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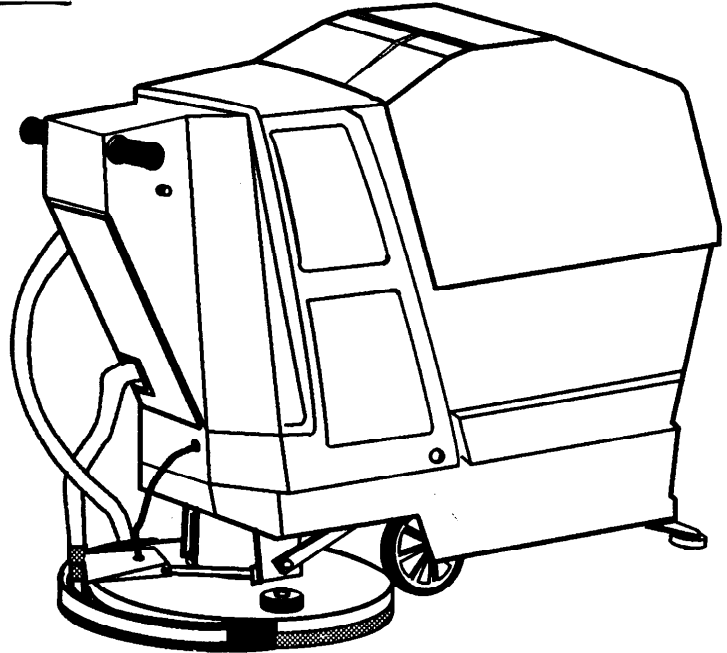
201 Scrubber

Model: SB201

Operator Manual and Parts Lists



PDF Version of manual by:
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OPERATION

Read and understand manual completely before operating or servicing machine.

This manual is furnished with each new 201 Scrubbisher Model. It provides necessary operation, machine maintenance instructions and an illustrated parts list.

Use the illustrated Parts Lists to order parts. Before ordering parts or supplies, be sure to have your machine model number and serial number handy. Parts and supplies may be ordered by phone or mail from any authorized parts and service center, distributor or from any of the subsidiaries.

This machine will provide excellent service. However, the best results will be obtained at minimum costs if:

- The machine is operated with reasonable care.
- The machine is maintained regularly - per the machine care instructions provided.
- The machine is maintained with manufacturer supplied or equivalent parts.

MACHINE DATA

Please fill out at time of installation for future reference.

Model No.- _____ Install. Date - / /
Serial No.- _____

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SAFETY PRECAUTIONS

This machine is suited to scrub or burnish floors in a indoor environment and is not constructed for any other use.

ATTENTION: The following symbol is used throughout this manual is as indicated in their description:

⚠ WARNING: It warns the operator of hazards and unsafe practices which could result in severe personal injury or death.

⚠ CAUTION: It warns the operator of unsafe practices which could cause damage to the equipment.

FOR SAFETY

The following information signals potentially dangerous conditions to the operator or equipment:

1. DO NOT OPERATE, MAINTAIN OR SERVICE MACHINE:

- Unless trained and authorized.
- Unless operator manual is read and understood.
- If it is not in proper operating condition.

2. WHEN OPERATING MACHINE:

- Remove loose objects on floor. Loose objects may become dangerous projectiles if struck by revolving pads/brushes
- Keep hands and feet away from revolving pads/brushes.
- Keep machine moving to prevent damage to finish or floor.
- Do not operate machine where flammable liquids or gases are present.

- Do not run on ramps or inclines unless adequate personnel are present for assistance.
- Do not operate this equipment in bare feet or with open-toed shoes or sandals.
- Make sure key switch is in the "OFF" position before installing pad.

3. BEFORE LEAVING OR SERVICING MACHINE:

- Make sure machine is turned off and key is removed.
- Stop on level Surface.
- Maintenance and repairs must be performed by authorized personnel.
- Turn key off and unplug battery charger from machine before performing any maintenance procedures.
- Turn key off and disconnect batteries before performing any type of machine repair.

⚠ WARNING: To prevent shock or electrocution, always disconnect batteries before servicing machine.

⚠ WARNING: Batteries emit hydrogen gases, explosion or fire can result. Keep sparks and open flame away.

⚠ WARNING: Charge in a well ventilated area and keep hood propped open when charging batteries, explosion or fire can result.

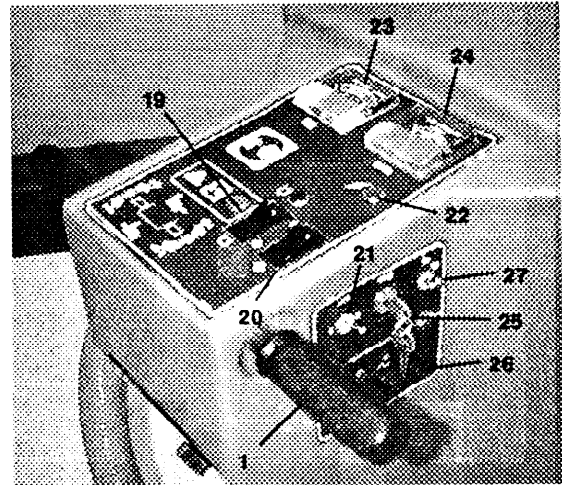
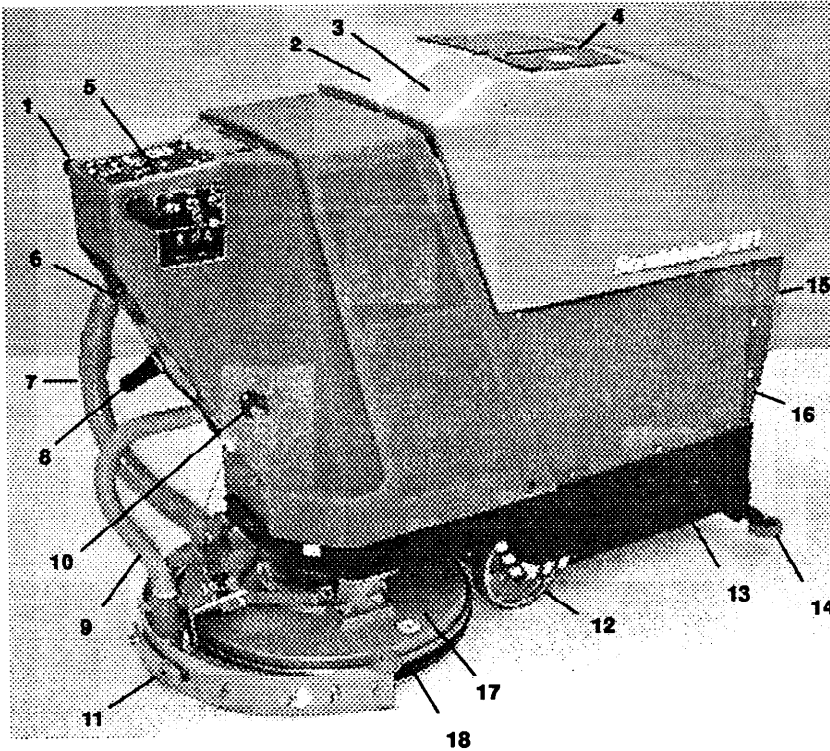
⚠ WARNING: Battery acid can cause burns. Wear protective gloves and shield eyes when servicing batteries.

⚠ CAUTION: Do not store outdoors and avoid getting wet.

⚠ CAUTION: The use of supplies other than those recommended by manufacturer may cause damage.

OPERATION

MACHINE COMPONENTS



- | | |
|-------------------------|------------------------------|
| 1. Control Grips | 15. Drain Hose Access Door |
| 2. Recovery Tank | 16. Battery Compartment |
| 3. Solution Tank | 17. Pad Shroud |
| 4. Tank Lids | 18. Dust/Water Control Skirt |
| 5. Control Console | 19. Solution ON/OFF Switch |
| 6. Dust Bag Access Door | 20. Vacuum ON/OFF Switch |
| 7. Dust Recovery Hose | 21. Pad ON/OFF Switch |
| 8. Squeegee Lift Handle | 22. Power ON Light |
| 9. Recovery Vacuum Hose | 23. Battery Meter |
| 10. Vacuum Hose Clip | 24. Pad Pressure Meter |
| 11. Squeegee Assembly | 25. Key Switch |
| 12. Main Drive Wheels | 26. Fuse Panel |
| 13. Front Caster | 27. Speed Slow/Fast Switch |
| 14. Wall Rollers | |

MACHINE INSTALLATION

UNCRATE MACHINE

Carefully check carton for signs of damage. Report damages at once to carrier. Check carton contents list below to ensure all accessories are included.

Accessories and squeegee are stored in the battery compartment of the machine. Batteries, battery charger is packaged separately.

Carton Contents:

- 1-Battery Hardware Package
- 1-Squeegee Assembly
- 1-Vacuum Hose
- 2-Wood Battery Spacers
- 2-Foam Battery Spacers
- 1-Battery Support Plate
- 1-Cloth Bag

ATTENTION: Battery installation must be accomplished after removing machine from shipping crate.

To uncrate your machine, remove shipping straps and shipping bolts that secure the front of the machine to the crate. Raise pad and carefully lift or make a ramp using crate boards to remove machine from pallet.

CAUTION: Do not roll machine off pallet, damage may occur.

ATTACH WALL ROLLERS

1. Attach (2) wall rollers, rollers and hardware are packaged with the battery hardware pack.
2. Use screw and nut to mount rollers as shown. (Figure 1)

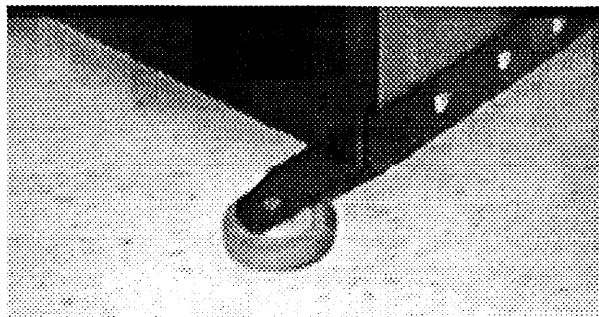


FIG. 1.

INSTALL BATTERIES

WARNING: Batteries emit hydrogen gases, explosion or fire can result. Keep sparks and open flame away.

WARNING: Battery acid can cause burns. Wear protective gloves and shield eyes when servicing batteries.

Battery Specifications:

Six 6 volt, deep cycle batteries(235A, 305A, 335A or 370A). Consult with an Authorized Distributor for specific batteries. Maximum battery dimensions are 7"(178mm) W x 11-3/4"(298mm) L x 16.5(419mm) H. from top of battery post.

1. Turn all switches to the OFF position and remove key.

WARNING: To prevent motors from accidental starting, remove key from machine.

2. Carefully hinge open recovery tanks to access battery compartment. Engage scissor latch to support tanks. Remove accessories from compartment. (Figure 2)

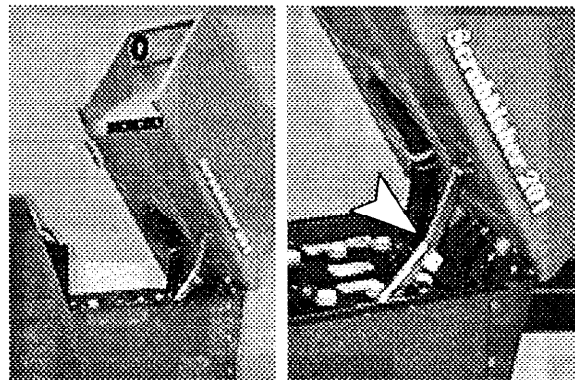


FIG. 2.

3. Next remove (2) wing nuts, using a screwdriver or pliers, and hinge open rear control housing as shown. (Figure 4)

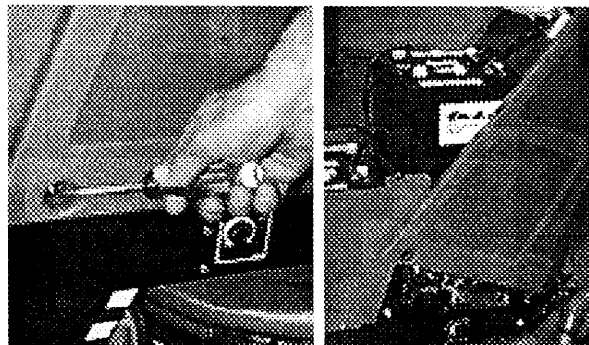


FIG. 3.

OPERATION

- Carefully install (6) batteries into compartment and arrange battery posts as shown. (Figure 5)
- Secure batteries with spacers if you have excess battery space. Position spacers as shown. Batteries must be secure. (Figure 4)

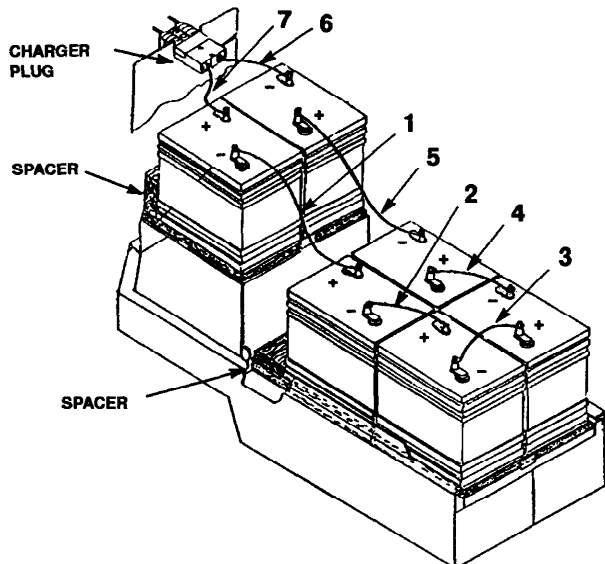


FIG. 4.

CAUTION: Do not drop batteries into compartment, battery and machine housing damage may result. This damage is not covered by warranty.

- Connect cables to battery posts in numerical order as labeled. Use rubber boots provided. (Figure 5)
- Last, plug battery connector into machine connector. Be certain that RED is to Positive (+) and BLACK is to Negative (-).
- Double check cable connections before closing up battery compartment.
- Turn key switch on, and check battery meter charge level to ensure batteries are fully charged. If batteries need charging, see *BATTERY CHARGING*.

WARNING: Do not attempt to operate the machine unless the manual is completely read and understood.

MACHINE OPERATING MODES

The 201 machine offers a unique combination of operating modes:

- SCRUB MODE:** Acts as an automatic scrubber which dispenses solution, scrubs and picks up water.
- BURNISH MODE:** Acts as a dry burnisher to provide a high "wet-look" shine.

Choose the appropriate operating mode that best meets your cleaning needs.

SCRUB MODE SETUP

NOTE: See page 9 for Burnish Mode

PRE-OPERATION CHECKS

- Sweep and dust mop floor to remove particles and other debris.
- Check battery meter charge level to ensure batteries are fully charged. (See *BATTERY CHARGING*)
- Check that a clean scrubbing pad is installed.
- Check that squeegee assembly is installed.
- Clean squeegee and check condition of blades.

ATTACH SQUEEGEE ASSEMBLY

- Loosen (2) wing screws on squeegee mount bracket and slide the squeegee assembly onto the bracket. Washers should be on top of the bracket. (Figure 5)

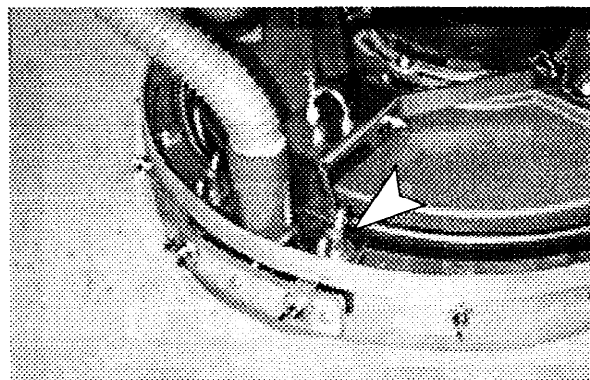


FIG. 5.

2. Tighten wing screws. **HAND TIGHTEN ONLY.** If they are too tight, the breakaway feature will not function if the squeegee is caught on an obstruction.
3. Attach vacuum pickup hose to squeegee assembly as shown. (Figure 5)

INSTALL SCRUBBER PAD

1. Turn all switches off and remove key.

⚠ WARNING: To prevent accidental starting, remove key before installing pad.

2. Select recommended scrubbing pad that best meets your cleaning needs.

IMPORTANT: Consult your authorized distributor to assist you in choosing the correct pad for your specific cleaning need.

3. Raise squeegee assembly, lift and pull out lever to lock the squeegee in the "UP" position. (Figure 6)



FIG. 6.

4. Slightly step down and release on the right front side of the pad shroud. Pad shroud will rise to pad installation position. (Figure 7)

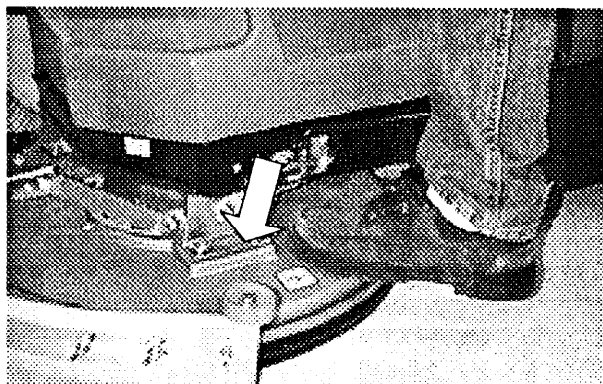


FIG. 7.

5. Remove the plastic centerlock from the pad driver by turning it **counterclockwise**. Position the pad accurately centered on the pad driver and replace centerlock. Turn centerlock **clockwise** until secure. (Figure 8)

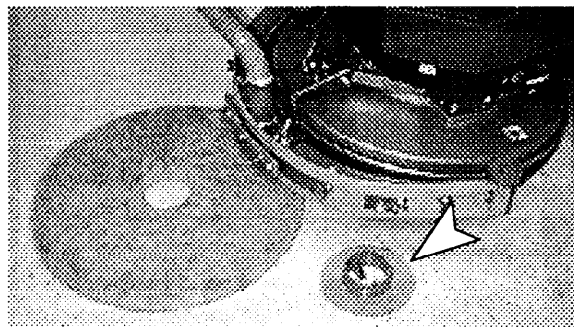


FIG. 8.

⚠ CAUTION: To prevent possible floor damage, make sure centerlock does not cross-thread, and it is completely threaded on the pad driver. Do not overtighten.

⚠ CAUTION: Do not operate machine without a pad installed.

FILL SOLUTION TANK

1. Transport machine to filling station. Raise squeegee and pad when transporting.
2. Shut off solution switch.
3. Open solution tank lid at top right side of machine and fill tank with clean water (140°F/ 60°C maximum temperature). Do not fill beyond the bottom lip of the float chamber. (Figure 9)

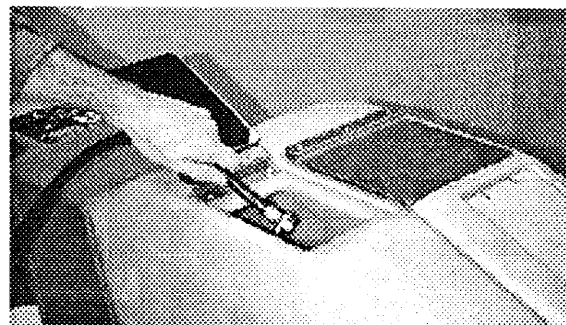


FIG. 9.

NOTE: If filling with a bucket be certain that bucket is clean. This will prevent possible solution line clogs.

4. Add liquid cleaning chemical. See proper dilution ratio instructions on bottle.

NOTE: If powdered chemicals are used, premix with water before putting in the tank to prevent plugging of the valve.

⚠ CAUTION: Use only recommended cleaning chemicals, **DO NOT** use substitutes. Consult an authorized distributor to assist you with the recommended cleaning chemicals.

⚠ WARNING: Use only nonflammable commercial cleaning chemicals.

OPERATION

SCRUB MODE OPERATION

1. Read and understand **SAFETY PRE- CAUTIONS** before operating machine.
2. Perform **SCRUB MODE SETUP** before operating.
3. Lower squeegee assembly to floor, lift lever and push forward to lower. (Figure 10)

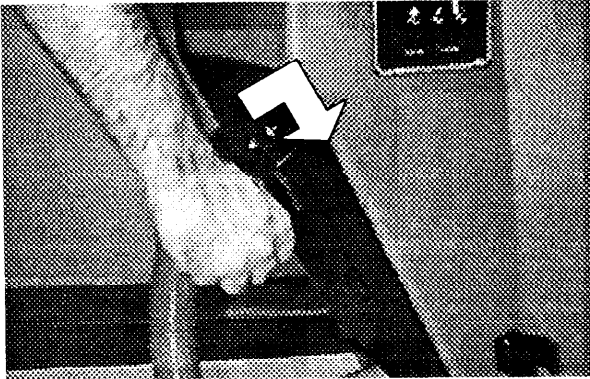


FIG. 10.

4. Step down on the pad shroud slowly, locking it into the down position. (Figure 11)

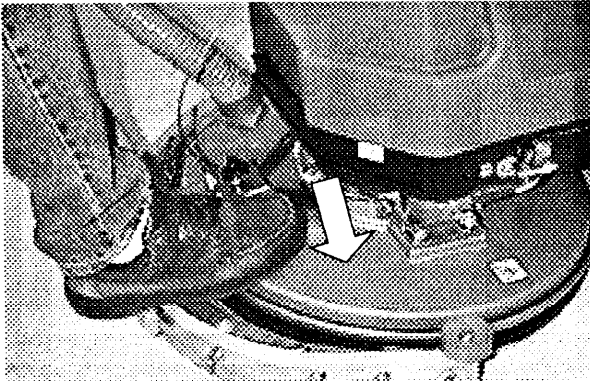


FIG. 11.

5. Turn on **SOLUTION** switch. Solution will not flow until you twist the control grips. If you do not want solution to flow, leave switch turned off. To adjust the amount of solution flow see **MACHINE ADJUSTMENTS** section.
6. Turn key switch on. A green light will glow.
7. Turn on **VACUUM** and **PAD** switches.
8. Select desired scrubbing speed mode by choosing slow or fast speed. Switch is located on the side of the console. (Figure 12)

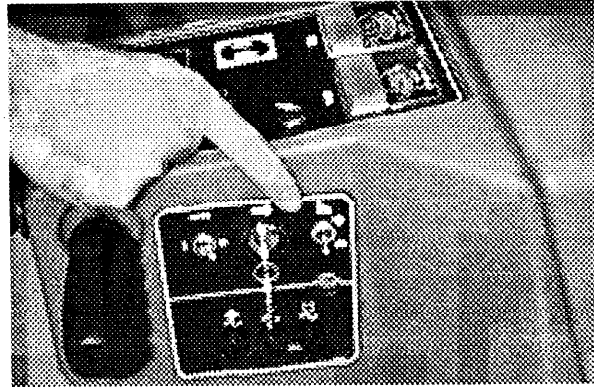


FIG. 12.

⚠ CAUTION: For first time users, start out in the slow speed until you can maneuver machine with ease.

9. Twist control grips forward to begin scrubbing. Slow speed switch position only offers one speed. Fast speed switch position offers a variable speed. Twist grips all the way forward for maximum speed. (Figure 13)

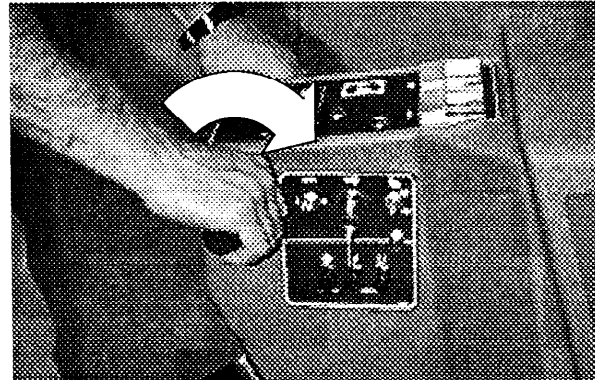


FIG. 13.

10. To reverse direction, twist control grips backwards. Always raise squeegee assembly when operating machine in reverse.

⚠ WARNING: Always start machine out slowly to prevent machine from leaping forward.

⚠ CAUTION: Keep hands and feet clear of revolving pad.

⚠ CAUTION: Keep machine moving to prevent pad damage to floor finish.

11. Once machine begins to move, check the needle position on the Pad Pressure Meter. (Figure 14)

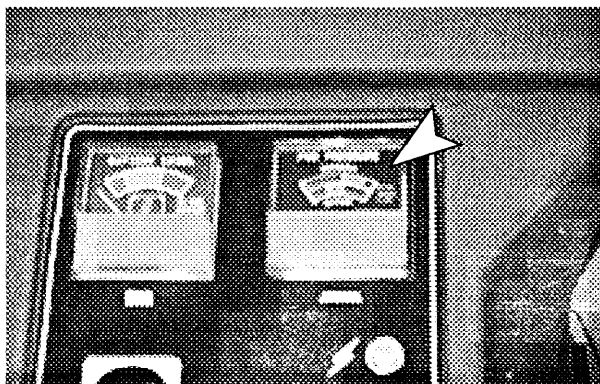


FIG. 14.

For proper pad pressure, the needle **must** run in the Scrub Mode Green zone.

See *MACHINE ADJUSTMENTS* section If the needle is not in the green zone.

Incorrect pad pressure will affect the following:

- Scrubbing performance.
- Battery run time.
- Motor overload.

⚠ CAUTION: To prevent circuit breakers from tripping do not operate machine with pad pressure meter needle in the RED zone.

12. If the squeegee is not wiping the floor properly, see *MACHINE ADJUSTMENTS* section.
13. If the pad skirt is not containing the solution properly, see *MACHINE ADJUSTMENTS* section.
14. To stop machine, release grips.

WATER PICKUP ONLY

If you wish to squeegee and recover water **ONLY**, without scrubbing, turn off the PAD MOTOR switch. Lower the squeegee and pad shroud, the squeegee will operate without the pad motor turning.

DRAINING TANKS

Recovery tank must be emptied prior to refilling solution tank. To drain recovery tank, perform the following steps:

⚠ ATTENTION: Raise squeegee and pad shroud when transporting machine to floor drain. Turn off machine power when draining.

NOTE: If using a bucket to drain machine, do not use same bucket for filling solution tank. This will prevent possible solution line clogs.

1. Open door at front of machine to access drain hoses.
2. There are two drain hoses. The hose located to the right is connected the recovery tank and the other hose is connected to the solution tank.
3. To drain tank, pull out the hose end, unscrew plug and drain. After draining tank replace plug and tighten. (*Figure 15*)

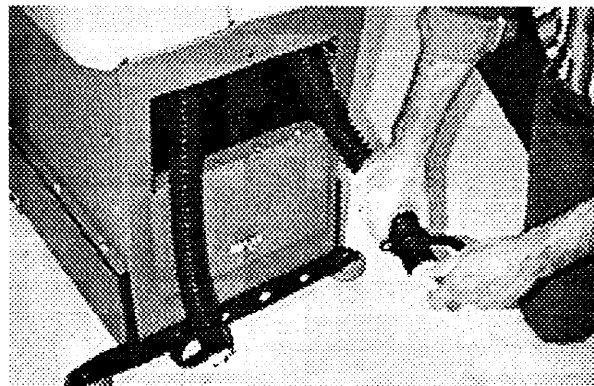


FIG. 15.

4. Rinse out recovery tank after each use. This will prevent foul odor buildup. Open recovery tank lid and use a hose to rinse out the tank. Failure to do this may cause drain obstructions.

BURNISH MODE SETUP

PRE-OPERATION CHECKS

1. Sweep and dust mop floor to remove particles and other debris.
2. Check that a dust control bag is installed. **Always empty or replace bag prior to use.**
3. Check battery meter charge level to ensure batteries are fully charged. (*See BATTERY CHARGING*)
4. Check that squeegee assembly is removed.
5. Check that a clean burnishing pad is installed.

REMOVE SQUEEGEE ASSEMBLY

1. Turn all switches off and remove key.

⚠ WARNING: To prevent accidental starting, remove key.

2. If following SCRUB MODE, remove the squeegee assembly from the squeegee mount bracket then lower the squeegee lift handle.
3. Store the vacuum hose in the clip provided as shown. (*Figure 16*)

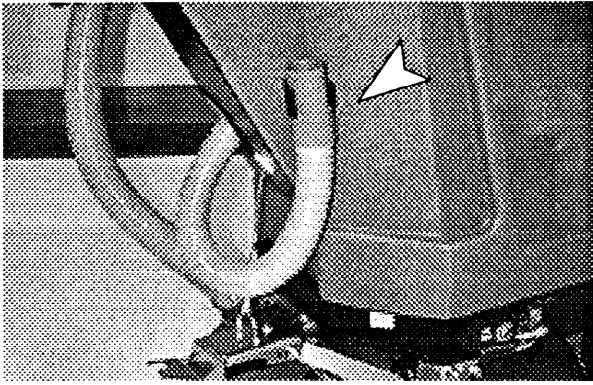


FIG. 16.

INSTALL BURNISHING PAD

1. Turn all switches off and remove key.

⚠ WARNING: To prevent accidental starting, remove key before installing pad.

2. Select a recommended high speed burnishing pad that best meets your needs.

IMPORTANT: Consult your authorized distributor to assist you in choosing the correct pad for your specific needs.

3. If following SCRUB MODE, remove the scrub pad and wipe the underside of the pad shroud and skirt clean.
4. Slightly step down and release on the right front side of the pad shroud. Pad shroud will rise to pad installation position. (Figure 17)

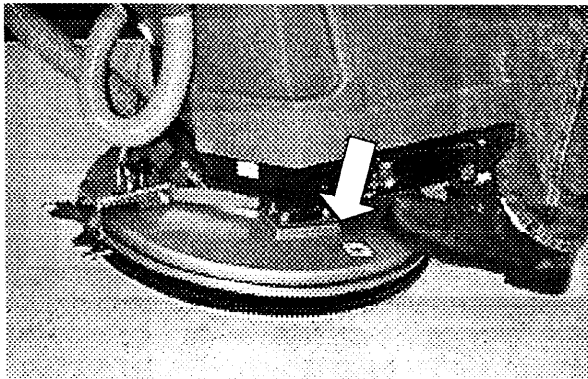


FIG. 17.

5. Remove the plastic centerlock from the pad driver by turning it **counterclockwise**. Position the pad accurately centered on the pad driver, and screw the centerlock in place clockwise until it is tight. (Figure 18)

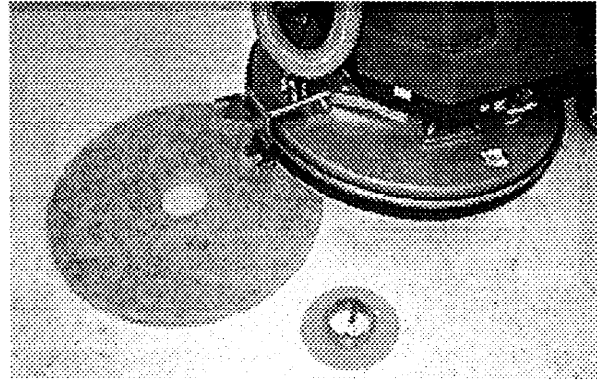


FIG. 18.

⚠ CAUTION: To prevent possible floor damage, make sure centerlock does not cross-thread, and it is completely threaded on the pad driver. Do not overtighten.

⚠ CAUTION: Do not operate machine without a pad or brush in place.

INSTALL DUST CONTROL BAG

1. Open the dust control bag access door and make sure the filter bag is in place on the hose fitting. (Figure 19)



FIG. 19.

BURNISH MODE OPERATION

1. Read and understand **SAFETY PRE- CAUTIONS** before operating machine.
2. Perform **BURNISH MODE SETUP** before operating.
3. Slowly step down on the pad shroud, locking it into the down position. (Figure 20)



FIG. 20.

4. Turn key switch on. A green light will glow.
5. Turn on PAD switch ONLY.
6. Select desired burnishing speed by choosing slow or fast speed. Slow speed is recommended in heavy pedestrian areas. (Figure 21)

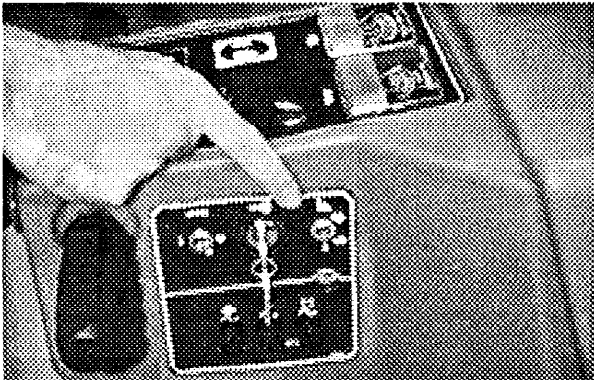


FIG. 21.

⚠ CAUTION: For first time users, start out in the slow speed until you can maneuver machine with ease.

7. Twist control grips forward to begin burnishing. Slow speed switch position only offers one speed. Fast speed switch position offers a variable speed. Twist grips all the way forward for maximum speed. (Figure 22)

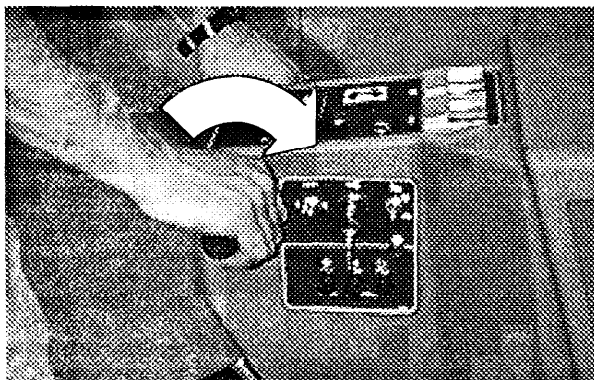


FIG. 22.

8. To reverse direction, twist control grips backwards. Machine will travel backwards in slow speed only.

⚠ CAUTION: Keep hands and feet clear of revolving pad.

⚠ CAUTION: Keep machine moving to prevent pad damage to floor finish.

9. Once machine begins to move, check the needle position on the Pad Pressure Meter. (Figure 23)



FIG. 23.

For proper pad pressure, the needle must run in the Burnish Mode Green zone.

See *MACHINE ADJUSTMENTS* section if the needle is not in the green zone.

Incorrect pad pressure will affect the following:

- Burnishing performance.
- Battery run time.
- Motor overload.

⚠ CAUTION: To prevent circuit breakers from tripping do not operate machine with pad pressure meter needle in the RED zone.

10. To stop machine, release control grips.

OPERATION

WHILE OPERATING MACHINE

⚠ WARNING: Read and understand Safety Precautions at front of manual before operating machine.

OPERATING AND SAFETY TIPS

1. Always check dust control bag for fullness prior to operating machine. Empty or replace when bag is 1/2 full.
2. Always operate at a slower speed when working around walls or obstacles. When turning, reduce speed to a lower level to maintain maximum control.
3. During burnishing mode, Never operate machine without a dust bag or when bag is full.
4. Never stand still while machine is running.
5. Overlap each pass by 2”(5cm).
6. Change pad when dirty or if a vibration develops. It may be necessary to readjust pad pressure when changing to a new pad.
7. During scrubbing mode, do not back up machine with squeegee assembly in the down position.
8. Always operate with pad pressure gauge in the GREEN zone, never in the RED Zone.
9. If you leave the machine unattended, even for a short while, remove key to prevent unauthorized use and potential injury.
10. Do not park the machine for long periods of time on resilient floors, as the concentrated weight of the machine can leave wheel marks on the floor.
11. Keep in mind that the harder you work the machine (heavy pad pressure, etc.), the shorter your run time will be. Only use as much power as is required for the job.
12. Stay clear of obstructions on the floor, such as electrical plates and grates, this will destroy pads.
13. Periodically check battery meter discharge level. When the needle drops into the left side red zone, recharge batteries. Do not continue to operate machine.
14. During scrubbing mode, when solution tank runs dry, drain recovery tank.
(See *DRAINING TANKS*).

STOPPING THE MACHINE

1. Release the control grips to stop machine.
2. Turn off all switches.
3. Turn off key and remove.
4. Raise squeegee and pad shroud.

⚠ ATTENTION: Before leaving machine, stop on level surface, turn off machine and remove key if left unattended.

To reset emergency stop button, turn off all switches and key, then turn button clockwise to reset. Resume to normal operation.

CIRCUIT BREAKERS AND FUSES

The 201 machine is equipped with (2) circuit breakers and (3) fuses to protect machine from damage.

The fuse panel is located on the right side of the control panel and the circuit breaker buttons are on the lower left rear frame as shown (*Figure 24*).

If a circuit overloaded occurs during use, the breaker will trip or fuse will blow. Breakers will not reset immediately upon tripping. Determine reason why breaker tripped, allow motor to cool for 2-5 minutes and then reset breaker by pushing in on button. When replacing fuses, never substitute to a higher fuse than specified.

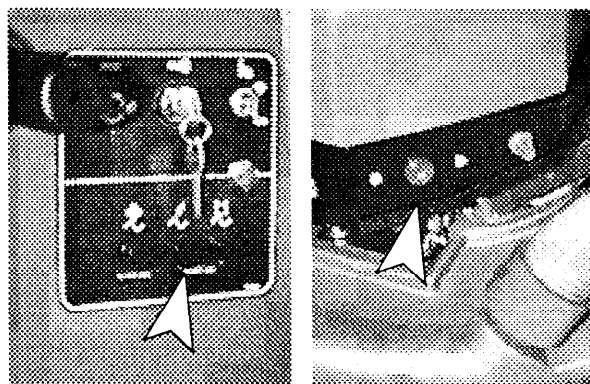


FIG. 24.

MACHINE ADJUSTMENTS

SOLUTION FLOW ADJUSTMENT

Different cleaning jobs may require a different solution flow rate, adjust accordingly to your specific cleaning needs. If the solution flow requires adjustment follow the steps below.

1. Locate adjustment screw on the lower left side of frame.
2. Using a coin, turn the screw to the desired rate. Select anywhere from "MAXIMUM" to "MINIMUM" flow rates.

A minimum flow rate will conserve solution and give you longer time between refills, for best cleaning results, it is recommended you leave the adjustment screw set at maximum. (Figure 25)

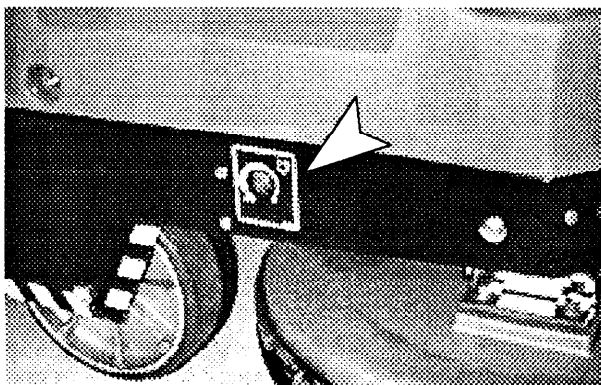


FIG. 25.

PAD PRESSURE ADJUSTMENT

Pad pressure performance is displayed for the operator on the pad pressure meter, located on the control console.

For proper pad pressure, the meter needle **MUST** run in the GREEN zone for that specific cleaning mode. If the needle is in the RED zone to the right of the green zone it indicates too much pressure or pad resistance. If it is in the RED zone to the left, it indicates too low pressure or that the battery charge is low.

⚠ CAUTION: To prevent circuit breakers from tripping do not operate machine with pad pressure meter needle in the right side RED zone.

In most cases, once the pad pressure is properly adjusted on your machine, it should not require readjustment in the future for a repeated operation.

If the pad pressure requires adjustment follow the steps below:

1. Turn off key switch and raise pad shroud by stepping on the right front corner of the shroud.
2. Reach under the frame between the drive wheel and the pad shroud and locate a plastic knob. (Figure 26)

⚠ WARNING: To prevent the risk of pinching your arm or fingers the pad shroud **MUST** be in UP position before making the pad pressure adjustment.

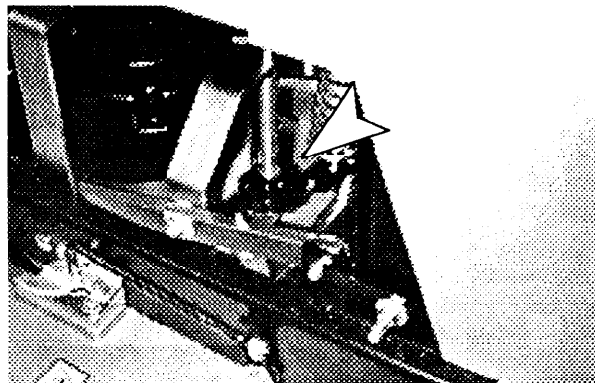


FIG. 26.

(Photo shown with rear shroud removed for clarity)

3. Turn the knob clockwise to decrease the pad pressure and counter-clockwise to increase.
4. If aggressive performance is needed and run time is not a consideration, adjust the needle to the (right) side of the green zone.
5. If long run time is needed, adjust the needle to the (left) side of the green zone.
6. During use, the meter needle will rise as the pad gets dirty or filled with floor finish, because the load on the motor gets greater. To prevent circuit breakers from tripping stop operation if needle moves into the right red zone.
To prevent circuit breaker from tripping turn pad over, replace with new or readjust pad pressure. Remember to readjust pad pressure when changing to a new pad.
7. If the needle drops into the red zone to the left side of the meter, it indicates the battery charge is low, and recharging is required.

SQUEEGEE ADJUSTMENT

The squeegee is properly adjusted at the factor. It normally will not require adjustment in the field.

However, if the blade does not wipe the floor evenly across the length of the blade, adjustment may be

OPERATION

required. When the squeegee is properly adjusted the blade should lay over evenly across its full length.

If you are experiencing one of the following problems, adjust accordingly:

1. Squeegee draws down to floor by suction and the blade lays over too much.
 - a. Loosen the two (2) wing nuts on the adjustment plate.
 - b. Push the squeegee adjustment plate DOWN across the full length, until it works properly. Tighten the wing nuts. (Figure 27)

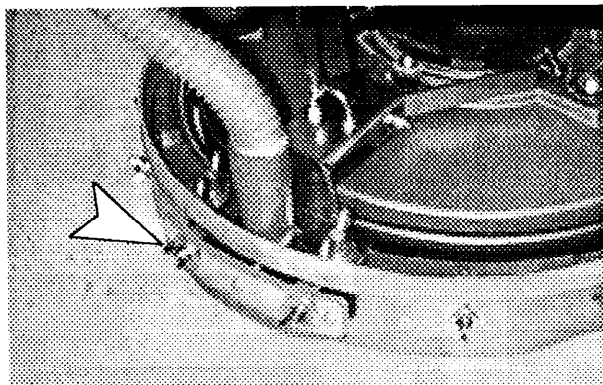


FIG. 27.

2. Squeegee "chatters" and the wiping blade does not lay over across its length.
 - a. Loosen the two (2) wing nuts on the squeegee adjustment plate. (Figure 27)
 - b. Pull plate UP along its length, so the blade will lay over more. Tighten the wing nuts lightly.
3. Squeegee deflection is not the same over the full length of the blade.
 - a. Push machine forward with squeegee down, look at the deflection of the squeegee blade.
 - b. To properly adjust squeegee deflection, so it's the same over the full length of the blade, turn the leveling knob. Counter- clockwise to increase or clockwise to decrease. (Figure 28)

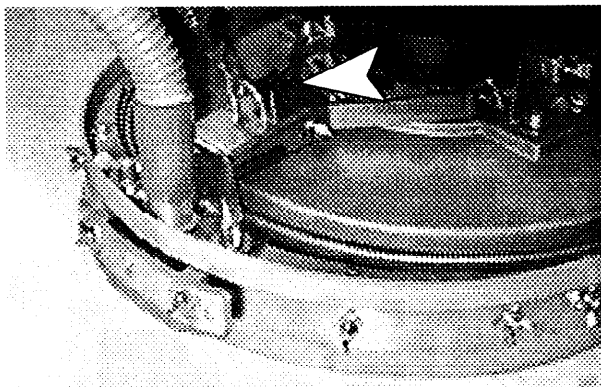


FIG. 28.

PAD SKIRT ADJUSTMENT

The pad skirt controls the water and dust during operation, is self adjusting and normally does not require adjustment in the field.

If you are experiencing one of the following problems, adjust accordingly.

1. Skirt does not contact the floor properly during use:
 - a. Check pad thickness. It may be too THICK or too THIN (or worn out).
 - b. Change to proper pad thickness.
- Note:** Do not use pads thicker than 1" or thinner than 1/2".
2. Water is not escaping from skirt so it can be picked up by the squeegee:
 - a. Loosen the band screw, do not remove.
 - b. Shift skirt around the shroud until the skirt escape holes are positioned at about 7 o'clock from the rear of machine.
 - c. Tighten band.

BATTERY CHARGING

⚠ ATTENTION: The following charging instructions are intended for manufacturer supplied chargers only. Or use a charger with the following specifications listed below. Improper charger may cause battery damage.

CHARGER SPECIFICATIONS:

- OUTPUT VOLTAGE - 36 VOLTS
- OUTPUT CURRENT - 25-40 AMPS
(Determines battery capacity - Consult your Authorized Distributor)
- AUTOMATIC SHUT-OFF CIRCUIT
- FOR LEAD ACID DEEP CYCLE BATTERY CHARGING

Life expectancy of a battery is limited by the number of charges it receives. To get the most life from the batteries, recharge batteries when discharge needle is in the red zone. Never let batteries set in a discharge condition.

⚠ CAUTION: Do not continue to run machine when battery meter needle is in the red zone, battery damage will result.

⚠ DANGER EXPLOSIVE GASES: Always charge batteries in a well ventilated area. Batteries

emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away.

⚠ FOR SAFETY: Shield eyes when servicing batteries and avoid contact with battery acid.

1. Transport machine to a well ventilated area when charging.
2. Turn machine power off.
3. Drain tanks.
4. Hinge open recovery tank and engage scissor latch. (Figure 29)

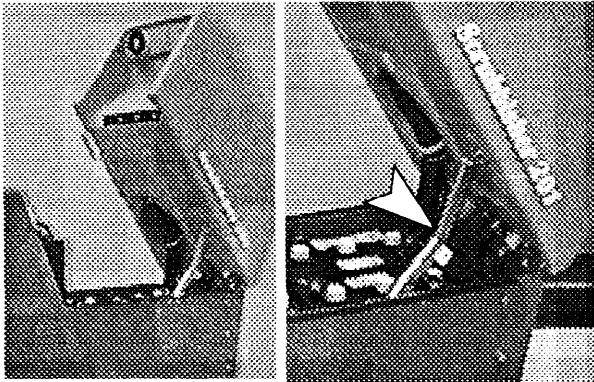


FIG. 29.

5. Next, remove (2) thumb nuts, using a screwdriver, and hinge open rear control housing to access the top two batteries. (Figure 30)

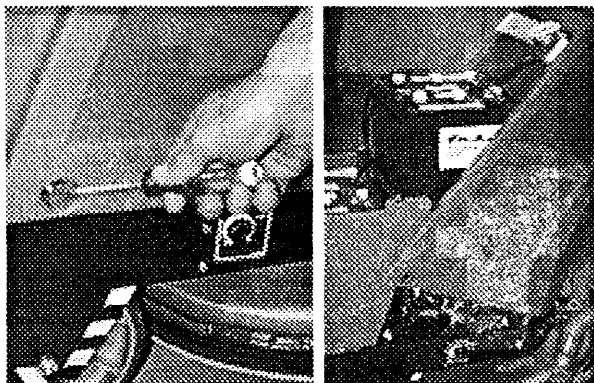


FIG. 30.

6. Check water level (A) in each battery cell. Do not charge batteries unless water is slightly covering battery plates (B). If needed, add just enough distilled water to slightly cover plates. DO NOT overfill. Batteries can overflow during charging due to expansion. Replace cell caps before charging. (Figure 31)

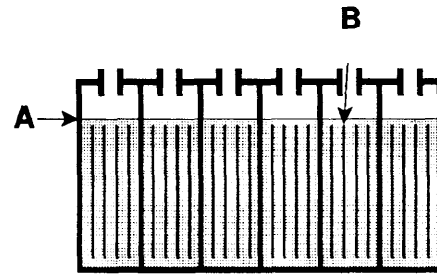


FIG. 31.

7. Plug charger power cord into grounded wall outlet **before** connecting charger to batteries. (Figure 32)

⚠ WARNING: To avoid an electrical hazard, charger MUST be grounded while in use to protect user from electric shock and serious injury.

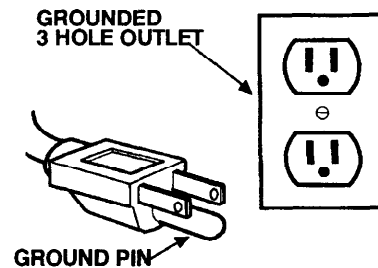


FIG. 32.

8. Unplug battery connector from machine connector, located in battery compartment, and plug charger into battery connector. (Figure 33)

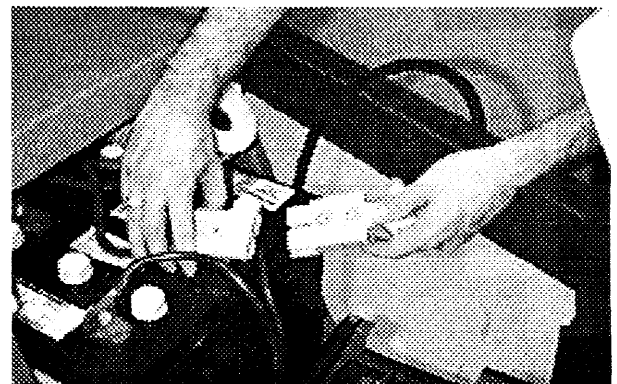


FIG. 33.

9. Charger will automatically begin charging and automatically shut off when fully charged.
10. After charger has turned off, disconnect charger from machine then unplug charger from wall outlet.
11. Recheck battery fluid level **after** charging. If needed, add distilled water to bring level of fluid to bottom of sight tubes. Be certain to replace cell caps securely and to wipe off the top of batteries with a clean cloth.

OPERATION

MAINTENANCE

To keep machine in good working condition, simply follow daily, weekly and monthly maintenance procedures.

⚠ WARNING: Before attempting any maintenance procedures on machine, stop on level surface, turn key off, and disconnect battery charger if charging machine.

⚠ WARNING: Before attempting any type of machine repair, disconnect batteries. Repairs must be performed by authorized personnel.

HOURLY METER

Machine is equipped with an hour meter, located on the inside of the rear panel. It records the number of hours the machine has been powered on. (Figure 34)

Use hour meter to determine when machine should be maintained and also to log machine hours when service was performed.



FIG. 34.

DAILY MAINTENANCE

1. Remove and clean pads or replace. Never use soiled pads. Replace pads when they become loaded with residue.
2. Drain and rinse tanks thoroughly.
3. Remove and rinse the float shut-off assembly located in recovery tank. (Figure 35)

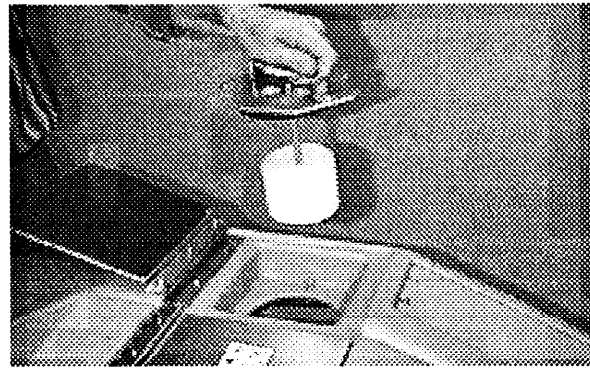


FIG. 35.

4. Remove squeegee and rinse under water.
 5. Inspect pad and squeegee blade for wear, replace if required.
 6. Flush underside of pad shroud.
 7. Clean machine housing with a nonabrasive, non-solvent cleaner.
 8. Inspect dust control bag, if 1/2 full replace with new bag.
 9. Recharge batteries if needed.
-

WEEKLY MAINTENANCE

1. Flush out tanks and solution lines. Mix a solution of 1 qt. (946ml.) vinegar to 3 gallons (11.3 ltr.) water. Rinse with clean water afterwards.
 2. Inspect pad skirt for wear and proper adjustment. Pad skirt should just touch the floor while operating. See Pad Skirt Adjustment if required.
 3. Check water level in battery cells. (See BATTERY MAINTENANCE).
 4. Clean battery tops to prevent corrosion.
 5. Check for loose or corroded battery cables.
-

MONTHLY MAINTENANCE

1. Remove plastic dust cover on pad motor to inspect for dust buildup. This procedure will prevent the risk of the motor from overheating and increase the life of the motor.
2. Lubricate chain with a water resistant oil.
3. Lubricate front caster and main wheel grease fittings with a water resistant grease.
4. Lubricate all linkage pivot points with silicone spray then coat with a water resistant grease to maintain a smooth operation.
5. Check machine for water leaks and loose nuts and bolts.

EVERY 250 HOURS OF OPERATION

1. Check drive and pad motors for carbon brush wear, replace brushes when worn to a length of 3/8" (1cm) or less.
2. Check vacuum motor for carbon brush wear, replace brushes when worn to a length of 3/8" (1cm) or less.

BATTERY MAINTENANCE

⚠ DANGER EXPLOSIVE GASES: Batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away.

⚠ FOR SAFETY: Shield eyes when servicing batteries, avoid contact with battery acid and keep all metal objects off the top of batteries.

1. Always follow proper charging instructions. (See BATTERY CHARGING)
2. Each week *after* charging, check water level (A) in each battery cell of all batteries. Water level should reach bottom of sight tubes (B). If needed, add just enough distilled water to reach bottom of sight tubes. DO NOT overfill. (Figure 36)

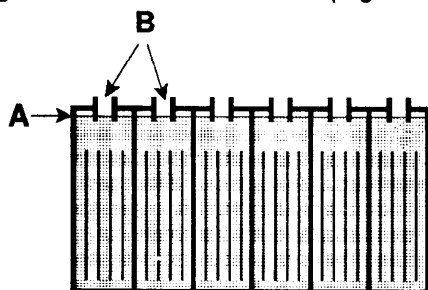


FIG. 36.

3. Keep battery tops and terminals clean and dry.

To clean batteries:

- a. Mix a strong solution of baking soda and water.
- b. Brush solution sparingly over battery tops, terminal and cable connectors.

NOTE: Do not allow baking soda solution to enter battery cells.

- c. Use wire brush to clean terminal post and cable connections.
- d. After cleaning, apply a coating of clear battery post protectant to terminals and cable connections.

4. Check for loose or worn cables. Replace if worn.

SQUEEGEE BLADE MAINTENANCE

The wiping blade has four useable edges. Reverse the blade when wiping edge has become worn. When all edges are worn replace with squeegee kit, not just the wiping blades.

To reverse or replace the wiping blade:

1. Remove the squeegee assembly from the machine.
2. Starting at the outside of each end of the squeegee assembly, remove the bolts working toward the center.
3. To install the new blades, put blades in place, and install the bolts from the center out.

IMPORTANT: Proper blade installation is critical to maximize water pickup. Make sure blades are straight and do not overtighten bolts. This will cause blades to wrinkle.

DRIVE CHAIN MAINTENANCE

Inspect drive chain periodically for proper tension. Chain should flex approximately 1/4" (6.35mm) from center. If chain flexes more than 1/4" (6.35mm), chain should be tightened. To tighten chain, follow steps below:

1. From under machine, locate and loosen 4 motor mount bolts, do not remove bolts.
2. Slide drive motor forward until proper chain tension obtained.
3. Retighten motor mount screws.
4. Lubricate chain with a water resistant oil.

OPERATION

TRANSPORTING MACHINE

When transporting machine by use of trailer or truck, be certain to follow tie-down procedures below:

⚠ WARNING: Do not operate on ramps or inclines unless adequate personnel are present for assistance.

1. Remove squeegee from machine and raise pad shroud. Leave pad installed.
2. Load machine using a recommended loading ramp.
3. Position front of machine up against front of trailer of truck. Once machine is positioned, lower brush head.
4. Place a block behind the drive wheel and the rear casters.
5. Place tie-down straps over top of machine and secure straps to floor. It may be necessary to install tie-down brackets to the floor of your trailer or truck.

STORING MACHINE

1. Before storing machine, be certain to flush tanks and drain machine of all water.
2. Store machine in a dry area with squeegee removed and pad shroud in the raised position.
3. Open tank lids to promote air circulation.
4. When storing machine for short periods, raise pad shroud and squeegee off floor to prevent damage.

⚠ ATTENTION: If storing machine in freezing temperatures, be certain to drain machine of all water. Damage due to freezing temperatures is not covered by warranty.

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Machine does not operate	Key switch is "Off".	Turn key switch to "On".
	Emergency stop button is activated.	Turn button clockwise to reset.
	Battery connector is not plugged in.	Plug battery connector into the machine.
	Batteries discharged.	Charge batteries per instructions.
	Ignition fuse has blown.	Replace fuse with proper size.
	Loose or corroded battery cables.	Clean and lubricate.
	Electrical malfunction.	Contact Service Center.
Machine does not self propel.	Drive circuit breaker tripped.	Reset Breaker Button.
	Drive chain broken.	Contact Service Center.
	Wheel bearing frozen.	Contact Service Center.
Pad motor does not operate	Pad not lowered and locked in ready (Down) position.	Lower pad into ready position.
	Pad motor On/Off switch set to "OFF".	Set pad motor On/Off switch to "ON".
	Pad circuit breaker tripped.	Reset breaker.
	Electrical malfunction.	Contact Service Center.
	Worn carbon brushes in pad motor.	Contact Service Center.
Pad drive motor circuit breaker trips continuously.	Dirty pad.	Replace pad.
	Burnishing a dirty floor.	Scrub floor prior to burnishing.
	Improper pad for application.	Change to correct pad.
	Improper pressure adjustment.	Reduce pressure so needle operates in green zone.
	Improper spray buff material.	Use Proper brand and mixture.
	Defective circuit breaker.	Contact Service Center.
	Worn motor brushes.	Contact Service Center .
Pad driver vibrates during use.	Pad is off center.	Reposition pad.
	Pad out of round or damaged.	Replace with new pad.
	Pad driver is damaged.	Contact Service Center.
Batteries run time is below normal.	Batteries not fully charged.	Charge batteries.
	Electrolyte level is low	Fill to proper level and charge.
	Cables are loose or corroded.	Clean and lubricate.
	Pad pressure too heavy.	Reduce pressure.
	Improper pad causing too much amp draw.	Change to proper pad.
	Charger is defective.	Contact Service Center.
	Defective battery	Contact Service Center.
Dust control doesn't work properly.	Bag is full or dirty.	Empty, clean, replace.
	Skirt not adjusted properly, and/or torn	Adjust skirt per instructions and/or replace
	Pad is worn excessively.	Replace pad.
	Dust control hose plugged with debris.	Clean out hose.

OPERATION

TROUBLE SHOOTING – Continued

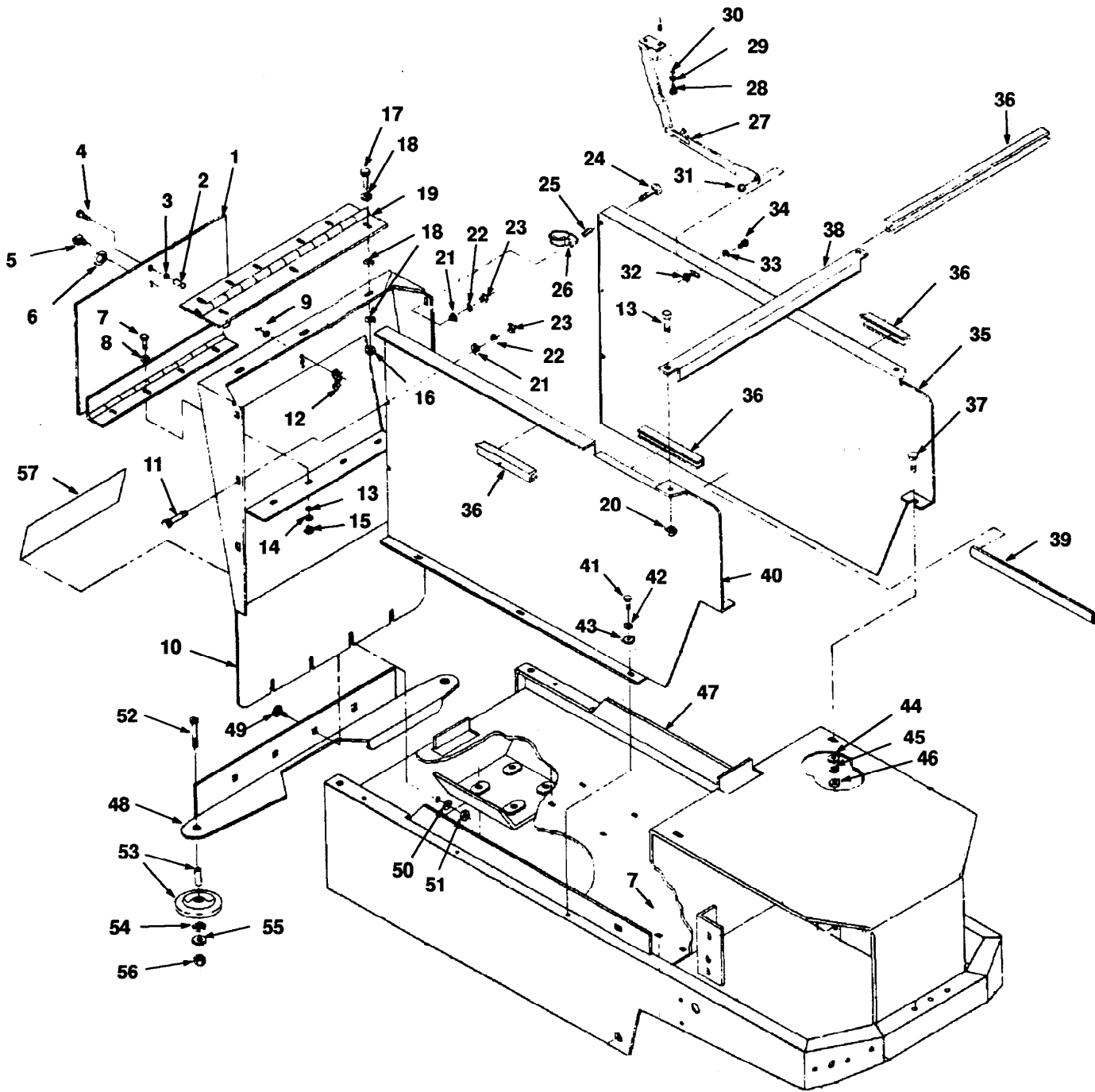
PROBLEM	CAUSE	SOLUTION
Transport drive circuit breaker trips during use.	Operator attempting to run machine on an incline.	Machine not designed for incline use.
	Obstruction in cleaning path.	Remove obstruction.
	Operator using control grips as a brake.	Do not use control grips as a brake.
	Drive circuit breaker defective.	Contact Service Center.
	Drive motor brushes worn.	Contact Service Center.
Vacuum motor will not run.	Vacuum motor fuse blown.	Replace fuse with proper size.
	Electrical Malfunction	Contact Service Center.
	Worn carbon motor brushes.	Contact Service Center.
Poor vacuum pickup.	Inlet filter screen plugged on float guide rod.	Clean and replace.
	Recovery tank drain hose left open.	Install and seal plug
	Blockage in pickup hose, baffle hose, or squeegee assembly.	Inspect hoses and squeegee for blockage. Inspect recovery tank at pickup hose entrance for solid material build-up.
	Low battery charge.	Charge batteries.
	Defective vacuum motor.	Contact Service Center.
Squeegee streaks, uneven pickup.	Squeegee obstructed with debris.	Check squeegee for obstructions.
	Squeegee blades worn.	Reverse or replace squeegee blades.
	Squeegee improperly adjusted.	Adjust per instructions.
	Inadequate lubrication for cleaning conditions.	Increase solution flow rate and/or chemical concentration.
	Squeegee blades installed improperly.	Inspect and replace properly.
Float shut off trips prematurely.	Air leak around float shut off Gasket.	Check for any foreign material between these parts and/or contact Service Center.
	Excess foam in recovery tank.	Use low foam cleaner or use defoamer in recovery tank.
No solution flow	Solution switch off.	Turn solution switch "ON".
	Pad not lowered and control grips not twisted.	Lower pad and twist control grips forward or reverse to start solution flow.
	Solution tank empty.	Fill tank.
	Solution screen plugged.	Unplug screen.
	Solution lines plugged.	Remove, inspect, and clean lines and/or contact Service Center
	Flow adjustment set too low.	Increase setting.
	Electrical malfunction.	Contact Service Center.

SPECIFICATIONS

MODEL NO.	SB201
LENGTH	145cm/57.25"
WIDTH	58cm/23"
HEIGHT	111cm/43.5"
WEIGHT	163kg/351 lbs. (440kg/950 lbs. with Batteries)
SOLUTION TANK CAPACITY	38L/10 Gallons
RECOVERY TANK CAPACITY	40L/10.5 Gallons
SPEED CONTROL	TWO SPEED with REVERSE
CLEANING SPEED	160 fpm/49mpm - 265fpm/81mpm MAX.
CLEANING PATH WIDTH	51cm/20"
SQUEEGEE WIDTH	.70m/27.5"
DRIVE MOTOR	.2 h.p., 340rpm, 36V, 6A, 149W
PAD MOTOR	3 h.p., 0-2500rpm, 36V, 55A, 2238W
VACUUM MOTOR	.53 h.p., 2-stage 5.7", 36V, 11A, 398W
WATER LIFT	114cm/45"
BATTERIES	6-6 Volt, 235A, 305A, 335A, 370A
DECIBEL RATING AT OPERATOR'S EAR, INDOORS ON TILE.	<70dB(A)

PARTS LIST

CHASSIS FRAME GROUP

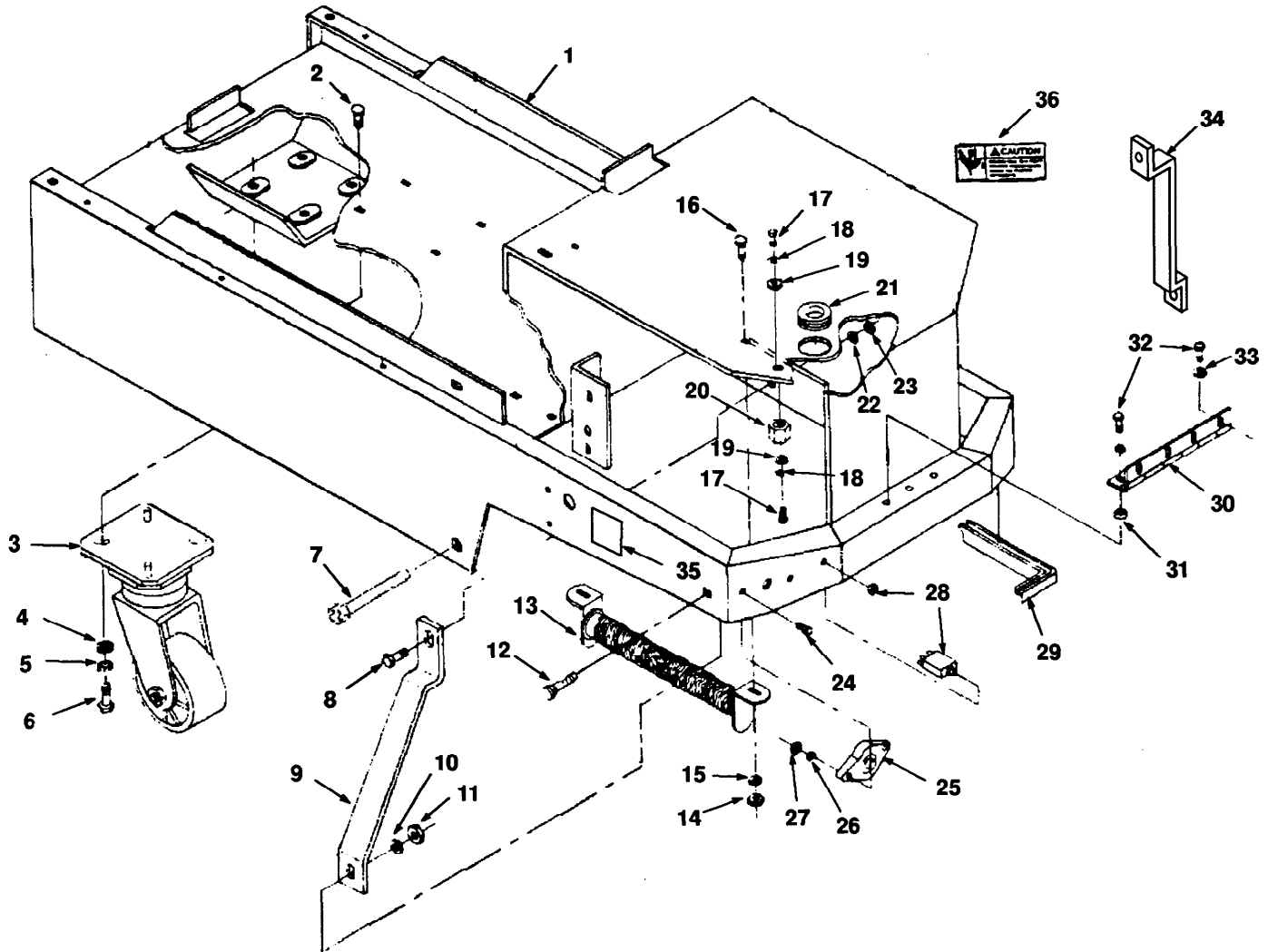


CHASSIS FRAME GROUP

Ref.	Part No.	Description	Qty.
1	621147NDG	DOOR, WELDMENT	1
2	621154000	STUD, BALL	1
3	140023	WASHER, LOCK	1
4	611226000	SCREW, #06-32, 0.25	1
5	611247000	RETAINER, RING	4
6	611246000	HANDLE, RING	1
7	200031343	SCREW, M04 X 12	4
8	200301014	WASHER, FLAT	8
9	200513089	RIVET, POP	1
10	621134NDG	PANEL, FRONT	1
11	069767164	SCREW	6
12	621153000	CLIP	1
13	200031483	SCREW, M08 X 12MM	2
14	200351014	WASHER, LOCK	4
15	200102014	NUT	4
16	579028	NUT, HEX LOCK	3
17	200031436	SCREW	3
18	579210	WASHER, FLAT	9
19	621030000	HINGE, TANK	1
20	200160017	NUT, LOCK	2
21	140012	WASHER, FLAT	6
22	140016	WASHER, LOCK	6
23	059650595	NUT, HEX, .25-20	6
24	612184000	SCREW, .25X1.5	1
25	069764007	SPACER	1
26	069762155	CLAMP	1
27	621458	LATCH, SUPPORT	1
28	200031342	SCREW, M04 X 10	2
29	200301014	WASHER, FLAT	2
30	200351014	WASHER, LOCK	2
31	200160014	NUT, LOCK	1
32	200101014	WASHER, NYLON	1
33	200301016	WASHER, FLAT	2
34	200031344	SCREW, M04X14	1
35	621136NDG	PANEL, RIGHT SIDE	1
36	621299000	SERVICE KIT, EDGING	1
37	602049000	SCREW, .25-20X1.00	2
38	621149000	CROSS-SUPPORT	1
39	621310000	SKID STRIP	2
40	621137NDG	PANEL, LEFT SIDE	1
41	200031433	SCREW	6
42	140016	WASHER, LOCK	6
43	200304017	WASHER, FLAT	6
44	579210	WASHER, FLAT	2
45	140016	WASHER, LOCK	2
46	059650595	NUT, .25-20	2
47	069767001	FRAME	1
48	069767102	BRACKET, WALL, ROLLER	1
49	069767077	SCREW	4
50	069760082	WASHER, FLAT	4
51	140546	NUT, HEX LOCK	4
52	621286000	SCREW	2
53	630450	WHEEL, RUBBER	2
54	140015	WASHER, LOCK	2
55	069760082	WASHER, FLAT	2
56	200640017	NUT	2
57	120238	DECAL, NOBLES LOGO	1

PARTS LIST

CHASSIS GROUP



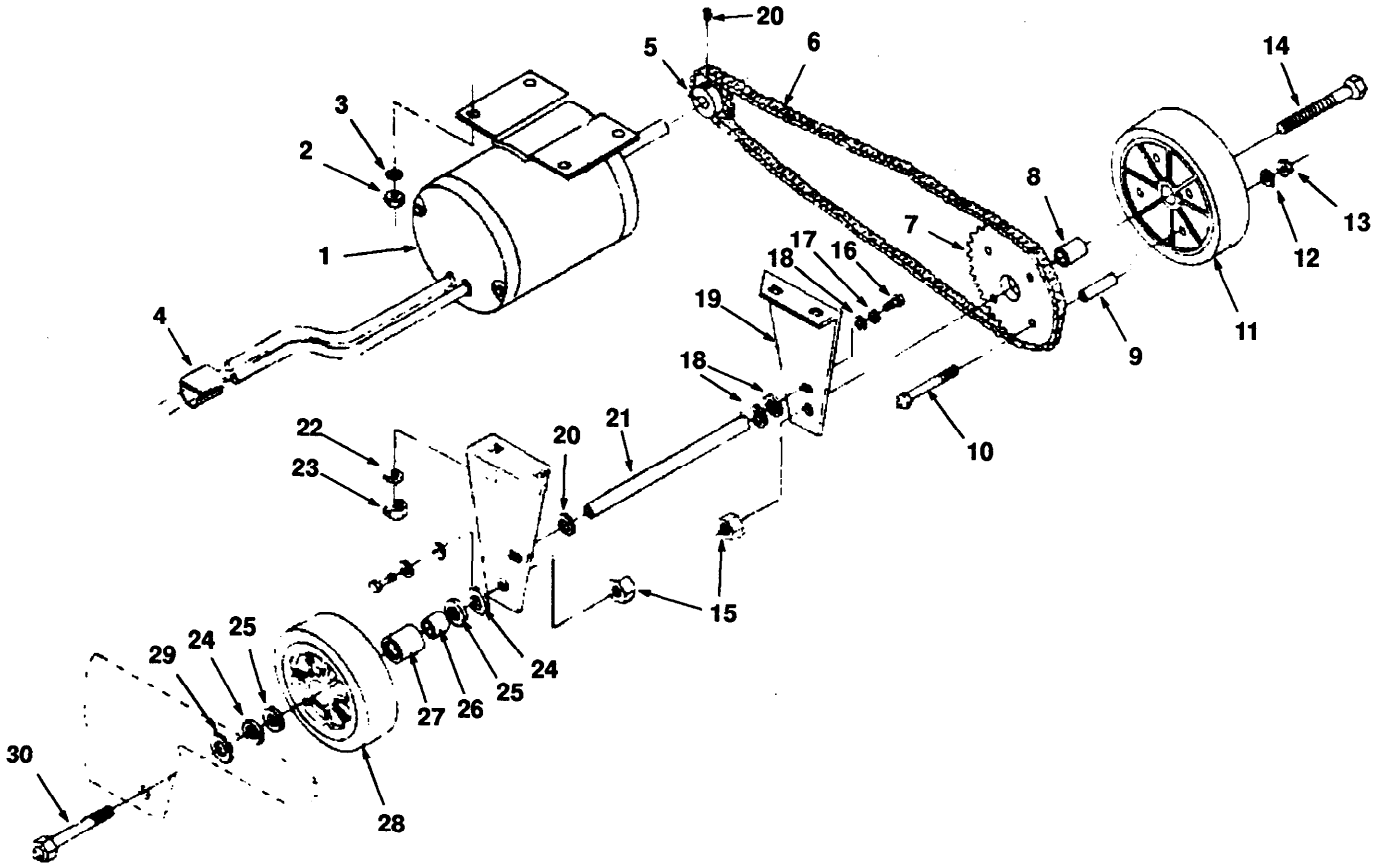
CHASSIS GROUP

Ref.	Part No.	Description	Qty.
1	069767001	FRAME	1
2	069767077	SCREW, 31-18X.75	4
3	069760030	CASTER	1
4	579144	WASHER, FLAT	4
5	200351020	WASHER, LOCK	4
6	200031541	SCREW, M10 X 25	4
7	621237000	AXLE, .50X3.38	1
8	200607491	SCREW	2
9	069767174	BRACKET (L.H.)	1
10	069760082	WASHER, PLAIN	2
11	140546	NUT, LOCK	2
12	069767077	SCREW, 31-18X.75	2
13	069764063	RESISTOR	1
14	059650595	NUT, .25-20	2
15	140016	WASHER, LOCK	2
16	069767164	SCREW, .25-20X.50	2
17	069762115	SCREW, .25-20X.50	2
18	140016	WASHER, LOCK	2
19	579210	WASHER, FLAT	2
20	578427	STANDOFF, TERMINAL	1
21	069762134	GROMMET, STRIP	1
22	200303019	WASHER, FLAT	2
23	200160017	NUT, LOCK	2
∇25	190905	KIT, CIRCUIT BREAKER	1
▲25	130781	CIRCUIT BREAKER, 80A	1
▲24	602168000	SCREW	2
▲26	069762005	WASHER, LOCK	2
▲27	575380	NUT, HEX	2
28	611110000	CIRCUIT BREAKER, 10A	1
29	069767121	EXTRUSION, FRAME	1
30	069767036	HINGE, SHROUD	1
31	019686055	SPACER	3
32	200031433	SCREW, M06X12MM	7
33	578728	WASHER, LOCK	7
34	069767178	BRACKET (R.H.)	1
35	600800	DECAL, SOLUTION CONTROL	1
36	602063000	DECAL, CAUTION, PAD ADJUSTMENT	1

∇= ASSEMBLY

▲= INCLUDED IN ASSEMBLY

DRIVE WHEEL GROUP



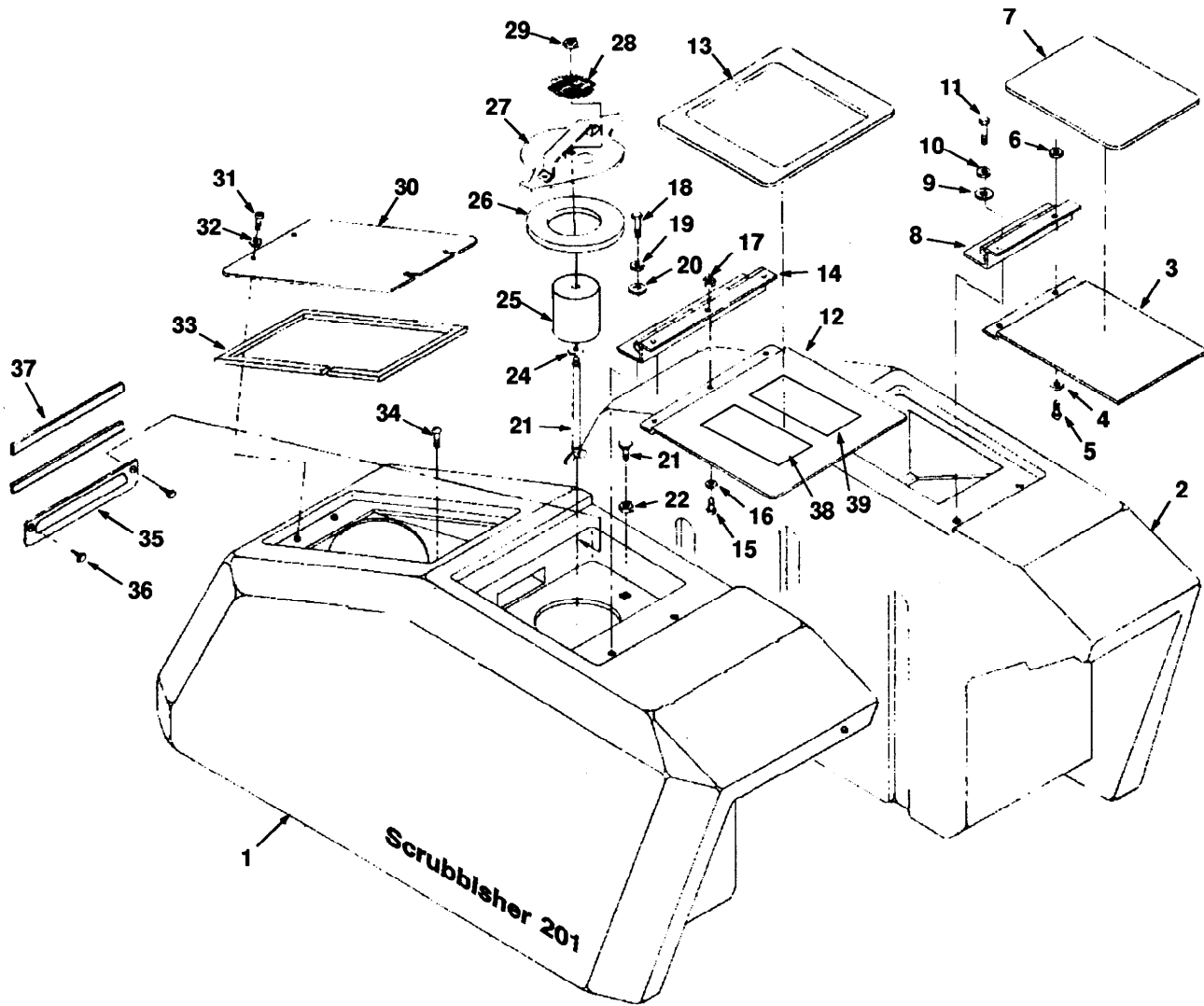
DRIVE WHEEL GROUP

Ref.	Part No.	Description	Qty.
▽ 1	621188000	MOTOR, .2HP	1
▲	602091000	BRUSH CARD, MOTOR	1
2	140546	NUT, NYLON LOCK	4
3	14880.5	WASHER, PLAIN	4
4	575037	CLIP, CABLE	1
5	621101000	SPROCKET	1
6	069767011	CHAIN	1
7	069767007	SPROCKET	1
8	069767005	SPACER	1
9	069767006	SPACER	1
10	579212	SCREW	4
11	069767003	WHEEL	1
12	140016	WASHER, LOCK	4
13	059650595	NUT	4
14	621238000	AXLE, .50X4.00	1
15	069764157	NUT, LOCK	2
16	200031438	SCREW, M06X20MM	2
17	140016	WASHER, LOCK	2
18	140012	WASHER, FLAT	2
19	069767002	BRACKET	2
20	602011000	SCREW, SET	1
21	069767161	SUPPORT, WHEEL	1
22	069760082	WASHER, PLAIN	4
23	140546	NUT, LOCK	4
24	602171000	WASHER, THRUST	4
25	602014000	SEAL, GREASE	4
26	069767004	SPANNER, WHEEL	2
27	602013000	BEARING, WHEEL	2
28	069767082	WHEEL	1
29	621311000	SERVICE KIT,WHEEL SHIM	2
30	621237000	AXLE, .50X3.38	1

SOLUTION TANK GROUP

Ref.	Part No.	Description	Qty.
1	600662	TANK, SOLUTION	1
2	140308	CLAMP, HOSE	2
3	160116	HOSE, DRAIN	2
4	069764075	FITTING, HOSE	2
5	578441	STRAP	2
6	630394	SLEEVE	2
7	621324	PLUG, DRAIN	2
8	621057000	CONNECTOR, TANKS	1
9	579210	WASHER, FLAT	4
10	140016	WASHER, LOCK	4
11	200031436	SCREW, M06X16MM	4
12	600660	TANK, RECOVERY	1
13	579143	SCREW	2
14	621256000	BRACKET, HOSE	1
15	069777441	NUT, LOCK	2
16	621221000	HOSE, VAC	1
17	140308	CLAMP, HOSE	1
18	621222000	ADAPTER, TANK HOSE	1
19	621269000	O-RING	1
20	621253000	NUT, VACUUM	1
21	621260000	GASKET, VACUUM	1
22	120318	DECAL, 201 SCRUB.	2
23	621239000	BRACKET, HAND GUARD	1
24	200301014	WASHER, FLAT	2
25	200351014	WASHER, LOCK	2
26	200031342	SCREW, M04X10	2
∇27	621267000	VAC. MOTOR, 3/4 HP	1
▲	621300000	BRUSH CARD, VAC. MTR	1
28	067762162	KIT, SERVICE, MTR BRHS	1
29	578424	GASKET, FOAM	1
30	621226000	SPACER, VAC FAN	4
31	621048000	BRACKET, VAC MOUNT	1
32	069760082	WASHER, PLAIN	2
33	140016	WASHER, LOCK	2
34	200031433	SCREW, M06X12MM	2
35	069762056	WASHER, PLAIN	4
36	069762005	WASHER, LOCK	4
37	621227000	SCREW, 10-24X1.5	4
38	621030000	HINGE, TANK	1
39	579210	WASHER, FLAT	5
40	140016	WASHER, LOCK	5
41	200031436	SCREW	5
42	160117	HOSE DRAIN	1
43	621044000	DECAL, MAINTENANCE	1

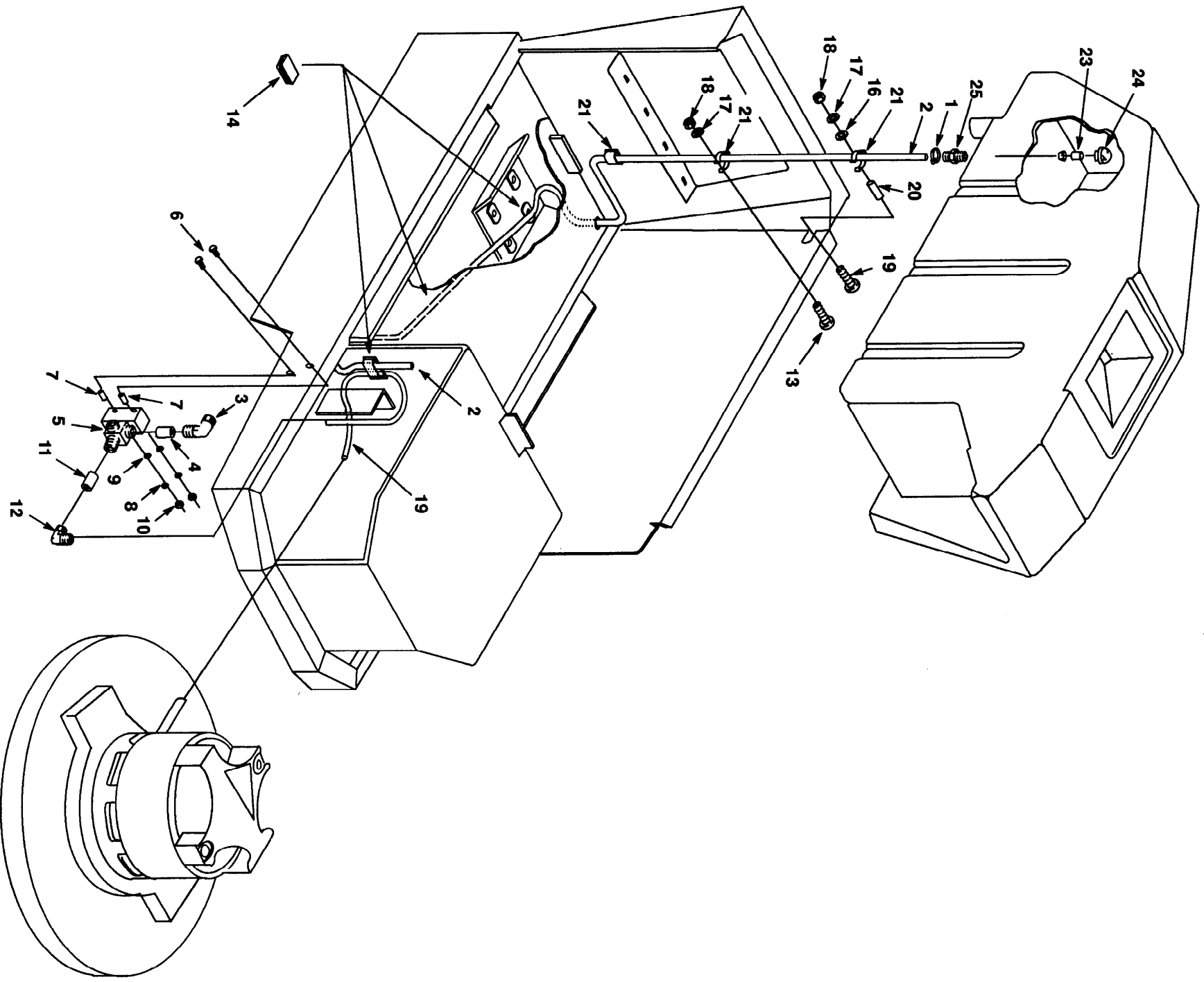
SOLUTION TANK GROUP



SOLUTION TANK GROUP

Ref.	Part No.	Description	Qty.
1	600660	TANK, RECOVERY	1
2	600662	TANK, SOLUTION	1
3	621121000	COVER, SOL. TANK	1
4	621288000	WASHER, PLAIN	2
5	621266000	SCREW, M4.0X10	2
6	200160014	NUT, LOCK	2
7	621199000	GASKET	1
8	621122000	HINGE	1
9	200301014	WASHER, FLAT	2
10	200351014	WASHER, LOCK	2
11	200031342	SCREW	2
12	621131000	COVER, REC. TANK	1
13	102571	GASKET	1
14	621132000	HINGE, REC. TANK LID	1
15	621266000	SCREW, M4.0X10	3
16	621288000	WASHER, PLAIN	3
17	200160014	NUT, LOCK	3
18	200031342	SCREW, M04X10	3
19	200351014	WASHER, LOCK	3
20	621288000	WASHER, PLAIN	3
21	621265000	STUD, WELD, M6X20MM	2
22	200101016	NUT, JAM	2
23	578411	ROD, FLOAT GUIDE	1
24	601076000	WASHER, FLAT	1
25	621432000	FLOAT	1
26	621143000	GASKET, REC. TANK	1
27	621141000	COVER, FLOAT	1
28	603009000	SCREEN, FILTER	1
29	579028	NUT, LOCK	1
30	621123NLG	COVER, REC. TANK	1
31	621266000	SCREW, M4.0X10	4
32	621288000	WASHER, PLAIN	4
33	621314000	SEAL, DOOR	1
34	579143	SCREW	2
35	621329000	DEFLECTOR, WATER	1
36	200452085	SCREW, SELF TAP	2
37	621143000	GASKET	2
38	621487	DECAL, DO/DONT, SCRUB	1
39	621488	DECAL, DO/DONT, BURNISH	1

PLUMBING GROUP

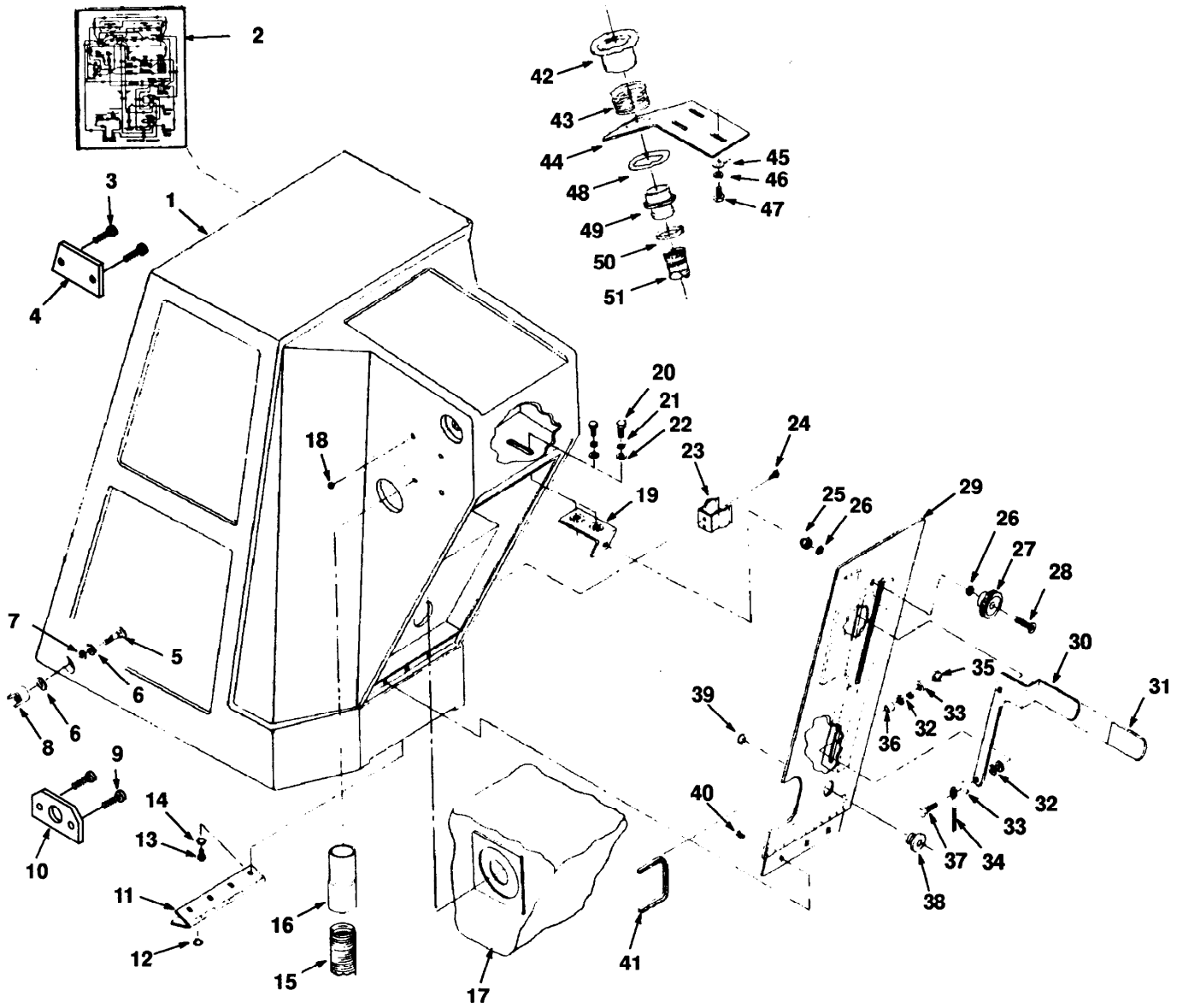


PLUMBING GROUP

Ref.	Part No.	Description	Qty.
1	140310	CLAMP, HOSE	1
2	621216000	HOSE, VINYL, .375DX.125"	1
3	621217000	FITTING, ELBOW	1
4	612104000	HOSE, CLEAR, 40MM	1
5	621062000	VALVE, SOLENOID	1
6	186002085	SCREW, 10-32X.75	2
7	019686055	SPACER	2
8	069762056	WASHER, FLAT	2
9	069762005	WASHER, LOCK	2
10	575380	NUT	2
11	612104000	HOSE, CLEAR, 40MM	1
12	621218000	FITTING, ELBOW	1
13	621214000	HOSE, VINYL, 700MM	1
14	578422	CLIP, CABLE	3
15	069767164	SCREW, CARRIAGE	5
16	140012	WASHER, FLAT	6
17	140016	WASHER, LOCK	6
18	059650595	NUT	6
19	612185000	SCREW, CARRIAGE	1
20	069764007	SPACER	1
21	069762155	CLAMP	2
22	578422	CLAMP	1
23	601105	SPACER, SOL. DRAIN	1
24	069760038	STRAINER, SOL. TANK	1
25	621162000	FITTING, MALE	1

PARTS LIST

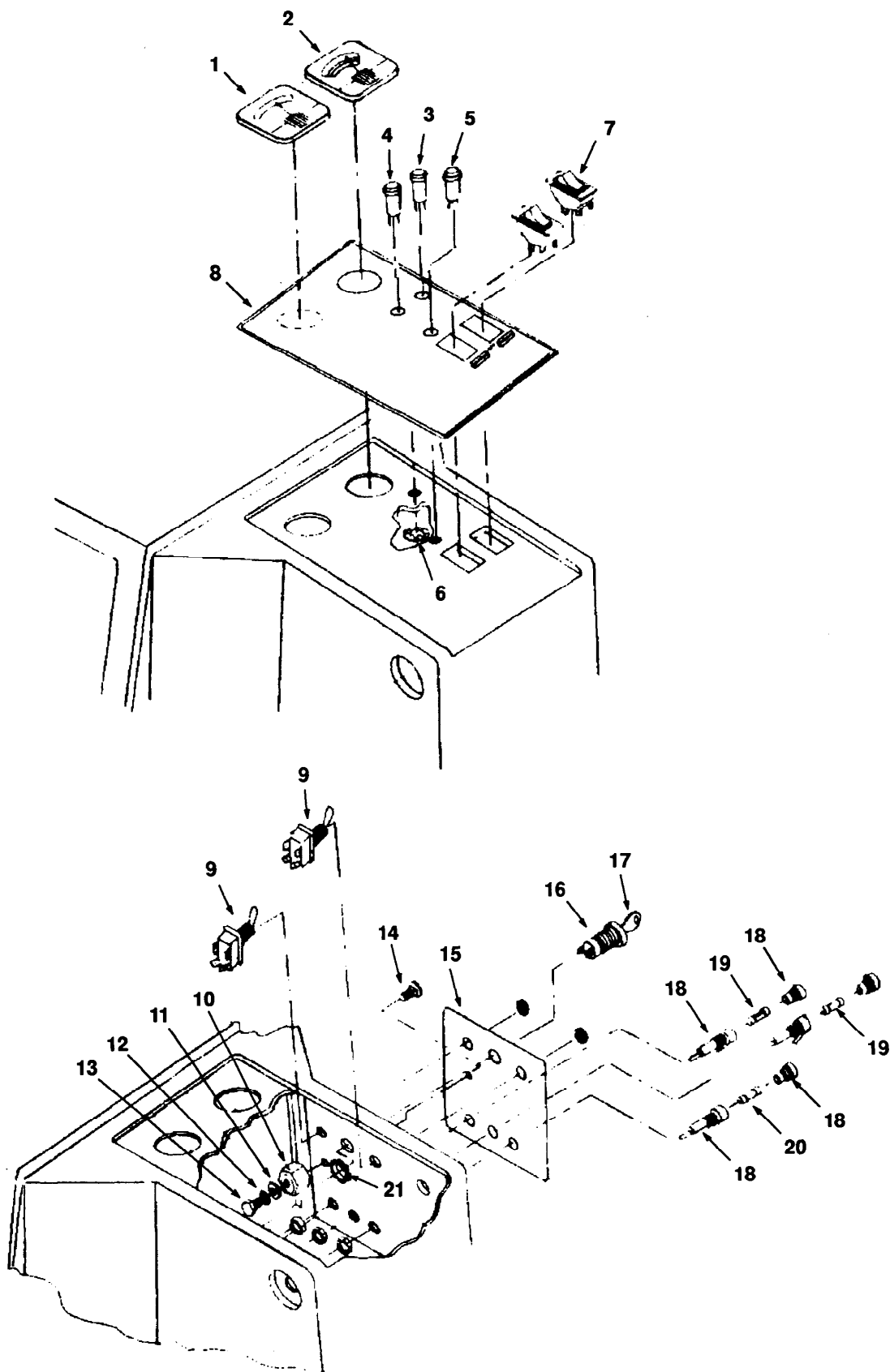
REAR SHROUD GROUP



REAR SHROUD GROUP

Ref.	Part No.	Description	Qty.
1	600770	SHROUD, REAR	1
2	621091000	DECAL, WIRING	1
3	621366000	SCREW	4
4	621365000	GUIDE, SHROUD	2
5	602068000	SCREW, 31-18X1.25	2
6	148805	WASHER, PLAIN	4
7	621325000	RING, RETAINER	2
8	602074000	NUT, THUMB	2
9	200058432	SCREW, STIFF PLATE	4
10	069767096	PLATE, REAR STIFFENER	4
11	069767036	HINGE, SHROUD	1
12	630446	WASHER, NYLON	3
13	200031433	SCREW, M06 X12MM	7
14	578728	WASHER, LOCK	7
15	069767187	HOSE, DUST CONTROL	1
16	069767189	CUFF, DUST CONTROL	1
17	069767155	BAG, FILTER CLOTH	1
	039707079	BAG, FILTER PAPER (10)	1
18	130164	PLUG, BUTTON	2
19	621229000	BRACKET, DOOR LOCK	1
20	200031436	SCREW, M06X12MM	2
21	140016	WASHER, LOCK	2
22	140012	WASHER, FLAT	2
23	573010000	CLIP, HOSE	1
24	200452085	SCREW	2
25	579028	NUT, LOCK	1
26	602139000	WASHER, FLAT	2
27	578439	NUT, THUMB	1
28	200031444	SCREW, M06X30MM	1
29	621231000	DOOR, REAR	1
30	621233000	HANDLE, SQ LIFT	1
31	621234000	GRIP, SQ HANDLE	1
32	573047000	WASHER, NYLON	7
33	579210	WASHER, FLAT	4
34	621345000	CABLE, SQUEEGEE LIFT	1
35	579028	NUT	2
36	621291000	SPACER	2
37	200031441	SCREW, M06X25MM	2
38	621235	BUSHING, CABLE	1
39	621236000	RING, RETAINING	1
40	200058432	SCREW, M06X10MM	3
41	069762134	GROMMET, STRIP, 3.2MM	1
42	621254000	FLANGE, FLOAT	1
43	621270000	SPRING, VAC	1
44	621258000	BRACKET, VAC	1
45	140016	WASHER, LOCK	3
46	140012	WASHER, PLAIN	3
47	200031433	SCREW, M06X12MM	3
48	621274000	WASHER, NYLON	1
49	621278000	FITTING, VAC	1
50	140308	CLAMP, HOSE	1
51	621202000	HOSE, SQUEEGEE	1

CONTROL CONSOLE GROUP

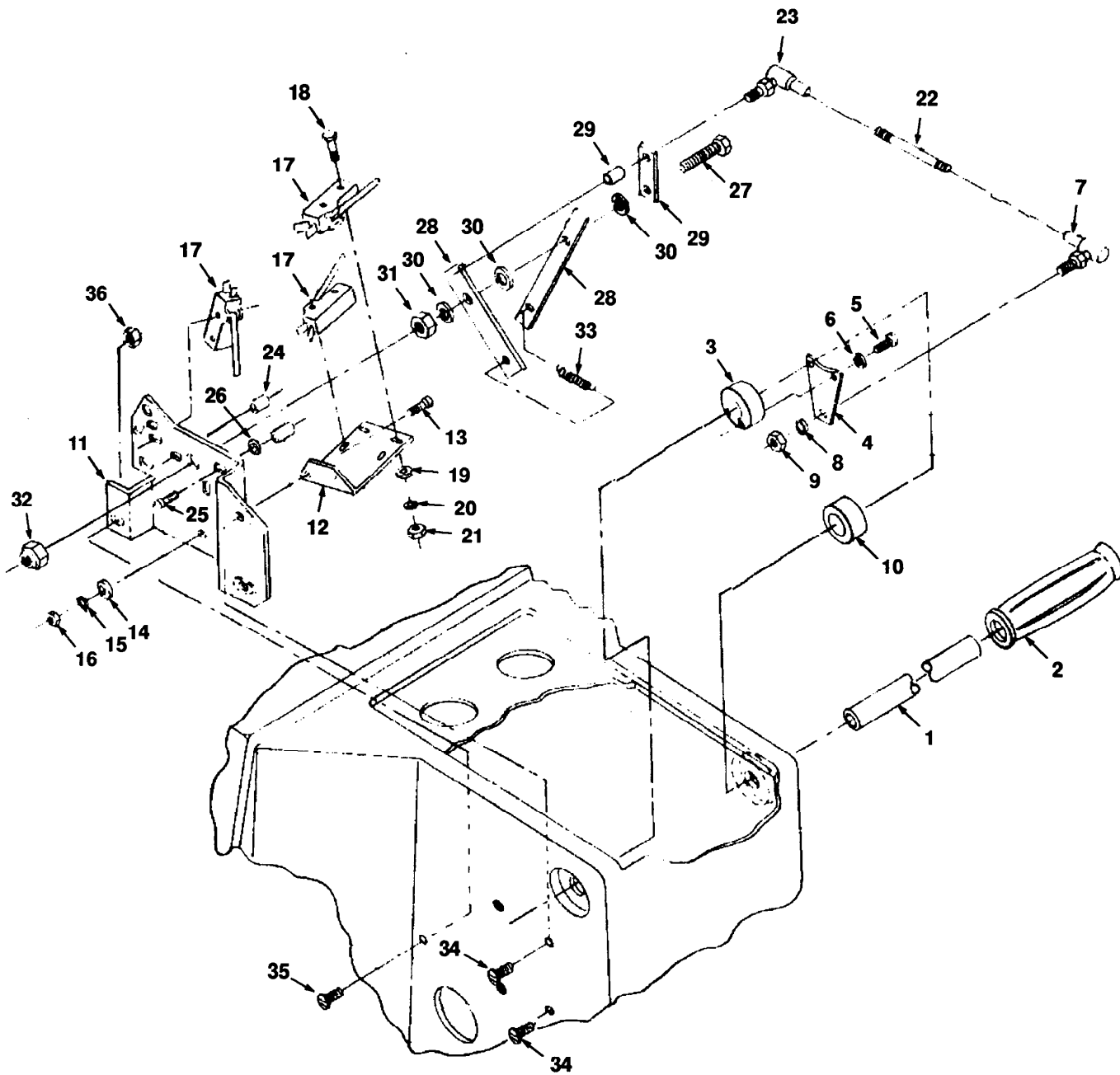


CONTROL CONSOLE GROUP

Ref.	Part No.	Description	Qty.
1	610026	METER, BATTERY	1
2	621451	METER, 100 AMP	1
3	611147000	LIGHT, PILOT, 32V, GREEN	1
4	611148000	LIGHT, BRUSH 32V AMBER	1
5	611149000	LIGHT, PILOT, 32V, BLUE	1
6	602140000	WASHER, RETENTION	3
7	039705081	SWITCH, ROCKER, 15A	2
8	600576	DECAL, CONSOLE	1
9	059650152	SWITCH, TOGGLE	2
10	578427	STANDOFF, TERMINAL	1
11	579210	WASHER, FLAT	1
12	140016	WASHER, LOCK	1
13	069762115	SCREW, .25-20X.50"	1
14	069767164	SCREW, .25-20X.50"	1
15	600801	DECAL, SPEED, & FUSE	1
16	612462	SWITCH, KEYLOCK	1
17	069762236	KEY, REPLACEMENT	1
18	578418	FUSEHOLDER, BAYONET	3
19	069760639	FUSE, 15AMP	2
20	601078000	FUSE, 25AMP	1
21	621437000	BRACKET	1

PARTS LIST

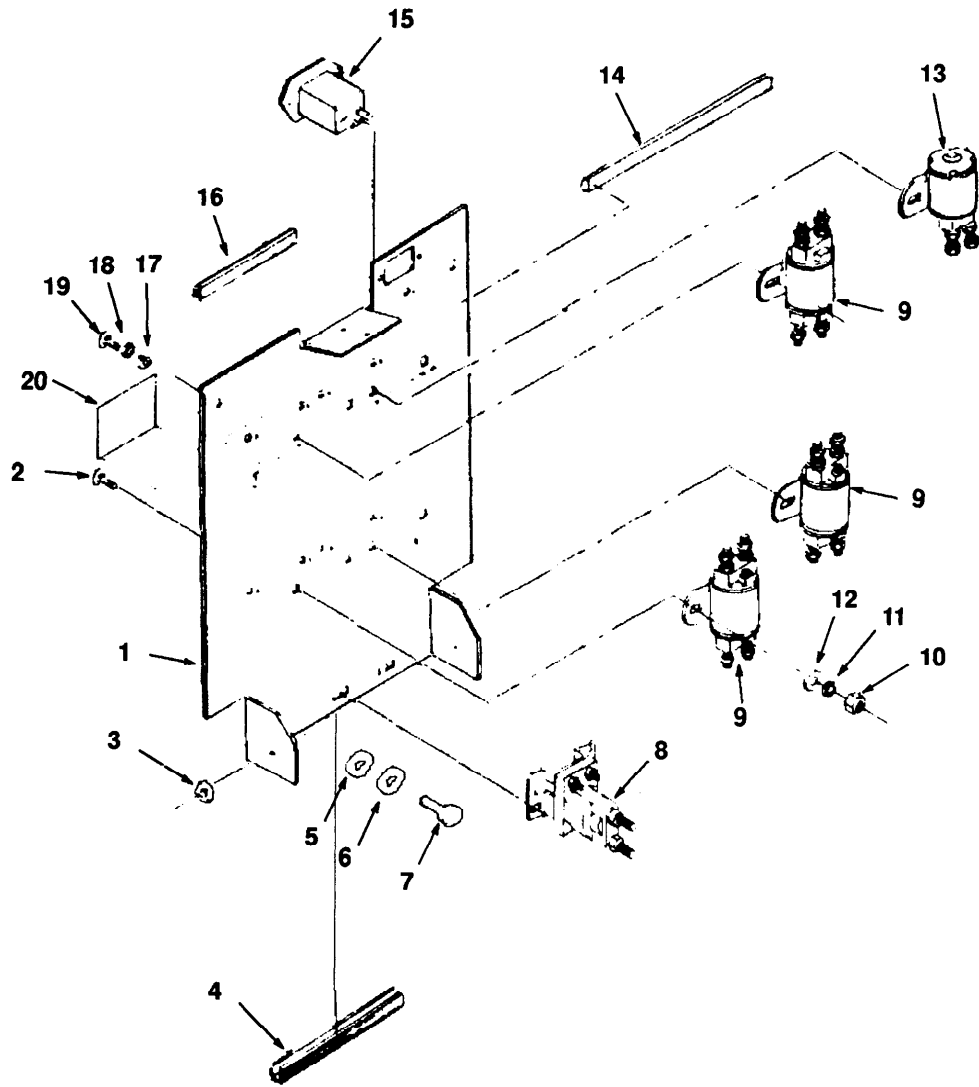
SPEED CONTROL GROUP



SPEED CONTROL GROUP

Ref.	Part No.	Description	Qty.
1	069764062	BAR, HANDLE	1
2	630190	GRIP, HANDLE	2
3	069764005	COLLAR, SWITCH	1
4	069767026	PLATE, HANDLEBAR	1
5	069764190	SCREW, M03X16	2
6	200351012	WASHER, LOCK	2
7	069767070	JOINT, BALL	1
8	069762005	WASHER, LOCK	1
9	575380	NUT, HEX	1
10	630186	COLLAR, SHAFT	1
11	621058000	BRACKET, SPEED CNTRL	1
12	069767057	BRACKET, SWITCH	1
13	579259	SCREW	2
14	069764054	WASHER, FLAT	2
15	140023	WASHER, LOCK, INT	2
16	200102014	NUT	2
17	069764009	SWITCH, SNAP, 25A	3
18	069764002	SCREW, 6-32X1.00	6
19	069764053	WASHER, PLAIN	8
20	069764054	WASHER, LOCK	6
21	069762159	NUT	6
22	069767058	ROD, SPEED CONTROL	1
23	069767070	JOINT, BALL	1
24	621440000	SPACER, NYLON	3
25	186002085	SCREW, 10-32X.75	2
26	140018	WASHER, STAR	2
27	200032496	SCREW, M08X35MM	1
28	069767066	SCISSOR, LINK	2
29	621059000	STRIP, ARM	1
30	630446	WASHER, NYLON	3
31	200640017	NUT	1
32	200160017	NUT, LOCK	1
33	069764069	SPRING	1
34	069764060	SCREW, .31-18X.75	3
35	602234	SCREW, .31-18X1.00	1
36	140546	NUT, LOCK	1

COMPONENT PANEL GROUP



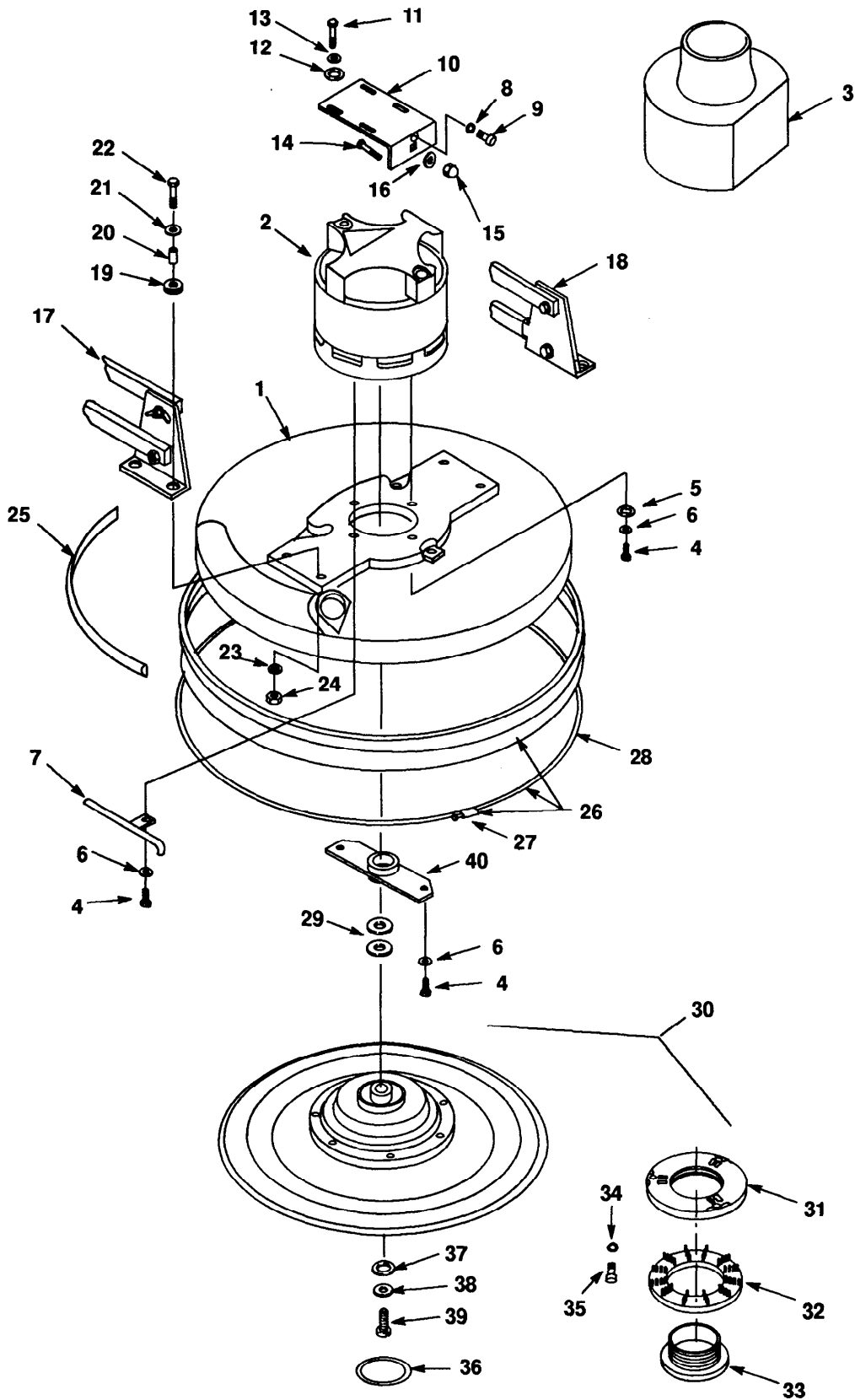
COMPONENT PANEL GROUP

Ref.	Part No.	Description	Qty.
1	069767033	PANEL, ELECTRICAL	1
2	069767164	SCREW, .25-20X.50"	10
3	019686055	SPACER	2
4	602125000	EDGING, PLASTIC	1
5	630446	WASHER, NYLON	2
6	579210	WASHER, FLAT	2
7	200031438	SCREW, M06X20MM	2
8	611157000	CONTRACTOR, SPNO, 100A	1
9	069760440	CONTRACTOR, SPDT, 100A	3
10	059650595	NUT	10
11	140016	WASHER, LOCK	10
12	200303019	WASHER, FLAT	10
13	621381000	CONTRACTOR, SPNO, 200A	1
14	621310000	BUMPER, BATTERY	1
15	630143	METER, HOUR	1
16	621295000	EDGING, PLASTIC	1
17	579210	WASHER FLAT	2
18	578728	WASHER, LOCK	2
19	200031432	SCREW, M06X10	2
20	630422	DECAL, CAUTION	1

HEAD LINKAGE GROUP

Ref.	Part No.	Description	Qty.
1	069767012	LINKAGE, UPPER	2
2	621207000	SPACER	1
3	200031501	SCREW,M08X50	1
4	200160017	NUT, LOCK	2
5	200032496	SCREW,M08X35MM	1
6	630447	WASHER, NYLON	4
7	14880.5	WASHER, PLAIN	2
8	069760416	BEARING, JOURNAL	10
9	069760417	SLEEVE	2
10	069767013	LINKAGE, LOWER	2
11	200031496	SCREW, M08X35MM	2
12	200160017	NUT, LOCK, M08	2
13	630447	WASHER, NYLON	4
14	069760417	SLEEVE	2
15	14880.5	WASHER, PLAIN	1
16	069767056	BRACKET, SWITCH	1
17	069764009	SWITCH, SNAP, 25A	1
18	069764002	SCREW,06-32X1.00	2
19	069764054	WASHER, LOCK	2
20	069764053	WASHER, PLAIN	2
21	069762159	NUT, 06-32	2
22	621177000	ARM, CROSS	1
23	630447	WASHER, NYLON	2
24	069767158	SCREW, 1/2"-20X5	1
25	069760091	WASHER, PLAIN	1
26	069767162	NUT, .50-20	1
27	069767148	PLATE	1
28	069767091	END, ROD	2
29	069767171	ROD, MOUNTING	2
30	579028	NUT, LOCK, M06	2
31	069767128	SPRING	2
32	621178000	BRACKET	1
33	200031494	SCREW,M08X30MM	2
34	069760417	SLEEVE	2
35	630447	WASHER, NYLON	4
36	14880.5	WASHER, PLAIN	4
37	200160017	NUT, LOCK, M08	2
38	602027000	BOLT,EYE	1
39	602009000	PIN, HEADLESS	1
40	578421	PIN, COTTER	2
41	602028000	SPRING, ADJUSTMENT	1
42	602029000	KNOB, ADJUSTING	1
43	602046000	SCREW, SET	1
44	140515	NUT, LOCK, NYLON	1
45	621179000	BRACKET, LEFT	1
46	621180000	BRACKET, RIGHT	1
47	200031496	SCREW,M08X35MM	2
48	630447	WASHER, NYLON	4
49	14880.5	WASHER, PLAIN	2
50	200160017	NUT, LOCK, M08	2
51	069760417	SLEEVE	2
52	200031496	SCREW, M08X50	2
53	14880.5	WASHER, PLAIN	4
54	630447	WASHER, NYLON	6
55	069767177	SLEEVE	2
56	200160017	NUT, LOCK, M08	2
57	140153	SPACER	1

PAD DRIVER GROUP

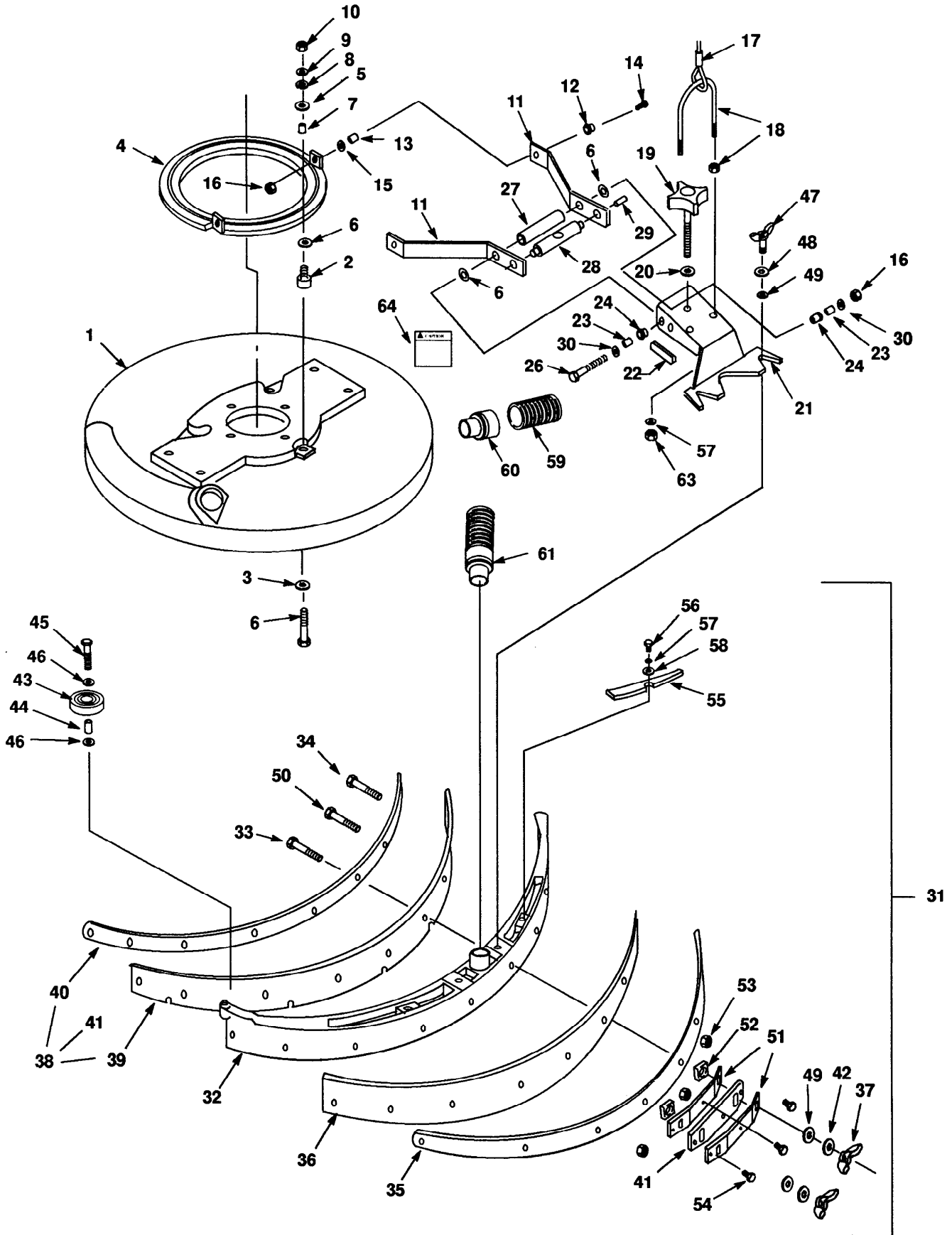


PAD DRIVER GROUP

Ref.	Part No.	Description	Qty.
1	621022000	HEAD, SCRUBBER	1
2	621370000	MOTOR	1
3	100834	COVER, MOTOR	1
4	019686107	SCREW, .38-16X.75"	4
5	140013	WASHER, PLAIN	1
6	140017	WASHER, LOCK	4
7	621157000	TUBE, SOLUTION FEED	1
8	140016	WASHER, LOCK	1
9	200070432	SCREW, STOP	1
10	621186000	BRACKET, HEAD STOP	1
11	200031438	SCREW, M06X25MM	4
12	019680127	WASHER, PLAIN	4
13	578728	WASHER, LOCK	4
14	602079000	SCREW, .38-16X.63"	1
15	602080000	NUT, ACORN	1
16	140017	WASHER, LOCK	1
17	621179000	BRACKET, HEAD (LT)	1
18	621180000	BRACKET, HEAD (RT)	1
19	602055000	GROMMET	4
20	602056000	SPACER	4
21	069764631	WASHER, FLAT	4
22	200031494	SCREW, M08X30MM	4
23	14880.5	WASHER, PLAIN	4
24	200160017	NUT, LOCK, M08	4
25	611216000	STRIP, SKID 1.5M	1
26	621474	ASM., SKIRT & BAND	1
27	602044000	FASTENER, ADJ. SKIRT	1
28	069767094	BAND, FASTENING	1
29	621471	SPACER	2
∇30	621340000	ASM., PAD DRIVER	1
▲31	621326000	CENTERLOCK	1
▲32	572084000	RING, PAD LOCK	1
▲33	621327000	CENTERLOCK	1
▲34	069760097	WASHER, PLAIN	3
▲35	186002062	SCREW, #08-32X.38	3
▲36	572061000	O-RING, BLOCK HUB	1
37	069764631	WASHER, FLAT	1
38	140015	WASHER, LOCK	1
39	602173000	SCREW	1
40	601154	SHIELD, BEARING	1

∇= ASSEMBLY
 ▲= INCLUDED IN ASSEMBLY

SQUEEGEE GROUP

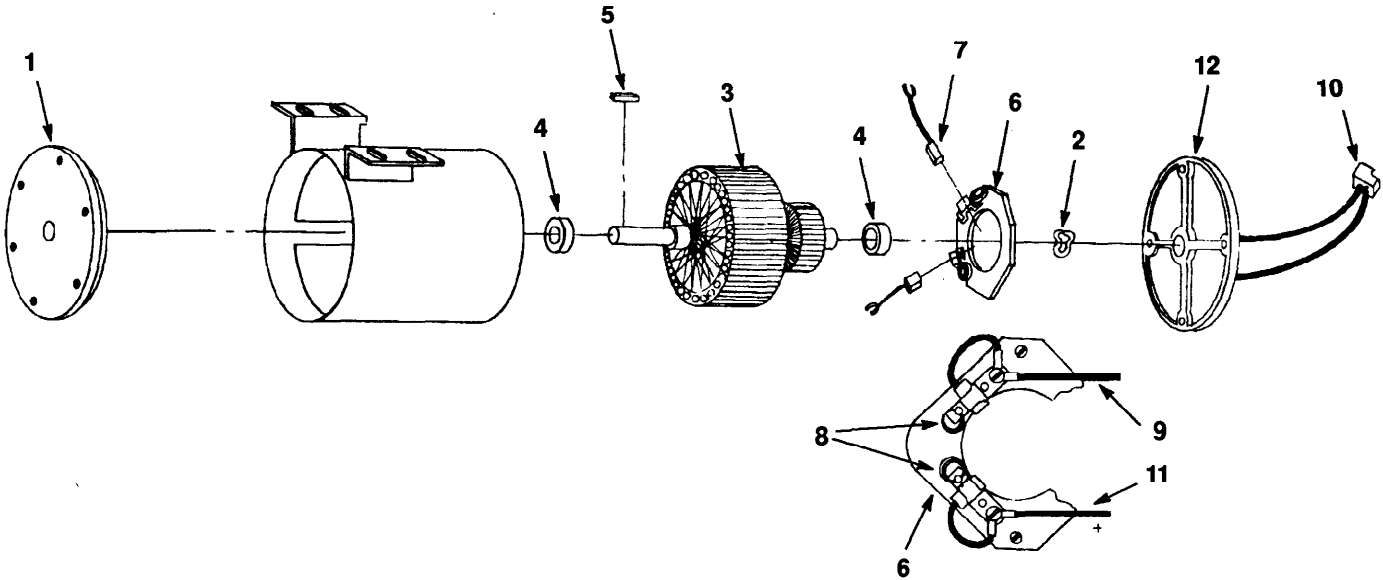


SQUEEGEE GROUP

Ref.	Part No.	Description	Qty.
1	621022000	HEAD, SCRUBBER	1
2	621125000	INSULATION, VIBRATION	3
3	140016	WASHER, LOCK	3
4	621112000	PLATE, PIVOT	1
5	621289000	WASHER, NYLON	6
6	069762115	SCREW, .25-20X.5	3
7	621291000	SPACER	3
8	621290000	WASHER, WAVE	3
9	579210	WASHER, FLAT	3
10	059650595	NUT, .25-20	3
11	621196000	YOKE, SQUEEGEE	2
12	630095	BEARING, FLANGE	2
13	621291000	SPACER	2
14	200031441	SCREW, M06 X 25MM	2
15	621289000	WASHER, NYLON	2
16	579028	NUT, LOCK	2
17	621345000	CABLE, SQUEEGEE LIFT	1
18	621349000	U-BOLT	1
19	621350000	KNOB, TIP ADJ.	1
20	602139000	WASHER, FLAT	1
21	621124000	BRACKET, SQUEEGEE	1
22	621351000	EDGING, PLASTIC	2
23	621291000	SPACER	2
24	630095	BEARING, FLANGE	2
25	621289000	WASHER, NYLON	2
26	921690000	SCREW, M06 X 90MM	2
27	621255000	SPACER	1
28	621348000	ARM, CROSS, TIP ADJ.	1
29	602046000	SCREW, SET, NYLON	1
30	579210	WASHER, FLAT	2
∇31	621374000	ASM., SQUEEGEE	1
▲32	621114000	SQUEEGEE	1
▲33	621334000	SCREW, .31-18X3.25"	2
▲34	069767191	SCREW, .31-18X2.00"	4
▲35	621118000	STRIP, RETAINER, REAR	1
▲36	621017000	BLADE, SQ REAR	1
▲37	621206000	NUT, WING	10
▲38	621337000	∇KIT, SQUEEGEE BLADE	1
▲39	621116000	▲BLADE, SQ FRONT	1
▲40	621117000	▲STRIP, RETAINER	1
▲41	621333000	▲BLADE, SQUEEGEE ADJ.	1
▲42	069760087	WASHER, PLAIN	10
▲43	069320051	WHEEL, SQUEEGEE	2
▲44	069320054	SPACER	2
▲45	621284000	SCREW, .31-18X1.25	2
▲46	200651019	WASHER, FLAT	4
▲47	069764149	SCREW, .50-13X1.00"	2
▲48	069760091	WASHER, PLAIN	2
▲49	059650290	WASHER, NYLON	1
▲50	621130000	SCREW, .31-18X2.50"	2
▲51	621332000	PLATE, SQUEEGEE ADJ.	2
▲52	621331000	NUT, SQUEEGEE	2
▲53	069762303	NUT, LOCK	3
▲54	200607436	SCREW, M06X16MM	3
▲55	621246000	WEIGHT	2
▲56	140208	SCREW, .25	2
▲57	140016	WASHER LOCK, .25	2
▲58	069760082	WASHER FLAT, .25	2
59	069767187	HOSE, DUST CONTROL	1
60	621106000	CUFF, HOSE DUST CTRL	1
61	621202000	HOSE, SQUEEGEE	1
62	621345000	CABLE, SQUEEGEE LIFT	1
63	059650595	NUT, LOCK	2
64	602040000	DECAL, CAUTION, HANDS	1

PARTS LIST

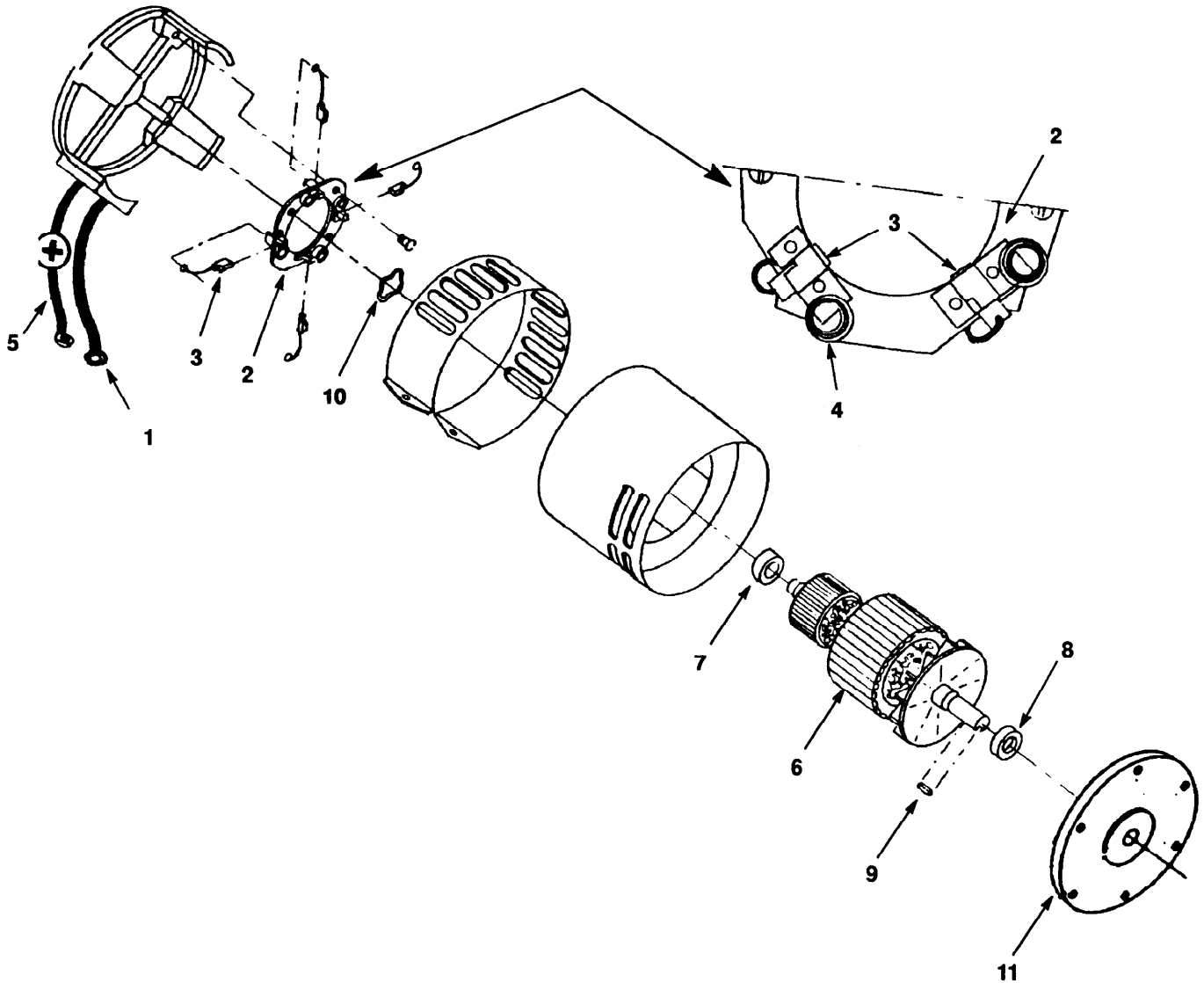
DRIVE MOTOR BREAKDOWN



Ref.	Part No.	Description	Qty.
1	602086000	BRACKET, B. E.	1
2	602087000	WASHER, HELICAL	1
∇3	602090000	ASM., ARMATURE	1
▲4	602088000	BEARING	2
5	069764176	KEY, SHAFT	1
∇6	602091000	ASM., BRUSH BOARD	1
▲7	602130000	BRUSH, CARBON	2
▲8	602131000	SPRING, BRUSH	SET/2
9	602093000	LEAD, ASSEMBLY (NEG)	1
10	602094000	CONNECTOR, HOUSING	1
11	602095000	LEAD, ASSEMBLY (POS)	1
12	602092000	BRACKET, COMMUTATOR	1

∇= ASSEMBLY
 ▲= INCLUDED IN ASSEMBLY

PAD MOTOR BREAKDOWN

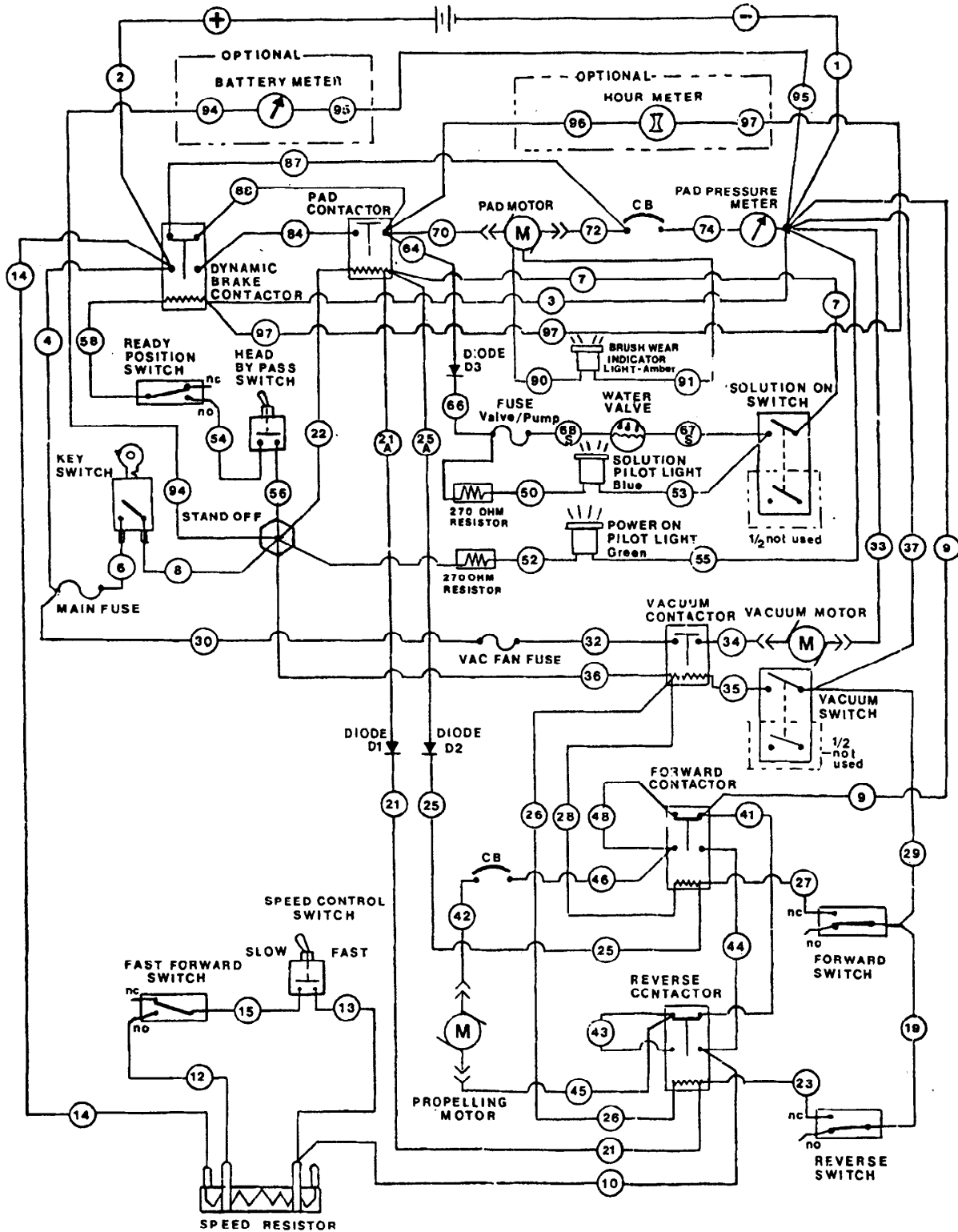


Ref.	Part No.	Description	Qty.
1	621370000	MOTOR, COMPLETE	1
	621362000	LEAD, ASSEMBLY	2
∇2	621300000	ASM., BRUSH BOARD	1
▲3	621478	BRUSH, CARBON	SET/4
▲4	621307000	SPRING, BRUSH	SET/4
5	621358000	KIT, SERVICE WIRE LEADS	1
∇6	621301000	ASM., ARMATURE	1
▲8	140124	BEARING, BOTTOM	1
▲7	602088000	BEARING, TOP	1
9	602010000	KEY, SHAFT	1
10	602087000	HELICAL WASHER	1
11	019683016	BELL END, LOWER	1

∇= ASSEMBLY
 ▲= INCLUDED IN ASSEMBLY

ELECTRICAL DIAGRAM

1616VOLT BATTERIES (36VDC)



Part No.	Description
069767101	Wire Harness Batteries (Wires 1, 2, 3)
621191000	Main Wire Harness
069767183	Wire, Pad Motor (Wire #70)
069767184	Wire, Jumper (Wire #84)
069764206	Diode Replacement