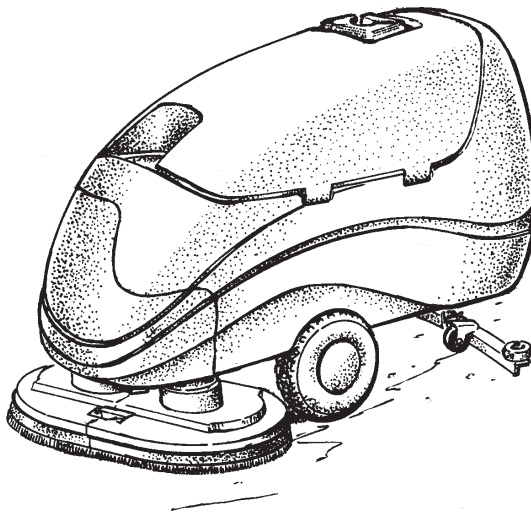

Clarke®

Division of
ALTO

Operator's Manual



ENCORE
S28XP
S33XP
S38XP

U.S. Patent No. 6,105,192; No. 5,383,251; No. 6,557,207

READ THIS BOOK

This book has important information for the use and safe operation of this machine. Failure to read this book prior to operating or attempting any service or maintenance procedure to your Clarke machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If your operator(s) cannot read English, have this manual explained fully before attempting to operate this machine.

Si Ud. o sus operadores no pueden leer el Inglés, se hagan explicar este manual completamente antes de tratar el manejo o servicio de esta máquina.

All directions given in this book are as seen from the operator's position at the rear of the machine.

For new books write to: Clarke®, 2100 Highway 265, Springdale, Arkansas 72764.

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OPERATOR SAFETY INSTRUCTIONS



WARNING



AVERTISSEMENT



ADVERTENCIA



DANGER:

Failure to read and observe all **DANGER** statements could result in severe bodily injury or death. Read and observe all **DANGER** statements found in your Owner's Manual and on your machine.



WARNING:

Failure to read and observe all **WARNING** statements could result in injury to you or to other personnel; property damage could occur as well. Read and observe all **WARNING** statements found in your Owner's Manual and on your machine.



CAUTION:

Failure to read and observe all **CAUTION** statements could result in damage to the machine or to other property. Read and observe all **CAUTION** statements found in our Owner's Manual and on your machine.



DANGER:

Failure to read the Owner's Manual prior to operating or attempting any service or maintenance procedure to your Clarke machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If your operator(s) cannot read English, have this manual explained fully before attempting to operate this machine.



DANGER:

Operating a machine that is not completely or fully assembled could result in injury or property damage. Do not operate this machine until it is completely assembled. Inspect the machine carefully before operation.



DANGER:

Machines can cause an explosion when operated near flammable materials and vapors. Do not use this machine with or near fuels, grain dust, solvents, thinners, or other flammable materials. This machine is not suitable for picking up hazardous dust.



DANGER:

Lead acid batteries generate gases which can cause an explosion. Keep sparks and flames away from batteries. Do not smoke around the machine. Charge the batteries only in an area with good ventilation. Make sure that you unplug the AC charger from the wall outlet before disconnecting from the machine.



DANGER:

Working with batteries can be dangerous! Always wear eye protection and protective clothing when working near batteries. Remove all jewelry. Do not put tools or other metal objects across the battery terminals, or the tops of the batteries.



DANGER:

Using a charger with a damaged power cord could result in an electrocution. Do not use the charger if the power cord is damaged.



WARNING:

Operating this machine from anywhere other than the back of the machine could result in injury or damage. Operate this machine only from the rear.











WARNING:

This machine is heavy. Get assistance before attempting to transport or move it. Use two able persons to move the machine on a ramp or incline. Always move slowly. Do not turn the machine on a ramp. If operating machine on a gradient over 2%, do not stop, turn or park. Read the "Procedures For Transporting" in this manual before transporting.



WARNING:

Machines can topple over if guided over the edges of stairs or loading docks and cause injury or damage. Stop and leave this machine only on a level surface. When you stop the machine, turn the key "OFF". Set the parking brake.

-  **WARNING:** Maintenance and repairs performed by unauthorized personnel could result in damage or injury. Maintenance and repairs must be performed by authorized Clarke personnel only.
-  **WARNING:** Any alterations or modifications of this machine could result in damage to the machine or injury to the operator or other bystanders. Alterations or modifications not authorized by the manufacturer voids any and all warranties and liabilities.
-  **WARNING:** Electrical components of this machine can "short-out" if exposed to water or moisture. Keep the electrical components of the machine dry. Wipe the machine down after each use. For storage, keep the machine in a dry building.
-  **WARNING:** Operating a machine without observing all labels and instructional information could result in injury or damage. Read all machine labels before attempting to operate. Make sure all of the labels and instructional information are attached or fastened to the machine. Get replacement labels and plates from your Clarke distributor.
-  **WARNING:** Wet floor surfaces can be slippery. Water solutions or cleaning materials used with this type of machine can leave wet areas on the floor surface. These areas can cause a dangerous condition for the operator or other persons. Always put "Caution" signs around/near the area you are cleaning.
-  **WARNING:** Improper discharge of waste water may damage the environment and be illegal. The United States Environmental Protection Agency has established certain regulations regarding discharge of waste water. Also, city and state regulations regarding this discharge may be in your area. Understand and follow the regulations in your area. Be aware of the environmental hazards of chemicals that you dispose.
-  **CAUTION:** Use of this machine to move other objects or to climb on could result in injury or damage. Do not use this machine as a step or furniture. Do not ride on this machine.
-  **CAUTION:** Your machine warranty will be voided if anything other than genuine Clarke parts are used on your machine. Always use Clarke parts for replacement.

Introduction & Machine Specifications

Introduction & Machine Specifications

Clarke's newly designed Encore 38XP, 33XP and 28XP automatic scrubbers are efficient and superior floor cleaning machines. The Encore 38XP uses two brushes or pads to scrub a path 38 inches wide. The Encore 33XP uses two brushes or pads to scrub a path 33 inches wide. The Encore 28XP uses two brushes or pads to scrub a path 28 inches wide. A squeegee wipes the floor while the vacuum motor removes the dirty solution from the floor - all in one pass.


The Encore 38XP, 33XP and 28XP automatic scrubbers come complete with six - 6 volt batteries, five battery connector cables, one battery cable assembly, one battery charger, either two brushes or two pad drivers, and one operator's manual.

SPECIFICATIONS:

| Model | S38XP-00691A | S33XP-00671A | S28-00651A |
|-------------------------------------|---|---|---|
| Motor, Vac | 1 HP (.67kw) three stage tangential discharge | 1HP (.67kw) three stage tagential discharge | 1HP (.67kw) three stage tagential discharge Power |
| Supply | 36 volt (6-6V batteries) 250AH, 330AH, or 370AH | 36 volt (6-6V batteries) 250AH, 330AH, or 370AH | 36 volt (6-6V batteries) 250AH, 330AH, or 370AH |
| Solution Tank | 30 gallon (114 liter) | 30 gallon (114 liter) | 30 gallon (114 liter) |
| Recovery Tank | 30 gallon (114 liter) | 30 gallon (114 liter) | 30 gallon (114 liter) |
| Motors, Brush (2) | 1 hp PM (.74kw) | .75 hp PM (.56kw) | .75 hp PM (.56kw) |
| Motor Traction | .50 hp PM (.37kw) | .50 hp PM (.37kw) | .50 hp PM (.37kw) |
| Brushes (2) | 19 inch (48cm) w/.5" (1.5cm) overlap | 17 inch (43cm) w/1" (3 cm) overlap | 14 inch (36cm) w/.5" (1.5 cm) overlap |
| Brush Speed | 200 rpm | 200 rpm | 200 rpm |
| Brush Pressure | Variable 150 lbs. - 200 lbs. | Variable 150 lbs. - 200 lbs. | Variable 150 lbs. - 200 lbs. |
| Speed, Forward | Variable to 230 ft./min. | Variable to 230 ft./min. | Variable to 230 ft./min. |
| Speed, Reverse | Variable to 180 ft./min. | Variable to 180 ft./min. | Variable to 180 ft./min. |
| Charger | 36V, 25A, 115V/60hz | 36V, 25A, 115V/60hz | 36V, 25A, 115V/60hz |
| Length | 66 inches (168cm) | 63 inches (160cm) | 62.5 inches (159cm) |
| Width - Machine | 28 inches (71cm) | 28 inches (71 cm) | 28 inches (71 cm) |
| Height | 44 inches (112cm) | 44 inches (112 cm) | 44 inches (112 cm) |
| Cleaning Rate | 42,000 sq ft/hr (3,901 sq. m/hr) | 35,000 sq ft/hr (3,252 sq. m/hr) | 29,7000 sq ft./hr (2,750 sq ft./hr) |
| Cleaning Swath | 37.5 inch (95.3cm) | 33 inch (84cm) | 28, inch (70cm) |
| Grade Cleaning | 6° Incline | 6° Incline | 6° Incline |
| Weight w/Batteries (330AH) | 1038 lbs. 471kg | 1028 lbs. 467kg | 1018 lbs. 462kg |
| Shipping Weight w/batteries (330AH) | 1341 lbs. 608kg | 1331 lbs. 604kg | 1321 lbs. 599kg |

PROCEDURES FOR TRANSPORTING

How To Put The Machine In A Van Or Truck

 **WARNING:** The machine is heavy. Make sure you use two able persons to assist the machine in climbing the ramp.

1. Make sure the loading ramp is at least eight (8) feet long, and strong enough to support the machine.
2. Make sure the ramp is clean and dry.
3. Put the ramp in position.
4. Remove squeegee assembly, brush housings, & brushes or pad drivers before loading.
5. Turn key switch "ON".
6. Align the machine on a level surface ten (10) feet in front of the ramp.
7. Put the traverse speed switch in the "HI" position.
8. Push the control handles toward the machine all the way.
9. Push the machine to the top of the ramp.
10. Turn the key switch "OFF".
11. Fasten the machine to the vehicle.

How To Remove The Machine From A Van Or Truck

1. Make sure there are no obstructions in the area.
2. Make sure the unloading ramp is at least eight (8) feet long and strong enough to support the machine.
3. Make sure the ramp is clean and dry.
4. Put the ramp in position.
5. Unfasten the machine.

 **WARNING:** The machine is heavy. Make sure you use two able persons to assist in moving the machine down the ramp.

6. Turn the key switch "ON".
7. Carefully and slowly, pull the machine to the top of the ramp.
8. Put the traverse speed switch in the "HI" position.
9. As the machine begins to travel down the ramp, push the control handles toward the machine to maintain a slow downward speed.
10. Replace squeegee assembly, brush housings, & brushes or pad drivers after the machine is unloaded and ready to use.

SYMBOLS USED ON ENCORE S38XP, S33XP, S28XP



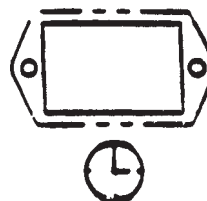
Warning



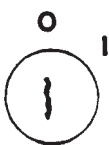
Battery Meter



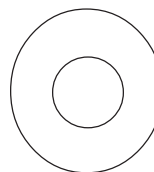
Power



Hour Meter



On/Off Key Switch



Increase Brush Pressure



Traverse Speed Control



Solution Control



Warning Label



Brush Up/Down

MACHINE CONTROL PANEL

Key Switch (See Figure #1, Item "A")

The key switch turns "ON" the power to the control panel. "0" is "OFF" and "1" is "on".

Traverse Speed Switch (See Figure #1, Item "B")

The speed control varies from low to high speed. To increase the speed, turn the knob to the right. To decrease the speed, turn the knob to the left.

Brush Up/Down Switch (See Figure #1, Item "C")

The brush switch has two positions: "Up" positions the brushes up; "Down" positions the brushes on the floor. The brush motors start when the brushes are down.

Increase Brush Pressure Switch (See Figure #1, Item L)

This switch is used to increase the brush pressure. Increased brush pressure may be required when stripping or cleaning heavily soiled floors. To increase brush pressure, first lower the brushes by pressing the brush up/down switch (Item "C") to the down position. This will lower the brushes to the normal scrub position. To increase brush pressure, press and hold the switch (Item "L") until the desired brush pressure is reached or the brush deck stops moving downward. To reposition the brush pressure to normal scrub, press the brush up/down switch (Item "C") to the up position and after the brush deck is completely raised, then return the switch to the down position for normal scrub.

Solution Control Knob (See Figure #1, Item "D")

The solution control knob regulates the flow of cleaning solution to the floor. To increase the flow turn the knob clockwise. To decrease the flow, turn the knob counter-clockwise.

Control Handle (See Figure #1, Item "E")

The control handle is located at the rear of the machine. It controls the direction of the machine. Push forward to go forward. (See Figure #3, page 10). Pull back to move in reverse. (See Figure #4, page 10).

Circuit Breakers (See Figure #1, Item "F"- "J")

The circuit breaker reset buttons are located on the rear cover, below the control handle. The breakers are located as follows: Item F & G - Brush Motors (35A); Item H - Traverse Motor (30A); Item I - Vac Motor (25A); Item J - Actuator Motor, Brush Head (5A)

If a circuit breaker trips, determine which motor is not operating and turn the key switch "OFF". Wait five minutes and push the reset button back in. Turn the key switch "ON", and try again. An authorized service person should be contacted if the breaker trips again.

Hour Meter (See Figure #1, Item "K")

The hour meter indicates the number of hours the machine has operated. It runs only when the machine is moving forward or reverse.

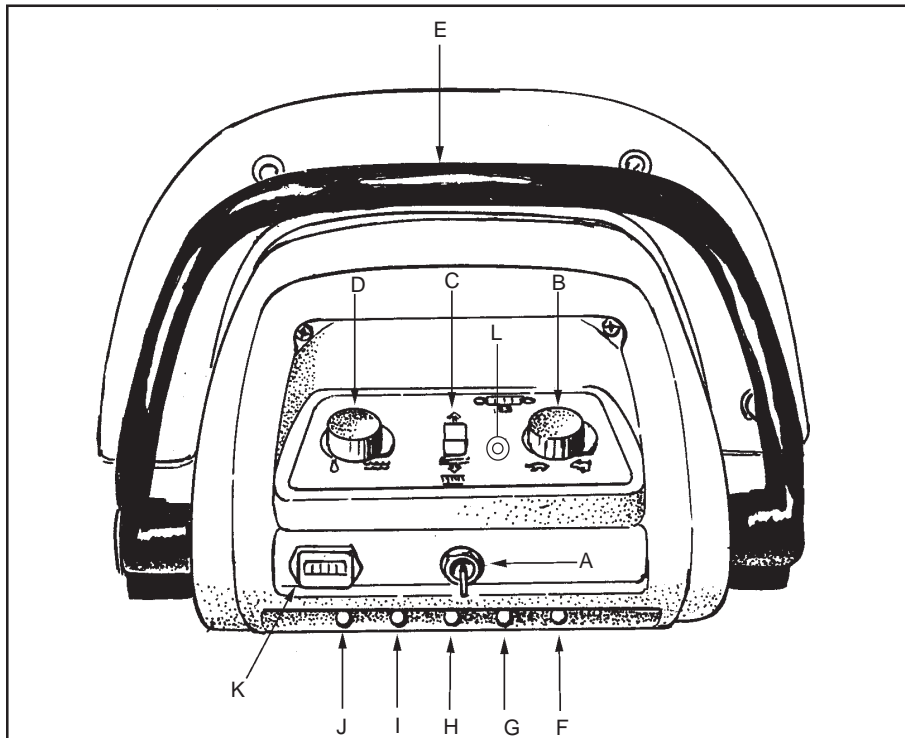


Figure #1

MACHINE CONTROLS & FEATURES

Squeegee Lift Handle See Figure #5a, 5b, & 5c.
The squeegee lift handle is located below the control handles on the right side. It is used to raise or lower the squeegee. The vac motor is turned on when the handle is lowered. (S38, S33 & S28 models only).

Parking Brake (Optional) See Figure #6.
The parking brake prevents movement of the machine. The brake is located on the left hand side of the transaxle motor. Turn the key switch off or disconnect the power to the battery to apply the brake.

There is a mechanical lever located on the brake. This lever is an override. To manually release the brake, rotate the lever toward the rear of machine (counter clockwise). To return the brake to normal or to apply the brake, rotate the lever towards the front of the machine (clockwise). **NOTE: If the lever is left in the override position, the brake will not function with the key switch, and the machine will not operate.**

CAUTION: Do not activate the brake while the machine is moving.

Float Shut Off See Figure #7.
The shut-off switch for the vac motor is located in the recovery tank. It automatically turns off the vac motor when the recovery tank is full.

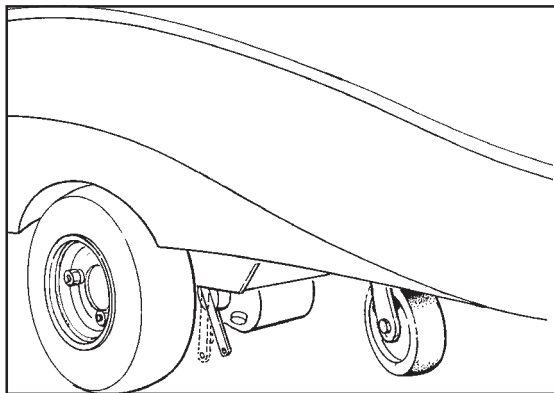


Figure #6

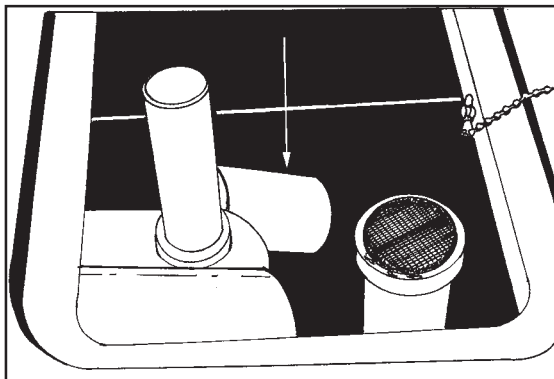


Figure #7

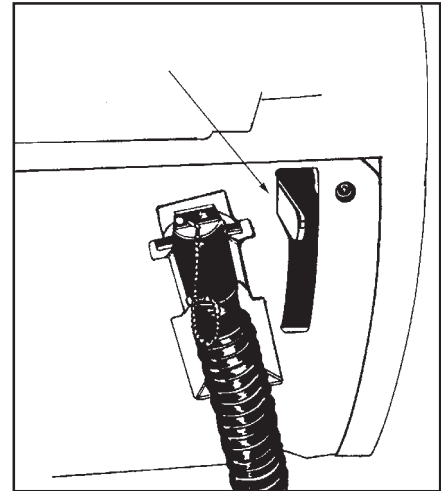


Figure #5a

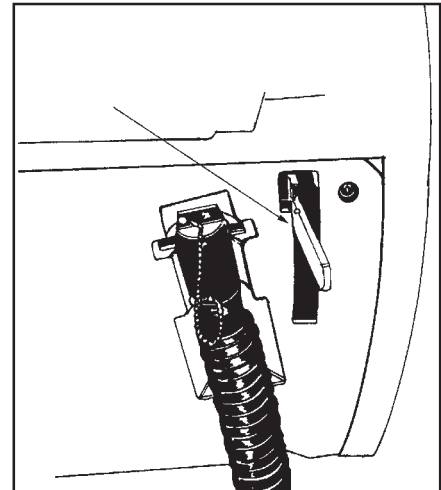


Figure #5b

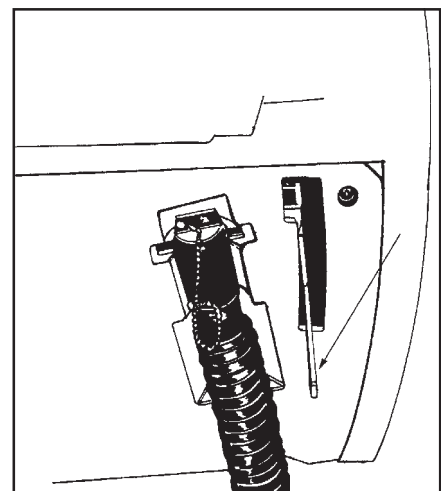


Figure #5c

HOW TO PREPARE THE MACHINE FOR OPERATION

How To Install The Batteries

The 38, 33 and 28 Encore machines use six 6-volt or three 12-volt batteries. The batteries are located in the battery compartment under the recovery tank.

To Install the batteries, follow this procedure:

1. Turn key switch off.
2. Make sure both tanks are empty.
3. Disconnect the hoses from the recovery tank (upper tank) & unplug the vac motor. Remove the recovery tank.
4. Place the batteries in the solution tank as shown in figures 8a - 8d.

WARNING: Lifting batteries without help could result in an injury. Get help to lift the batteries. The batteries are heavy.

WARNING: Working with batteries can be dangerous. Always wear eye protection and protective clothing when working near batteries. **NO SMOKING!**

5. Connect the battery cables between batteries and install long battery cable assembly as indicated. See figure 8a - 8d.

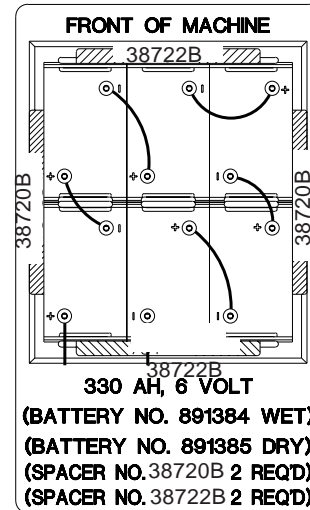


Figure #8a

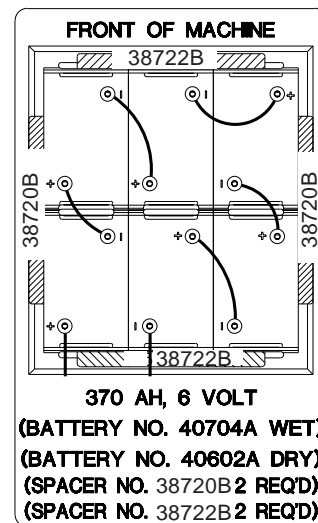


Figure #8b

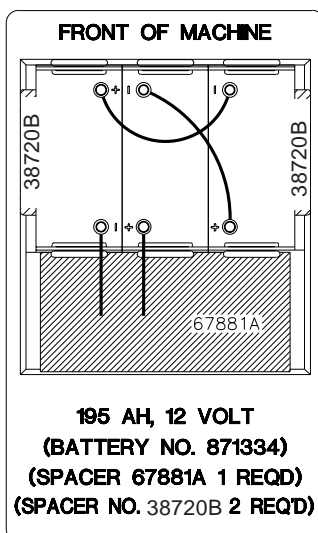


Figure #8c

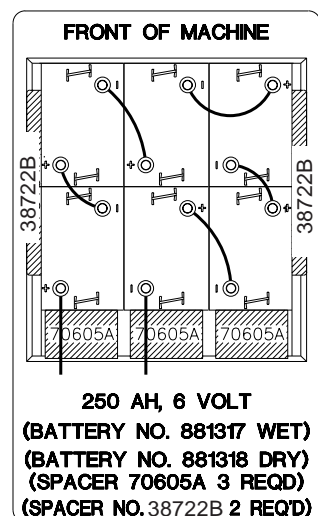


Figure #8c

HOW TO PREPARE THE MACHINE FOR OPERATION

6. Join the connector from the battery pack to the connector on the control panel. See figure #9.
7. Install the tank, reconnecting hoses and replace the two screws attaching the solution tank to the rear of the frame.

NOTE: Charge the batteries before using the machine.

Battery Maintenance

The electrical power to operate the machine comes from the storage batteries. Storage batteries need preventive maintenance.

⚠ WARNING: Working with batteries can be dangerous. Always wear eye protection and protective clothing when working near batteries. **NO SMOKING!**

To maintain the batteries in good condition, follow these instructions:

1. Keep the electrolyte at the correct level. The correct level is between 1/4" below the bottom of the tube in each cell and above the tops of the plates. Check the level of the electrolyte each time you charge the batteries. See figure #10.

NOTE: Check the level of electrolyte prior to charging the batteries. Be sure the plates in each cell are covered with electrolyte. Do not top off the cells prior to charging the battery. Electrolyte expands during charging. As a result, the electrolyte could overflow from the cells. Always top off the cells with distilled water after charging.

⚠ CAUTION: Irreversible damage will occur to the batteries if the electrolyte level does not cover the plates. Keep the electrolyte at the correct level.

⚠ CAUTION: Machine damage and discharge across the tops of the batteries can occur if the batteries are filled above the bottom of the tube in each cell. Do not fill the batteries up to the bottom of the tube in each cell. Wipe any acid from the machine or the tops of the batteries. Never add acid to a battery after installation.

⚠ CAUTION: Tap water may contain contaminants that will damage batteries. Batteries must be re-filled with distilled water only.

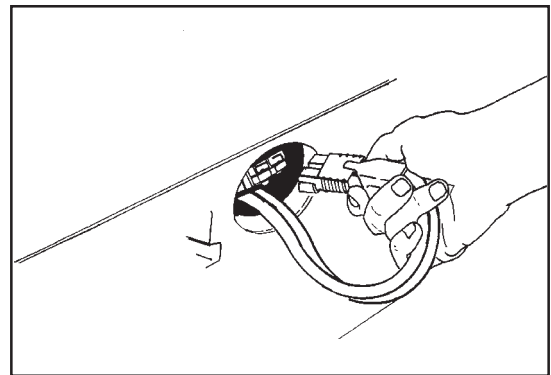


Figure #9

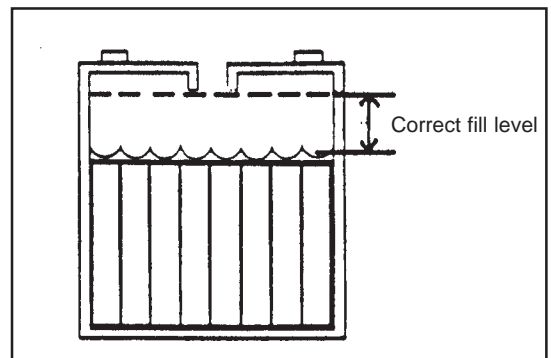


Figure #10

2. Keep the tops of the batteries clean and dry. Keep the terminals and connectors clean. To clean the top of the batteries, use a damp cloth with a weak solution of ammonia or bicarbonate of soda solution. To clean the terminals and connectors, use a terminal and connector cleaning tool. Do not allow ammonia or bicarbonate of soda to get into batteries.
3. Keep the batteries charged.

HOW TO PREPARE THE MACHINE FOR OPERATION

How To Charge The Batteries

- ⚠ WARNING:** Charging the batteries in an area without adequate ventilation could result in an explosion. To prevent an explosion, charge the batteries only in an area with good ventilation.
- ⚠ WARNING:** Lead acid batteries generate gases which could explode. Keep sparks and flames away from batteries. **NO SMOKING!**
- ⚠ WARNING:** Failure to disconnect the AC plug from the wall receptacle before connecting or disconnecting the DC connector on the charger could result in an explosion. Always disconnect the AC plug from the wall receptacle before connecting or disconnecting the DC connector on the charger.

To charge the batteries, follow this procedure:

1. Put the charger on a flat surface. Make sure the vents on the sides are at least two inches away from walls and other objects. Make sure there are no objects near the vents on the bottom of the charger.
2. Make sure the key switch is in the "OFF" position.
3. Disconnect the battery pack connector from the control housing connector. See figure #11.
4. Connect the DC connector on the charger to the battery pack connector. See figure #12.
5. Connect the charger to a properly grounded single phase (3-wire) wall receptacle having the voltage, frequency, and ampere capacity specified on the nameplate of the charger.

For more instruction on the use of the charger, read the instruction book supplied with the charger.

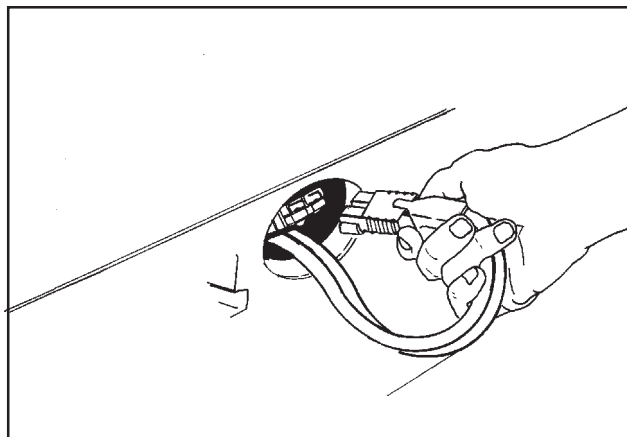


Figure # 11

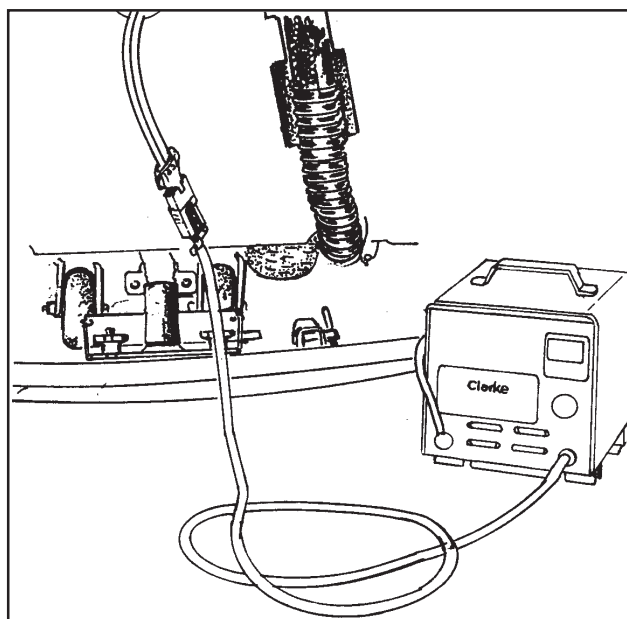


Figure #12

HOW TO PREPARE THE MACHINE FOR OPERATION

How To Install The Brushes Or Pad Drivers

To install the brushes or pad drivers on the machine, follow this procedure:

1. Turn the key switch "ON".
2. Put the brush switch in the "UP" position.
3. Turn the key switch "OFF".
4. Go to the front of the machine.
5. Unlatch right and left brush housings and remove them. See figure #13.
6. Put a brush or pad driver under the brush motor plate. See figure #14.
7. Align the lugs on the motor gimbal with the slots in the brush gimbal.
8. Pull the brush up until the gimbal locks.
9. Repeat steps 6, 7, and 8 to install the second brush or pad driver.

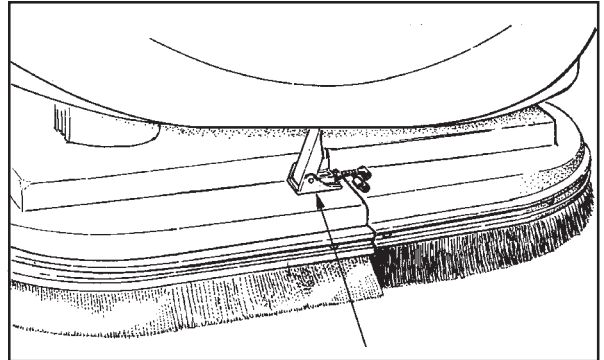


Figure #13

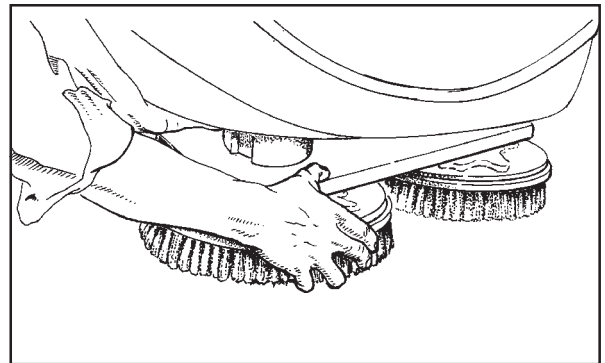


Figure #14

How To Remove The Brushes Or Pad Drivers

To remove the brushes or pad drivers from the machine, follow this procedure:

1. Turn the key switch "ON".
2. Put the brush switch in the "UP" position.
3. Turn the key switch "OFF".
4. Go to the front of the machine.
5. Push down on two sides of the brush or pad driver until the gimbals release.

HOW TO OPERATE THE MACHINE

How To Operate The Scrub Deck

Brushes or pads are used along with a solution mix to agitate and scrub the floor. Many different types of brushes or pads are available (see accessory section) for different scrubbing applications. See your Clarke representative for proper brush or pad requirements. To operate the brushes or pads follow this procedure:

1. Install the brushes or pads and replace the brush housings. See section on How To Install the Brushes Or Pad Drivers.
2. Fill the solution tank. See section on How To Fill The Solution Tank.
3. Lower the brush deck by pressing the Up/Down brush switch to the down position (figure 15, A). This will place the brush deck in the normal scrub position.
4. If additional brush pressure is desired, such as when stripping or cleaning a heavily soiled floor, more pressure can be applied. After the brush deck has been lowered to the floor, additional brush pressure can be applied by pressing and holding the jog button switch (figure 16, B) until the desired brush pressure is reached or until the brush deck stops moving downward. To reposition the brush pressure to normal scrub, press the brush up/down switch to the up position and after the brush deck has completely raised, then return the switch to the down position for normal scrub.
5. The brushes/pads and solution will start when the traverse control handle (figure 16, C) is pushed forward or pulled to the rear. Note: The brushes/pads and solution will only operate when the brush deck is in the down position and the traverse control handle is pushed forward or pulled to the rear.
6. Stop the brushes/pads and solution flow by releasing the traverse control handle, or raising the brush deck to the full up position.

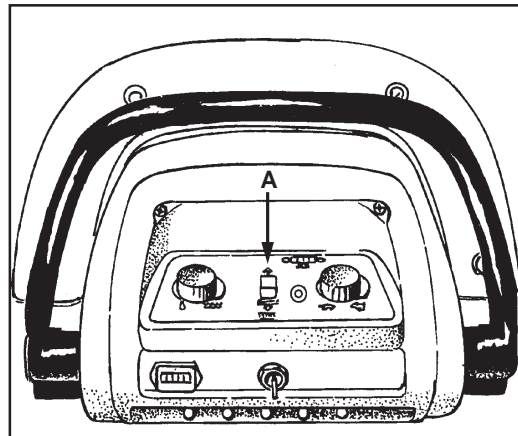


Figure #15

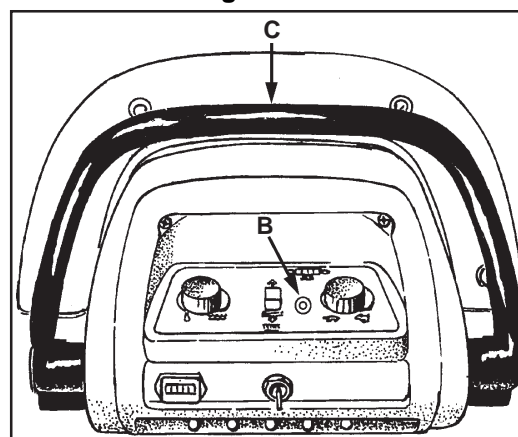


Figure #16

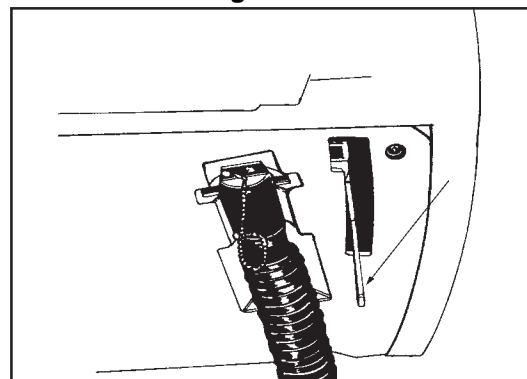


Figure #17

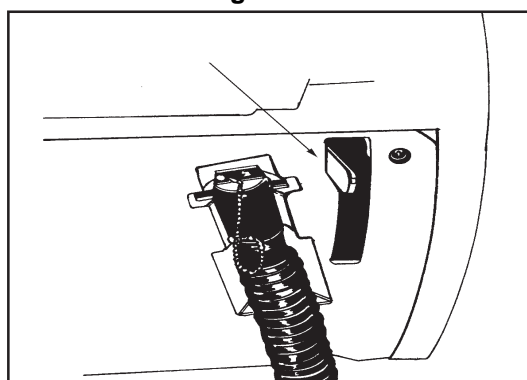


Figure #18

How To Operate the Squeegee ("S Class" models only)

The squeegee wipes the floor while the vacuum motor removes the dirty solution from the floor. Use your right hand to lower or raise the squeegee handle. To operate the squeegee, follow this procedure:

1. To lower the squeegee and start the vac motor move the squeegee lever to the right and down. See figure #17.
2. To raise the squeegee, lift the squeegee lever up. See figure #18.

Note: The center position lets the vac motor continue to run with the squeegee off the floor to avoid drips.

HOW TO OPERATE THE MACHINE (cont.)

How to Fill The Solution Tank

CAUTION: Make sure water or solution does not enter the opening for the vacuum motor, See figure #19.

The solution tank lid is at the front. To fill the solution tank follow this procedure:

1. Remove the solution tank lid. See figure #20
2. Fill the solution tank with water.
3. Add a cleaning chemical to the water. for the correct amount, follow the directions shown on the container.

WARNING: Water solutions or cleaning materials used with this type of machine can leave wet areas on the floor surface. These areas can cause a dangerous condition for the operator or other persons. Always put CAUTION signs near the area you are cleaning.

WARNING: Machines can ignite flammable materials and vapors. Do not use with or near flammables such as gasoline, grain dust, solvents, and thinners. Only use a cleaning concentration recommended by the chemical manufacturer.

WARNING: Clarke recommends a maximum water temperature of 120°F(49°C)

4. Replace the solution tank lid.

How To Clean A Floor

NOTE: Put the machine in the slow traverse speed. Use the machine in an area that has no furniture and objects until you can do the following:

1. Move the machine in a straight direction, forward and backward.
2. Stop the machine safely.
3. Move the machine in a straight direction after you turn the machine.

To move the machine, follow this procedure:

1. Turn the key switch "ON" position.
2. Put the brush switch in the "UP" position.
3. Raise the squeegee.
4. To go forward, push the control handles toward the machine. See figure #21.
5. To stop the machine, put the handles in the center position.
6. To go backward, pull the handles away from the machine. See figure #22.
7. To turn the machine, push the rear of the machine to the side.
8. When you stop the machine, turn the key switch "OFF".

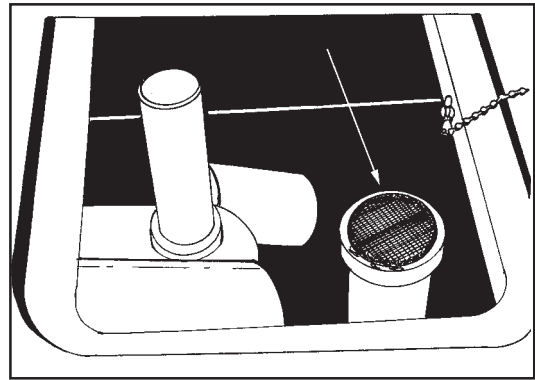


Figure # 19

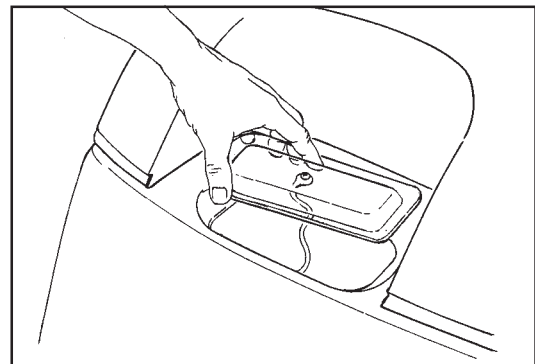


Figure # 20

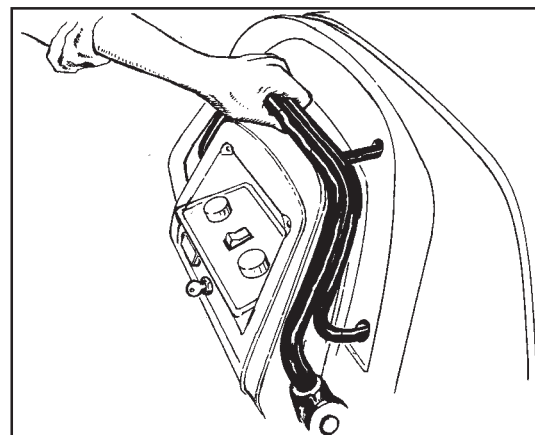


Figure # 21

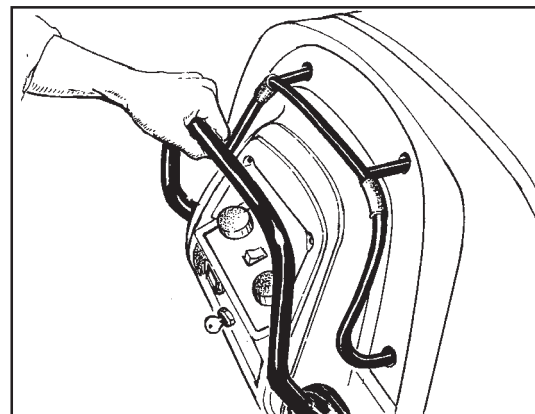


Figure # 22

HOW TO OPERATE THE MACHINE (cont.)

HOW TO CLEAN A FLOOR

⚠ WARNING: Water solutions or cleaning materials used with this type of machine can leave wet areas on the floor surfaces. These areas can cause a dangerous condition for the operator or other persons. Always put CAUTION signs near the area you are cleaning.

To clean a floor, follow this procedure:

1. Put the water and a cleaning chemical in the clean solution tank.
2. Turn the key switch "ON".
3. Lower the squeegee.
4. Put the brush switch in the "DOWN" position.
5. Turn the solution knob to the right to activate the flow of solution. Adjust the flow of clean solution to the flow desired.
6. Move the machine across the floor in the forward direction. See figure #23 (1).
7. When the machine is one machine length from the end of the area to be cleaned (figure #23 (2)), rotate the solution knob to the left.
8. Make a 180° turn. See figure #23 (3).

NOTE: When you make more passes across the floor, let the brushes clean approximately 2 inches of the area already cleaned by the brushes. See figure #23 (4).

NOTE: During most cleaning procedures, apply and remove the solution in one operation.

HOW TO CLEAN A VERY DIRTY FLOOR

To clean a very dirty floor, follow this procedure:

1. Apply solution to the floor.
2. Do not lower the squeegee.
3. Do not activate the vacuum motor.
4. Lower the brushes and scrub the floor.

NOTE: Additional brush pressure may be applied (see section on How To Operate Scrub Deck).

5. Leave the solution on the floor long enough for the solution to begin cleaning the floor.
6. Scrub the floor again with additional solution, picking up all the solution with the squeegee

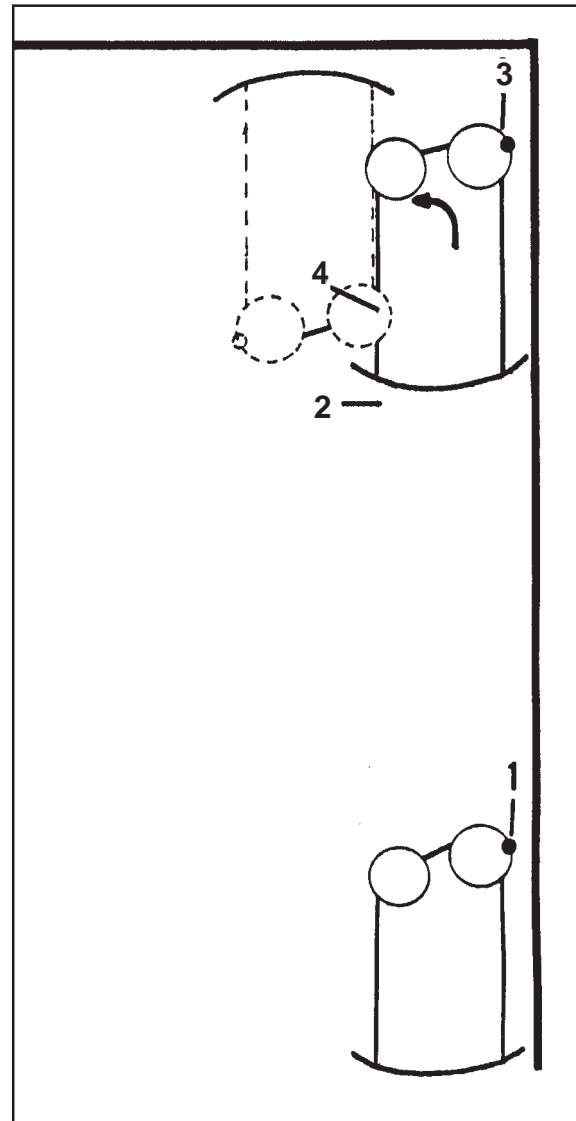


Figure #23

MAINTENANCE

⚠ WARNING: Maintenance and repairs must be done by authorized personnel only.

⚠ WARNING: Always empty the solution tank and recovery tank before doing any maintenance.

⚠ WARNING: Keep all fasteners tight.

These Maintenance Procedures Must Be Done Every Day

Keep the machine clean, it will need fewer repairs and have longer life.

Do These Procedures When You Begin Your Work Period

1. Turn off key switch.
2. Disconnect the plug on the charger from the connector on the back of the machine. See figure #24.
3. Join the connector from the batteries (1) to the control panel cable connection. See figure #24.
4. Make sure the recovery tank lid is on correctly. See figure #25, Item A.
5. Make sure the Screen filter over the vacuum motor is clean and in position. See figure #26, Item B.
6. Make sure the valves on the drain hoses are clean. Tightly close the valves.
7. Make sure brush housings and skirts are in position on the brush head.
8. Make sure the brushes are in position and installed correctly
9. Check the installation of the squeegee and squeegee hose.

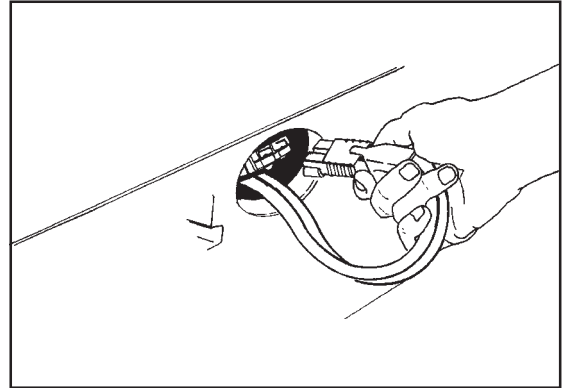


Figure #24

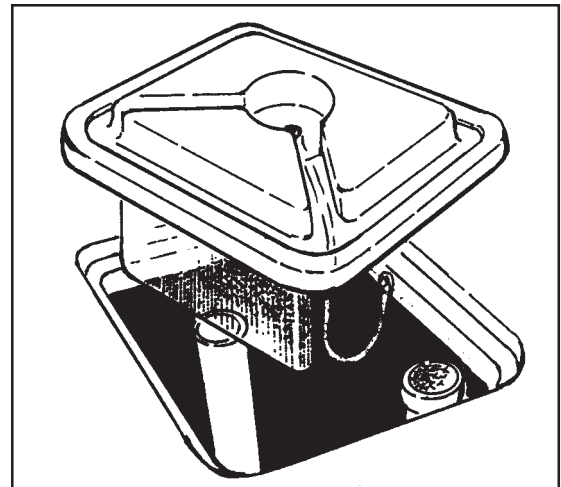


Figure #25

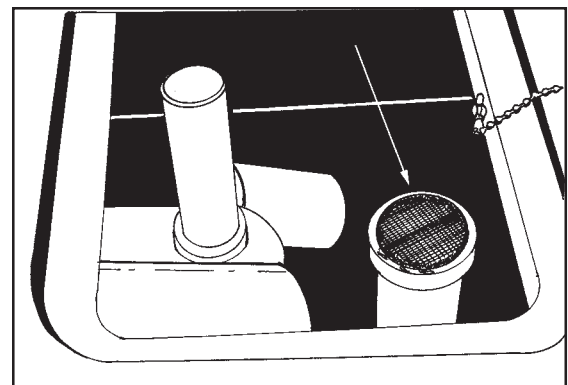


Figure #26

MAINTENANCE

Do These Procedures When You End Your Work

1. Drain the solution tank (Figure #27a) and the recovery tank (Figure #27b). To drain the tanks, follow this procedure:
2. Drain the solution tank (Figure #27a) and the recovery tank (Figure #27b). To drain the tanks, follow this procedure:
 - a. Turn the key switch "OFF".
 - b. Remove the drain hose from the back of the machine.
 - c. Put the end of the hose over a drain or bucket.
 - d. Turn the valve handle to the left. Pull the handle out to open the drain. (Figure #27c)

NOTE: Have the opening in the side of the valve away from you when you open the valve.

- e. To open the valve completely, turn the handle to the right. Pull the handle out of valve. (Figure #27d)
2. Flush the tanks. To flush the tanks, put clean water in the tank through the opening on top of the tank.
 3. If a tank or drain hose has an obstruction, use a high pressure water hose to flush the tank or hose. Put the water hose into the drain hose.
 4. Leave the tanks and the drain valves open to dry in the air.
 5. Check the squeegee blade. Use a cloth to clean the squeegee blade. If the squeegee blade is damaged or worn, turn or replace the blade.
 6. Check and clean the solution lid gasket. Use a mild cleaning solution and rinse the parts in clean water.

Check the batteries and add distilled water as needed. The correct level is within 1/4 inch of the bottom of the tube in each cell.

CAUTION: Tap water may contain contaminants that will damage batteries. Batteries must be re-filled with distilled water only.

WARNING: Lead acid batteries generate gases which can cause an explosion. **NO SMOKING.** Always wear eye protection and protective clothing when working near batteries.

Use a clean cloth and wipe the surface of the machine.

Charge the batteries. See the instruction in the section of this book called "How To Charge The Batteries".

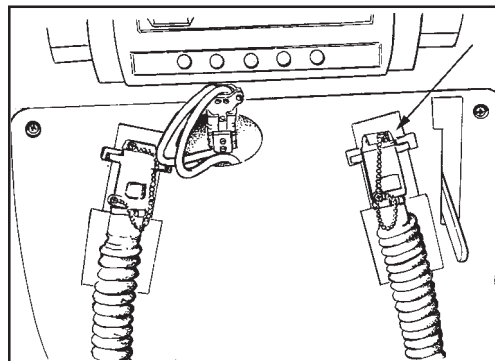


Figure #27a

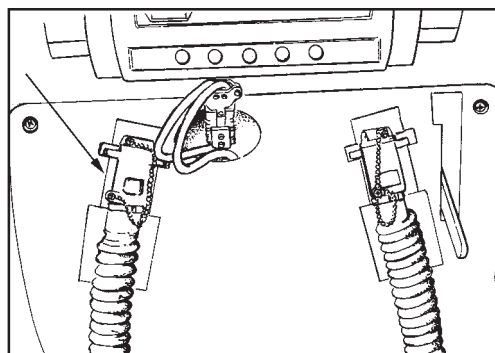


Figure #27b

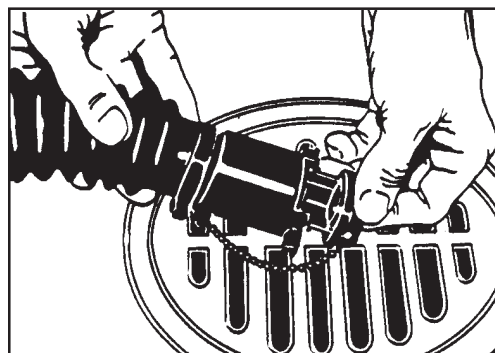


Figure #27c

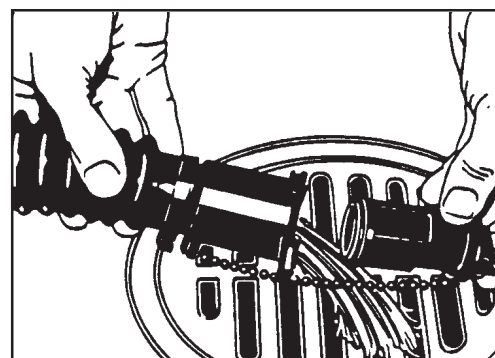


Figure #27d

MAINTENANCE

These Maintenance Procedures Must Be Done Every Week:

⚠ WARNING: Maintenance and repairs must be done by authorized personnel only. Always empty the solution tank and the recovery tank before doing any maintenance. Keep all fasteners tight.

⚠ WARNING: Always wear eye protection and protective clothing when working near batteries. Do not put tools or other metal objects across the battery terminals or the tops of the batteries.

⚠ CAUTION: To prevent damage to the machine, and discharge across the tops of the batteries, do not fill the batteries above the bottom of the tube in each cell. Wipe any acid from the machine or the tops of the batteries. Do not add acid to battery after installation.

NOTE: Always turn off key switch before servicing the machine.

⚠ WARNING: Always wear eye protection and protective clothing when working near batteries. **NO SMOKING!**

1. To inspect batteries, tip up recovery tank until it locks in up position. See Figure #28.
2. Disconnect the batteries. Use a cloth and a solution of ammonia or bicarbonate of soda to wipe the top of the batteries. Clean the battery terminals. Reconnect the batteries.
3. Check the hoses for leaks, obstructions and other damages.
4. Check and clean the filter screen in the solution hose. To clean the screen, follow this procedure:
 - a. Turn the connector to the left.
 - b. Remove and clean the filter screen.
 - c. Install the filter screen in the hose. Turn the connector to the right to connect the hose.
5. Use a grease gun to lubricate the drive wheel and the casters. See figure #29.
6. Check tire pressure. Tire pressure should be about 50 psi.

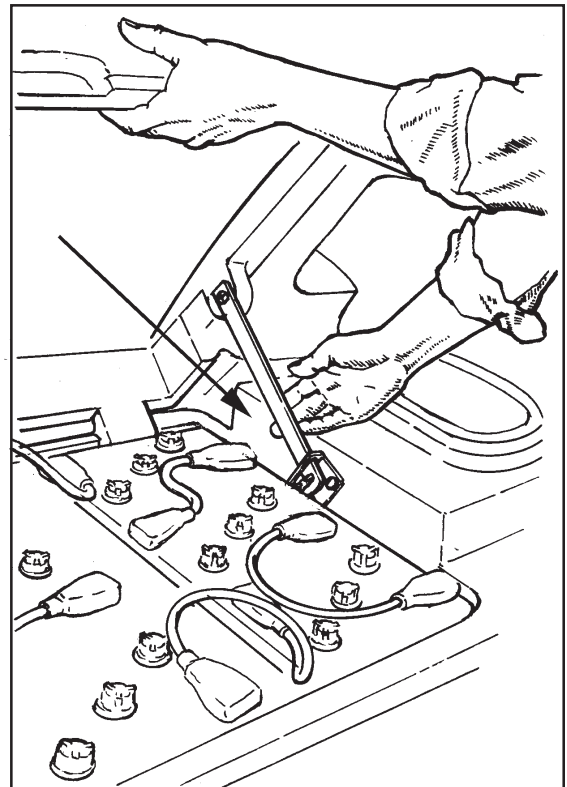


Figure #28

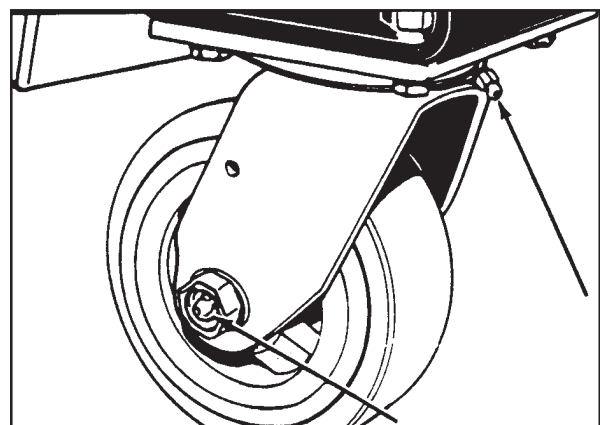


Figure #29

MAINTENANCE

7. Check the squeegee and the scrub brushes or the pad drivers for damage.
8. Check the squeegee and the vacuum hose for damage, leaks and obstructions.

Maintenance For The Squeegee

To remove the squeegee, follow this procedure:

1. Remove the squeegee assembly by loosening the two knobs that attach the squeegee to the machine. Pull the squeegee assembly off. See figure #30.
2. Inspect the squeegee blade.
3. If the blade is worn, turn the blade so that a new edge is in the wiping position.
4. Reinstall squeegee assembly on the machine.

How To Adjust The Squeegee

The following adjustments are set at the factory, however they may require slight adjustment.

Adjusting Squeegee Pressure:

To adjust the pressure, refer to Figure #31. Proper adjustment will produce a uniform flare along the rear blade when the machine is moved forward. To increase pressure, tighten the nuts on each side of the swing arm. To decrease the pressure, loosen the nuts on each side.

Adjusting Squeegee Tilt:

The tilt of the squeegee causes the rear blade to raise up in the center or on the ends, depending on which direction the tilt is changed. For tilt adjustment, refer to figure # 32. Loosen left and right screw "X". In order to bring the rear blade down in the center, tip "Y" down. To bring both ends down, tip "Y" up. Make very small adjustments and try it until a uniform flare is achieved. Changing the tilt may also require readjusting the squeegee pressure.

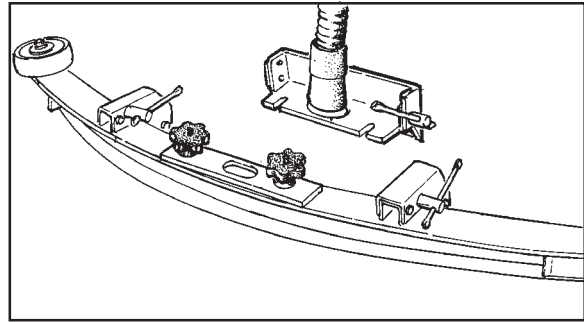


Figure #30

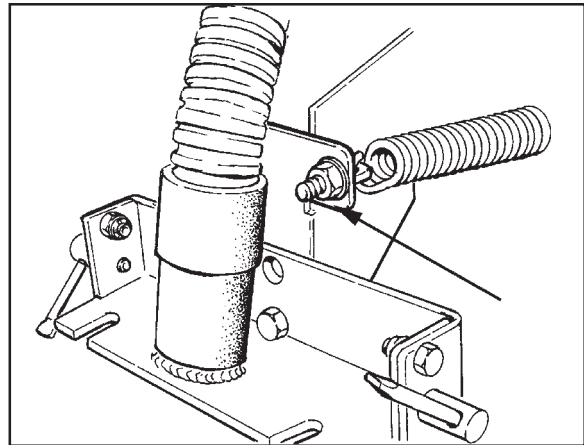


Figure #31

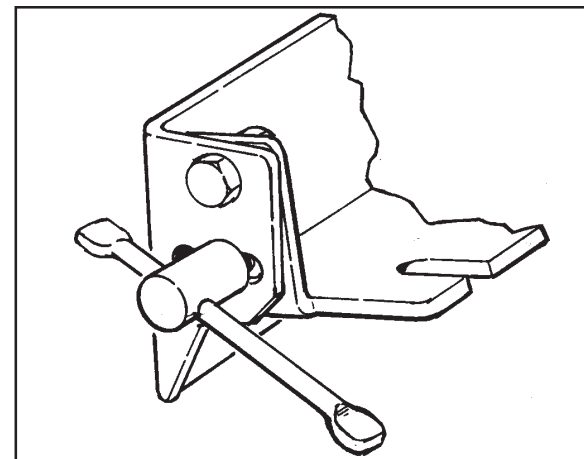


Figure #32

MAINTENANCE

Adjusting Squeegee Blades

When properly installed the front blade should be approximately .06 above the rear blade. See figure #33.

Adjusting Squeegee Support Wheels:

The support wheels should be set at .12 above the floor with the rear blade touching the floor. See figure #33.

⚠ WARNING: Maintenance and repairs must be done by authorized personnel only .

⚠ WARNING: Electrical repairs must be done by authorized personnel only.

Consult your Clarke Authorized Service Person to do the service procedures.

Use only genuine Clarke parts.

How to Clean the Solution Line

If the solution line becomes clogged, pull the filter assembly out from behind the brush housing (Figure #34) and remove the filter screen (Figure # 35) and clean or replace it. Push filter assembly back inside frame.

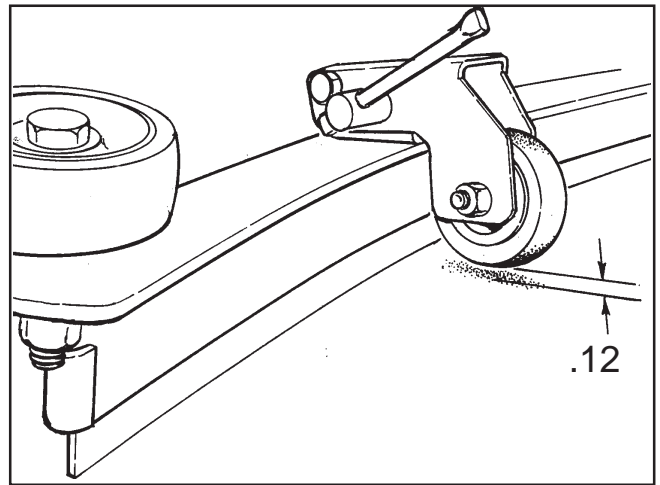


Figure #33

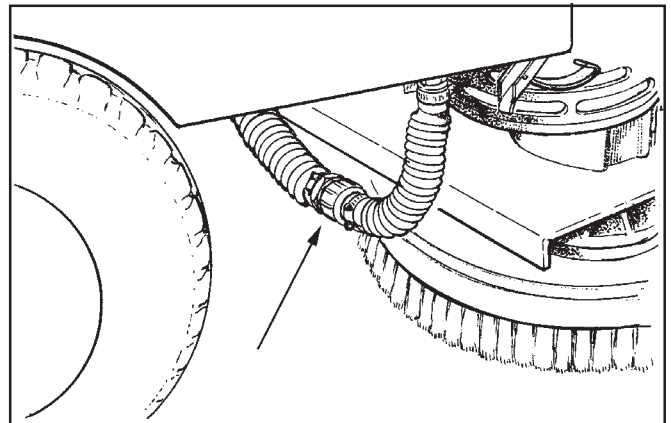


Figure #34

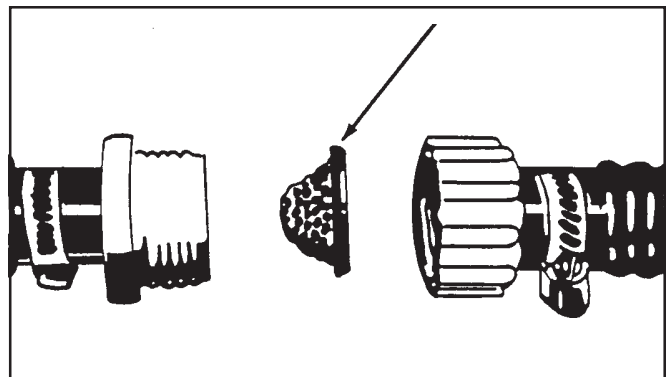


Figure #35

**Clarke® Encore 28/33/38
Accessories - 6/02**

ACCESSORIES

| <u>Description</u> | <u>Part No.</u> |
|--|-----------------|
| Power Wand System Kit | 10674A |
| ESP Recycle System Kit | 10675A |
| Soft Caster Asm. | 52127A |
| Clarke Care Kit | 14607A |
| Drive Wheel, Foam Filled | 59955A |
| <i>Imperial</i> Electric Parking Brake Kit | 10684A |
| Accessory Bag | 30070A |
| Poly Dur Protectant | 50478A |

Optional Squeegee Blades

| Machine No. | Blade | Type | Material | Length | Part |
|--------------------|--------------|----------------|-------------------------------|---------------|-------------|
| 38 | Front | Optional | Urethane, Ribbed (60) | 46.00" | 30954A |
| 38 | Front | Optional-Grout | Urethane, Notched, 1/16" (80) | 46.00" | 30959A |
| 38 | Rear | Optional | Nitrile, Solid (40) | 48.00" | 30939A |
| 28, 33 | Rear | Optional | Gum Rubber | 43.50" | 30069A |
| 28, 33 | Rear | Optional | Nitrile, Solid | 43.50" | 30082A |
| 28, 33 | Rear | Optional | Orange, Ribbed | 43.50" | 30086A |
| 28, 33 | Front | Optional | Natural, Ribbed | 40.25" | 30091A |
| 28, 33 | Front | Optional-Grout | Slit Grout | 40.25" | 30080A |
| 28, 33 | Front | Optional | Orange, Ribbed | 40.25" | 30084A |

Brushes:

| <u>Size</u> | <u>Description</u> | <u>Part No.</u> |
|-------------|--------------------|-----------------|
| 17" | Poly | 11424B |
| 17" | Grit-Heavy | 11425B |
| 17" | Grit-Medium | 11430B |
| 17" | Grit-Lite | 10384A |
| 17" | Soft Nylon | 11428B |
| 14" | Poly | 11427B |
| 14" | Grit-Heavy | 11426B |
| 14" | Grit-Medium | 11431B |
| 14" | Grit-Lite | 10383A |
| 14" | Soft Nylon | 11429B |
| 19" | Poly | 11434B |
| 19" | Grit-Heavy | 11433B |
| 19" | Grit-Medium | 11432B |
| 19" | Grit-Lite | 10385A |
| 19" | Soft Nylon | 11435B |

Pad Drivers:

| <u>Size</u> | <u>Part No.</u> |
|-------------|-----------------|
| 19" | 17524B |
| 17" | 17520C |
| 14" | 17521C |



Encore
S28XP, S33XP, S38XP
Section II
Parts and Service Manual

(70657A)

U.S. Patent No. 6,105,192; No. 5,383,251; No. 6,557,207

HOW TO CORRECT PROBLEMS IN THE MACHINE

| PROBLEM | CAUSE | ACTION |
|---|--|---|
| <p>The machine does not remove all the water from the floor.</p> | <p>The squeegee is up</p> <p>The vacuum tank is full.</p> <p>The screen filter is dirty.</p> <p>There is an obstruction or damage in the squeegee, squeegee hose or standpipe.</p> <p>The vacuum motor is not running.</p> <p>The squeegee hose is disconnected.</p> <p>The squeegee blade is damaged, worn, or incorrectly installed.</p> <p>The squeegee pressure is not correctly adjusted.</p> <p>The gaskets on the cover of the recovery tank are damaged.</p> | <p>Lower the squeegee.</p> <p>Drain the tank.</p> <p>Clean the screen filter.</p> <p>Remove the obstruction or repair the damage.</p> <p>Check for tripped breaker. Have an authorized service person make repairs.</p> <p>Connect the hose.</p> <p>Turn or replace the squeegee blade. Correctly install the squeegee blade.</p> <p>Adjust the pressure of the squeegee.</p> <p>Replace the gaskets.</p> |
| <p>The batteries do not give the normal running time.</p> | <p>The battery terminals are dirty or damaged.</p> <p>The electrolyte level is too low.</p> <p>The batteries are not fully charged.</p> <p>The charger is damaged.</p> <p>The battery is defective.</p> <p>The batteries are disconnected.</p> | <p>Clean the terminals and connectors. Replace the damaged cables. Charge the batteries.</p> <p>Add distilled water to each cell and charge the batteries.</p> <p>Charge the batteries for a full 16 hour charge.</p> <p>Have an authorized service person repair the charger.</p> <p>Check voltage of each cell while discharging.</p> <p>Connect the batteries.</p> |
| <p>The cleaning is not even.</p> | <p>The scrub brushes or pads are worn.</p> <p>There is damage to the brush assembly, casters or the solution valve.</p> <p>The brush motors are not running</p> <p>The solution level is low.</p> | <p>Replace the scrub brushes or pads.</p> <p>Have an authorized service person make the needed repairs.</p> <p>Check for tripped breaker, reset. Check for loose connections.</p> <p>Fill the solution tank.</p> <p>NOTE: If the motors continue to stop consult an authorized service person.</p> |
| <p>The machine does not run.</p> | <p>The machine loses power.</p> | <p>Reset the circuit breaker.</p> <p>Check wire connection to traverse motor.</p> <p>Replace the fuses.</p> <p>Check the batteries connections.</p> <p>Check parking brake override lever position (if installed)</p> <p>NOTE: If the motors continue to stop, consult an authorized service person.</p> |

MAINTENANCE

Adjusting Brush Head Position Switch: (See figure 34)

1. Turn "ON" the key switch.
2. Start with the brush head up/down switch in the "Up" position and the brush pressure knob set to minimum, fully counter clockwise. This should cause the brush head to be in the full "Up" position.
3. Install the proper brushes or pads and pad drivers for the machine.
4. Leave the brush pressure knob set to minimum, fully counter clockwise. Switch the brush head up/down switch to the "Down" position. This should cause the brush head to travel down to the floor until the brush position switch (47422A) is closed. At this time the brush head actuator will stop running down.
5. Check at the front of the machine to see if the brushes or pads are completely flat on the floor. The screw, that goes through the brush head actuator tube (69188A), should be at the top of the 1.25 inch slot in the tube. If the brushes or pads are not on the floor, or the screw is not at the top of the slot, the brush position switch (47422A) needs to be loosened and moved up or down in the slot on the switch mount bracket (65972A). Retighten the brush position switch.
6. Keep the brush pressure knob set to minimum, fully counter clockwise. The brush head will need to be raised and lowered again with the brush up/down switch. Check to see if the adjustment put the brushes or pads on the floor and kept the screw at the top of the tube. If no, repeat step #5 until this step is completely accomplished.

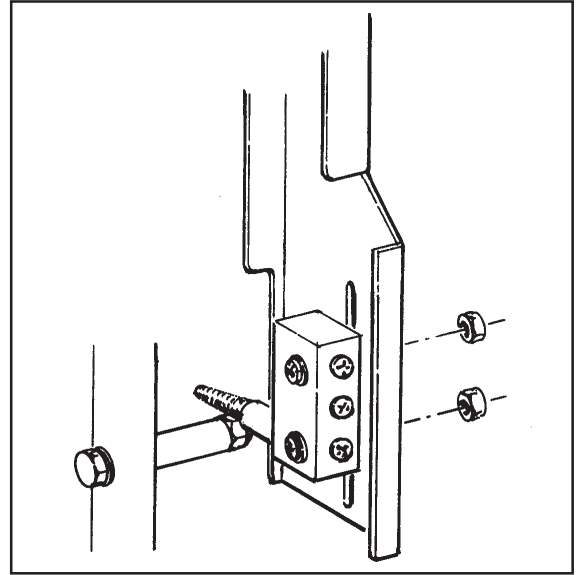
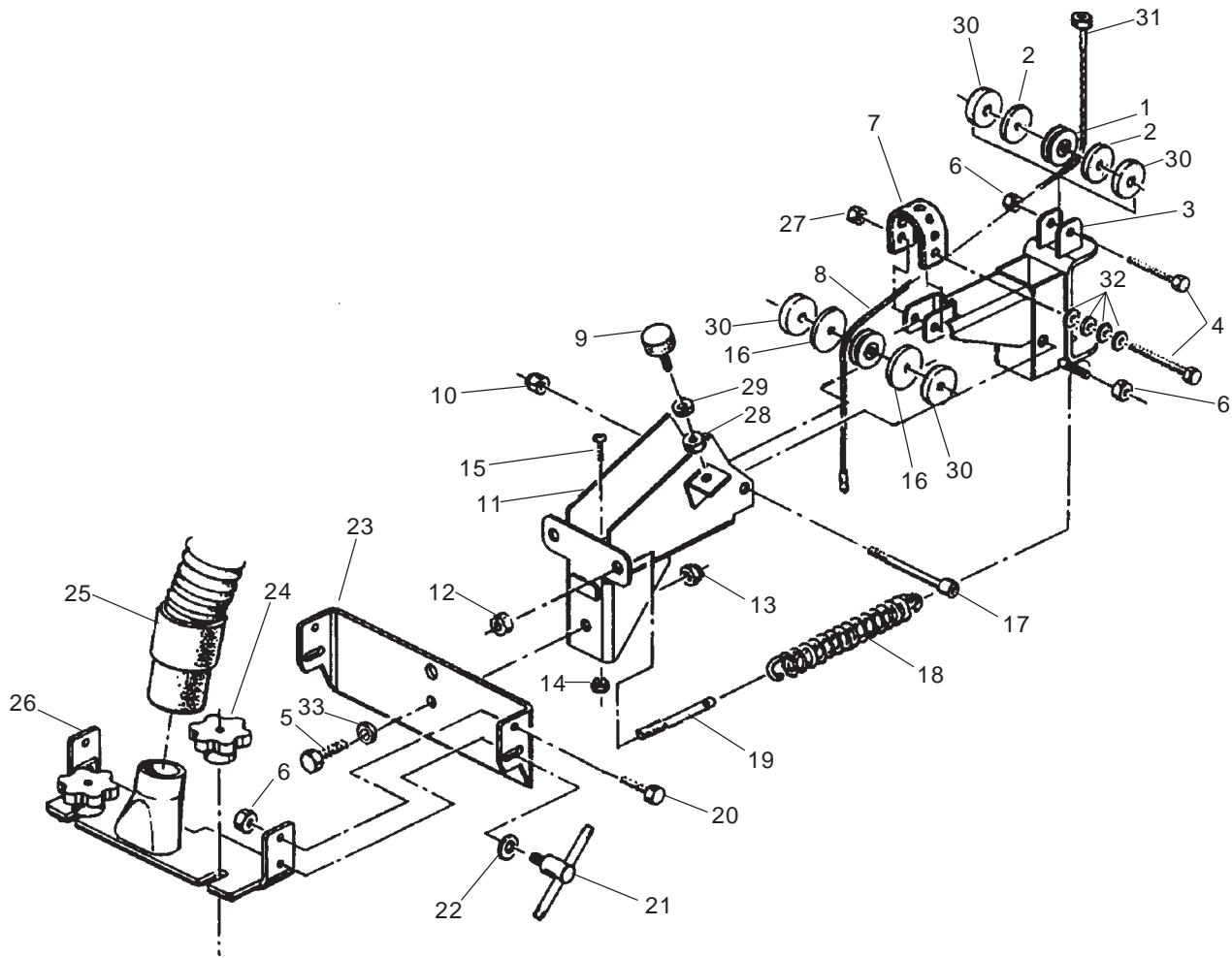


Figure #34

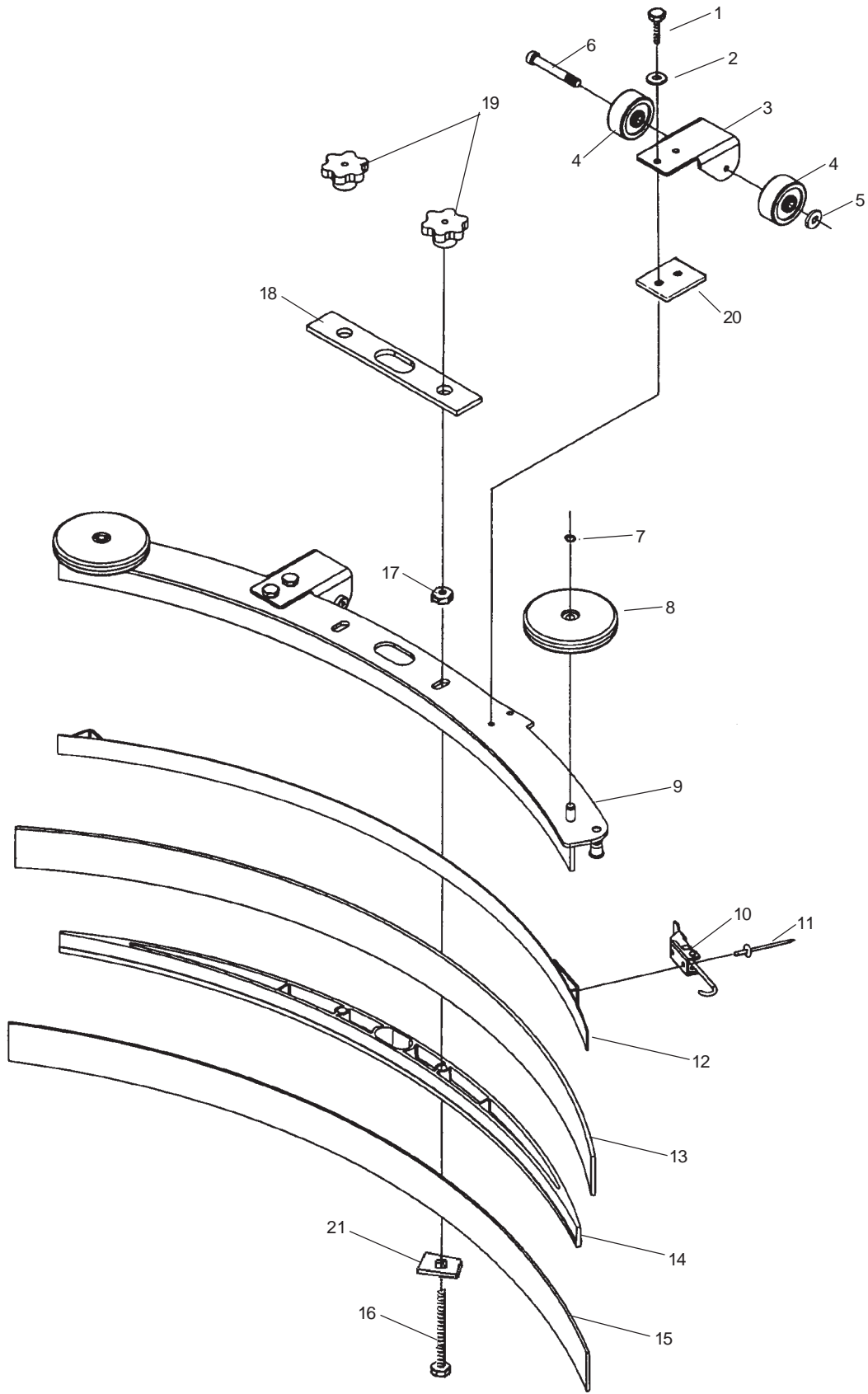
Clarke®
Encore S28XP/S33XP/S38XP
Swing Arm Assembly Drawing 5/04



Clarke®
Encore S28XP/S33XP/S38XP
Swing Arm Assembly Drawing 5/04

| Ref # | Part No. | Description | Qty |
|--------------|-----------------|-------------------------|------------|
| 1 | 57275A | Pulley | 2 |
| 2 | 87623A | Washer, Nylon 1¼x¼x1/8 | 2 |
| 3 | 60452A | Swing Arm, Front | 1 |
| 4 | 86004A | Screw, .25-20 x 1.50 | 2 |
| 5 | 85730A | Screw, .375-16 x 1¼ | 1 |
| 6 | 81104A | Nut, Hex ESNA SS | 5 |
| 7 | 38021A | Strap | 1 |
| 8 | 61679A | Cable, Lower | 1 |
| 9 | 51613A | Bumper | 1 |
| 10 | 920110 | Nut, ESNA | 2 |
| 11 | 60454A | Swing Arm, Rear | 1 |
| 12 | 920256 | Nut, Hex | 2 |
| 13 | 81105A | Nut, ESNA SS | 1 |
| 14 | 920296 | Nut, 10-24 ESNA SS | 1 |
| 15 | 962798 | Screw, 10-24 x .50 | 1 |
| 16 | 87624A | Washer, Nylon 1½x¼x1/8 | 2 |
| 17 | 80015A | Screw, Shoulder | 1 |
| 18 | 53423A | Spring, Squ. Pressure | 2 |
| 19 | 68016A | Stud | 2 |
| 20 | 170915 | Screw, SS Hex | 2 |
| 21 | 64905A | T Handle | 3 |
| 22 | 980651 | Washer, Flat .312 | 1 |
| 23 | 60678C | Pivot Bracket | 1 |
| 24 | 25201A | Knob | 2 |
| 25 | 35192A | Hose, Squeegee Rec. | 1 |
| 26 | 61267A | Tube Bracket | 1 |
| 27 | 81217A | Nut, ½-20 | 1 |
| 28 | 920208 | Nut, Hex ¼-20 | 1 |
| 29 | 980657 | Washer, ¼ Lock | 1 |
| 30 | 87625A | Washer, Nylon 1¼x¼x1/32 | 4 |
| 31 | 81303A | Nut, ¼-28 | 1 |
| 32 | 87026A | Washer | 4 |
| 33 | 87031A | Washer, 3/8 Flat | 1 |

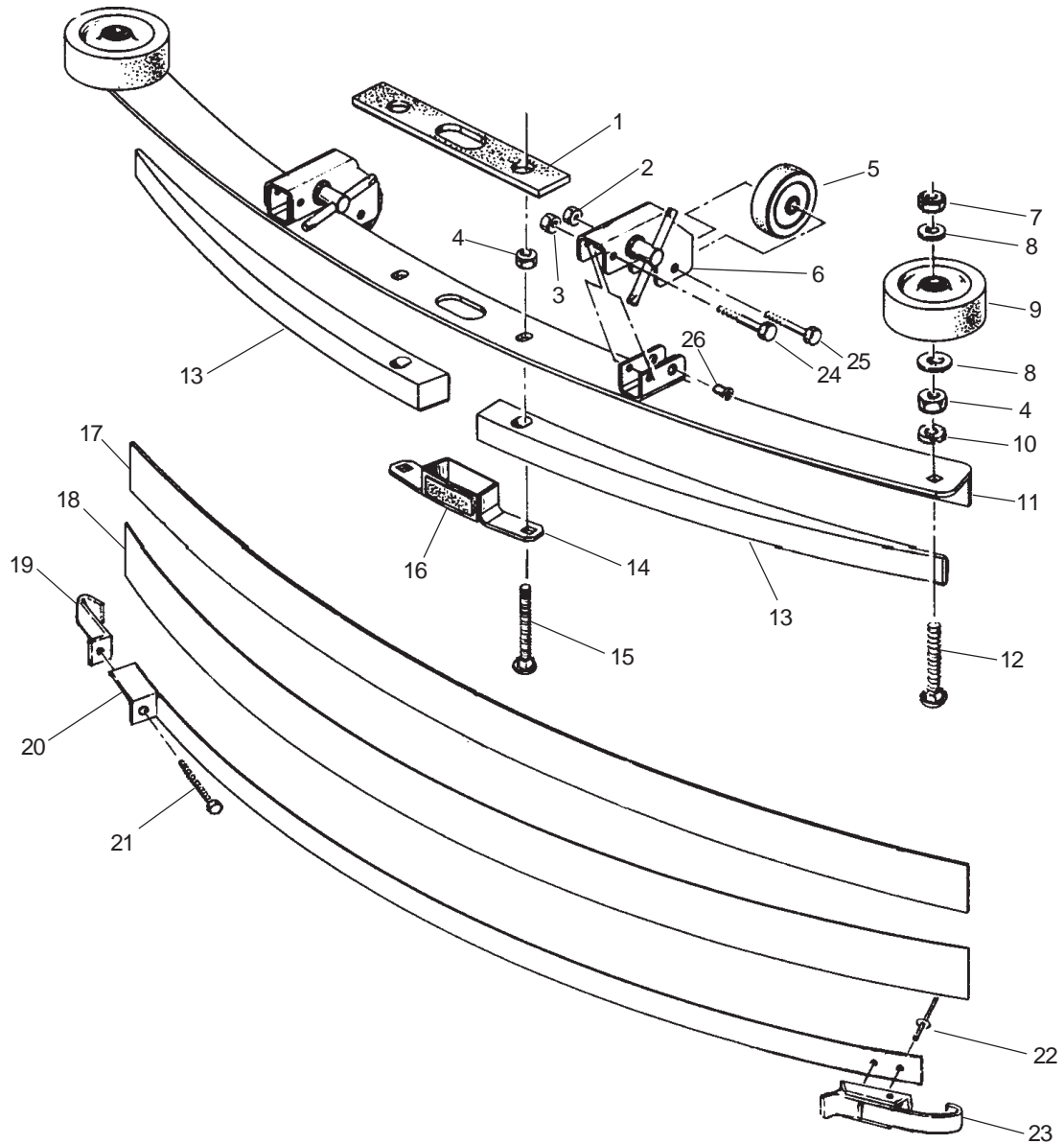
Clarke®
Encore S28XP and S33XP
Squeegee Assembly Drawing 6/04
Drawing#10068A



Clarke®
Encore S28XP and S33XP
Squeegee Assembly Parts List 6/04

| Ref. # | Part No. | Description | Qty |
|---------------|-----------------|-------------------------------------|------------|
| 1 | 962720 | Screw, ¼-20 x ½ Hex SS | 4 |
| 2 | 980657 | Washer, ¼ Lock | 4 |
| 3 | 60243A | Bracket, Squeegee Wheel | 2 |
| 4 | 30049B | Wheel, Squeegee | 4 |
| 5 | 81104A | Nut, ¼-20 | 2 |
| 6 | 60254A | Bolt, Shoulder 5/16x 2¼ | 2 |
| 7 | 50958A | Ring, 3/8 ID Snap | 2 |
| 8 | 30048A | Wheel, Guide, 4 Inch Diameter | 2 |
| 9 | 60272A | Channel, Squeegee Weldment 39" | 1 |
| 10 | 50835A | Latch, Squeegee Clamp | 1 |
| 11 | 930086 | Rivet, 3/16 x .450 Aluminum | 2 |
| 12 | 60252A | Strap, Clamp, Squeegee Retainer 39" | 1 |
| 13 | 30069A | Blade, Rear, Gum Rubber, 39" | 1 |
| 14 | 30058A | Spacer, Squeegee 39" | 1 |
| 15 | 30091A | Blade, Front Ribbed 39" | 1 |
| 16 | 80011A | Screw, 3/8-16 x 3 | 2 |
| 17 | 81301A | Nut, 3/8-16 Jam SS | 2 |
| 18 | 34260B | Gasket | 1 |
| 19 | 25201A | Knob | 2 |
| 20 | 60358A | Shim, Squeegee Wheel | 2 |
| 21 | 80280A | Nut, Squeegee Backup | 2 |

Clarke®
Encore S38XP
Squeegee Assembly Drawing 6/02
Drawing # 16617A - S



* Apply antiseize to threads

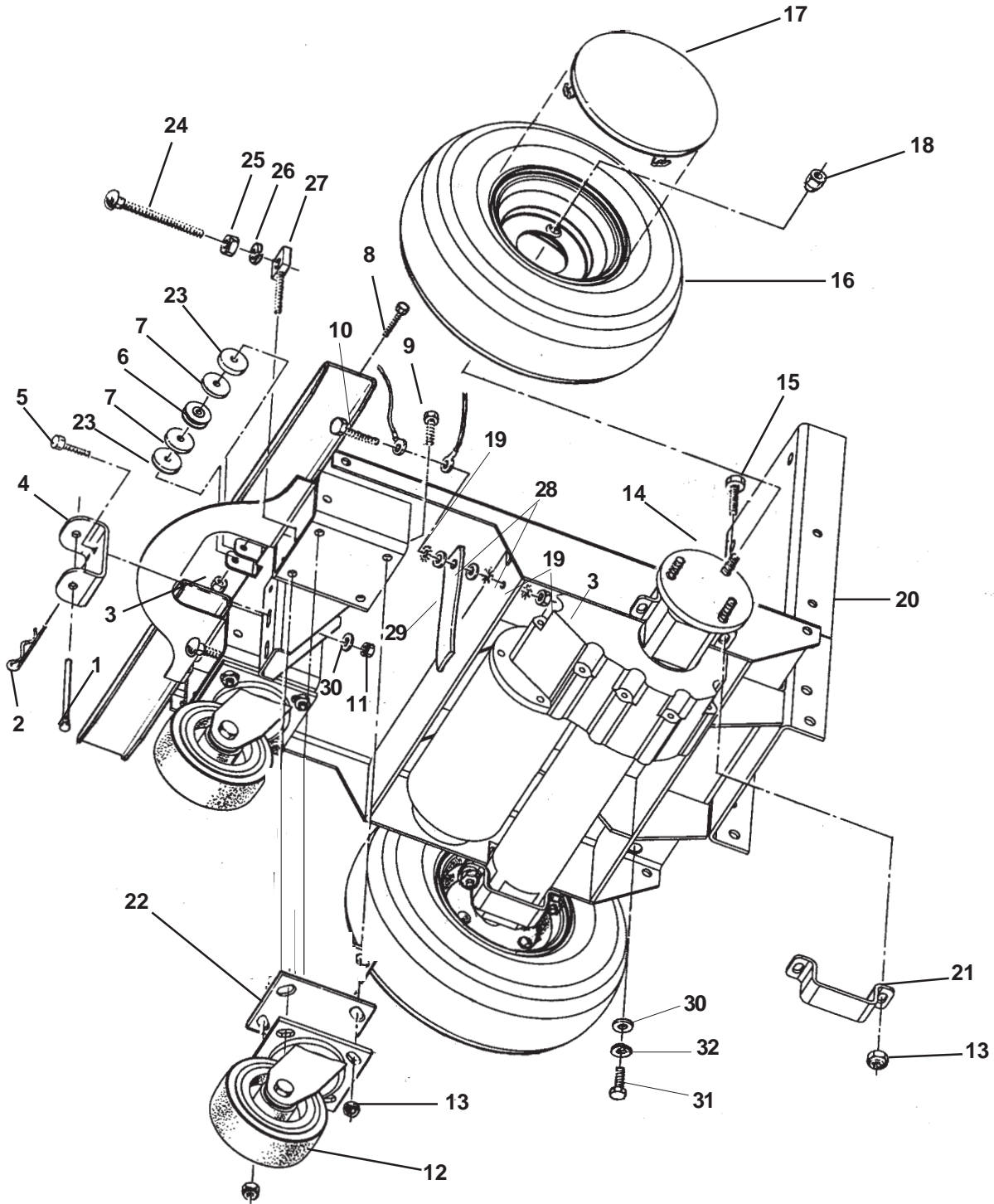
Clarke®
Encore S38XP
Squeegee Assembly Parts List 6/02

| Ref # | Part No. | Description | Qty |
|-------|----------|---|-----|
| 1 | 34260B | Squeegee Gasket | 1 |
| 2 | 920110 | Nut, ESNA | 3 |
| 3 | 81104A | Nut, Hex ESNA SS | 6 |
| 4 | 81301A | Nut, Jam SS | 4 |
| 5 | 59971A | Wheel | 2 |
| 6 | 65975A | Wheel Mount Bracket | 2 |
| 7 | 920248 | Nut, Jam | 2 |
| 8 | 980645 | Washer, Flat | 4 |
| 9 | 59950A | Guide Wheel | 2 |
| 10 | 980638 | Washer, Lock | 2 |
| 11 | 69675A | Squeegee Base | 1 |
| 12 | 85610A | Screw, PN Phillips | 2 |
| 13 | 38715A | Spacer | 2 |
| 14 | 62712A | Air Duct | 1 |
| 15 | 80011A | Screw, .375-16 x 3.00 | 2 |
| 16 | 37016A | Grip Pad | 1 |
| 17* | 30934A | Blade, Inner | 1 |
| 18* | 30935A | Blade, Outer | 1 |
| 19 | 62421A | End Clamp | 1 |
| 20 | 62444A | Clamp, Weld | 1 |
| 21 | 86004A | Screw, .25-20 x 1.50 Hex | 1 |
| 22 | 170932 | Rivet | 2 |
| 23 | 55722A | Squeegee Strap Latch | 1 |
| 24 | 85702A | Screw, .25-20 x 1.75 | 2 |
| 25 | 85816A | Screw, .312-18 x 1.75 | 2 |
| 26 | 54766A | Insert, Threaded ⁵ / ₁₆ -24 | 2 |

* See accessory page

NOTE: When changing squeegee blades, it might be necessary to loosen screw #15; install and secure blades with clamp #20; then retighten screw #15. This will allow for different thickness.

Clarke®
Encore S28XP/S33XP/S38XP
Traverse System Assembly Drawing 6/02
Drawing 19021A

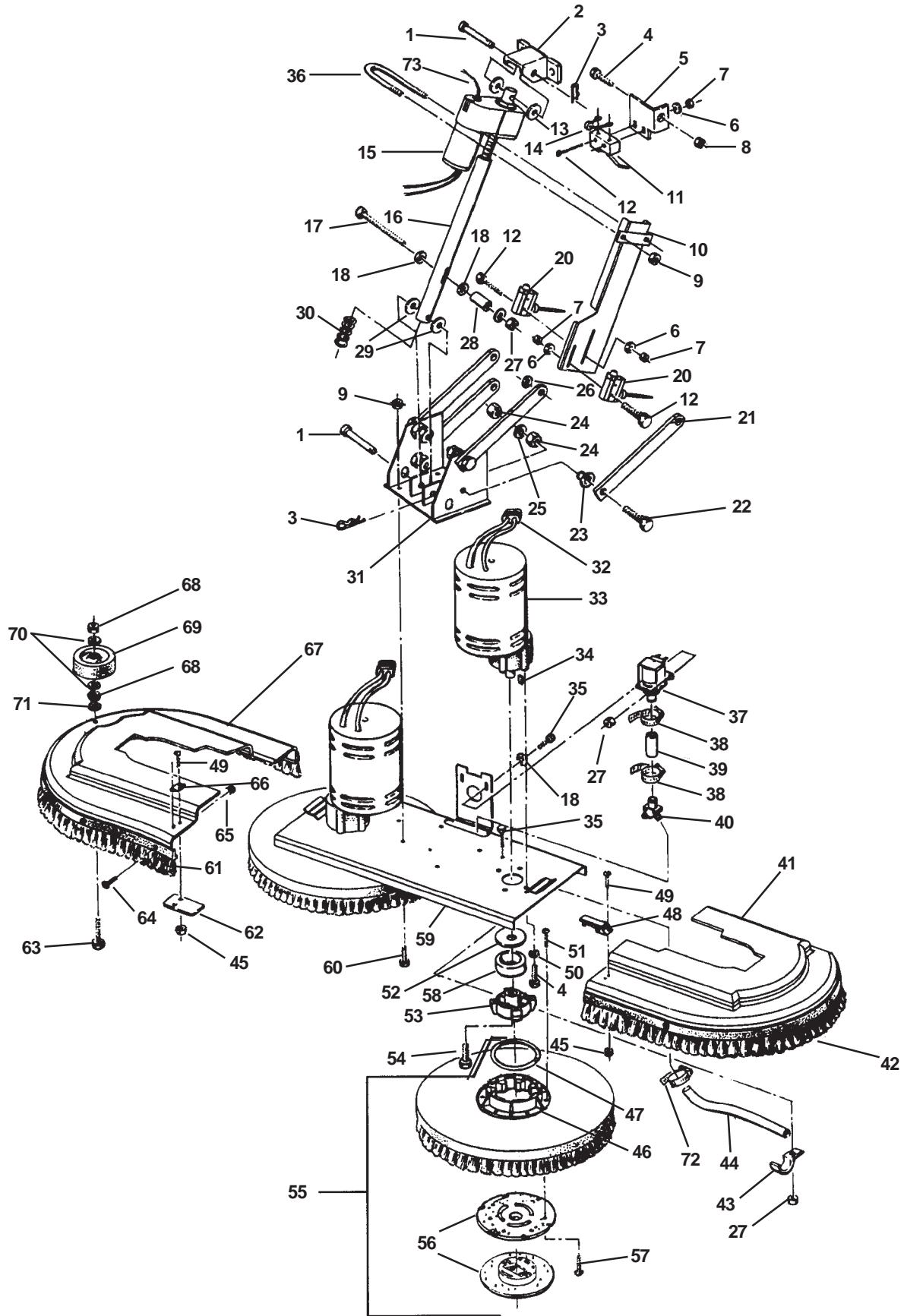


Clarke®
Encore S28XP/S33XP/S38XP
Traverse System Assembly Parts List 6/02
Drawing 19021A

| Ref # | Part No. | Description | Qty |
|-------|----------|--|-----|
| 1 | 66531A | Swing Arm Pin | 1 |
| 2 | 836711 | Hair Pin | 1 |
| 3 | 81104A | Nut, .25-20 ESNA | 2 |
| 4 | 69877A | Swing Bracket | 1 |
| 5 | 85811A | Screw, .312-18 x .75 | 2 |
| 6 | 57275A | Cable Pulley | 1 |
| 7 | 87623A | Washer, Nylon 1¼x¼IDx.120 | 2 |
| 8 | 86004A | Screw, .25-20 x 1.50 | 1 |
| 9 | 85703A | Screw, .375-16 x 1.50 | 6 |
| 10 | 85700A | Screw, .25-20 x 1 | 1 |
| 11 | 920110 | Nut, .312-16 ESNA | 2 |
| 12 | 899769 | Caster Assembly | 2 |
| 13 | 81105A | Nut, .375-16 ESNA | 12 |
| 14 | 59116A | Transaxle, Imperial (see page 46, 45 for parts) | 1 |
| 15 | 85730A | Screw, Hex | 4 |
| 16 | 59969A | Wheel Assembly* | 2 |
| | 59955A | Wheel, Foam Filled (opt.) | 2 |
| 17 | 32417B | Wheel Cover | 2 |
| 18 | 81221A | Lug Nut, 50-20 UNF | 6 |
| 19 | 980614 | Washer, Star Lock .25 | 3 |
| 20 | 60230A | Main Frame | 1 |
| 21 | 65963A | Transaxle Mount | 2 |
| 22 | 69712A | Spacer | 2 |
| 23 | 87625A | Washer, Nylon 1¼x¼IDx3/32 | 2 |
| 24 | 80011A | Screw, ¾-16 x 3 | 2 |
| 25 | 81207A | Nut, ¾-16 | 2 |
| 26 | 170883 | Washer, Lock ¾ | 2 |
| 27 | 58419A | Stud, ¾M x ¾F | 2 |
| 28 | 980205 | Washer, .25 Fender | 2 |
| 29 | 69639A | Strap, Static | 1 |
| 30 | 980645 | Washer, Flat ¾ | 6 |
| 31 | 962244 | Screw, ¾-16 x ¾ | 4 |
| 32 | 980638 | Lockwasher ¾ | 4 |

*30039A tube, inner (included in item #16) 1 Ref.

Clarke®
 Encore S28XP/S33XP/S38XP
 Brush Head Assembly Drawing 6/02
 Drawing # 11453A, 11449A, 11452A



Clarke®
Encore S28XP/S33XP/S38XP
Brush Head Assembly Parts List 8/04

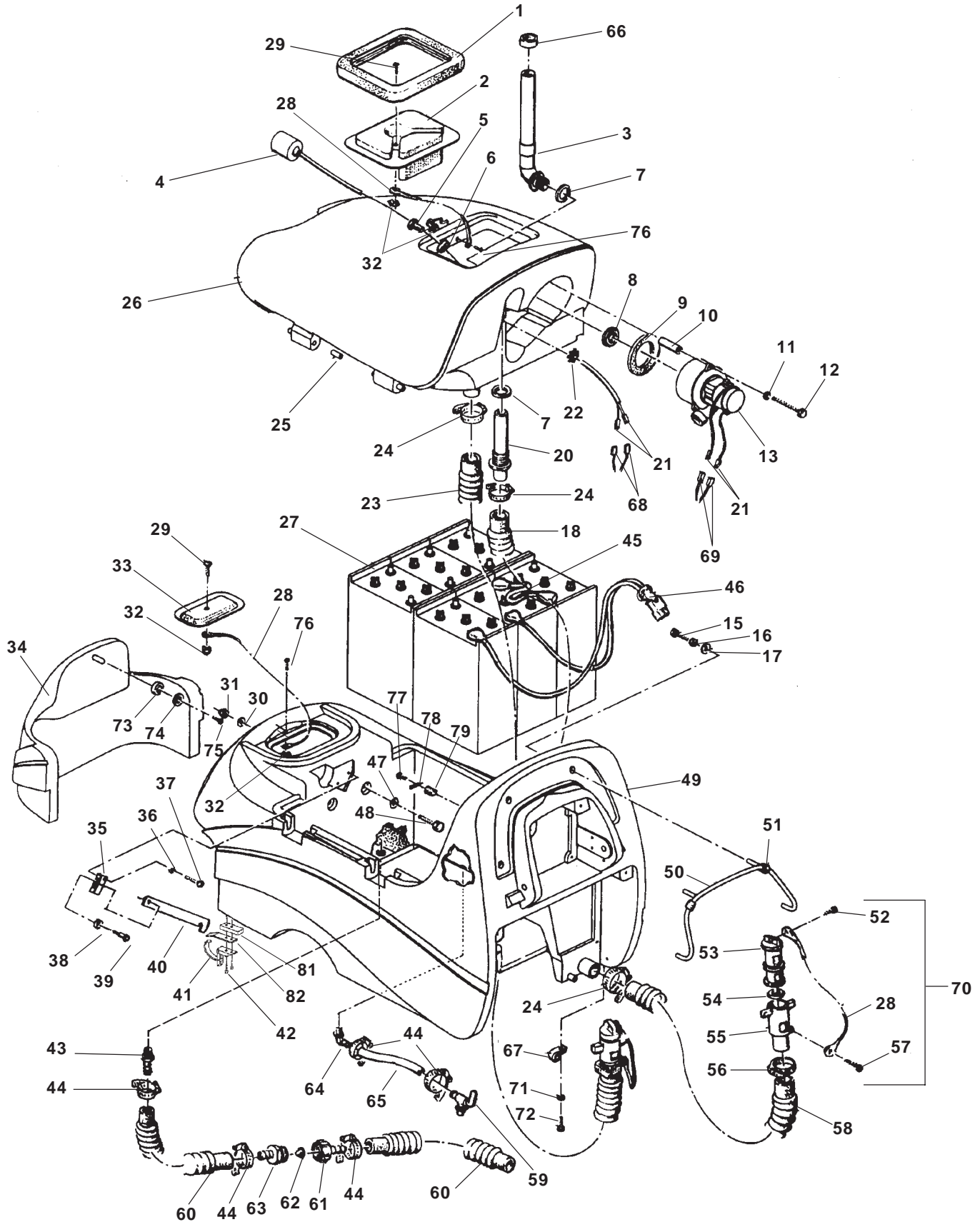
| Ref # | Part No. | Description | Qty | Model | Ref # | Part No. | Description | Qty | Model |
|-------|----------|--|-----|-------|-------|----------|----------------------------|-----|-------|
| 1 | 82501A | Pin | 2 | All | 44 | 30453A | Brush Hose | 2 | All |
| 2 | 60230A | Main Frame | Ref | All | 45 | 81109A | Nut, 8-32 ESNA SS | 4 | All |
| 3 | 766780 | Hair Pin | 2 | All | 46 | 833802 | Gimbal, Female | 2 | All |
| 4 | 962244 | Screw, .375-16x.75 | 9 | All | 47 | 838301 | Brush Holder Spring | 2 | All |
| 5 | 69883A | Switch Bracket | 1 | All | 48 | 55721A | Latch | 1 | All |
| 6 | 980608 | Washer, #6 | 6 | All | 49 | 962992 | Screw, 8-32x.62 SS | 4 | All |
| 7 | 920056 | Nut, #6-32 ESNA | 6 | All | 50 | 980638 | Washer, Lock .375 | 8 | All |
| 8 | 81105A | Nut, .375-16 ESNA | 1 | All | 51 | 962495 | Screw, .25-20x1.00Pn Hd | 6 | All |
| 9 | 920110 | Nut, .312-18 ESNA | 6 | All | 52 | 59856A | Rubber Washer | 2 | All |
| 10 | 60472A | Switch Mount | 1 | All | 53 | 34400B | Gimbal, Male | 2 | All |
| 11 | 47374A | Lever, Switch | 1 | All | 54 | 962714 | Screw, .312-18x.75 Soc. | 2 | All |
| 12 | 962980 | Screw, #6-32x1.00 PN | 6 | All | 55 | 11427B | Poly Brush Assembly-14 | 2 | 28 |
| 13 | 38708A | Nylon Spacer | 2 | All | | 11424B | Poly Brush Assembly-17 | 2 | 33 |
| 14 | 42401A | Diode | 1 | All | | 11434B | Poly Brush Assembly-19 | 2 | 38 |
| 15 | 50208A | Actuator & Tube Asm. | 1 | All | | 11426B | Grit Brush Assembly-14 | 2 | 28 |
| 16 | 69188A | Head Pressure Tube | 1 | All | | 11425B | Grit Brush Assembly-17 | 2 | 33 |
| 17 | 85602A | Screw, .25-20 x 3 | 1 | All | | 11433B | Grit Brush Assembly-19 | 2 | 38 |
| 18 | 87007A | Washer, Flat .25 | 5 | All | | 17521C | Pad Driver Assembly-14 | 2 | 28 |
| 20 | 47422B | Whisker Switch | 2 | All | | 17520C | Pad Driver Assembly-17 | 2 | 33 |
| 21 | 63032A | Linkage Bar | 4 | All | | 17524B | Pad Driver Assembly-19 | 2 | 38 |
| 22 | 85838A | Screw, .50-201.50 | 8 | All | 56 | 56941A | Center-Lok Asm. | 2 | All |
| 23 | 67705B | Sleeve Bearing | 8 | All | | | (Pad Driver Only) | | |
| 24 | 920278 | Nut, Jam 50-20 | 16 | All | 57 | 962737 | Screw, 10-16x.88 | 6 | All |
| 25 | 980626 | Washer, Lock .50 | 8 | All | | | (Pad Driver Only) | | |
| 26 | 980673 | Washer * | 4 | All | 58 | 61658A | Gimbal Collar | 2 | All |
| 27 | 81104A | Nut, .25-20 ESNA | 5 | All | 59 | 66232A | Brush Plate-28 | 1 | 28 |
| 28 | 51278A | Sleeve | 1 | All | | 66233A | Brush Plate-33 | 1 | 33 |
| 29 | 38723A | Nylon Spacer | 2 | All | | 66234A | Brush Plate-38 | 1 | 38 |
| 30 | 53421A | Head Pressure Spring | 1 | All | 60 | 85811A | Screw, .312-18x.75 Hex | 4 | All |
| 31 | 65966A | Brush Head Mount | 1 | All | 61 | 38243A | Right Skirt | 1 | 28 |
| 32 | 41601A | Connector | 4 | All | | 38245A | Right Skirt | 1 | 33 |
| | 41602A | Housing | 4 | All | | 38247A | Right Skirt | 1 | 38 |
| 33◆ | 45036B | Brush Motor 1.00 HP (includes item #32) | 2 | All | 62 | 69186A | Latch Tab | 1 | All |
| 34 | 915102 | Key | 2 | All | 63 | 85610A | Screw, .375-16x2.5 SS Pn | 1 | All |
| 35 | 170915 | Screw, Hex | 4 | All | 64 | 85616A | Screw, 10-22x.62 Pn SS | 11 | All |
| 36 | 80044A | "U" Bolt | 1 | All | | 85616A | Screw, 10-22x.62 Pn SS | 12 | All |
| 37 | 48703A | Electric Valve | 1 | All | 65 | 82004A | "T" Nut 10-32 | 11 | All |
| 38◆ | 50248A | Hose Clamp | 2 | All | | 82004A | "T" Nut 10-32 | 12 | All |
| 39 | 30455A | Hose | 1 | All | 66 | 55451A | Keeper | 1 | All |
| 40 | 38014A | Solution Splitter | 1 | All | 67 | 30245A | Right Brush Housing | 1 | 28 |
| 41 | 35250B | Left Brush Housing | 1 | 28 | | 30246A | Right Brush Housing | 1 | 33 |
| | 35244B | Left Brush Housing | 1 | 33 | | 30247A | Right Brush Housing | 1 | 38 |
| | 35246B | Left Brush Housing | 1 | 38 | 68 | 920248 | Nut, .375-16 Jam Thin ESNA | 2 | All |
| 42 | 38242A | Left Skirt | 1 | 28 | 69 | 59950A | Guide Wheel | 1 | All |
| | 38244A | Left Skirt | 1 | 33 | 70 | 980645 | Washer, Flat .375 | 2 | All |
| | 38246A | Left Skirt | 1 | 38 | 71 | 980638 | Lockwasher | 1 | All |
| 43 | 782002 | Clamp | 2 | All | 72 | 722021 | Hose Clamp | 2 | All |
| | | | | | **NI | 77353A | Label, Front Motor | 1 | All |
| | | | | | **NI | 77352A | Label, Front Motor | 1 | All |
| | | | | | **NI | 77091A | Label, Moving Parts | 2 | All |

*Used only as required to square up linkage bars #21 to the frame.

**Attach to Brush Motor.

NOTE: ◆ indicates a change has been made since the last publication of this manual.

Clarke®
Encore S28XP/S33XP/S38XP
Solution/Recovery System Assembly Drawing 2/04



Clarke®
Encore S28XP/S33XP/S38XP
Solution/Recovery System Assembly Parts List 8/04

| Ref # | Part No. | Description | Qty | Model |
|-------|----------|--|-----|----------|
| 1 | 34265A | Recovery Lid Gasket | 1 | All |
| 2 | 36204A | Recovery Lid | 1 | All |
| 3 | 39338A | Stand Tube | 1 | All |
| 4 | 40002A | Float Switch (include #5 & 2 each #21 & #68) | 1 | All |
| 5 | 56459A | Strain Relief | 1 | All |
| 6 | 87612A | Seal | 1 | All |
| 7 | 837304 | O-Ring | 2 | All |
| 8* | 920797 | Nut | 1 | All |
| 9 | 643418 | Gasket | 1 | All |
| 10 | 58533A | Vac Motor Spacer | 3 | All |
| 11 | 87026A | Washer, Flat .25 | 3 | All |
| 12 | 85728A | Screw, .25-20 x 4.00 Hex | 3 | All |
| 13 | 45019A | Vac Motor (also order 2 each #21 and #69) | 1 | All |
| 14 | 77365B | Label, Battery Installation | 1 | All (NI) |
| 15 | 85815A | Screw, .312-18x1.25 Hex | 4 | All |
| 16 | 980652 | Washer, Lock .312 | 4 | All |
| 17 | 980205 | Washer, Fender .312 | 4 | All |
| 18 | 35192A | Vac Hose | 1 | All |
| 19 | 77093A | Label, Falling Parts | 1 | All (NI) |
| 20 | 30133A | Squeegee Adapter | 1 | All |
| 21 | 41809A | Contact | 4 | All |
| 22 | 82100A | Locknut | 1 | All |
| 23 | 35165A | Recovery Tank Drain Hose | 1 | All |
| 24 | 872010 | Hose Clamp | 3 | All |
| 25 | 36903A | Hinge Pin | 4 | All |
| 26 | 30243A | Recovery Tank, incl #25 | 1 | All |
| 27 | 881317 | Battery - 250 AH - 6 Volt | 6 | All |
| | 891384 | Battery - 330 AH - 6 Volt | 6 | All |
| | 40704A | Battery - 370 AH - 6 Volt | 6 | All |
| 28 | 38020A | Strap | 4 | All |
| 29 | 962798 | Screw, 10-24x.5 Pan | 2 | All |
| 30 | 980645 | Washer, Flat .375 | 2 | All |
| 31 | 81105A | Nut, .375-16 ESNA | 2 | All |
| 32 | 920296 | Nut, 10-24 ESNA | 4 | All |
| 33 | 36200A | Solution Lid | 1 | All |
| 34 | 32409B | Front Cover | 1 | 28, 33 |
| | 32419B | Front Cover | 1 | 38 |
| 35 | 69879A | Support Bracket | 1 | All |

†
 *Recommended torque
 175 5 inch/ pounds.

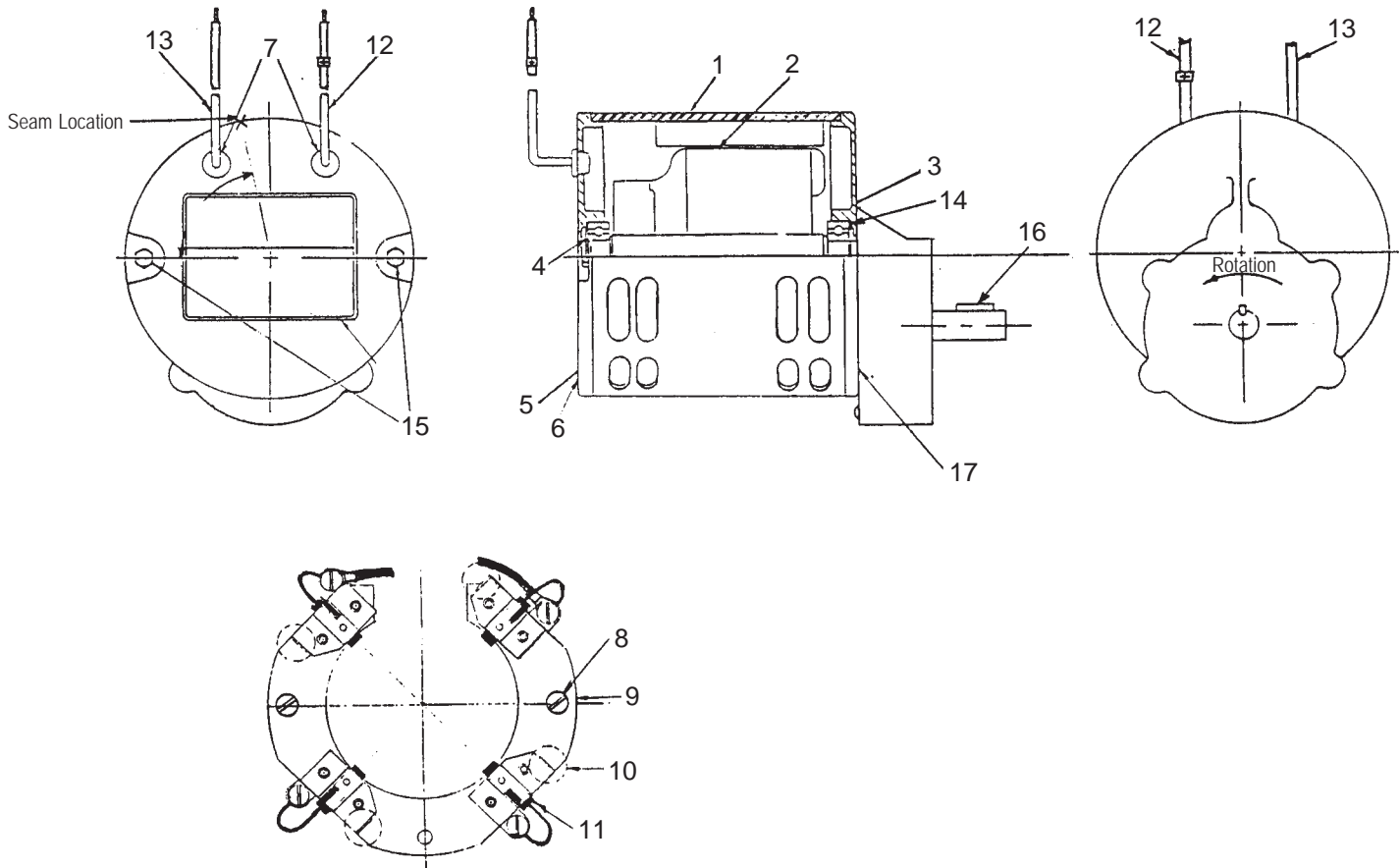
NI = Not Illustrated

NOTE: ♦ indicates a change has been made since the last publication of this manual.

| Ref # | Part No. | Description | Qty | Model |
|-------|----------|---|-----|---------|
| 36 | 170892 | Washer, Lock .25 | 2 | All |
| 37 | 170915 | Screw, .25-20x.75 SS Hex | 2 | All |
| 38 | 87622A | Washer, Nylon ⁵ / ₁₆ X ⁵ / ₈ X ¹ / ₃₂ | 1 | All |
| 39 | 80043A | Screw,Shoulder.25-20x25 | 1 | All |
| 40 | 69548A | Recovery Tank Support | 1 | All |
| 41 | 55723A | Latch | 2 | All |
| 42 | 85614A | Screw, 8-32 x .75 Pn. | 4 | All |
| 43♦ | 50359A | Barb, ½ NPTF x ¾ Hose | 1 | All |
| 44 | 722030 | Hose Clamp | 6 | All |
| 45 | 842406 | Series Cable - 9" | 3 | All |
| | 41206A | Series Cable - 16" | 2 | All |
| 46 | 41208A | Battery Cable | 1 | All |
| 47 | 87054A | Washer,Fender .375x1¼ | 2 | All |
| 48 | 85703A | Screw, .375-16x 1.50 Hex | 2 | All |
| 49 | 30242A | Solution Tank | 1 | All |
| 50 | 64900A | Stationary Handle | 1 | All |
| 51 | 30454A | Hose | 2 | All |
| 52 | 962987 | Screw, 10-24x.375 Pn. | 2 | All |
| 53 | 833901 | Drain Valve Handle | 2 | All |
| 54 | 833407 | Drain Gasket | 2 | All |
| 55 | 839401 | Drain Valve | 2 | All |
| 56 | 832002 | Hose Clamp, Drain Valve | 2 | All |
| 57 | 962943 | Screw, 8-18x.5 Pn. | 2 | All |
| 58 | 30449A | Drain Hose | 1 | All |
| 59 | 59614A | Battery Drain Valve | 1 | All |
| 60 | 30445A | Solution Hose | 2 | All |
| 61 | 50358A | Connector | 1 | All |
| 62 | 838517 | Filter Screen | 1 | All |
| 63 | 830214 | Hose Adapter | 1 | All |
| 64 | 822802 | Elbow | 1 | All |
| 65 | 30453A | Hose | 1 | All |
| 66 | 58069A | Vac Filter | 1 | All |
| 67 | 98465A | Clamp, Metal | 1 | All |
| 68 | 43402A | Housing, Blue | 2 | All |
| 69 | 43401A | Housing - Black | 2 | All |
| 70 | 839410 | Asm., Drain Valve | | |
| 71 | 980657 | Washer, ¼ Lock | 1 | All |
| 72 | 962139 | Screw, ¼-20x5/8 | 1 | All |
| 73 | 39713A | Washer, Rubber | 1 | All |
| 74 | 87032A | Washer | 1 | All |
| 75 | 85524A | Screw | 1 | All |
| 76 | 962666 | Screw | 2 | All |
| 77 | 962113 | Screw 10-32x1 | 1 | All |
| 78 | 51867A | Cable Clamp | 1 | All |
| 79 | 81800A | Well Nut | 1 | All |
| 80 | 77092A | Label, Gases & Chem. | 1 | All(NI) |
| 81 | 61493A** | Spacer, Latch | 2 | All |
| 82 | 61494A** | Plate, Support | 2 | All |

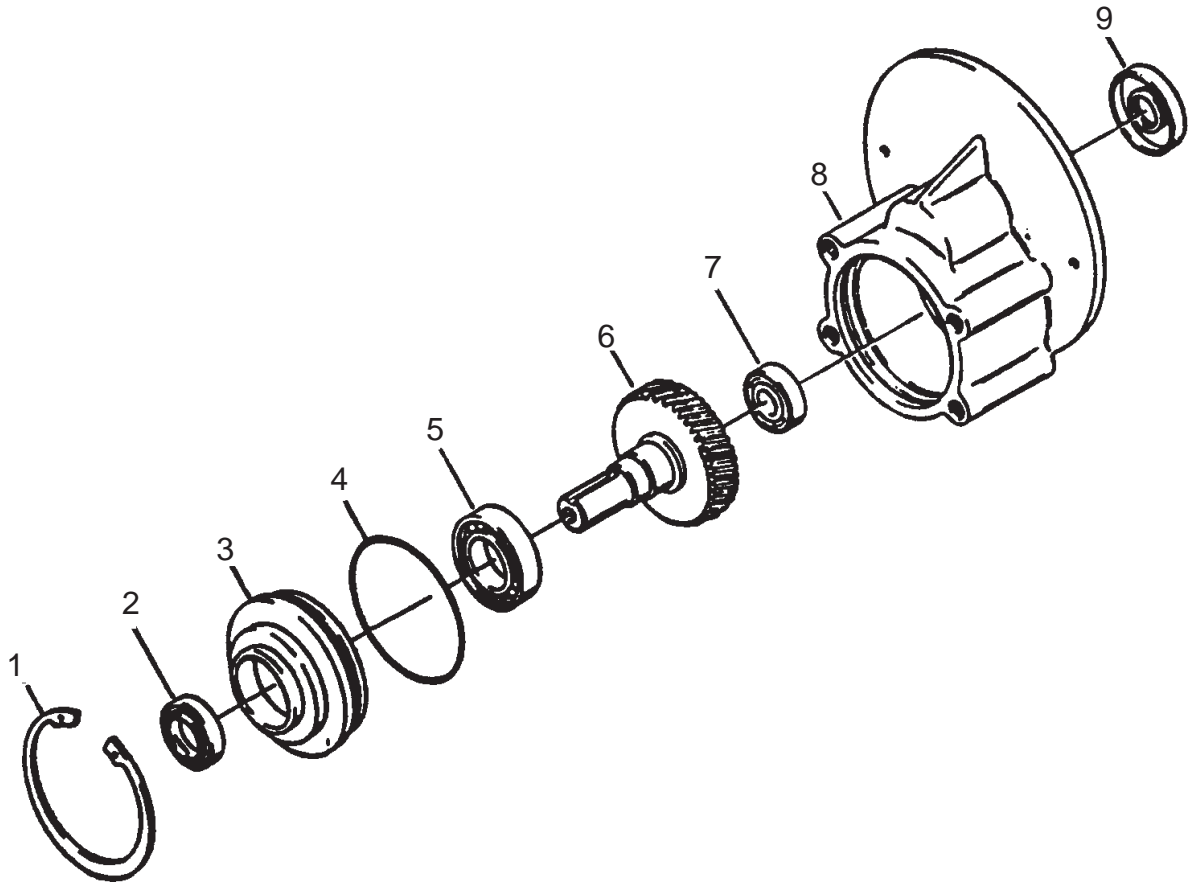
**NOTE: Ref. #'s 81 and 82 were added after Serial # CA2942

Clarke®
Encore S28XP/S33XP/S38XP
Brush Motor #45033A 12/03



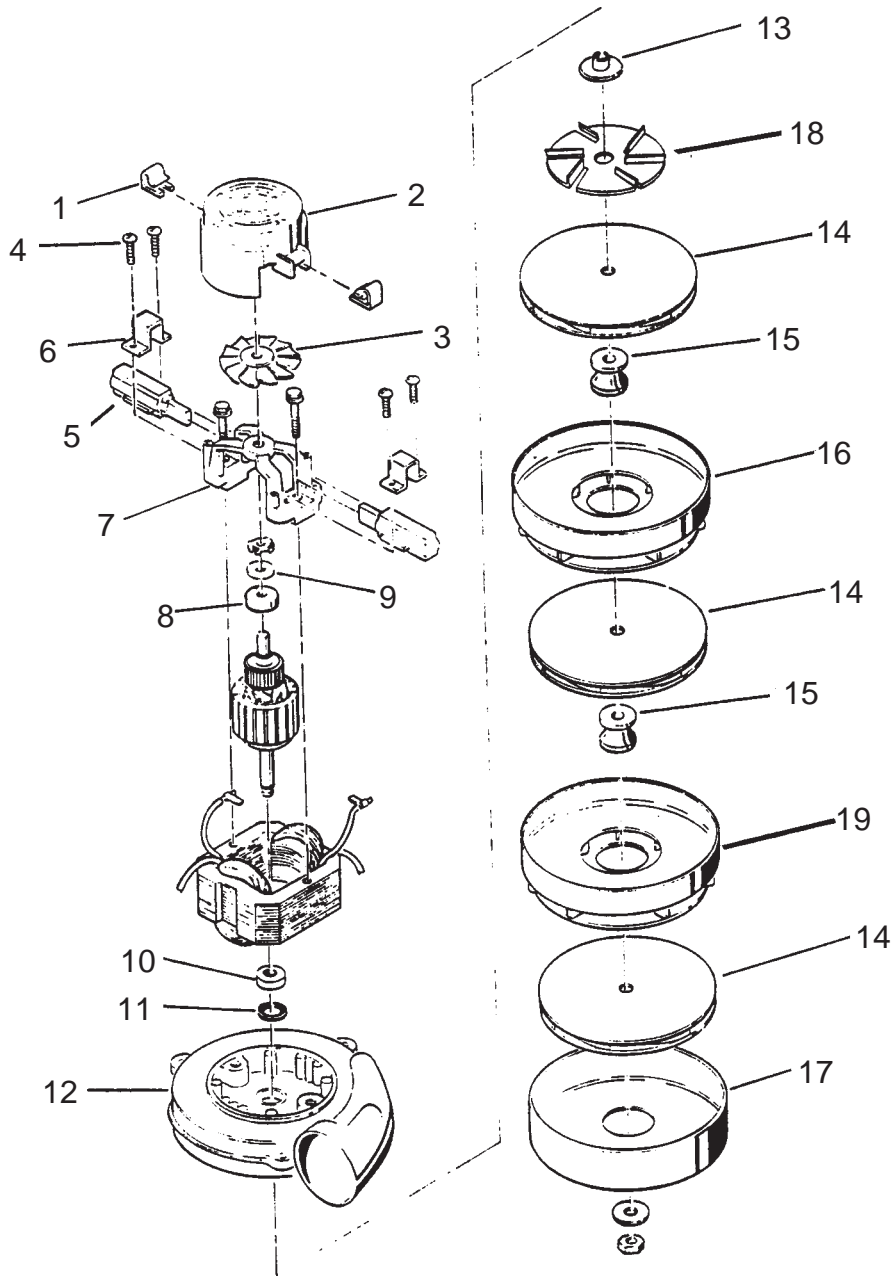
| Ref # | Part No. | Description | Qty |
|-------|----------|---|-----|
| 1 | 56478A | Stator Assembly (w/Magnets & Clips) | 1 |
| 2 | 40312A | Armature Asm.(w/B.E. & F.E. bearings) | 1 |
| 3 | 902654 | Bearings B.E. | 1 |
| 4 | 902550 | Bearing F.E. | 1 |
| 5 | 51840A | Commutator Bracket Assembly (w/Brush BRD Assembly Leads) | 1 |
| 6 | 50520A | Commutator Bracket | 1 |
| 7 | 56480A | Strain Relief | 2 |
| 8 | 962546 | Brush Board Screw | 2 |
| 9 | 50517A | Brush Board Asm. (w/springs & brushes) | 1 |
| 10 | 448396 | Brush Spring | 4 |
| 11 | 40826A | Brush Assembly | 4 |
| 12 | 55657A | Lead Assembly, Positive | 1 |
| 13 | 55656A | Lead Assembly, Negative | 1 |
| 14 | 59805A | Helical Washer | 1 |
| 15 | 50515A | Thru Bolt | 2 |
| 16 | 80501A | Shaft Key | 1 |
| 17 | 54238A | B.E. Bracket Assembly (Gear Box) | 1 |

Clarke®
 Encore S28XP/S33XP/S38XP
 Gear Box #54238A 6/02



| Ref # | Part No. | Description | Qty |
|-------|----------|-----------------------|------|
| 1 | 57846A | Ring, Snap | 1 |
| 2 | 507641 | Seal, Oil, Small | 1 |
| 3 | 52050A | Cap End | 1 |
| 4 | 56668A | O'Ring | 1 |
| 5 | 51176A | Bearing, Large | 1 |
| 6 | 58316A | Shaft & Gear, Gearbox | 1 |
| 7 | 902605 | Bearing, Small | 1 |
| 8 | 54883A | Housing | 1 |
| 9 | 58144A | Seal, Oil Large | 1 |
| NI | | Darina Grease | 4oz. |

Clarke®
Encore S28XP/S33XP/S38XP
Vac Motor Assembly #45019A 6/02



| Ref # | Part No. | Description | Qty |
|-------|----------|------------------------|-----|
| 1 | 51913A | Clip (optional) | 2 |
| 2 | 54809A | Housing | 1 |
| 3 | 53905A | Fan | 1 |
| 4 | 85303A | Screw - 8-32 x 3/8 | 4 |
| 5 | 40830A | Carbon Brushes | 2 |
| 6 | 51914A | Clamp | 2 |
| 7 | 50618A | Bracket | 1 |
| 8 | 53100A | Disc | 1 |
| 9 | 902679 | Bearing - Ball | 1 |
| 10 | 902648 | Bearing - ball, radial | 1 |

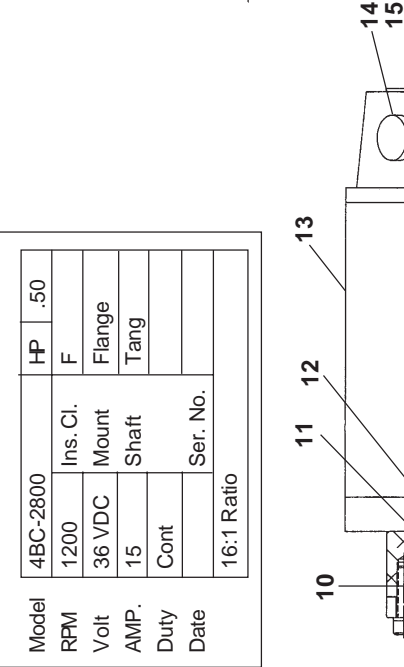
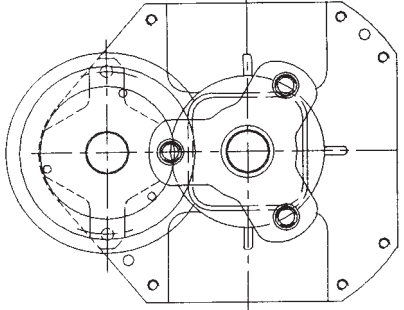
| Ref # | Part No. | Description | Qty |
|-------|----------|-------------------|-----|
| 11 | 59803A | Washer - neoprene | 1 |
| 12 | 50610A | Bracket and shell | 1 |
| 13 | 58501A | Spacer | 1 |
| 14 | 53914A | Fan - Rotating | 3 |
| 15 | 658201 | Spacer | 2 |
| 16 | 53908A | Fan - Stationary | 1 |
| 17 | 658506 | Shell | 1 |
| 18 | 53995A | Fan, Air Seal | 1 |
| 19 | 53996A | Fan, Stationary | 1 |

Clarke®
Encore S28XP/S33XP/S38XP
Imperial Transaxle Parts 12/03
PN59116A
Transaxle has black motor

PERMANENT MAGNET MOTOR
MFG. IN USA

| | | | |
|-------|----------|----------|------------|
| Model | 4BC-2800 | HP | .50 |
| RPM | 1200 | Ins. Cl. | F |
| Volt | 36 VDC | Mount | Flange |
| AMP. | 15 | Shaft | Tang |
| Duty | Cont | Ser. No. | |
| Date | | | |
| | | | 16:1 Ratio |

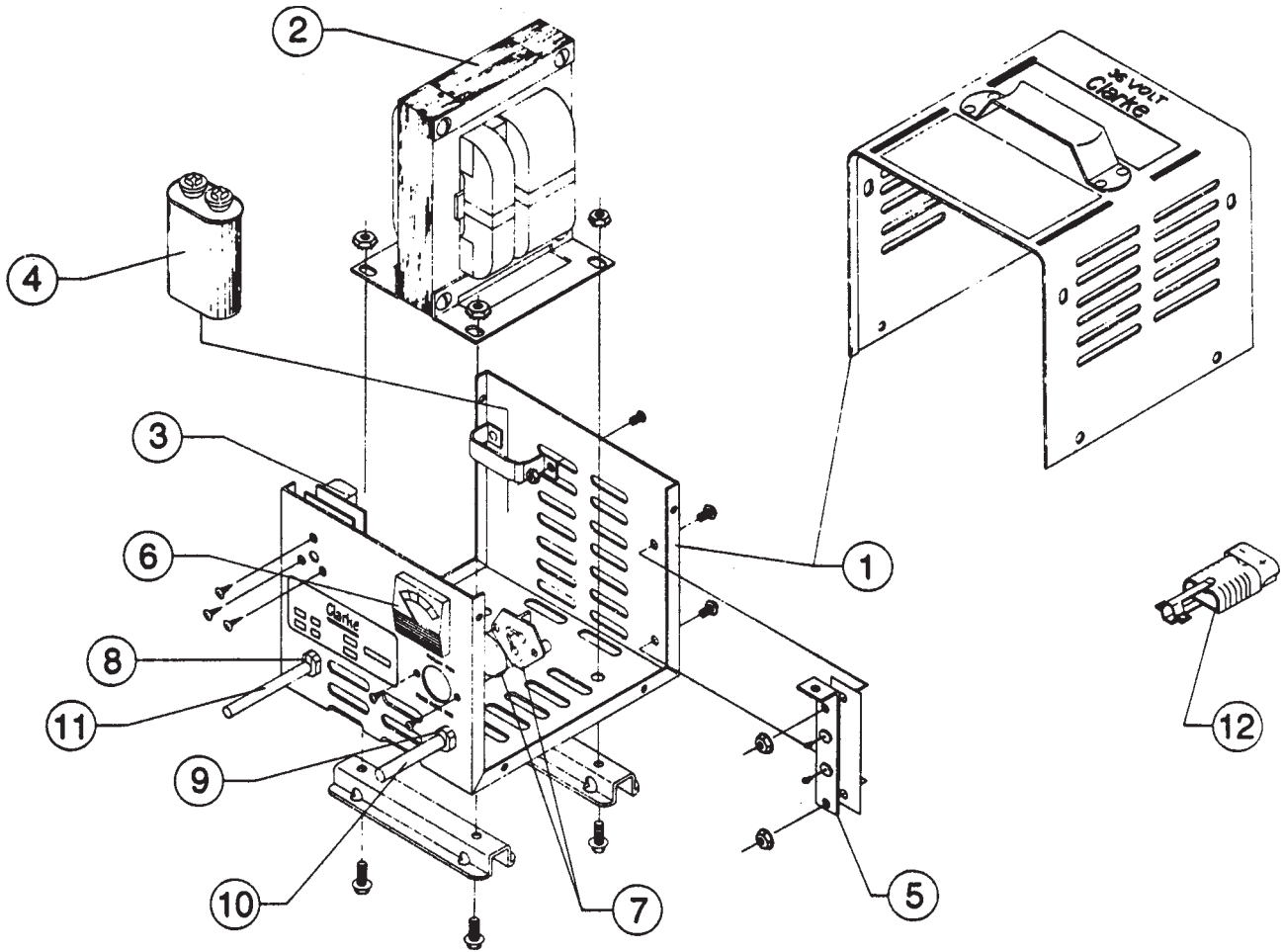
① To replace coupler remove these two screws (Black) to separate the motor from gearbox to allow access to coupler



| Ref # | Clarke Part # | Description | Qty |
|-------|---------------|--|-----|
| 1 | 10357A | Wheel Flange Kit (includes Flange, Studs, Key, Snap Rings & Shims) | 2 |
| 2 | 36508A | Rubber Mount | 2 |
| 3 | 53374A | Axle Oil Seal | 2 |
| 4 | 53375A | Axle Bearing | 4 |
| 5 | 53376A | Short Axle | 1 |
| 6 | 53377A | Output Gear | 1 |
| 7 | 53378A | Input Plug | 1 |
| 8 | 53379A | Outer Pinion Bearing | 1 |
| 9 | 53380A | Pinion | 1 |
| 10 | 53381A | Inner Pinion Bearing | 1 |
| 11 | 52663A | Steel Ring, Coupler | 1 |
| 12 | 69195A | Rubber Coupler | 1 |
| 13 | 45048A | Motor | 1 |
| 14 | 51720A | Brushes w/Springs (Set of 4) | 1 |
| 15 | 30074A | Motor Brush Cap (Internal Threads) | 4 |
| 15 | 53382A | Motor Brush Cap (External Threads) | 4 |
| 16 | 53383A | Long Axle | 1 |
| 16 | 54282A | Gearbox Asm w/o motor | 1 |
| 17 | 53435A | Miter Gear | 4 |

| Parking Brake Spare Parts | | |
|---------------------------|---------------------|-----|
| Part No. | Description | Qty |
| 53384A | Pad, Friction | 1 |
| 53385A | Hub, Shaft | 1 |
| 80121A | Key, 4 MM - Hub | 1 |
| 80122A | Set Screw, M3 - Hub | 1 |

Clarke®
Encore S28XP/S33XP/S38XP
36 Volt Battery Charger 6/02



WARNING: All electrical repairs must be performed by qualified personnel only.

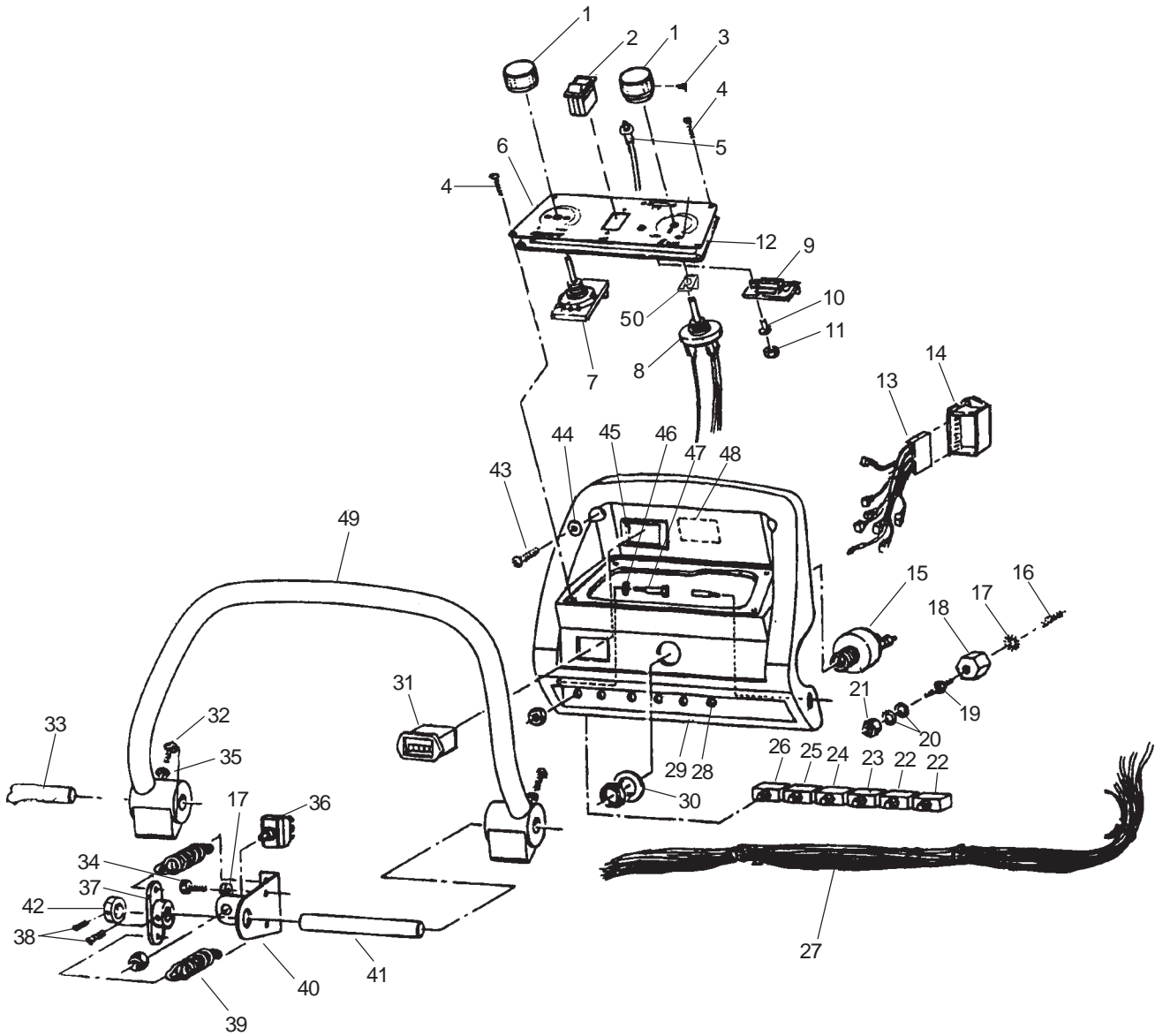
PARTS LIST FOR BATTERY CHARGERS

40506A - 36 Volt D.C., 25A, 115 Volt A.C., 60 Hz
 40505A - 36 Volt D.C., 25A, 230 Volt A.C., 50 Hz
 40507A - 36 Volt D.C., 25A, 230 Volt A.C., 60 Hz
 40514A - 36 Volt D.C., 36A, 115 Volt A.C., 60 Hz
 40515A - 36 Volt D.C., 36A, 230 Volt A.C., 50Hz

| Ref # | Description | Charger Model Number | | | | |
|-------|-------------------------------|----------------------|------------------|------------------|------------------|------------------|
| | | 40506A Part # | 40507A Part # | 40505A Part # | 40514A Part # | 40515A Part # |
| 1 | Charger Case | 42503A | 42504A | 51959A | 41139A | 51856A |
| 2 | Transformer | 48400A | 48412A | 48401A | Ref | Ref |
| 3 | Electronic Timer Kit | 41102A | 41103A | 41103A | 41102A | 41103A |
| 4 | Capacitor, 6 Mfd., 660 V.A.C. | 912132 | 912132 | 912132 | 912132 | 912132 |
| 5 | Heat Sink Assembly | 912212 | 912212 | 912212 | 43301A | 43301A |
| 6 | Ammeter | 40200A | 40200A | 40200A | 40210A | 40210A |
| 7 | Fuse Assembly | 912382 | 912382 | 912382 | 42704A | 42704A |
| 8 | Strain Relief, A.C. Cord | 837525 | 837525 | 837525 | 747553 | 747553 |
| 9 | Strain Relief, D.C. Cord | 747553 | 747553 | 747553 | 737502 | 737502 |
| 10 | D.C. Cord Assembly | 51973A | 51973A | 51973A | 42303A | 42303A |
| 11 | A.C. Cord Assembly | 51974A | 908947 | 908947 | 51974A | 51857A |
| 12 | D.C. Plug | 911185 | 911185 | 911185 | 911185 | 911185 |
| | D.C. Plug Lock Key | 795020 | 795020 | 795020 | 795020 | 795020 |

SEE
PAGES 44 - 59
FOR
COMPONENTS
FOR MACHINES
WITH A
41135C
TRAVERSE
CONTROLLER

Clarke®
Encore S28XP/S33XP/S38XP
Control Housing Assembly Drawing 12/03
Drawing# 13713A
(for machines with a 41135C Traverse Controller)

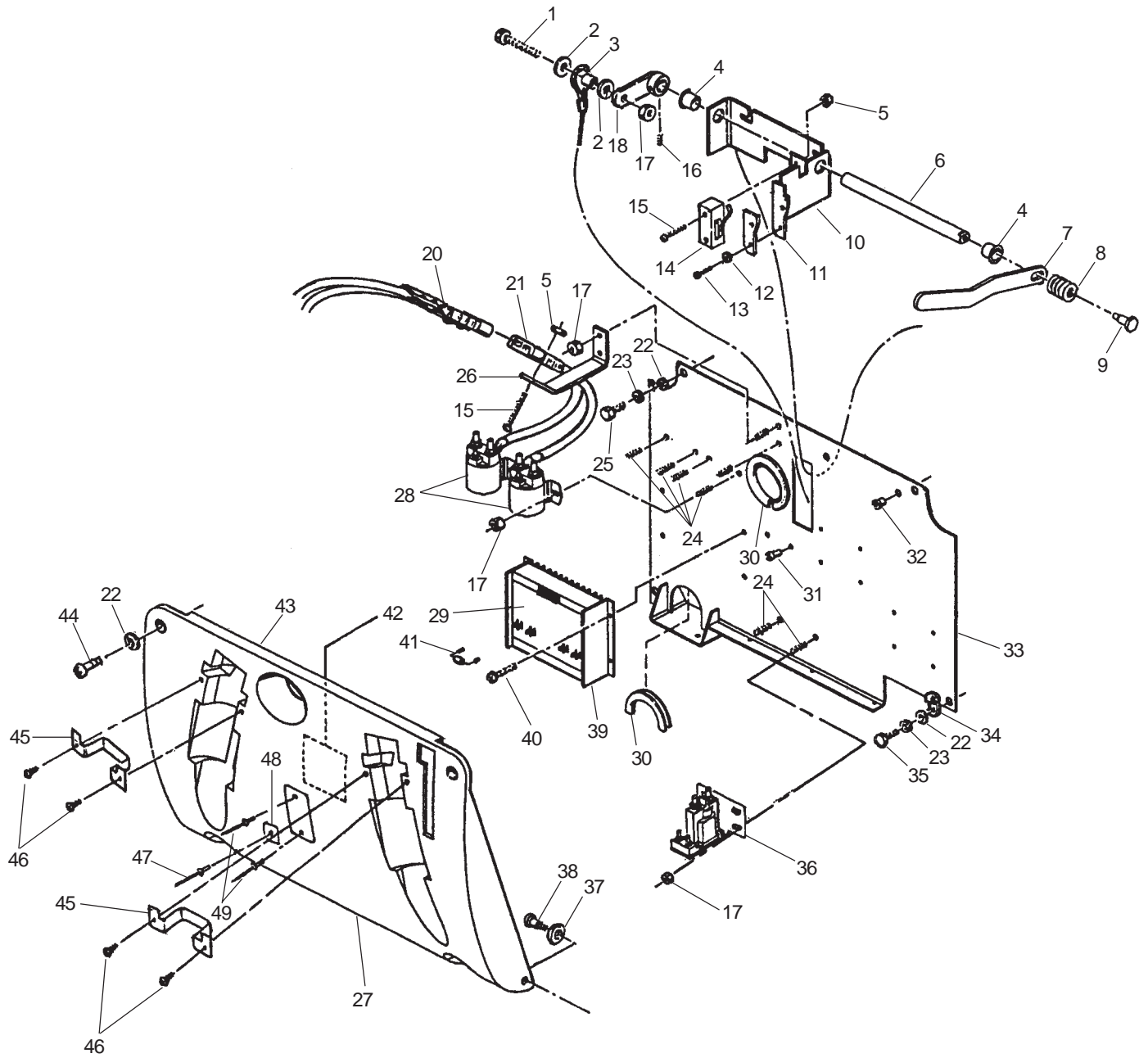


Clarke®
Encore S28XP/S33XP/S38XP
Control Housing Assembly Parts List 12/03
(for machines with a 41135C Traverse Controller)

| Ref # | Part No. | Description | Qty |
|-------|----------|-------------------------------|-----|
| 1 | 55502A | Knob | 2 |
| 2 | 47381B | Switch, Head up & down Rocker | 1 |
| 3 | 962262 | Screw, 8-32 x .25 Set | 2 |
| 4 | 85612A | Screw, 10-24 x .375 Pn. | 6 |
| 5 | 53031A | Switch | 1 |
| 6 | 77343B | Control Panel Label | 1 |
| | 60058A | Control Panel | 1 |
| 7 | 44308B | Solution Flow Module | 1 |
| 8 | 40623A | Speed Control Harness | 1 |
| 9 | 44416B | Battery Meter | 1 |
| 10 | 38724B | Spacer | 2 |
| 11 | 920056 | Nut, 6-32 ESNA | 2 |
| 12 | 30022A | Gasket, Panel | 1 |
| 13 | 40085A | Harness, Sequencer | 1 |
| 14 | 40083B | Module Sequencer | 1 |
| 15 | 47380A | Key Switch | 1 |
| 15A | 55413A | Key, Spare | 1 |
| 16 | 170781 | Screw, 1/4-20 x 3/4 Set | 1 |
| 17 | 980657 | Lock Washer | 3 |
| 18 | 854849 | Insulator | 1 |
| 19 | 83302A | Stud | 1 |
| 20 | 87026A | Washer | 2 |
| 21 | 81104A | Nut, 1/4-20 ESNA | 1 |
| 22 | 41431A | Circuit Breaker 35A | 2 |
| 23 | 41448A | Circuit Breaker 30A Scr. | 1 |
| 24 | 41422A | Circuit Breaker 25A Scr. | 1 |
| 25 | 41423A | Circuit Breaker 5A | 1 |
| 26 | 41430A | Circuit Breaker 1.5A | 1 |
| 27 | 40179A | Main Harness (S Series only) | 1 |
| 28 | 60042A | Stud, 5/16 x 1/4-20 Thread | 1 |
| 29 | 35252B | Control Housing | 1 |
| 30 | 87052A | Nylon Washer, Key Switch | 1 |
| 31 | 912226 | Hour Meter | 1 |
| 32 | 85390A | Screw, .25-20 x 1.25 Pn | 2 |
| 33 | 66549A | Pin, Left Hand | 1 |
| 34 | 962139 | Screw, .25-20 x .62 | 2 |
| 35 | 170892 | Washer, Lock .25 | 2 |
| 36 | 10052A | Toggle Switch | 1 |
| 37 | 60662A | Centering Bracket | 1 |
| 38* | 962304 | Screw, Set .312-18 x .5 | 4 |
| 39 | 53038A | Control Handle Spring | 2 |
| 40 | 61266A | Control Bracket | 1 |
| 41 | 66548A | Pin, Right Hand | 1 |
| 42 | 61651A | Collar | 1 |
| 43 | 85391A | Screw, .25-20 x .62 Pn | 2 |
| 44 | 87007A | Washer | 2 |
| 45 | 66871A | Retainer Key/Hour Meter | 1 |
| 46 | 980651 | Washer, Nylon IDxODx.034 | 1 |
| 47 | 80043A | Screw, Shoulder | 1 |
| 48 | 77351B | Label, Control Wiring | 1 |
| 49 | 24309B | Control Handle | 1 |
| 50 | 50883A | Retainer, Potentiometer | 1 |

*#38 must use red loctite set screws.

Clarke®
Encore S28XP/S33XP/S38XP
Rear Cover Assembly Drawing 6/02
(for machines with a 41135C Traverse Controller)



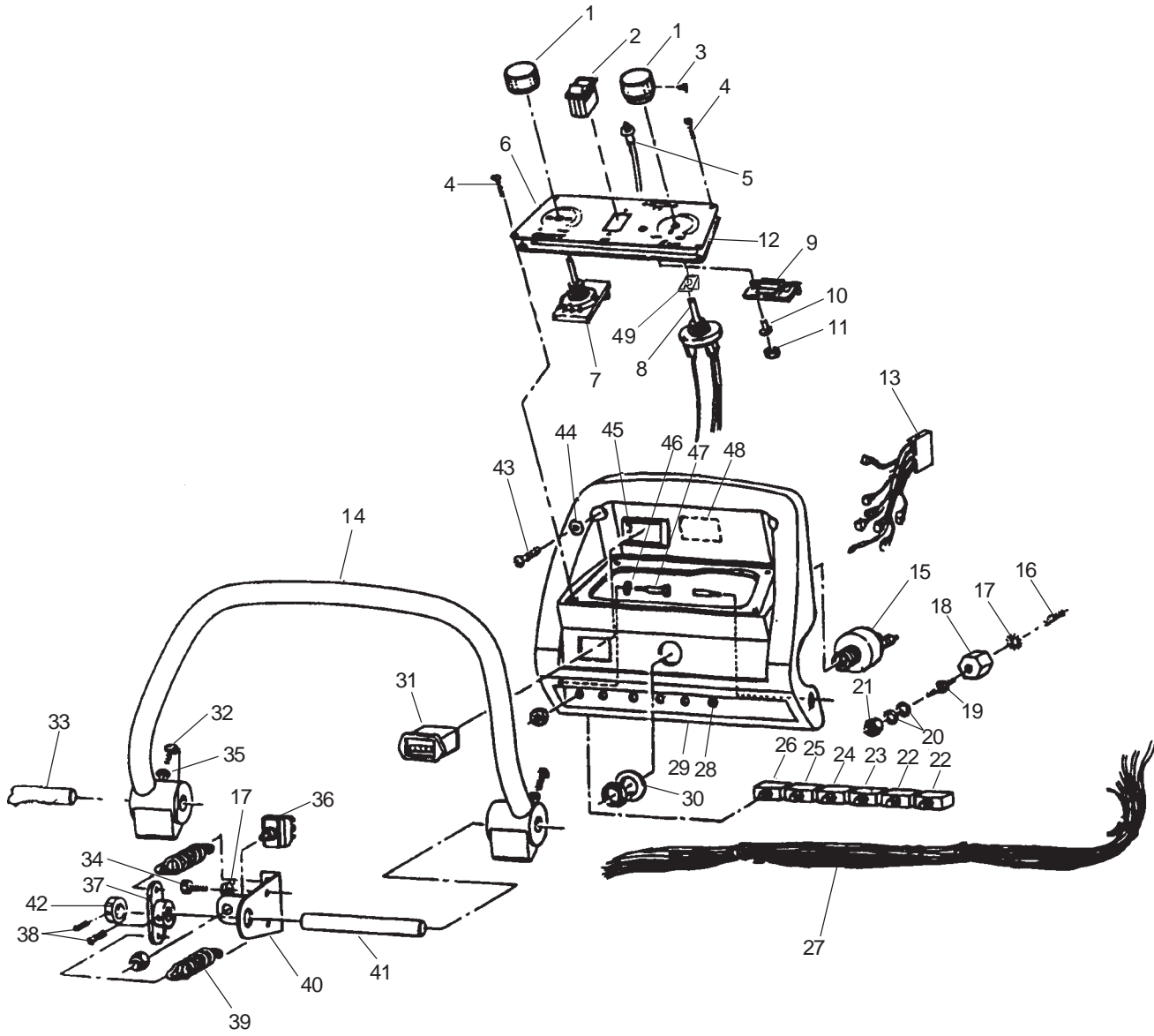
Clarke®
Encore S28XP/S33XP/S38XP
Rear Cover Assembly Parts List 6/02
(for machines with a 41135C Traverse Controller)

| Ref # | Part No. | Description | Qty |
|-------|----------|---------------------------------|-----|
| 1 | 85700A | Screw, .25-20x1.00 Hex | 1 |
| 2 | 87026A | Washer, Flat .25 | 2 |
| 3 | 608210 | Spacer | 1 |
| 4 | 902731 | Nylon Bearing | 2 |
| 5 | 920056 | Nut, 6-32 ESNA | 4 |
| 6 | 67476A | Shaft | 1 |
| 7 | 65629A | Squeegee Lever | 1 |
| 8 | 438360 | Spring | 1 |
| 9 | 960510 | Shoulder Screw | 1 |
| 10 | 61265A | Squeegee Lift Bracket | 1 |
| 11 | 68643A | Wear Plate | 1 |
| 12 | 980675 | Washer | 2 |
| 13 | 962546 | Screw, 10-24 x .50 Pn | 2 |
| 14 | 47388A | Switch | 1 |
| 15 | 962980 | Screw, 6-32 x 1.00 Pn | 4 |
| 16* | 962304 | Screw, .312-18 x .50 Set | 2 |
| 17 | 81104A | Nut, .25-20 ESNA | 9 |
| 18 | 65628A | Lever Weld. | 1 |
| 19 | 61682A | Upper Cable Assembly | 1 |
| 20 | 41208A | Battery Cable | Ref |
| 21 | 41140A | Cable Assembly | 1 |
| 22 | 87007A | Washer | 6 |
| 23 | 980657 | Washer, Lock | 4 |
| 24 | 83307A | Stud, ¼-20 | 8 |
| 25 | 962139 | Screw, .25-20x.62 Hex | 5 |
| 26 | 69878A | Plug Bracket | 1 |
| 27 | 77079A | Label, w/Brake Warning | 1 |
| | 77080A | Label, w/o Brake Warning | 1 |
| 28 | 41801A | Solenoid - Main / Brush | 2 |
| 29 | 77194B | Label, Traverse | 1 |
| 30 | 193951 | Trim, 4½" & 8" | 1 |
| 31 | 54763A | Insert | 4 |
| 32 | 54764A | Insert | 2 |
| 33 | 69372A | Lower Electrical Panel | 1 |
| 34 | 98465A | Clamp, Metal ^{7/18} | 1 |
| 35 | 85806A | Screw, ¼-20 x ¾ Hex | 1 |
| 36 | 40125A | Solenoid - Vac | 1 |
| 37 | 980651 | Washer | 2 |
| 38 | 80043A | Shoulder Screw | 2 |
| 39 | 41135C | Traverse, Control Board | 1 |
| 40 | 962992 | Screw, 8-32 x .74 Pn | 4 |
| 41 | 42405A | Diode | 1 |
| 42 | 77355A | Label | 1 |
| 43 | 32418B | Rear Cover | 1 |
| 44 | 85391A | Screw, .25-20 x.62 Pn | 2 |
| 45 | 60233A | Hose Bracket | 2 |
| 46 | 962957 | Screw, 10-16 x ½ | 4 |
| 48 | 77221A | Serial Tag | 1 |
| 47 | 83010A | Rivet, Pop | 1 |
| 49 | 930093 | Rivet | 2 |

*#16 must use red loctite.

SEE
PAGES 52 - 57
FOR
COMPONENTS
FOR MACHINES
WITH A
40089A
TRAVERSE
CONTROLLER

Clarke®
Encore S28XP/S33XP/S38XP
Control Housing Assembly Drawing 12/03
Drawing# 13713A
(for machines with a 40089A Traverse Controller)

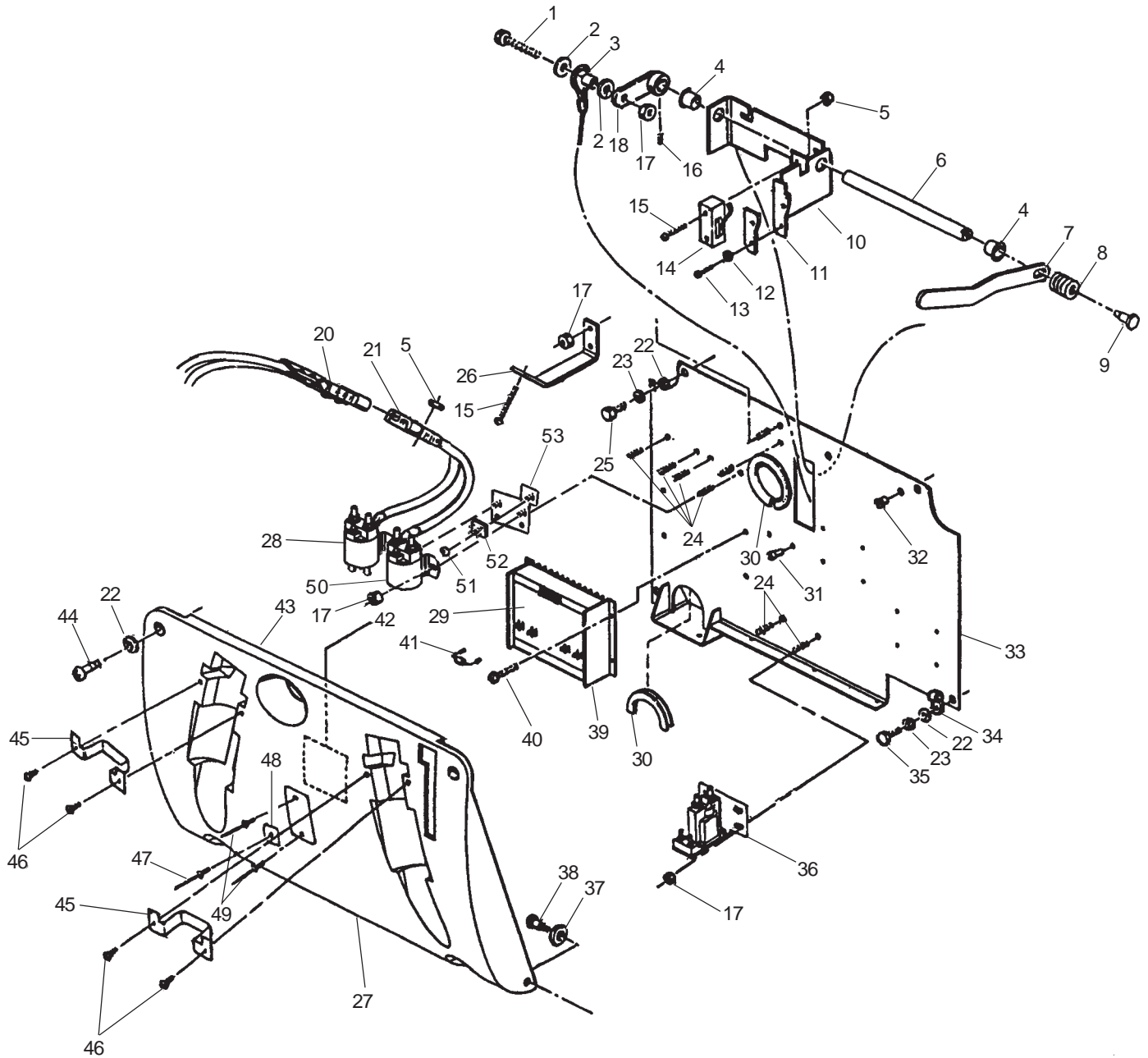


Clarke®
Encore S28XP/S33XP/S38XP
Control Housing Assembly Parts List 12/03
(for machines with a 40089A Traverse Controller)

| Ref # | Part No. | Description | Qty |
|-------|----------|--------------------------------------|-----|
| 1 | 55502A | Knob | 2 |
| 2 | 47381B | Switch, Head up & down Rocker | 1 |
| 3 | 962262 | Screw, 8-32 x .25 Set | 2 |
| 4 | 85612A | Screw, 10-24 x .375 Pn. | 6 |
| 5 | 53031A | Switch | 1 |
| 6 | 77343B | Control Panel Label | 1 |
| | 60058A | Control Panel | 1 |
| 7 | 44308B | Solution Flow Module | 1 |
| 8 | 40623A | Speed Control Harness | 1 |
| 9 | 44416B | Battery Meter | 1 |
| 10 | 38724B | Spacer | 2 |
| 11 | 920056 | Nut, 6-32 ESNA | 2 |
| 12 | 30022A | Gasket, Panel | 1 |
| 13 | 40623A | Harness, Traverse | 1 |
| 14 | 24309B | Control Handle | 1 |
| 15 | 47380A | Key Switch | 1 |
| 15A | 55413A | Key, Spare | 1 |
| 16 | 170781 | Screw, 1/4-20 x 3/4 Set | 1 |
| 17 | 980657 | Lock Washer | 3 |
| 18 | 854849 | Insulator | 1 |
| 19 | 83302A | Stud | 1 |
| 20 | 87026A | Washer | 2 |
| 21 | 81104A | Nut, 1/4-20 ESNA | 1 |
| 22 | 41431A | Circuit Breaker 35A | 2 |
| 23 | 41448A | Circuit Breaker 30A Scr. | 1 |
| 24 | 41422A | Circuit Breaker 25A Scr. | 1 |
| 25 | 41423A | Circuit Breaker 5A | 1 |
| 26 | 41430A | Circuit Breaker 1.5A | 1 |
| 27 | 40179B | Main Harness | 1 |
| 28 | 60042A | Stud, 5/16 x 1/4 -20 Thread | 1 |
| 29 | 35252B | Control Housing | 1 |
| 30 | 87052A | Nylon Washer, Key Switch | 1 |
| 31 | 912226 | Hour Meter | 1 |
| 32 | 85390A | Screw, .25-20 x 1.25 Pn | 2 |
| 33 | 66549A | Pin, Left Hand | 1 |
| 34 | 962139 | Screw, .25-20 x .62 | 2 |
| 35 | 170892 | Washer, Lock .25 | 2 |
| 36 | 10052A | Toggle Switch | 1 |
| 37 | 60662A | Centering Bracket | 1 |
| 38* | 962304 | Screw, Set .312-18 x .5 | 4 |
| 39 | 53038A | Control Handle Spring | 2 |
| 40 | 61266A | Control Bracket | 1 |
| 41 | 66548A | Pin, Right Hand | 1 |
| 42 | 61651A | Collar | 1 |
| 43 | 85391A | Screw, .25-20 x .62 Pn | 2 |
| 44 | 87007A | Washer | 2 |
| 45 | 66871A | Retainer Key/Hour Meter | 1 |
| 46 | 980651 | Washer, Nylon IDxODx.034 | 1 |
| 47 | 80043A | Screw, Shoulder | 1 |
| 48 | 77351C | Label, Control Wiring | 1 |
| 49 | 50883A | Retainer, Potentiometer | 1 |
| NI | 42909A | Fuse, 5 Amp ACG (included w/item#27) | 2 |

*#38 must use red loctite set screws.

Clarke®
Encore S28XP/S33XP/S38XP
Rear Cover Assembly Drawing 10/02
(for machines with a 40089A Traverse Controller)

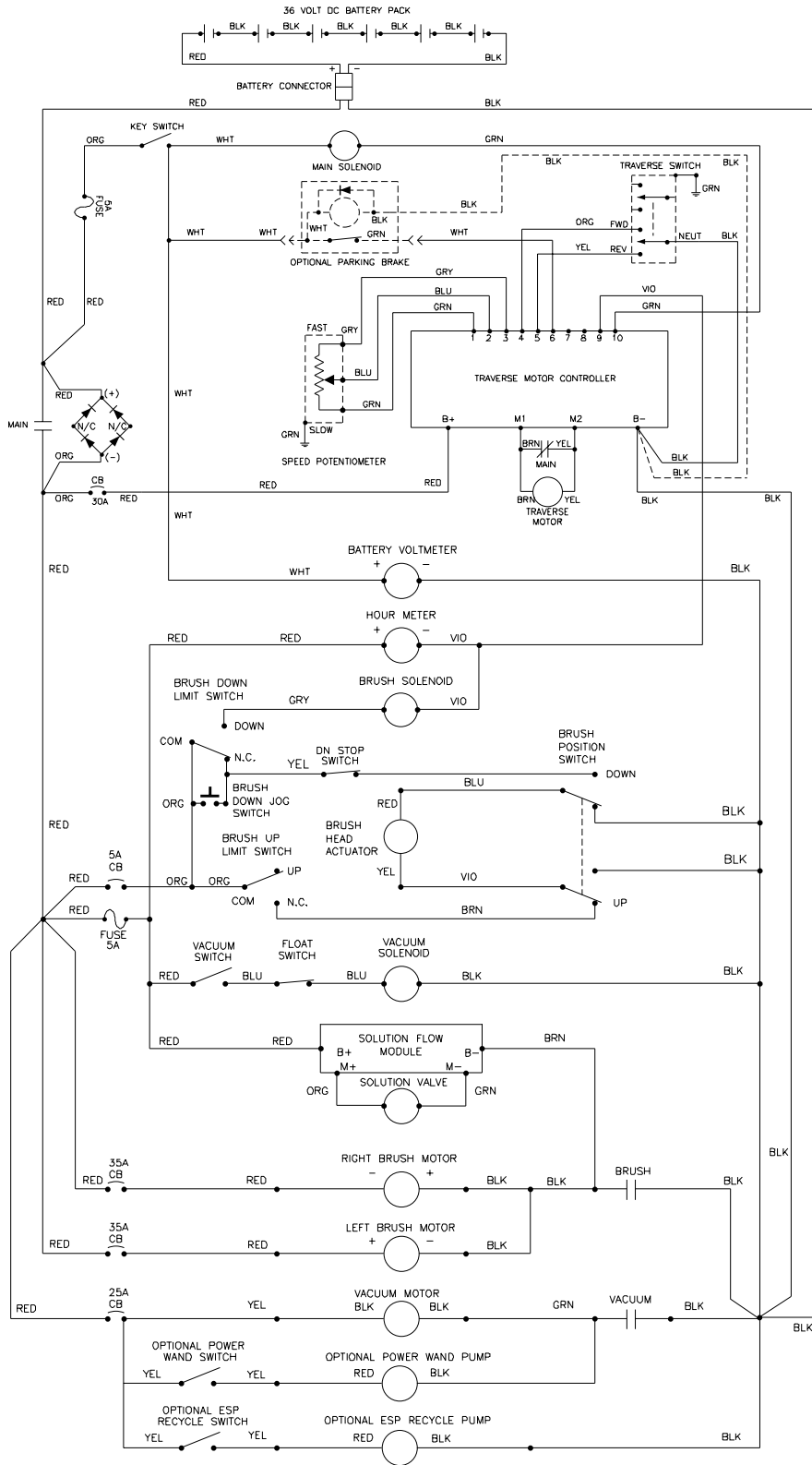


Clarke®
Encore S28XP/S33XP/S38XP
Rear Cover Assembly Parts List 10/02
(for machines with a 40089A Traverse Controller)

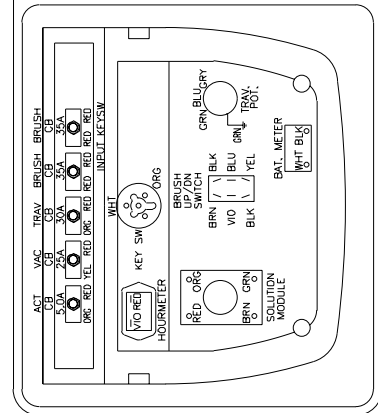
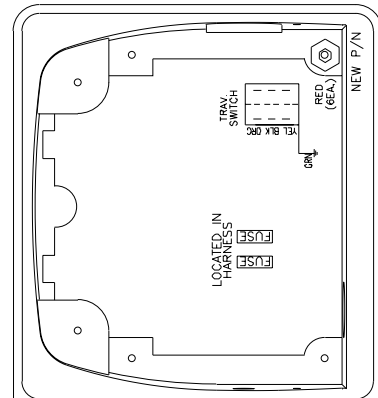
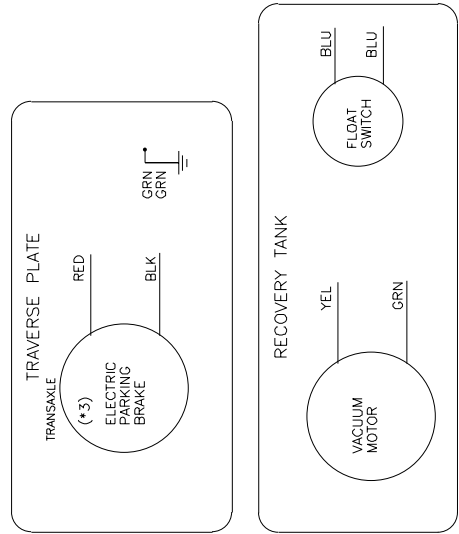
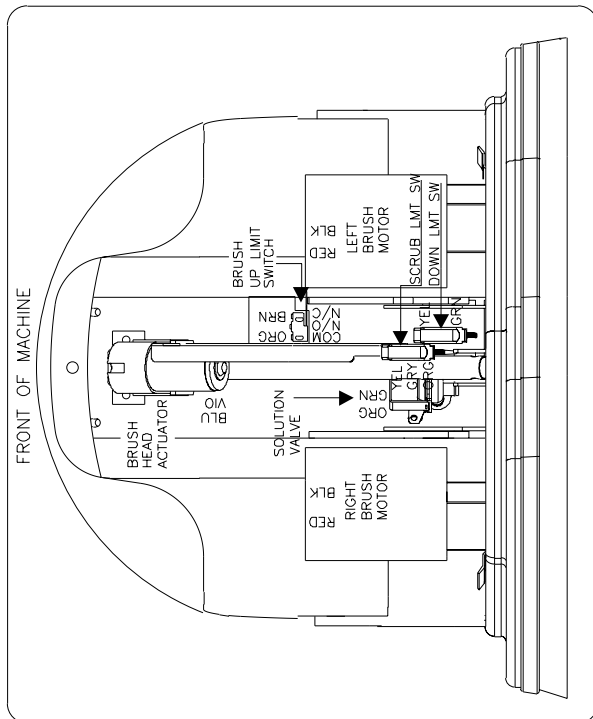
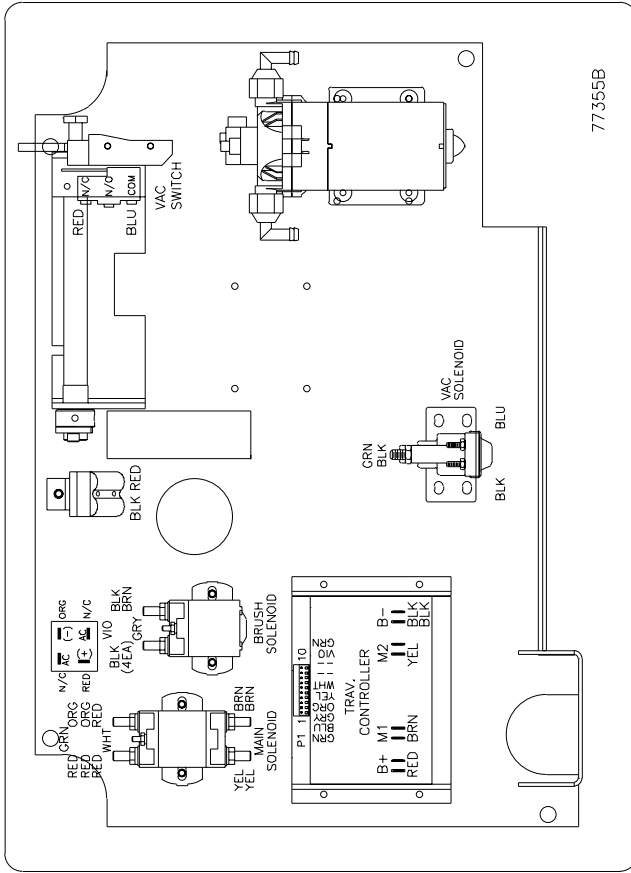
| Ref # | Part No. | Description | Qty |
|-------|----------|---------------------------------|-----|
| 1 | 85700A | Screw, .25-20x1.00 Hex | 1 |
| 2 | 87026A | Washer, Flat .25 | 2 |
| 3 | 608210 | Spacer | 1 |
| 4 | 902731 | Nylon Bearing | 2 |
| 5 | 920056 | Nut, 6-32 ESNA | 4 |
| 6 | 67476A | Shaft | 1 |
| 7 | 65629A | Squeegee Lever | 1 |
| 8 | 438360 | Spring | 1 |
| 9 | 960510 | Shoulder Screw | 1 |
| 10 | 61265A | Squeegee Lift Bracket | 1 |
| 11 | 68643A | Wear Plate | 1 |
| 12 | 980675 | Washer | 2 |
| 13 | 962546 | Screw, 10-24 x .50 Pn | 2 |
| 14 | 47388A | Switch | 1 |
| 15 | 962980 | Screw, 6-32 x 1.00 Pn | 4 |
| 16* | 962304 | Screw, .312-18 x .50 Set | 2 |
| 17 | 81104A | Nut, .25-20 ESNA | 9 |
| 18 | 65628A | Lever Weld. | 1 |
| 19 | 61682A | Upper Cable Assembly | 1 |
| 20 | 41208A | Battery Cable | Ref |
| 21 | 41140A | Cable Assembly | 1 |
| 22 | 87007A | Washer | 6 |
| 23 | 980657 | Washer, Lock | 4 |
| 24 | 83307A | Stud, ¼-20 | 8 |
| 25 | 962139 | Screw, .25-20x.62 Hex | 5 |
| 26 | 69878A | Plug Bracket | 1 |
| 27 | 77079A | Label, w/Brake Warning | 1 |
| | 77080A | Label, w/o Brake Warning | 1 |
| 28 | 41802A | Solenoid - Main | 1 |
| 29 | 77194B | Label, Traverse | 1 |
| 30 | 193951 | Trim, 4½" & 8" | 1 |
| 31 | 54763A | Insert | 4 |
| 32 | 54764A | Insert | 2 |
| 33 | 69372A | Lower Electrical Panel | 1 |
| 34 | 98465A | Clamp, Metal ^{7/18} | 1 |
| 35 | 85806A | Screw, ¼-20 x ¾ Hex | 1 |
| 36 | 40125A | Solenoid - Vac | 1 |
| 37 | 980651 | Washer | 2 |
| 38 | 80043A | Shoulder Screw | 2 |
| 39 | 41135C | Traverse, Control Board | 1 |
| 40 | 962992 | Screw, 8-32 x.74 Pn | 4 |
| 41 | 42405A | Diode | 1 |
| 42 | 77355A | Label | 1 |
| 43 | 32418B | Rear Cover | 1 |
| 44 | 85391A | Screw, .25-20 x.62 Pn | 2 |
| 45 | 60223A | Hose Bracket | 2 |
| 46 | 962957 | Screw, 10-16 x ½ | 4 |
| 48 | 77221A | Serial Tag | 1 |
| 47 | 83010A | Rivet, Pop | 1 |
| 49 | 930093 | Rivet | 2 |
| 50 | 41801A | Solenoid, Brush | 1 |
| 51 | 60552A | Bracket | 1 |
| 52 | 920722 | Nut, 10-32 ESNA | 1 |
| 53 | 912287 | Rectifier | 1 |

*#16 must use red loctite.

Clarke®
Encore S28XP/S33XP/S38XP
Electrical Schematic 10/02
(for machines with a 40089A Traverse Controller)



Clarke®
Encore S28XP/S33XP/S38XP
Connection Diagram 10/02
(for machines with a 40089A Traverse Controller)



ALTO[®] PRODUCT SUPPORT BRANCHES

U. S. A. Locations

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Technical Service - 1-800-356-7274

American Lincoln[®], Bowling Green, Ohio 43402
1100 Haskins Road

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2280 Elmhurst Road
(847) 956-7900

Clarke[®], Denver, Colorado 80204
1955 West 13th Ave.
(303) 623-4367

Clarke[®], Houston, Texas 77040
7215 North Gessner Road
713-937-7717

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Michigan 48071-0158
29815 John R.
(810) 544-6300

American Lincoln[®] / Clarke[®], Marietta, Georgia 30066
1455 Canton Road
(770) 973-5225

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74 Henry Street
(201) 864-5503

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Customer Service Headquarters and Factory
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S-431 04 Molndal
+46 31 706 73 00

ALTO Norge A/S, Oslo (Norway)
Bjornrudveien 24
N-1266
+47 2275 1770

Clarke® LIMITED U.S. WARRANTY

This Clarke Industrial/Commercial Product is warranted to be free from defects in materials and workmanship under normal use and service, when operated and maintained in accordance with Clarke's Maintenance and Operations instructions. The warranty period is subject to the conditions stated below.

3 YEARS FOR PARTS AND 1 YEAR FOR SERVICE LABOR (See exceptions below)

Motors must be inspected for carbon motor brush wear at six-month intervals by an authorized Clarke repair station. Failure to comply with the six-month inspection requirement or failure to replace worn motor brushes identified during the inspection will void the warranty on the motors. Cost of the six-month inspection and replacement of carbon motor brushes is the responsibility of the purchaser. In the event of a warranty claim on the motors, proof of inspection and any required motor brush replacement must be provided. This warranty is extended only to the original purchaser for use of the product. It does not cover normal wear parts such as electrical cable, rubber parts, hoses and motor brushes.

BATTERY WARRANTY

In addition to the items above, any original equipment Clarke Battery which becomes unserviceable under normal use within a period of ninety (90) days from date of sale to the original user will be repaired or replaced with one of equal specification at our option, F.O.B. any authorized Clarke Sales or Service Branch, with no charge to the user, except transportation costs. After expiration of the above ninety (90) day period, any battery which fails under normal use will be adjusted to the original user with a new battery of equal specification on an eighteen (18) months pro rate basis from the date of purchase. Adjustment will be determined using the then current list price, plus transportation costs.

Warranty is rendered null and void if battery is not kept filled to the proper level with DISTILLED WATER.

CLARKE: POLYDUR® AUTOMATIC SCRUBBER SOLUTION AND RECOVERY TANK EIGHT-YEAR U.S. GUARANTEE

Your new Clarke Encore XP has polydur Solution and Recovery Tanks. Polydur is a rotationally molded, low-density linear polyethylene that won't crack or dent, and withstands most corrosives and temperature extremes. Clarke backs up your Polydur tanks with an eight-year guarantee. If a tank breaks or leaks under normal use within eight years of the date of purchase, it will be replaced free.

CLARKE UNIBODY FRAME EIGHT-YEAR U.S. WARRANTY

Clarke warrants the frame of the Encore XP for a period of eight years against defects in materials and workmanship under normal use and service.

STATED WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED

Clarke's liability under this warranty is limited to repair of the product and/or replacement of parts and is given to purchaser in lieu of all other remedies, including INCIDENTAL AND CONSEQUENTIAL DAMAGES.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SPECIFIED HEREIN. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. NO WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY, SHALL BE IMPLIED. A warranty registration card is provided with your Clarke product. Return the card to assist Clarke in providing the performance you expect from your new floor machine.

If a difficulty develops with the product, you should: a) Contact the nearest authorized Clarke repair location or contact the Clarke Service Operations Department, 2100 Highway 265, Springdale, Arkansas 72764, for the nearest authorized Clarke repair location. Only these locations are authorized to make repairs to the product under this warranty. (b) Return the product to the nearest Clarke repair location. Transportation charges to and from the repair location must be prepaid by the purchaser. Clarke will repair the product and/or replace any defective parts with out charge within a reasonable time after receipt of the product.

Clarke, 2100 Highway 265, Springdale, Arkansas 72764.

Clarke reserves the right to make changes or improvements to its machine without notice.

Always use genuine Clarke Parts for repair.



**2100 Highway 265
Springdale, Arkansas, 72764**