



## Electronic Service Manuals

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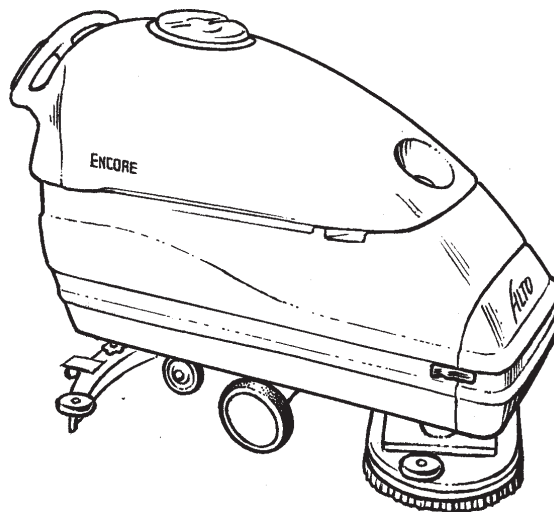
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# American-Lincoln®

## Operator's Manual



## ENCORE L25HD

U.S. Patent No. 6,105,192; No. 6,557,207; No. 6,760,947

### READ THIS BOOK

**▲ CAUTION:** Read the Operator's Manual before using the appliance.

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 American-Lincoln 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 operator(s) cannot read this manual, have it 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: **American-Lincoln®**, 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 Operator's Manual prior to operating or attempting any service or maintenance procedure to your American-Lincoln 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 you or 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 unless 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. Use only commercially available floor cleaning waxes intended for machine operation.
-  **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 the AC charger plug is unplugged from the wall receptacle before connecting or disconnecting the DC plug to or from the battery pack.
-  **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. Do not use on surfaces having a gradient exceeding that marked on the appliance. Read the "Procedures For Transporting" in this manual before transporting as machine might topple over if not secured.
-  **WARNING:** Machines can topple over and cause injury or damage if guided over the edges of stairs or loading docks. Stop and leave this machine only on a level surface. When you stop the machine, put all switches into their "OFF" position. Turn the key switch "OFF" and remove the key.

-  **WARNING:** Maintenance and repairs performed by unauthorized personnel could result in damage or injury. Maintenance and repairs must be performed by authorized American-Lincoln 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. This appliance is for dry use only and is not to be used or stored outdoors in wet conditions.
-  **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 decals from your American-Lincoln 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. City, state and national regulations regarding this discharge may also be in effect in your area. Understand and follow the regulations in your area. Be aware of the environment hazards of chemicals that you dispose.
-  **WARNING:** Only use the brushes provided with the appliance or those specified in the Operator's Manual. The use of other brushes may impair safety.
-  **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 American-Lincoln parts are used on your machine. Always use American-Lincoln parts for replacement.
-  **CAUTION:** This machine contains lead acid batteries. The batteries must be disposed of in an environmentally acceptable manner.

## Introduction & Machine Specifications

### Introduction & Machine Specifications

American-Lincoln's newly designed Encore L25HD automatic scrubber is efficient and superior floor cleaning machines. The Encore uses two brushes to scrub a path 25 inches wide. A squeegee wipes the floor while the vacuum motor removes the dirty solution from the floor - all in one pass.

The Encore L25HD comes complete with four - 6 volt batteries, one battery charger, either two brushes or two pad drivers, and one operator's manual.

#### SPECIFICATIONS:

Model	Encore L25HD
Machine Power Supply	24 Volt D.C., (4) 6V 250 AH Deep Cycle Batteries or (4) 6V 330 AH Deep Cycle Batteries
Pad or Brush 2 per machine	Gimbal Style
Traverse	0.5 hp (0.4 kW) Transaxle
Traverse Forward Speed	Variable to 250 ft./min (76 m/min)
Traverse Reverse Speed	Variable to 190 ft./min. (58 m/min)
Battery Protection	Low Voltage
Motor Vacuum	3/4 HP, 3 stage, Acoustical High Efficient Tangential
Solution Tank	20 Gallons (76 liters)
Solution Level	Calibrated level indicator on rear of machine
Recovery Tank	20 Gallons (76 liters)
Recovery Full Indicator	Electric Shut-Off
Parabolic Squeegee	Swing type with breakaway feature, No tool operation feature 32 inches (81 cm) hard width with 34 inches (86 cm) flex blade width.
Squeegee Operation	Reverse direction on floor and 3 - position manual lever style operation
Cleaning Swath	25 inch (63.5 cm) adjustable head
Motor, Brush	1 HP (0.74) 5.2:1 High Torque Gear Box
Brush / Pad Size	(2) 13 inch (33 cm)
Brush Speed	200RPM
Brush Pressure	0-155 lbs. / 0-70 kg.
Brush Solution Retention	Fiber Bristles
Drive Wheels	(2) 8 in. x 2 in. (20 cm x 5 cm) Neoprene tread
Caster	Dual 4 in. x 2 in. (10 cm x 5 cm)
Charger	24 V D.C., 25 Amp, 115/60 or 24 V D.C., 25 Amp, 230/50
Grade Cleaning	5 Degree
Length	56 inches (142 cm)
Width	28 inches (71 cm)
Height	43 inches (109 cm)
Weight	871 lb / 395 kg
Line of Sight (from Operator Height): 68 inches (173 cm)	7.5 feet (2.3 m)
Warranty	Machine 3 Years, Polydur tanks- 8 years Batteries- 18 months, pro-rated
Noise	71 dBA
Vibration	< 2.5 m/s <sup>2</sup>

## Procedures For Transporting

### How to Put the Machine Into a Van or Truck

**⚠ 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. Do not stop and leave the machine on a ramp or incline. The loading ramp must be a minimum of 32" wide.

**⚠ 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, put all switches into their "OFF" position.

1. Make sure the loading ramp is at least eight (8) feet (2.5m) long and a minimum of 32" (0.8m) wide, 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 housing and brush or pad driver before loading. American-Lincoln recommends that both the solution tank and recovery tank are empty before loading.
5. Turn key switch "ON".
6. Align the machine on a level surface five (5) feet (2 m) in front of the ramp.
7. Set the traverse control knob to full speed.
8. Push in either one of the forward/reverse switches while pushing in the white reverse switch. Back the machine up the ramp. See figure 1.
9. Turn the key switch "OFF".

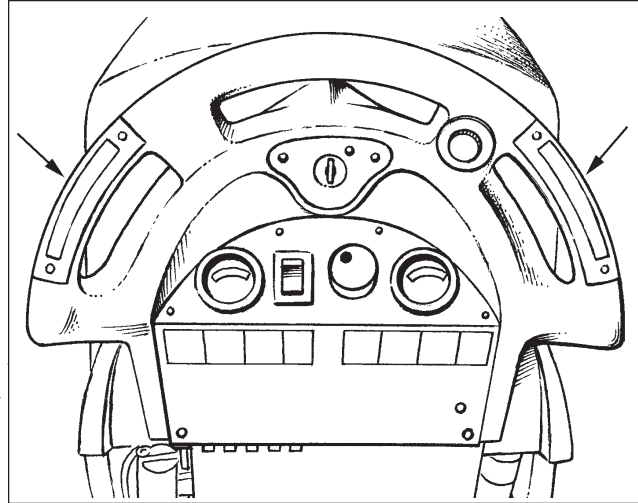


Figure #1

## Procedures For Transpoting (cont.)

### 10. Fasten the machine to the vehicle.

American-Lincoln recommends a strap over the top of the machine and a strap to keep the machine from rolling forward or backwards. If this is not done, there is a possibility of the machine toppling over. Four tie down points (2 along each side of frame) are provided on machine for securing machine.

### 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 (2.5m) long and a minimum of 32" (0.8m) wide, 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. Set the traverse control knob to the slowest forward speed setting. Carefully and slowly, drive the machine to the top of the ramp and start down.
8. While pushing in the right or left forward/reverse switch the machine will go forward. See figure 2.
9. As the machine begins to travel down the ramp, push in the forward/reverse switch to maintain a slow downward speed.
10. Replace squeegee assembly, brush housing, and brush or pad driver after machine is unloaded and ready to use.

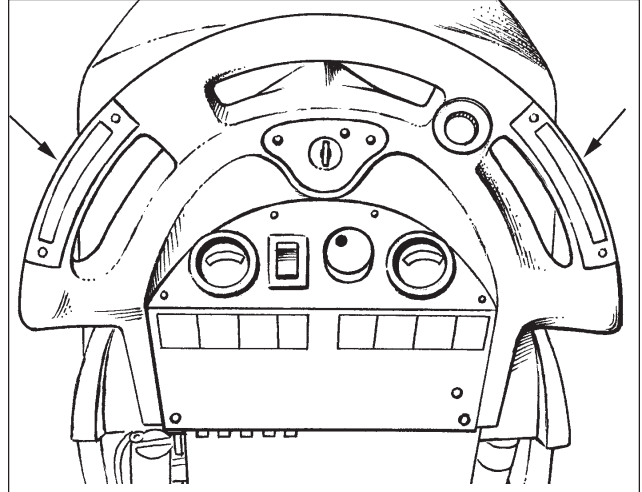
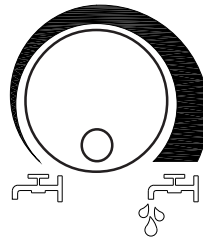


Figure #2

**SYMBOLS USED ON ENCORE L25HD**



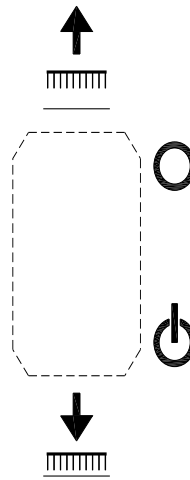
**Warning**



**Solution Control**



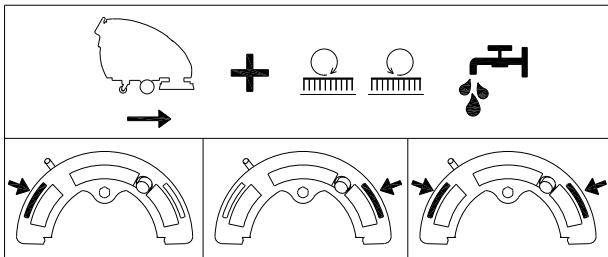
**Power**



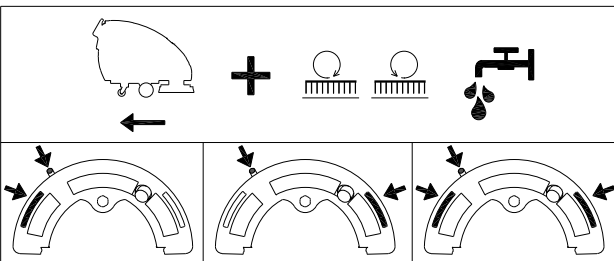
**Brush Up/Down**



**Traverse Speed Control**



**Traverse Directions Forward  
(Traverse and Solution, and Brush Rotation)**



**Traverse Directions Reverse  
(Traverse and Solution, and Brush Rotation)**

## SYMBOLS USED ON ENCORE L25HD



Warning Label  
with parking brake



Warning Label  
without parking brake

## Machine Control Panel

### **Key Switch (See Figure 3, Item "A")**

The key switch turns "ON" the power to the control panel. "O" is "OFF" and "I" is "ON".

### **Forward Reverse Switch (See Figure 3, Item "B")**

The forward/reverse switch turns the traverse motor "on" forward and if the brush motors are in the down position, activates the brush motors/solution control module. There is a two second delay for the pad motor to stop after releasing the switch. Either the right or the left switch can be used. Use either switch in conjunction with the white reverse switch to reverse the traverse motor.

### **Battery Meter (See Figure 3, Item "C")**

The battery meter indicates the relative charge on the battery pack. Do not continue to run the machine when the needle is in the "red" area. This will shorten the life of the battery pack.

### **Brush Pressure Meter (See Figure 3, Item "D")**

The pad pressure meter indicates the relative amount of pressure the pad is putting on the floor. To maximize run time on a battery charge, keep the needle towards the center of the green area.

### **Reverse Switch (See Figure 3, Item "E")**

The reverse switch, when used in conjunction with one of the forward/reverse switches, causes the machine to reverse directions. The reverse speed is 70% of the forward speed.

### **Hour Meter (See Figure 3, Item "O")**

The hour meter indicates the number of hours the machine has operated. It runs only when the brush motor is on.

### **Circuit Breakers (See Fig 3, Items "F", "G", "H", "I" & "J")**

The circuit breaker reset buttons are located on the rear cover. The breakers are located as follows:

- Item F - Actuator Head (5 amp)
- Item G - Vacuum Motor (30 amp)
- Item H & I - Brush Motor (45 amp)
- Item J - Traverse Motor (25 amp)

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.

### **Control Handles (See Figure 3, Item "K")**

The control handles are located at the rear of the machine. They are used to guide the machine.

### **Solution Control Knob (See Figure 3, Item "L")**

The solution control knob regulates the flow of chemical solution to the floor. To increase the flow, turn knob clockwise. To decrease the flow, turn counter clockwise. Full counter clockwise is OFF and full clockwise is ON.

### **Traverse Speed Knob (See Figure 3, Item "M")**

To increase speed, turn knob clockwise.

### **Brush Motor Switch (See Figure 3, Item "N")**

To activate brush motor, push brush position switch to down position. Brush Motor and solution flow will activate when the traverse buttons are pushed. To shut brush motor off, hold brush position switch in up position until actuator stops.

### **Vacuum Motor Switch (See Figures 4 & 5, pg. 11)**

To activate vacuum motor, lower squeegee handle. Handle has two positions. Lowest position is operating position and the middle position is transport to clear vacuum hose.

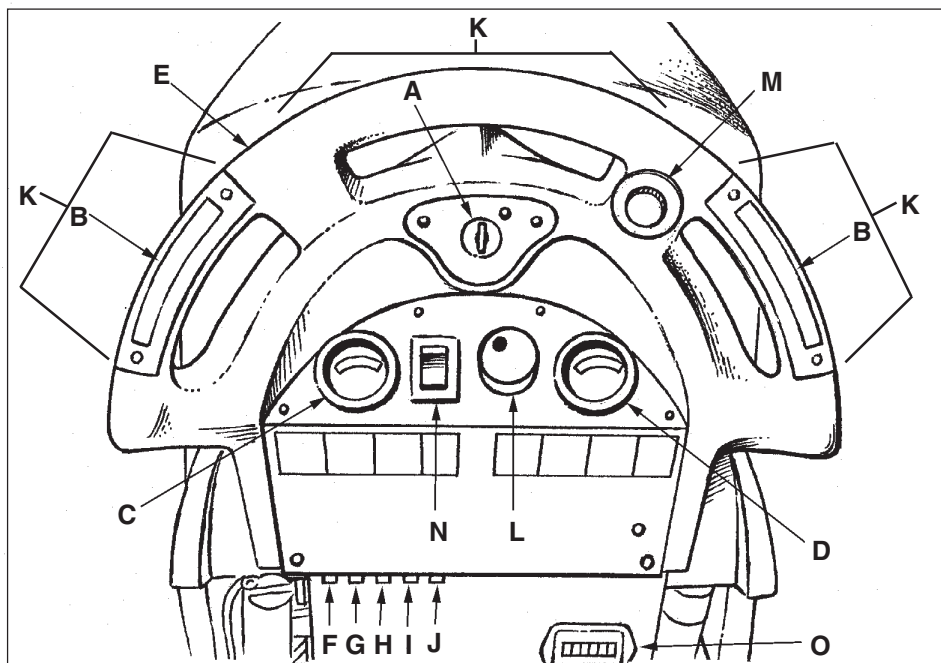


Figure 3

## Machine Controls and Features

### **Squeegee Lift Handle, See Figures 4 and 5**

The squeegee lift handle is located below the control handles in the center. It is used to raise or lower the squeegee. The vac motor is turned on when the handle is lowered to either the first or last position.

### **Float Shut Off, See Figure 6**

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. **NOTE: If excessive foaming occurs in recovery tank, defoamer must be added. Damage to vacuum motor could result from foam.**

### **Parking Brake (Optional)**

**NOTE: Parking Brake must be used if operating machine on greater than 2% gradient.**

The parking brake prevents movement of the machine.

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

The brake is located on the right hand side of the machine on 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 clockwise. To return the brake to normal or to apply the brake, rotate the lever up counter 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.**

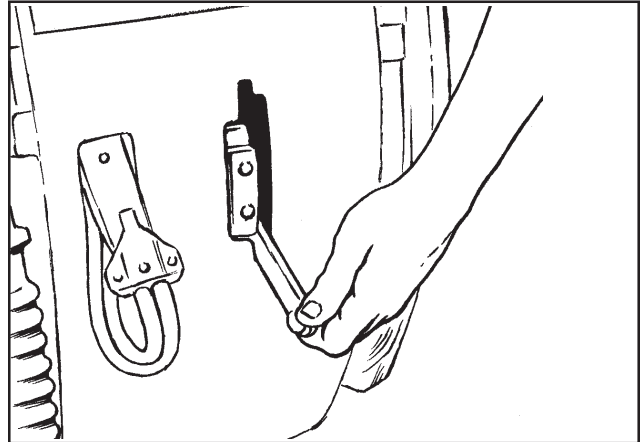


Figure 4

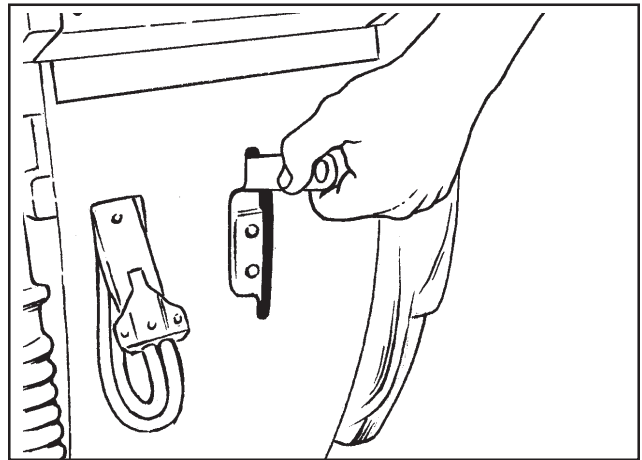


Figure 5

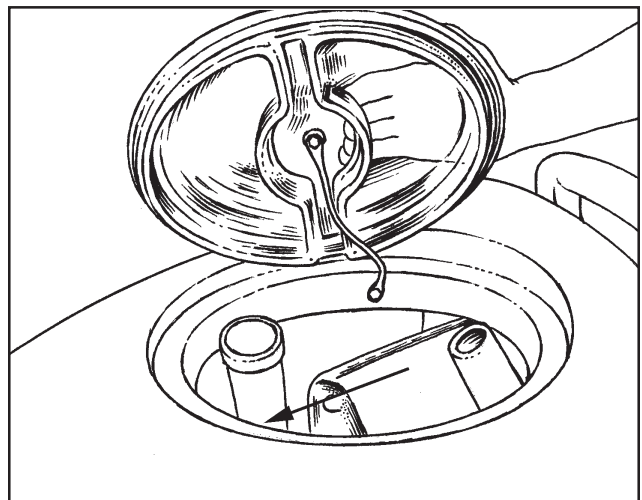


Figure 6

## How To Prepare the Machine For Operation

### How To Install The Batteries

The Encore machines uses either two 12-volt batteries or four - 6 volt batteries. The batteries are located in the battery compartment under the recovery tank.

To install the batteries, follow this procedure:

1. Turn machine off. Set brake (if equipped).
2. Make sure recovery tank is empty.
3. Tip up the recovery tank until it locks in the full open position. See figure 8A.

**CAUTION:** Before raising the tank, be sure tank is empty.

**NOTE:** There is an intermediate position available for holding the recovery tank open for charging batteries. See figure 8B.

**WARNING:** Do not operate or perform maintenance on the machine while the recovery tank is in the intermediate position. The tank can be accidentally bumped and it may slam shut.

4. Place the batteries in the tray as shown in figure 8C.

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

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

5. Connect the cables between batteries and install long battery cable assembly as indicated. See figure 8C.
6. Join the connector from the battery pack to the connector on the control panel. See figure 9.
7. Close recovery tank by pulling up on the latch arm and then slowly lowering the tank.

**NOTE:** Charge the batteries before using the machine.

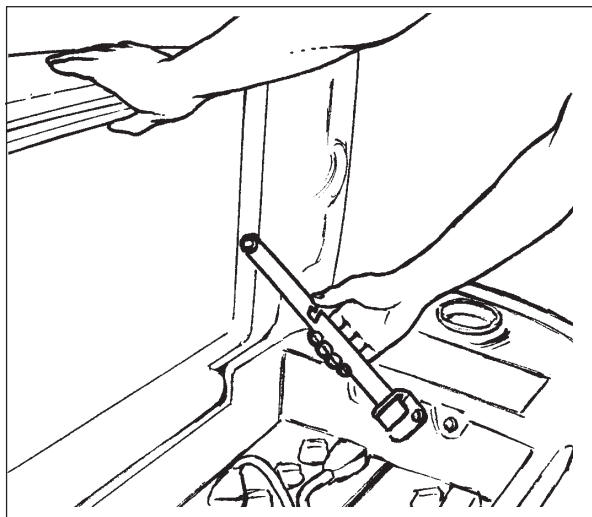


Figure 8A

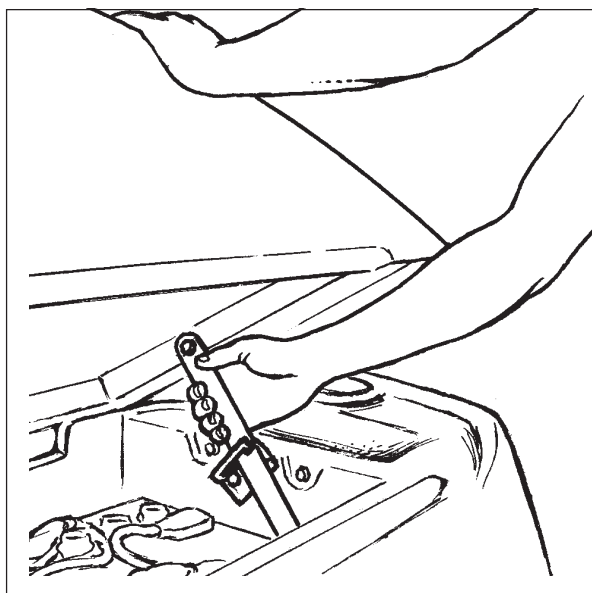


Figure 8B

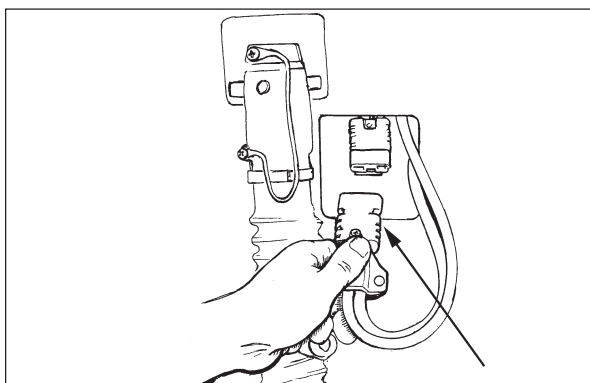


Figure 9

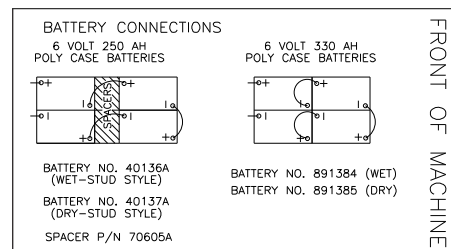


Figure 8C

## How To Prepare the Machine For Operation

### Battery Maintenance

The electrical power to operate the machine comes from the storage batteries. Storage batteries need preventative 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" (1/2 cm) 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 before charging. 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 electrolyte 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 over filled. 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:** Batteries must be refilled with distilled water only. Do not use tap water as it may contain contaminants that will damage batteries.

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.

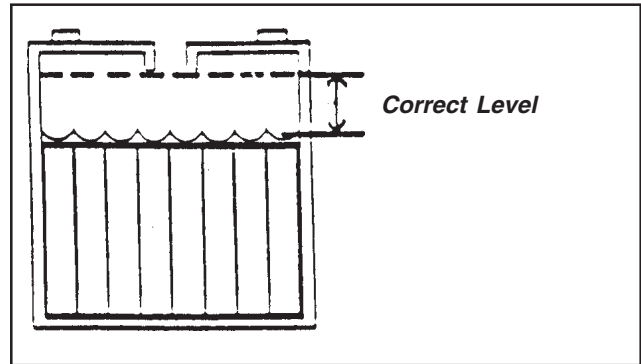


Figure 10

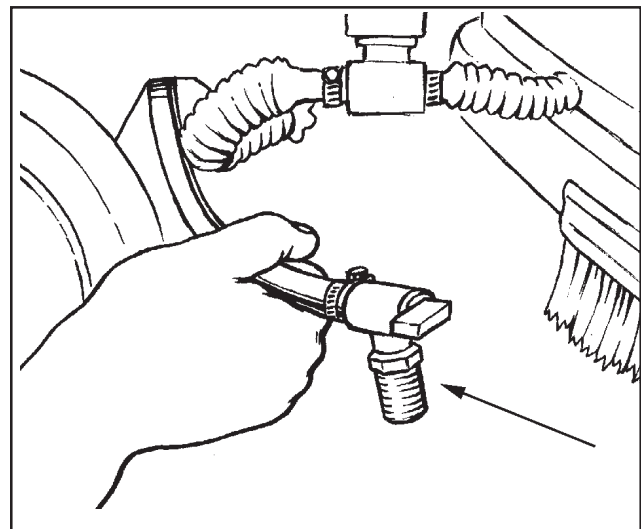


Figure 11

3. Keep the batteries charged.
4. To drain battery compartment: (See figure 11)
  - a. Always wear protective eye protection and protective clothing.
  - b. Add a weak solution of ammonia or bicarbonate of soda solution to battery compartment to neutralize any spilled acid.
  - c. Pull drain hose out from under transaxle.
  - d. Place hand behind flange and open valve.
  - e. When empty, close valve.
  - f. Replace valve and drain hose on top of transaxle.
  - g. Neutralize any acid spills with ammonia or bicarbonate of soda.

## 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. When key is off, dynamic brake is activated. If parking brake is installed it is on as well. Make sure key is off.
3. Before charging the batteries the battery compartment needs to be vented. To vent compartment, tip up the recovery tank until it locks in either of the two open positions. See figure 12. To close the tank, pull up on the latch arm and then slowly lower the tank to the closed position.

- ⚠ CAUTION:** Before raising tank, be sure tank is empty.

**NOTE:** There is an intermediate position available for holding the recovery tank open for charging batteries. See figure 13.

- ⚠ WARNING:** Do not operate or perform maintenance on the machine while the recovery tank is in the intermediate position. The tank can be accidentally bumped and it may slam shut.

To place the tank in the intermediate position, pull up on the latch arm while raising the recovery tank until it slips into the knotch area of arm. While pulling up on the latch arm, carefully lower the recovery tank making sure it is securely locked into place. See figure 13B. To release the latch arm, tip the recovery tank up slightly while pushing down on the latch arm and then slowly lower the tank.

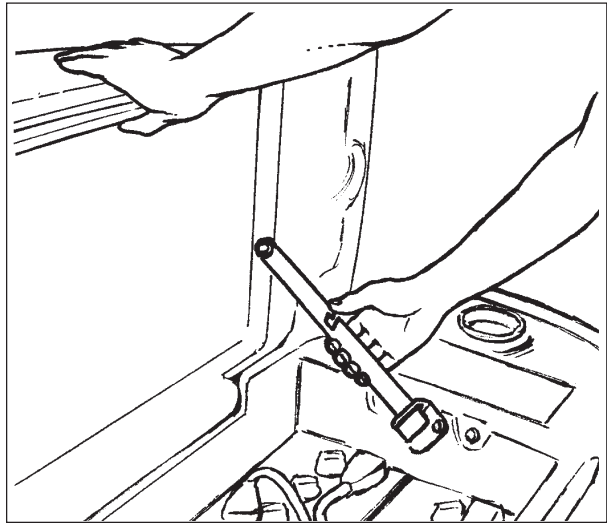


Figure 12

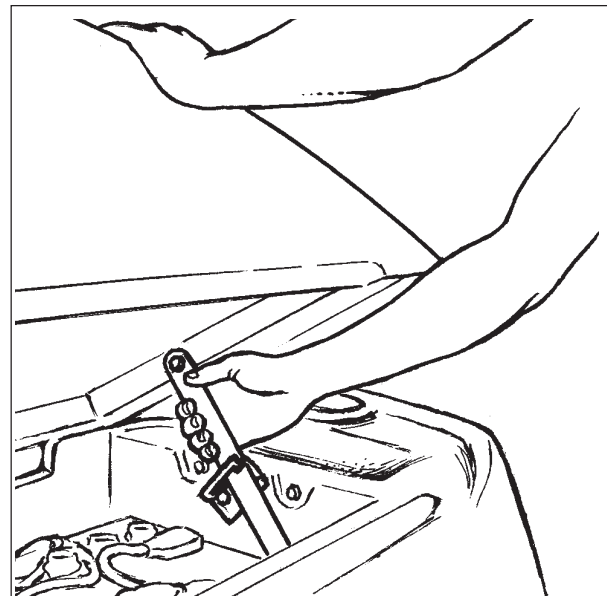


Figure 13

## How To Prepare the Machine For Operation

4. Disconnect the battery pack connector from the control housing connector. See figure 14.
5. Connect the DC connector on the charger to the battery pack connector. See figure 15.
6. Connect the charger to a properly grounded single phase (3-wire) wall receptacle having the input voltage, frequency, and ampere capacity specified on the nameplate of the charger.

For more information on the use of the charger, read the instructions supplied with the charger.

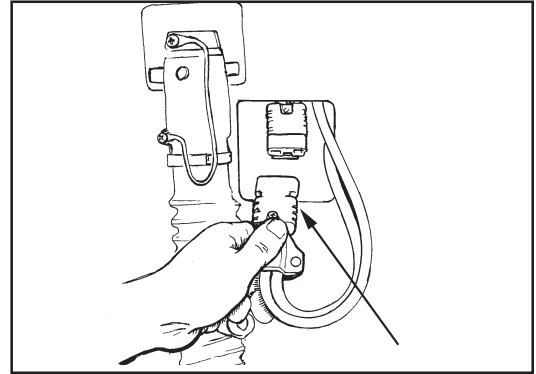


Figure 14

## 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. Raise the brush head by pressing and holding the brush switch until brush head is in its full up position.
3. Turn the key switch "OFF" and remove the key.
4. Go to the front of the machine and unlatch front cover, swing cover open.
5. Unlatch right and left brush housings and remove them. See figure 16.
6. Put a brush or pad driver under the brush motor plate. See figure 17.
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.
10. Reinstall right and left brush housings and latch front cover.

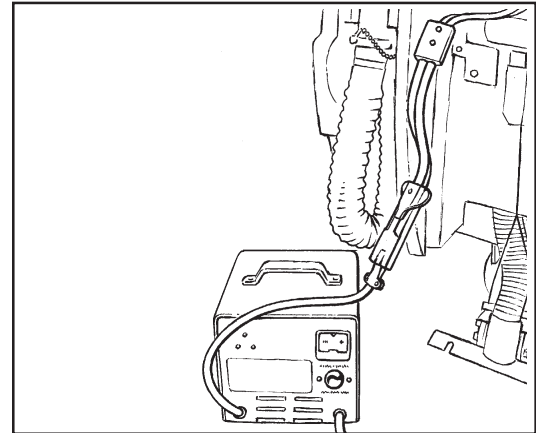


Figure 15

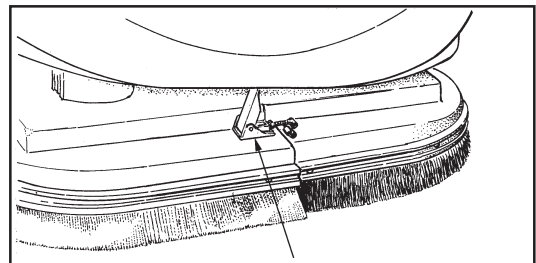


Figure 16

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

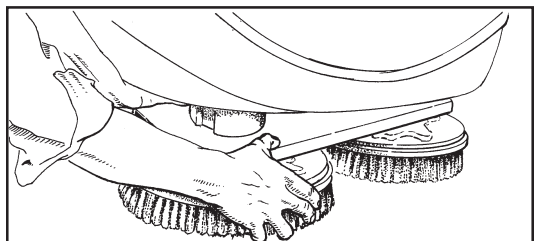


Figure 17

## How To Prepare the Machine For Operation

### 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. Raise the brush head by pressing and holding the brush switch until brush head is in its full up position.
3. Turn the key switch "OFF" and remove the key.
4. Go to the front of the machine and unlatch front cover. Swing cover open and unlatch the brush housings.
5. Push down on two sides of the brush or pad driver until the gimbals release.
6. Reinstall right and left brush housing and latch front cover.

**⚠ DANGER:** Operating a machine that is not completely or fully assembled could result in injury or property damage. Do not operate this machine unless it is completely assembled. Inspect the

## How To Operate The Machine

### How To Operate The Squeegee

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

1. To lower the squeegee and start the vacuum motor, move the squeegee lever to the right and down. See figure 18.
2. To raise the squeegee, lift the squeegee lever up. See figure 19.

**NOTE:** The center position lets the vacuum motor continue to run with the squeegee off the floor to avoid drips and also allows you to back up the machine.

### How To Fill The Solution Tank

The solution tank can be filled in the front or through the clear drain hose at the rear of the machine (See figure 20). To fill the solution tank follow this procedure:

1. Add a cleaning chemical to the solution tank. For the correct amount of chemical, follow the directions shown on the container.
2. Fill the solution tank with water. When filling machine in the front with a hose, position hose inside the fill screen as shown in figure 20A.

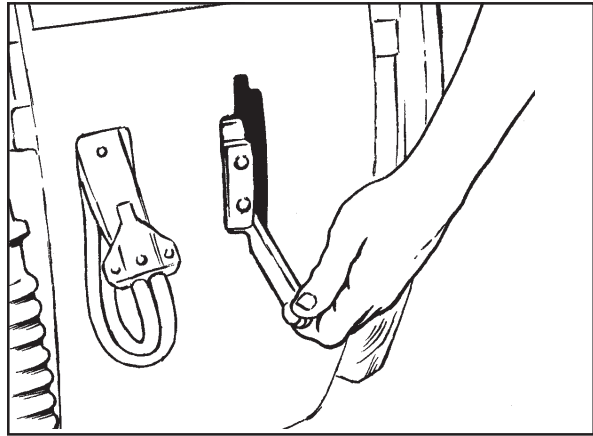


Figure 18

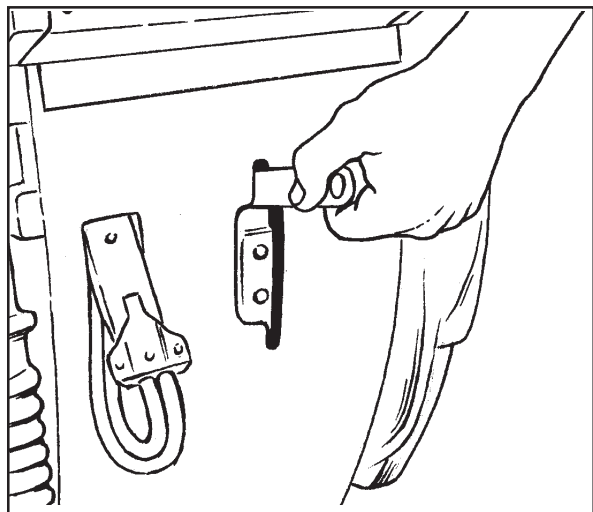


Figure 19

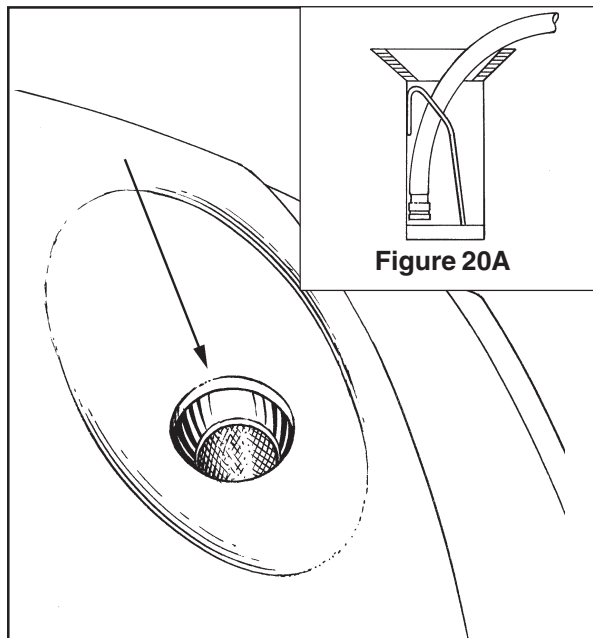


Figure 20A

Figure 20

## How To Operate The Machine

When filling machine from the rear, position clear drain hose against bracket and insert hose as shown in figure 20B. Solution level can be viewed from the back of the machine.

**⚠ 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:** American-Lincoln recommends a maximum water temperature of 120°F (49°C).

### Operating The Machine

**NOTE:** Put the machine in the lowest traverse speed setting. Use the machine in an area that has no furniture or objects until you can do the following:

1. Move the machine in a straight direction, forward and backward.
2. Stop the machine safely.
3. Turn the machine both left and right and return to a straight direction.

To move the machine, follow this procedure:

1. Turn the key switch to the "ON" position
2. Raise the brush to the highest setting.
3. Raise the squeegee.
4. When either the left or right forward/reverse switches (figure 21, item A) are pushed in, the machine will go forward.
5. Control the speed of traverse by using the traverse speed control knob (figure 21, Item C).
6. To stop, release the forward/reverse switch.
7. To reverse the machine, push in the white reverse switch (figure 21 item B) and either the right or left forward/reverse switch (figure 21 item A) at the same time.
8. To stop, release the forward/reverse switch.
9. To turn the machine, push the rear of the machine to the side.
10. When you stop the machine, turn the key switch "OFF", remove the key and insure that the parking brake (if equipped) is not in the override position.

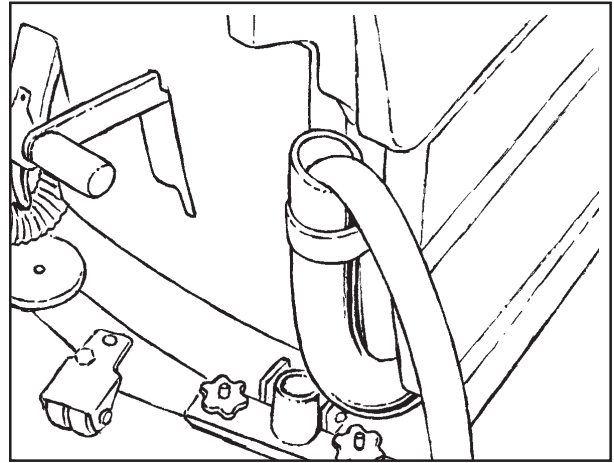


Figure 20B

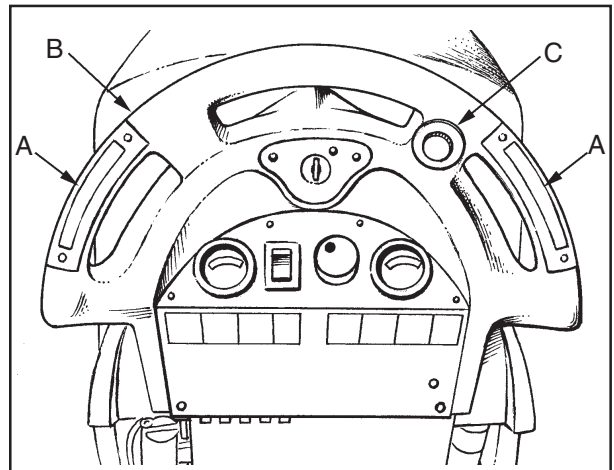



Figure 21


## 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. Set the parking brake (if equipped with machine.)
2. Put the water and a cleaning chemical in the clean solution tank.
3. Release the parking brake (if equipped with machine.)
4. Turn the key switch "ON".
5. Lower the squeegee.
6. Activate the brush switch until correct pressure is achieved.

 **WARNING:** This machine is capable of maximum head pressure with worn pads or brushes. With this feature, there is the possibility of exceeding the recommended brush pressure on new pads or brushes. This will either create reoccurring circuit breaker tripping or the possibility of lost traction and control. The brush switch should be activated to accomplish only enough brush pressure for the job. This will allow longer battery life and cleaning time.

**NOTE:** Keep the machine moving when the brush is rotating on the floor. Pre-wet brush/pad or keep light pressure on brush until solution flow is adequate to keep brush/pad from scratching the floor.

To pre-wet brushes you should first turn the speed knob to the lowest setting. Then lower brushes until brushes are just touching the floor. Activate the forward/reverse switch to start motor and solution flow.

7. Turn the solution knob to the right to activate the flow of solution. Adjust the flow of clean solution to the flow desired.
8. Move the machine across the floor in the forward direction.
9. Make a 180° turn.

**NOTE:** When you make more passes across the floor, let the brush clean approximately 2 inches (5 cm) of the area already cleaned by the brush.

**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. This will keep the vacuum motor off.
3. Lower the brush or pad and scrub the floor.
4. Scrub the floor again with additional solution and lower the squeegee.
5. Pick up all the solution with the squeegee.

## 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 AC power from battery charger (follow charger instructions).
2. Disconnect the plug on the battery charger from the battery pack connector.
3. Join the connector from the batteries to the control panel cable connection. See figure 22.
4. Make sure the Screen filter over the vacuum motor is clean and in position. See figure 24.
5. Make sure the recovery tank lid is on correctly. See figure 23, Item A.
6. Make sure the valve on the recovery drain hose is clean. Tightly close the valve.
7. Make sure the brushes/pads are in position and installed correctly.
8. Make sure brush housings and skirts are in position on the brush head.
9. Check the installation of the squeegee and squeegee hose.
10. Make sure the solution drain / level indicator hose is secure on the storage mount on the rear of the machine.

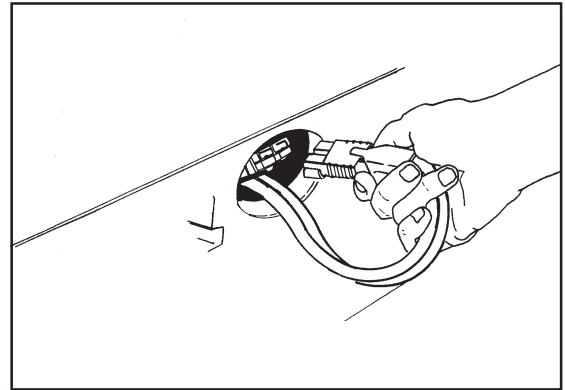


Figure 22

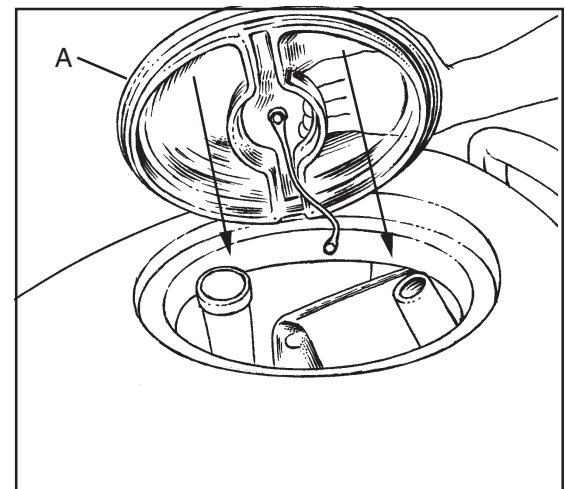


Figure 23

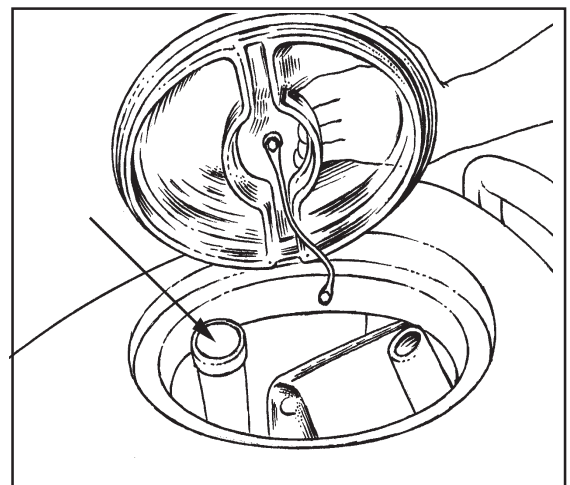


Figure 24

## Maintenance

### Do These Procedures When You End Your Work

1. Drain the solution tank (Figure 25) and the recovery tank (Figure 26). 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. *Recovery Tank:*
    - 1.) Turn the valve handle to the left. Pull the handle out to open the drain (Figure 27).

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

- 2.) To open the valve completely, turn the handle to the right. Pull the handle out of valve (Figure 28).

*Solution Tank:*

When hose is lowered to water level, water will flow.

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 pressure water hose to flush the tank or hose. Put the water hose into the drain hose.
4. Leave the tanks and the recovery drain valve 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 if necessary add distilled water after charging. The correct level is within 1/4 inch (1/2 cm) of the bottom of the tube in each cell.

**CAUTION:** Tap water may contain contaminants that will damage batteries. Batteries must be refilled 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".

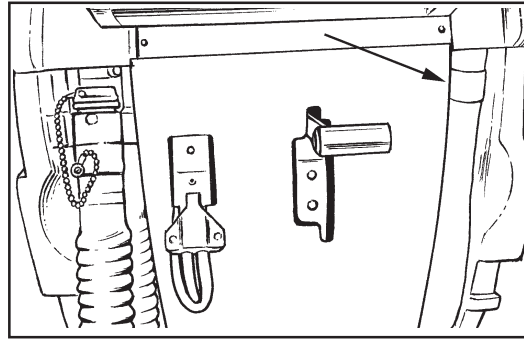


Figure 25

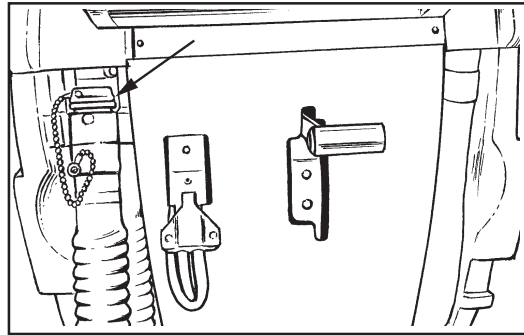


Figure 26

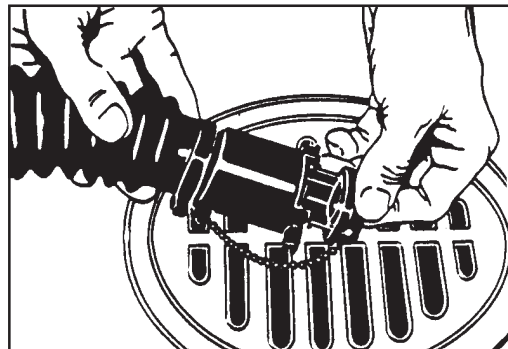


Figure 27

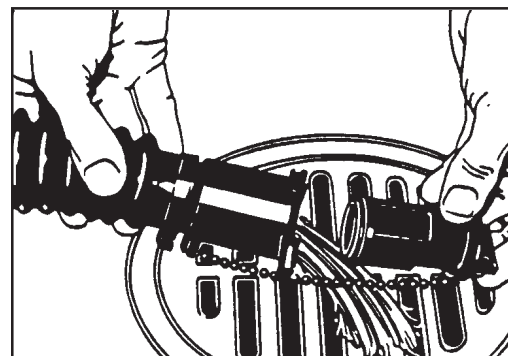


Figure 28

## Maintenance

### Maintenance Procedures To 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 the full open position. See figure 29A. To close the tank, pull up on the latch arm and then slowly lower the tank to the closed position.

**⚠ CAUTION:** Before raising the tank, be sure tank is empty.

**NOTE:** There is an intermediate position available for holding the recovery tank open for charging batteries. See figure 29B.

**⚠ WARNING:** Do not operate or perform maintenance on the machine while the recovery tank is in the intermediate position. The tank can be accidentally bumped and it may slam shut.

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 damage.
4. Check and clean the filter screen in the solution hose. To clean the screen, follow this procedure:
  - a. Close the solution flow valve.
  - b. Turn the connector to the left.
  - c. Remove and clean the filter screen.
  - d. Install the filter screen in the valve connector. Turn the connector to the right to connect the hose. See figure 34
  - e. Open the solution flow valve. See figure 34.

5. Use a grease gun to lubricate the dual casters. See figure 30.

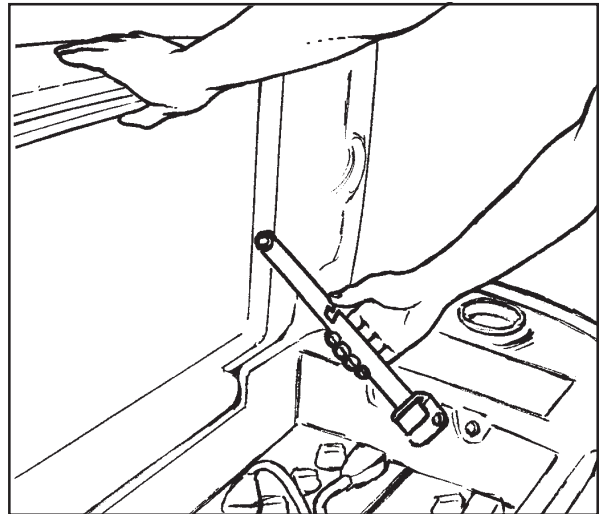


Figure 29A

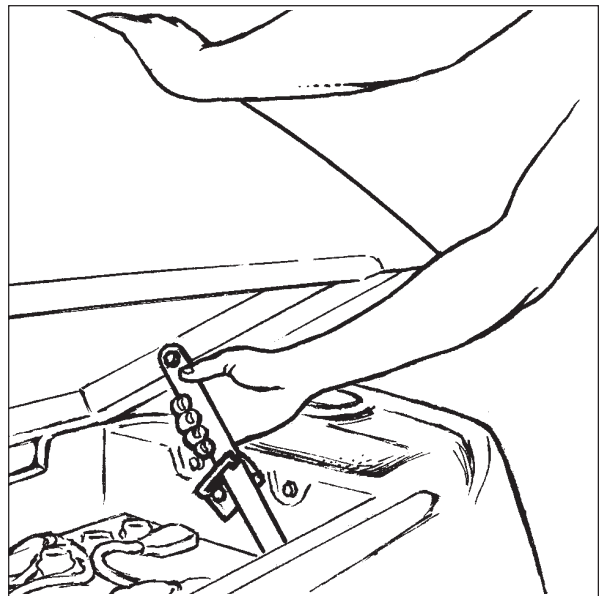


Figure 29B

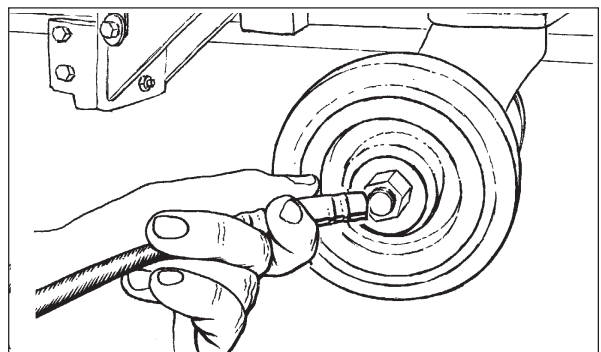


Figure 30

## Maintenance

### 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 31.
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 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 blades 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.

#### Adjusting Squeegee Blades:

When properly installed the front blade should be approximately 0.12" (3.0mm) above the rear blade. See figure 33.

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

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

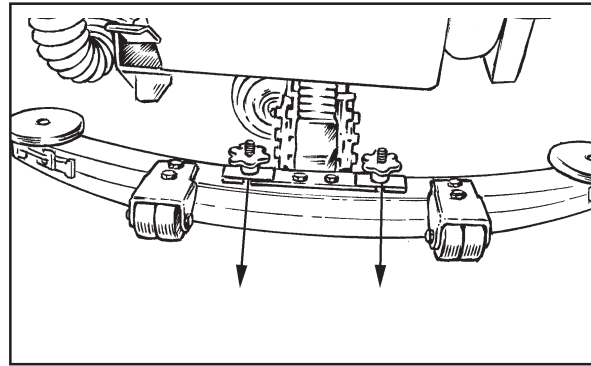


Figure 31

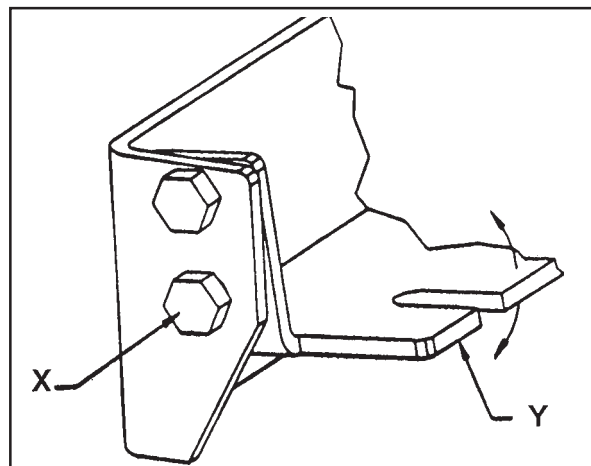


Figure 32

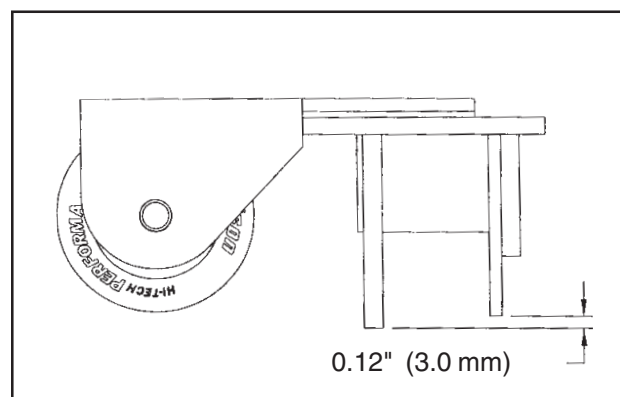


Figure 33

## Maintenance cont.

Consult your American-Lincoln Authorized Service Person to do the service procedures.

Use only genuine American-Lincoln parts.

### How to Center or Offset the Brush Head

The brush head on the Encore L25HD can be centered or offset 1 inch to the right side of the machine. To center or offset the brush head, follow this procedure:

Recommended tools: 3/8" drive ratchet, 3" extension and 9/16" socket.

**CAUTION:** Before offsetting the brush head, be sure that the recovery tank is empty of solution. Follow the instructions on page 20 on how to drain the recovery tank.

1. Turn the key switch "ON".
2. Raise the brush head by pressing and holding the brush switch until the brush head is in its full up position.
3. Turn the key switch "OFF" and remove the key.
4. Tip up the recovery tank until it locks in the full open position.
5. Go to the front of the machine and unlatch the front cover and swing cover open.
6. Locate the four mounting studs on the brush head bracket. See figure 34. The top two mounting nuts can be accessed through the top of the solution tank. The lower two can be accessed through the front. Loosen the four mounting nuts 2 to 3 turns counterclockwise. NOTE: Do not remove mounting nuts.
7. The brush head assembly can slide to the right side by one inch or placed back into the center. Slide the brush head assembly all the way to the ends of the slots for the desired position. This insures that the head operates straight up and down.
8. After repositioning the brush head, tighten nuts securely to approximately 236 inch-lbs.
9. Close the front cover.
10. Close the recovery tank.

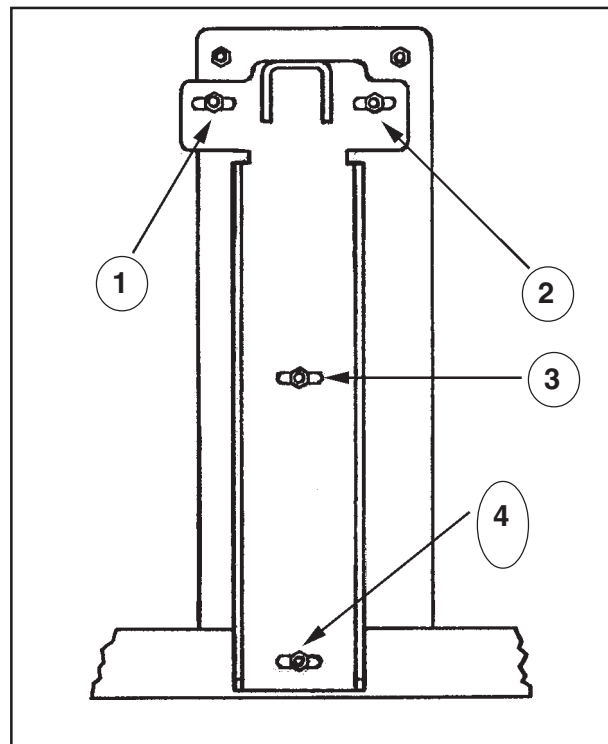


Figure 34

**American-Lincoln  
Encore L25HD  
Accessories - 10/06**

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**ACCESSORIES**

<u>Description</u>	<u>Part No.</u>
Power Wand System Kit	10150A
Clarke Care Kit	14607A
39" Squeegee Assembly	10068A
32" Squeegee Assembly	10129A
Poly Dur Protectant Kit, Grease Gun	50478A
Brake Kit Assembly	55420A
Accessory Bag	10072A
Soft Caster Assembly	30163A
	51092A

**Brushes and Pad Assemblies:**

<u>Size</u>	<u>Description</u>	<u>Part No.</u> (Gimbal "L")	<u>Used For</u>
13"	Polypropylene	11438A	General Scrubbing Hard Floors
13"	Pad Driver Asm.	17531A	Use for Pads
13"	Clean Grit	11439A	
13"	Super Grit	11440A	
13"	Nylon Soft	11437A	

**Squeegee Blades:**

<u>Description</u>	<u>32" Assembly</u>	<u>39" Assembly</u>
Blade, Rear - Linatex	30067L	30069L
Blade, Rear - Gum Rubber	30067A	30069A
Blade, Rear - Nitrile Solid	30081A	30082A
Blade, Rear - Ribbed Orange	30085A	30086A
Blade, Front - Linatex	30764L1	30717L1
Blade, Front - Ribbed Natural	30066A	30091A
Blade, Front - Slit Grout	30079A	30080A
Blade, Front - Ribbed Orange	30083A	30084A

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# **American-Lincoln®**

**ENCORE**

**L25HD**

**Section II**

**Parts and Service Manual**

(70430A)

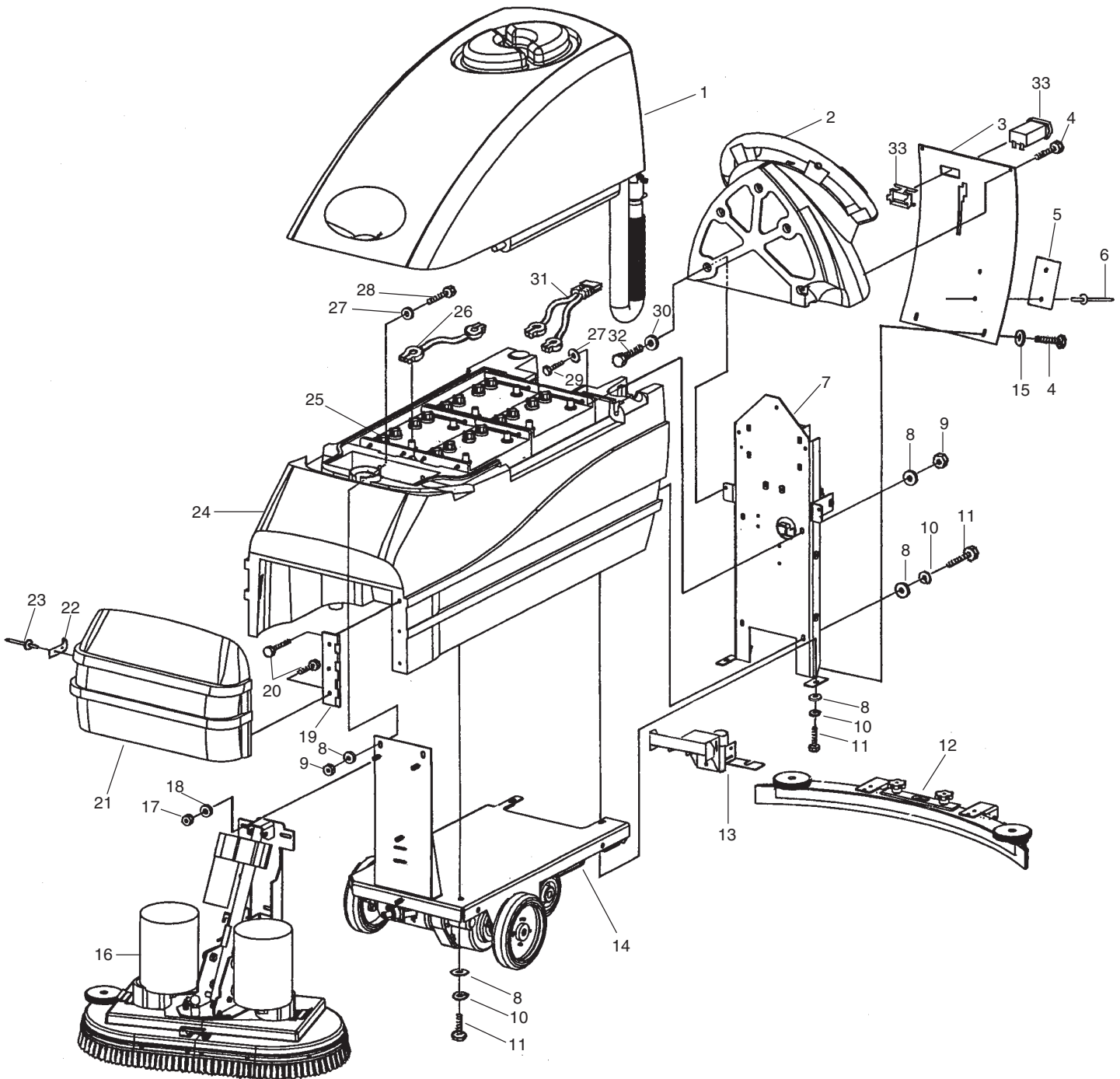
U.S. Patent No. 6,105,192; No. 6,557,207; No. 6,760,947

## HOW TO CORRECT PROBLEMS IN THE MACHINE

PROBLEM	CAUSE	ACTION
<b>There is no solution flow.</b>	<p>The solution tank is empty.</p> <p>The solution valve is closed.</p> <p>There is an obstruction in the solution hose or filter.</p> <p>The solution valve or electric wiring is damaged.</p> <p>The solution module is defective.</p>	<p>Fill the solution tank.</p> <p>Open the solution valve.</p> <p>Remove the obstruction from the hose or filter.</p> <p>Repair or replace the valve or the electric wiring.</p> <p>Replace solution module</p>
<b>The solution flow does not stop.</b>	<p>The solution valve is open.</p> <p>The solution valve or wiring is damaged.</p> <p>The solution valve is dirty</p> <p>There is a damaged seat and washer in the solution valve.</p> <p>The solution module is defective.</p>	<p>Close or Clean the solution valve.</p> <p>Repair or replace the valve and the wiring.</p> <p>Clean the solution valve.</p> <p>Replace the seat and washer.</p> <p>Replace solution module.</p>
<b>The machine does not remove all the water from the floor.</b>	<p>The squeegee is up.</p> <p>The squeegee tilt is not correct.</p> <p>The recovery 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, or damaged</p> <p>The squeegee blade is damaged, worn, or incorrectly installed.</p> <p>The gaskets on the cover of the recovery tank are damaged.</p>	<p>Lower the squeegee.</p> <p>To adjust See Figure 32, page 23.</p> <p>Drain the recovery 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>Check and connect hose.</p> <p>Turn or replace the squeegee blade. Correctly install the squeegee blade.</p> <p>Replace the gaskets.</p>
<b>The batteries do not give the normal running time.</b>	<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>Brush is in heavy scrub setting.</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>Adjust Pressure.</p>

PROBLEM	CAUSE	ACTION
<p><b>The cleaning is not even.</b></p>	<p>The scrub brush or pad is worn.</p> <p>There is damage to the brush assembly, caster or the solution valve.</p> <p>The brush motor is not running</p> <p>The solution level is low.</p>	<p>Replace the scrub brush or pad.</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 problem continues consult an authorized service person.</p>
<p><b>The machine does not run.</b></p>	<p>The machine loses power.</p> <p>Key or switch is off.</p> <p>Batteries are unplugged. Battery terminals are dirty.</p> <p>Batteries are discharged</p>	<p>Reset the circuit breaker.</p> <p>Turn key or switch on.</p> <p>Check the battery connections.</p> <p>Check battery gauge and recharge</p> <p>NOTE: If the problem continues consult an authorized service person.</p>

American-Lincoln®  
Encore L25HD  
Final Assembly Drawing 12/00

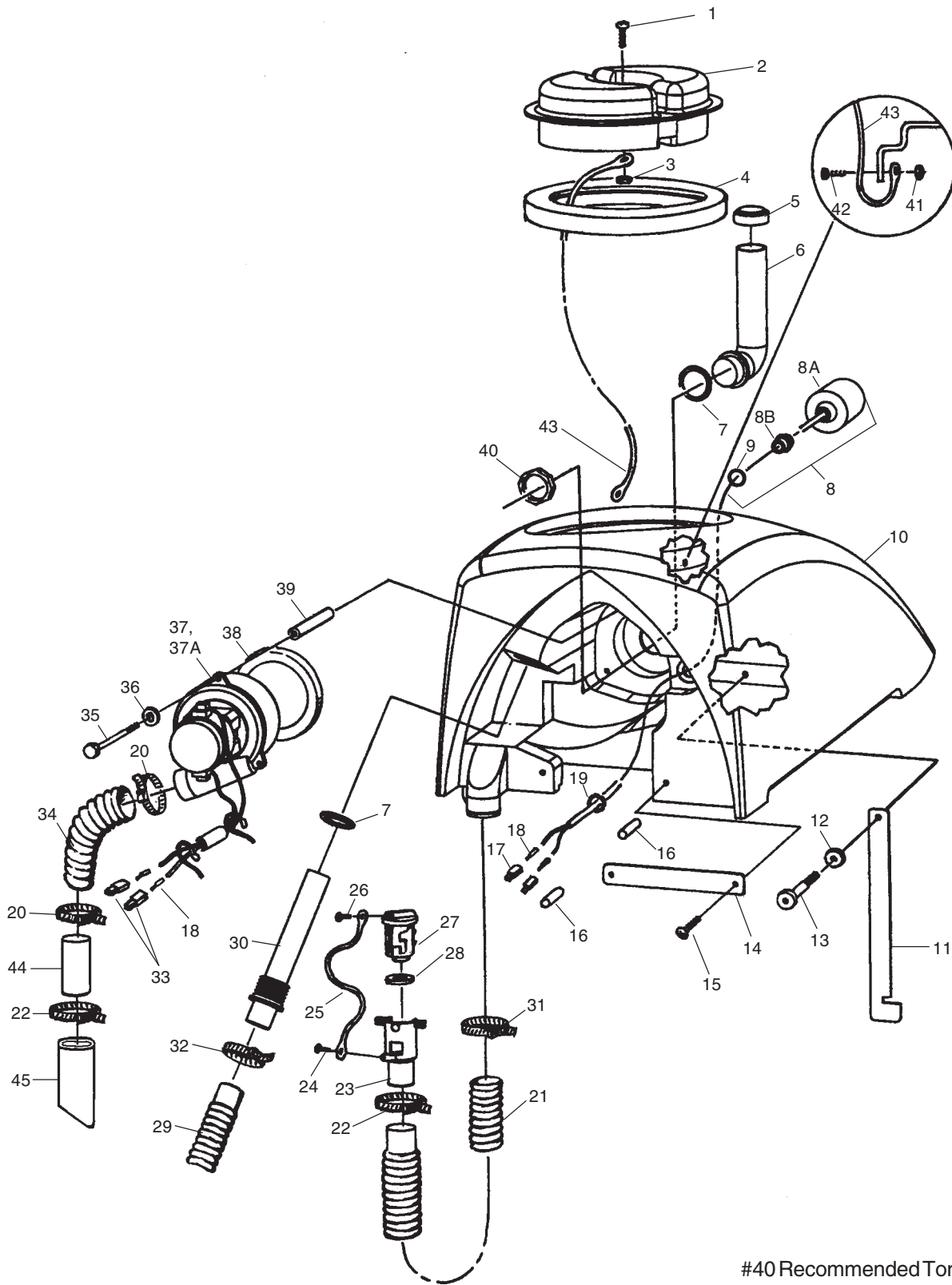


**American-Lincoln®**  
**Encore L25HD**  
**Final Assembly Parts List 12/00**

Ref. #	Part No.	Description	Qty "L"
1	10062A	Assembly, Recovery Tank	1
2	101841	Assembly, Control Panel	1
3	51309A	Rear Cover	1
4	80108A	Screw, 10-24 x ½ SS	4
5	70080A	Plate, Warning	1
6	83010A	Rivet, Pop 1/8	2
7	10190A	Assembly, Rear Panel	1
8	980651	Washer, 5/16 Flat	11
9	920110	Nut, 5/16 -18 ESNA	4
10	980652	Washer, 5/16 Lock	7
11	85811A	Screw, 5/16 -18 x ¾	7
12	10129A	Assembly, Squeegee 32"	1
13	10075A	Assembly, Squeegee Lift	1
14	10183A	Assembly, Traverse System	1
15	980982	Washer #10	2
16	10185A	Assembly, Brush Head	1
17	81105A	Nut, 3/8-16 ESNA	4
18	87031A	Washer, 3/8 Flat SS	4
19	50965A	Hinge	1
20	85395A	Screw, ¼-20 x ½ SS	6
21	30059A	Front Cover	1
22	50966A	Latch, Front Cover	Ref
23	930090	Rivet, 5/32 x 9/16	2
24	10180A	Assembly, Solution Tank	1
25*	Page 12	Battery	
	40136A	Battery 6V, 250 AH (wet - Stud Post)	4
	40137A	Battery 6V, 250 AH (dry - Stud Post)	4
	891384	Battery, 6V 330 AH (wet - UT Post)	4
	891385	Battery, 6V 330 AH (dry - UT Post)	4
26	41217A	Series Battery Cable (Ring Style)	3
27	980205	Washer, 5/16 Fender	4
28	85734A	Screw, 5/16-18 x 2	2
29	85739A	Screw, 5/16-18 x 3 Hex	2
30	87026A	Washer, ¼ flat SS	5
31	10189A	Battery, Cable (Taper Style)	1
32	85518A	Screw, ¼-20 x ¾	5
33	912226	Meter, Hour	1
NI	10179A	Lit Kit	1
NI	40512A	Battery Charger	1
NI	77092A	Label, Gases	1
NI	77093A	Label, Falling	1
NI	70226A	Label, Battery	1
NI	30163A	Accessory Bag	1
NI	10072A	Parking Brake Assembly	1
NI	40183A	Charger, Adapter Cable	1

\* See page 12 for installation.

**American-Lincoln®**  
**Encore L25HD**  
**Recovery Tank Assembly Drawing 3/08**  
**Drawing #10062A**



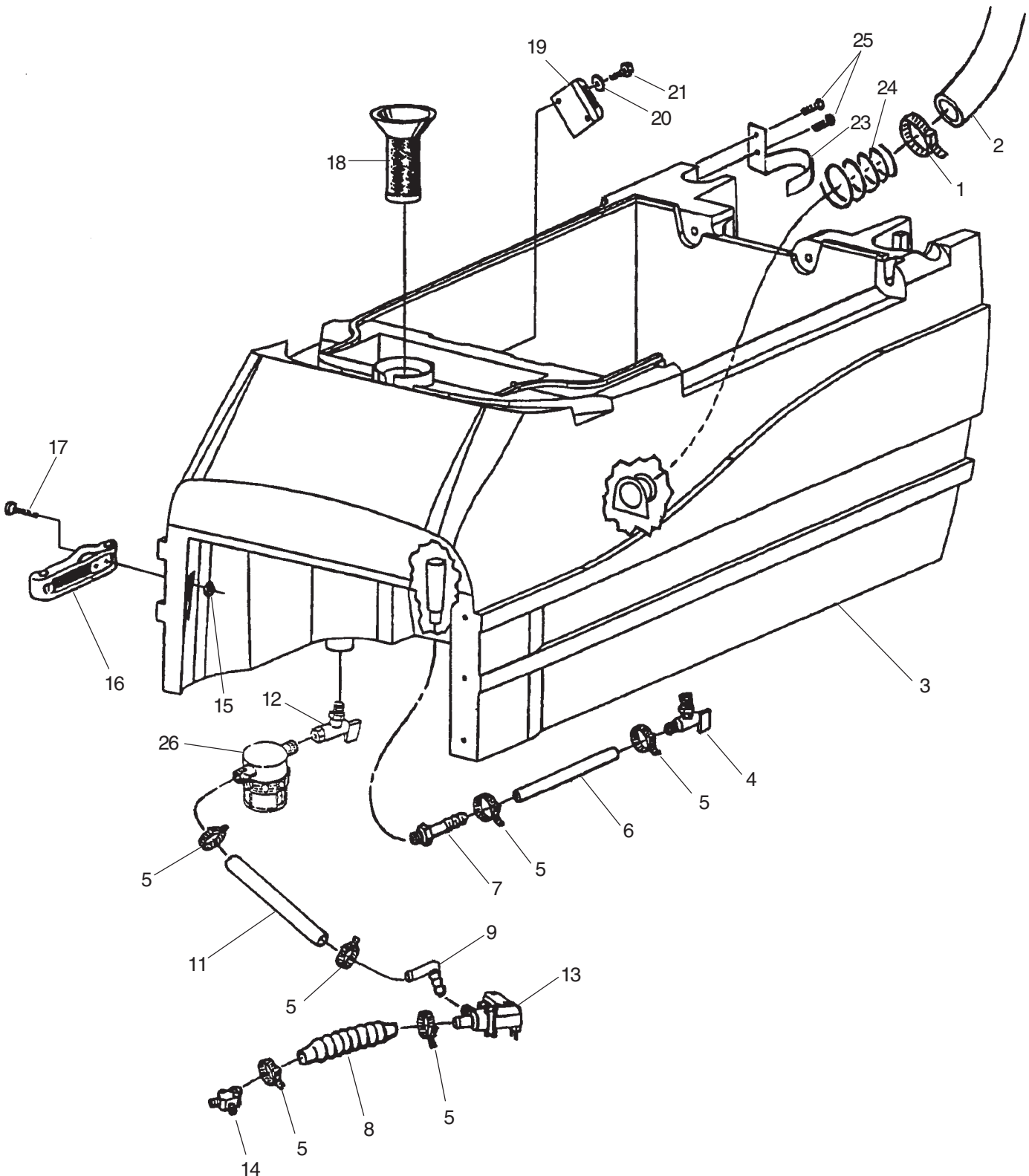
#40 Recommended Torque  
 175 + or - 5 inch pounds

**American-Lincoln®**  
**Encore L25HD**  
**Recovery Tank Assembly Parts List 3/08**

Ref. #	Part No.	Description	Qty
1	962798	Screw, 10-24 x .5	1
2	30057A	Lid	1
3	81110A	Nut, 10-24 SS	1
4	30065A	Gasket, Lid	1
5	58069A	Strainer	1
6	39338A	Stand Tube	1
7	837304	O-Ring	2
8	10660A	Switch Kit, (Includes 8A, 8B, 9)	1
8A	40002A	Switch (included in Item 8)	1
8B	56459A	Relief, Strain (included in Item 8A)	1
9	59877A	Seal, Washer	1
10	30293A	Tank, Recovery	1
11	60373A	Latch, Recovery Tank	1
12	87622A	Washer, Nylon 5/16 x 5/8 x 1/32	1
13	80043A	Screw, .25 x 20 x .25, Shoulder	1
14	60336A	Strap, Hose Retainer	1
15	85100A	Screw, 10-32 x ½ SS Xylan Coating	2
16	30068A	Hinge, Pin (included w/ item 10)	2
17	43402A	Housing, Connector(included in 8A)	2
18	41809A	Contact (included in 8A)	4
19	82100A	Nut, Strain Relief Lock	1
20	872010	Clamp, Hose	2
21	35165A	Hose, Drain	1
22	53371A	Clamp, Hose	2
23	839401	Valve, Drain	1
24	962943	Screw, 8-18 x ½ PN	1
25	52206A	Chain	1
26	962987	Screw, 10-24 x 3/8 Pan	1
27	833901	Drain, Valve Handle	1
28	833407	Gasket, Drain Valve	1
29	51060A	Hose, Squeegee	1
30	830208	Squeegee Stand Tube	1
31	80110A	Hose Clamp	1
32	752020	Hose Clamp	1
33	43401A	Housing, Vac Motor Connector	2
34	674110	Hose	1
35	85728A	Screw, ¼-20 x 4 Hex	3
36	87026A	Washer, ¼ Flat	3
37	51049A	Motor, Vacuum (3-Stage)	1
	51050A	Motor, Vacuum, (2-Stage Option)	1
37A◆	50996A	Brushes, Carbon	2
38	643418	Gasket	1
39	58533A	Spacer	3
40	920797	Nut	1
41	962666	Screw, 10-24 x ¾	1
42	920296	Nut, 10-24 Elastic	1
43	38020A	Strap	1
44	38735A	Connector, Muffler	1
45	30343A	Muffler	1
NI	839410	Valve Asm. (includes 23, 24, 25, 26, 27, 28)	1
NI	70226A	Label, Battery Installation	1

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

American-Lincoln®  
Encore L25HD  
Solution Tank Assembly Drawing 7/04  
Drawing #10180A



**American-Lincoln®**  
**Encore L25HD**  
**Solution Tank Assembly Parts List 3/08**

Ref. #	Part No.	Description	Qty
1	872010	Clamp, Hose	1
2	50964A	Hose, Drain	1
3	30244A	Tank, Solution	1
4	59614A	Valve, Battery Drain	1
5	722030	Clamp, Hose	6
6	30453A	Hose, Clear Vinyl	1
7	820207	Adapter, Hose 3/8 MPT x 1/2 Hosebarb	1
8	30412A	Hose, Stretch	2
9	51526A	Elbow	1
11	30446A	Hose	1
12	51204A	Valve, Solution	1
13	59789A	Valve, Solution	1
14	38014A	Splitter	1
15	81109A	Nut, 8-32 ESNA SS	2
16	50966A	Latch	1
17	80105A	Screw, 8-32 x 1 1/4 SS	2
18	50963B	Screen, Fill (with hose retention)	1
	51308B	Strainer (without hose retention)	1
19	69879A	Bracket, Latch	1
20	170892	Washer, Lock 1/4	2
21	170915	Screw, 1/4-20 x 3/4 SS Hex	2
23	60480A	Bracket, Hose	1
24	51346A	Spring, Hose	1
25	80108A	Screw, 10-24 x 1/2	2
26	53562A	Filter, Bowl Asm.	1
NI	30162A	Funnel, solution rapid fill	1
NI	10177A	Kit, Solution Fill (includes #18 - 51308A)(includes NI - 30162A)	1

53562A Components		
Clarke P/N	Description	Qty.
50018A◆	Bowl, Filter	1
53563A	Filter, Screen	1
53564A	Upper Body	1
54369A	Gasket, Bowl	1

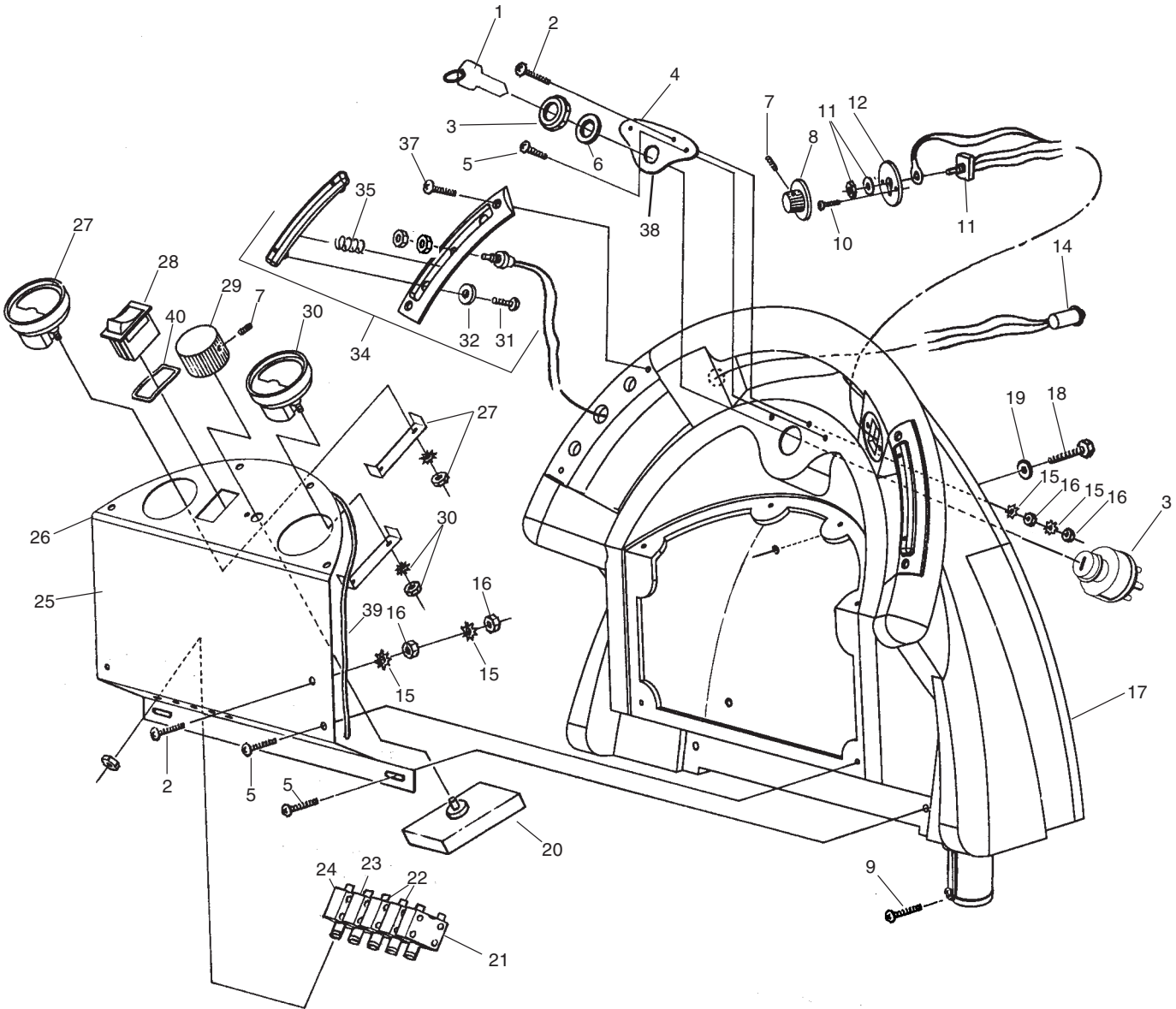
NOTE: ◆ indicates a change has been made since the last publication of this manual.



**American-Lincoln®**  
**Encore L25HD**  
**Rear Panel Assembly Parts List 3/03**

Ref. #	Part No.	Description	Qty
1	920224	Nut, 10-32	2
2	980603	Washer, Starlock	4
3	920056	Nut, 6-32	5
4	46106A	Rectifier	1
5	40184A	Harness, Power	1
6	962212	Screw, 6-32 x 7/8	1
7	85383A	Screw, 10-32 x 3/4	1
8	41810A	Solenoid, Brush	1
9	85395A	Screw, 1/4-20 x 1/2	6
10	980614	Washer, Starlock, 1/4	10
11	85391A	Screw, 1/4-20 x 5/8	4
12	60261A	Panel, Rear Metal	1
13	60257A	Cable, Squeegee Lift	1
14	920346	Nut, Pal	1
15	80028A	Bolt, Shoulder, 5/16 x 1.0	1
16	980692	Washer, Flat 5/16 SS	2
17	438360	Spring	1
18	64901A	Lever, Squeegee Lift	1
19	64490A	Handle, Squeegee	1
20	980666	Washer, 3/8 Starlock	1
21	85389A	Screw, 3/8-16 x 5/8	1
22	68643A	Plate, Vacuum Wear	1
23	962968	Screw, 10-24 x 1/2	2
24	61260A	Plate, Squeegee Lift	1
25	47388A	Switch, Vacuum Lever	1
26	85601A	Screw, 6-32 x 1 1/4 PN	2
27	81217A	Nut, 1/4-20 x .218H Nylock	1
28	51310A	Bracket, Power Connector	1
29	10181A	Cable, Assembly Console	1
30	193951	Grommet, slotted, 8"	Ref
31	41811A	Solenoid, Main	1
32	40157A	Harness, Traverse	1
33	40169A	Solenoid, Vacuum	1
34	962798	Screw, 10-24 x 1/2	2
35	40132A	Control, Traverse	1
36	962862	Screw, 10-24 x 1 1/2 PH	2
37	30097A	Insulator, Mylar	1
38	920296	Nut, 10-24, Nylock	2
NI	77093A	Label, Falling Parts	1
NI	77092A	Label, Gases	1

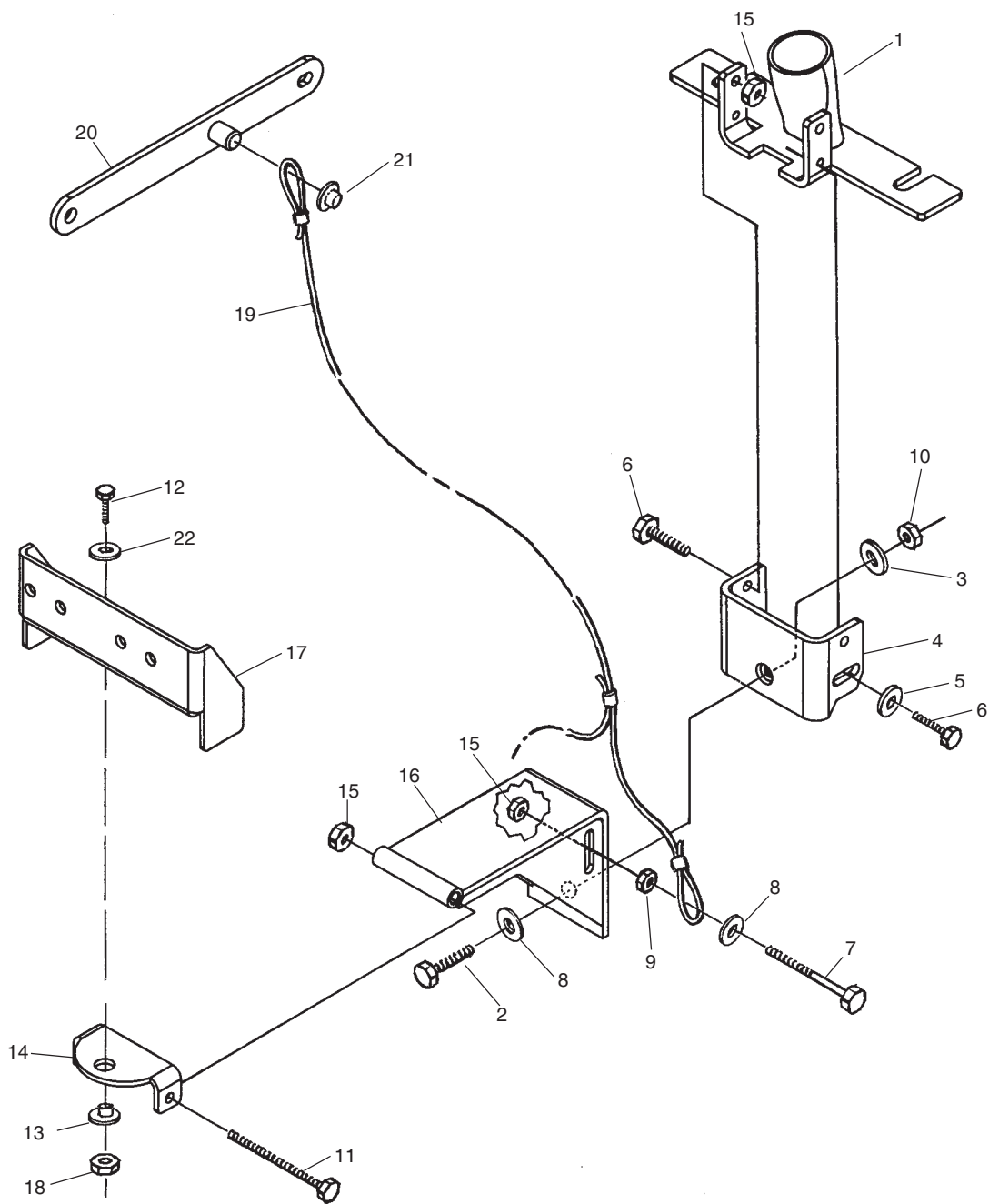
**American-Lincoln®**  
**Encore L25HD**  
**Control Panel Assembly Drawing 9/07**  
**Drawing #10184A**



**American-Lincoln®**  
**Encore L25HD**  
**Control Panel Assembly Parts List 9/07**

Ref. #	Part No.	Description	Qty
1	55413A	Key (included w/Item 3)	Ref
2	84237A	Screw, 10-32 x ½	2
3	47380A	Switch, Key	1
4	60334A	Panel, Key Switch	1
5	80108A	Screw, 10-24 x ½ SS Black Xylan	8
6	87052A	Washer, Switch	1
7	962262	Screw, Set 8-32 x ½ (included in item 29)	4
8	50962A	Traverse, Control Knob	1
9	85703A	Screw, 10-00 x ½ PN	1
10	962957	Screw, 10-16	2
11	40135A	Harness, Potentiometer Assembly.	1
12	60259A	Bracket, Traverse Switch	1
13	980666	Washer, 3/8 Starlock	1
14	40158A	Switch, Reverse	1
15	980603	Washer	4
16	920224	Nut, 10-32 Hex	4
17	30062A	Control Handle	1
18	85391A	Screw, ¼-20 x ½ SS	Ref
19	87026A	Washer, ¼ SS	Ref
20	44308B	Control, Solution	1
21	41422A	Breaker, Circuit 25 Amp Traverse	1
22	41416A	Breaker, Circuit 45 Amp Brush	2
23	41448A	Breaker, Circuit 30 Amp Vac	1
24	41423A	Breaker, Circuit 5 Amp Actuator	1
25	70245A	Label, Control	1
26	60258A	Panel, Control, Metal	1
27	40217B	Meter, Battery	1
28	40168A	Switch, Brush Adjustment	1
29	55502A	Knob	1
30	40185A	Meter, Brush	1
31	962330	Screw, 6-32 x ⅜	4
32	980608	Washer	4
34	11131A	Switch Asm.	2
35	50961A	Spring, Switch	4
37	80104A	Screw, 10-32 x ½ SS Black Xylan	4
38	70219A	Label, Key Switch	1
39	34264A	Gasket, Panel	1
40	30096A	Gasket, Switch	1
NI	47708A	¼ F.I.M.Q.D.	4
NI	47712A	¼ F.I.F.Q.D.	1

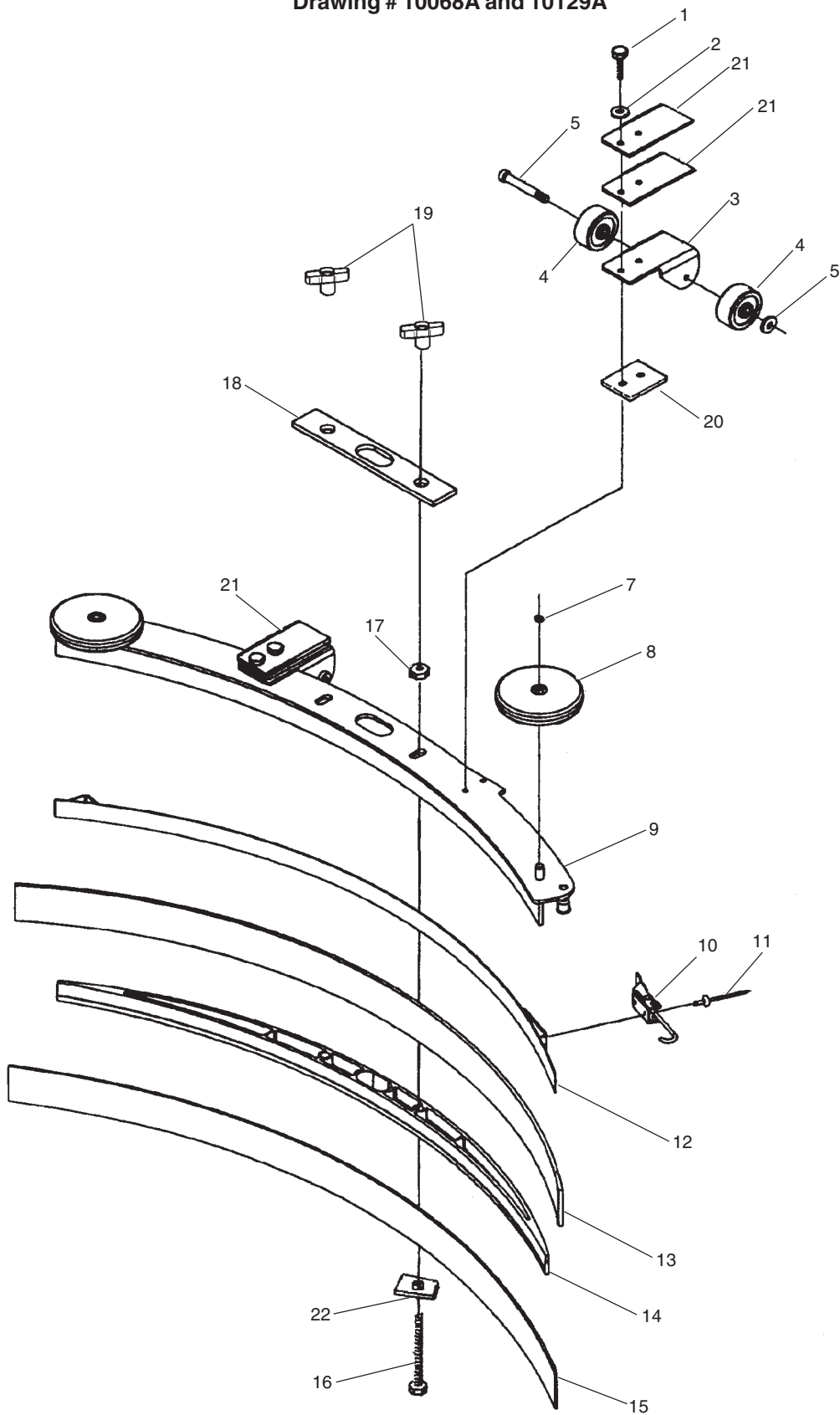
**American-Lincoln®**  
**Encore L25HD**  
**Squeegee Lift Assembly Drawing 10/03**  
**Drawing # 10075A**



**American-Lincoln®**  
**Encore L25HD**  
**Squeegee Lift Assembly Parts List 12/00**

<b>Ref. #</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>
1	61263A	Bracket Tube	1
2	85730A	Screw, 3/8-16 x 1 ¼, Hex SS	1
3	980638	Lockwasher, 3/8 LT Spring Type	1
4	69860B	Bracket, Pin	1
5	87026A	Washer, ¼ SS	2
6	170915	Screw, ¼-20 x ¾	4
7	962481	Screw, ¼-20 x 1 ¼ Hex	2
8	87031A	Washer, 3/8 Flat	3
9	920208	Nut, ¼-20	2
10	81111A	Nut, 3/8-16 ESNA	1
11	80101A	Screw, ¼-20 x 3¼ SS	1
12	85811A	Screw, 5/16-18 x ¾	1
13	67867A	Nut, spacer	1
14	60256A	Squeegee, Pivot Arm	1
15	81104A	Nut, ¼ Nylock	5
16	60255A	Bracket, Squeegee	1
17	60328A	Mount, Squeegee	1
18	81112A	Nut, 5/16-18 Thin ESNA SS	1
19	Page 35	Cable, Squeegee Lift	Ref
20	Page 35	Lift Handle Assembly	Ref
21	920346	Palnut	Ref
22	980651	Washer	1

**American-Lincoln®**  
**Encore L25HD**  
**Squeegee Assembly Drawing 3/08**  
**Drawing # 10068A and 10129A**

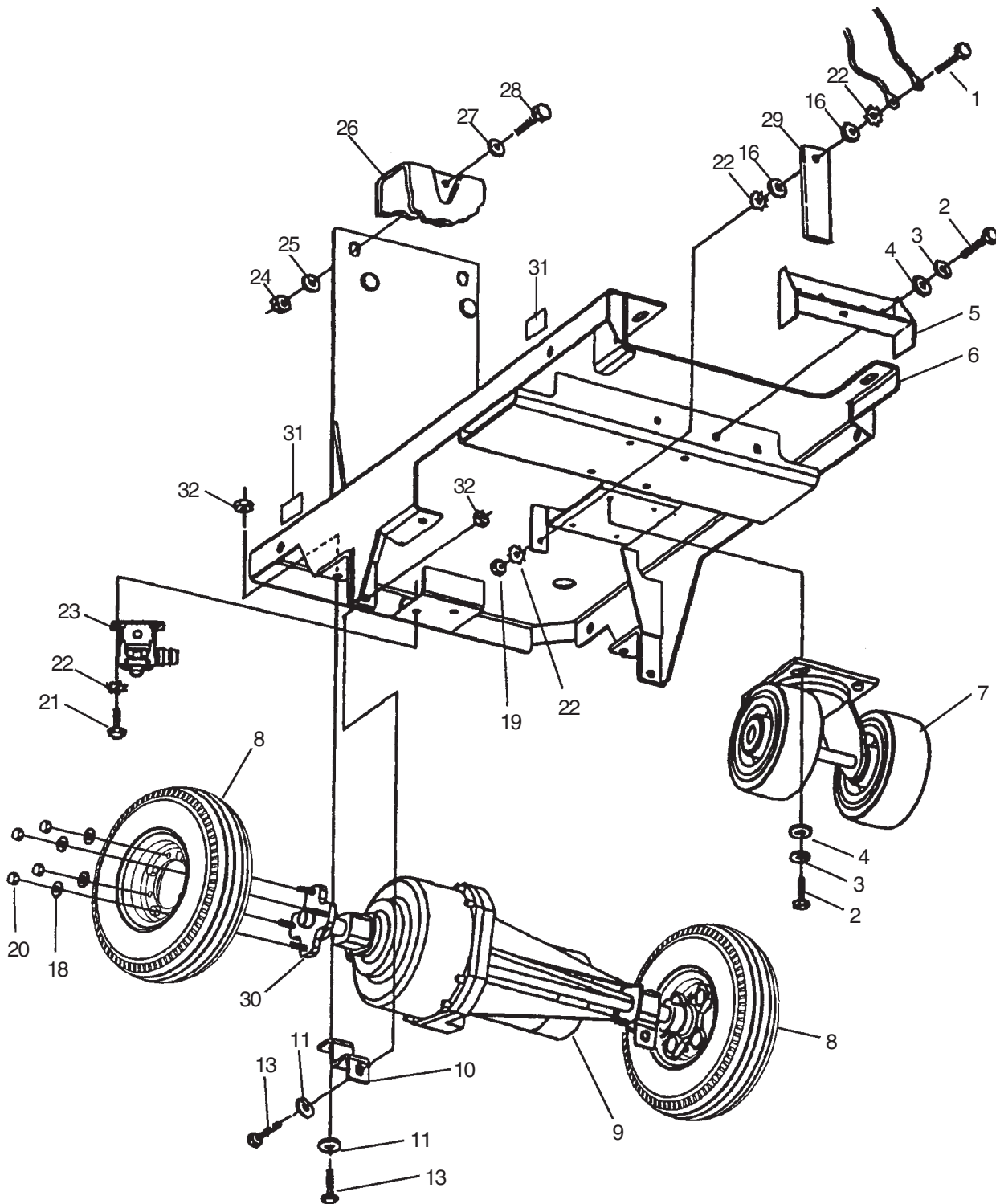


**American-Lincoln®**  
**Encore L25HD**  
**Squeegee Assembly Parts List 3/08**

Ref. #	Part No.	Description	10068A	10129A
			39" Qty	32" Qty
1	80252A	Screw, 1/4-20 x 1 Hex SS	-	4
	80253A	Screw, 1/4-20 x 1 1/2 Hex SS	4	-
2	980657	Washer, 1/4 Lock	4	4
3	60243A	Bracket, Squeegee Wheel	2	2
4	30049B	Wheel, Squeegee	4	4
5	81104A	Nut, 1/4-20	2	2
6	60254A	Bolt, Shoulder 5/16x 2 1/4	2	2
7	50958A	Ring, 3/8 ID Snap	2	2
8	30048A	Wheel, Guide, 4 Inch Diameter	2	2
9	60272A	Channel, Squeegee Weldment 39"	1	-
	60234A	Channel, Squeegee Weldment 32"	-	1
10	50835A	Latch, Squeegee Clamp	1	1
11	930086	Rivet, 3/16 x .450 Aluminum	2	2
12	60252A	Strap, Clamp, Squeegee Retainer 39"	1	-
	60232A	Strap, Clamp, Squeegee Retainer 32"	-	1
13	30069L	Blade, Rear, Linatex, 39"	1	-
	30067L	Blade, Rear, Linatex, 32"	-	1
14	30058A	Spacer, Squeegee 39"	1	-
	30047A	Spacer, Squeegee 32"	-	1
15	30717L1	Blade, Front Linatex 39"	1	-
	30764L1	Blade, Front Linatex 32"	-	1
16	80011A	Screw, 3/8-16 x 3	2	2
17	81301A	Nut, 3/8-16 Jam SS	2	2
18	34260B	Gasket	1	1
19◆	25201B	Knob	2	2
20	60358A	Shim, Squeegee Wheel	2	2
21	61370A	Weight	8	4
22	80280A	Nut, Squeegee Backup	2	2

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

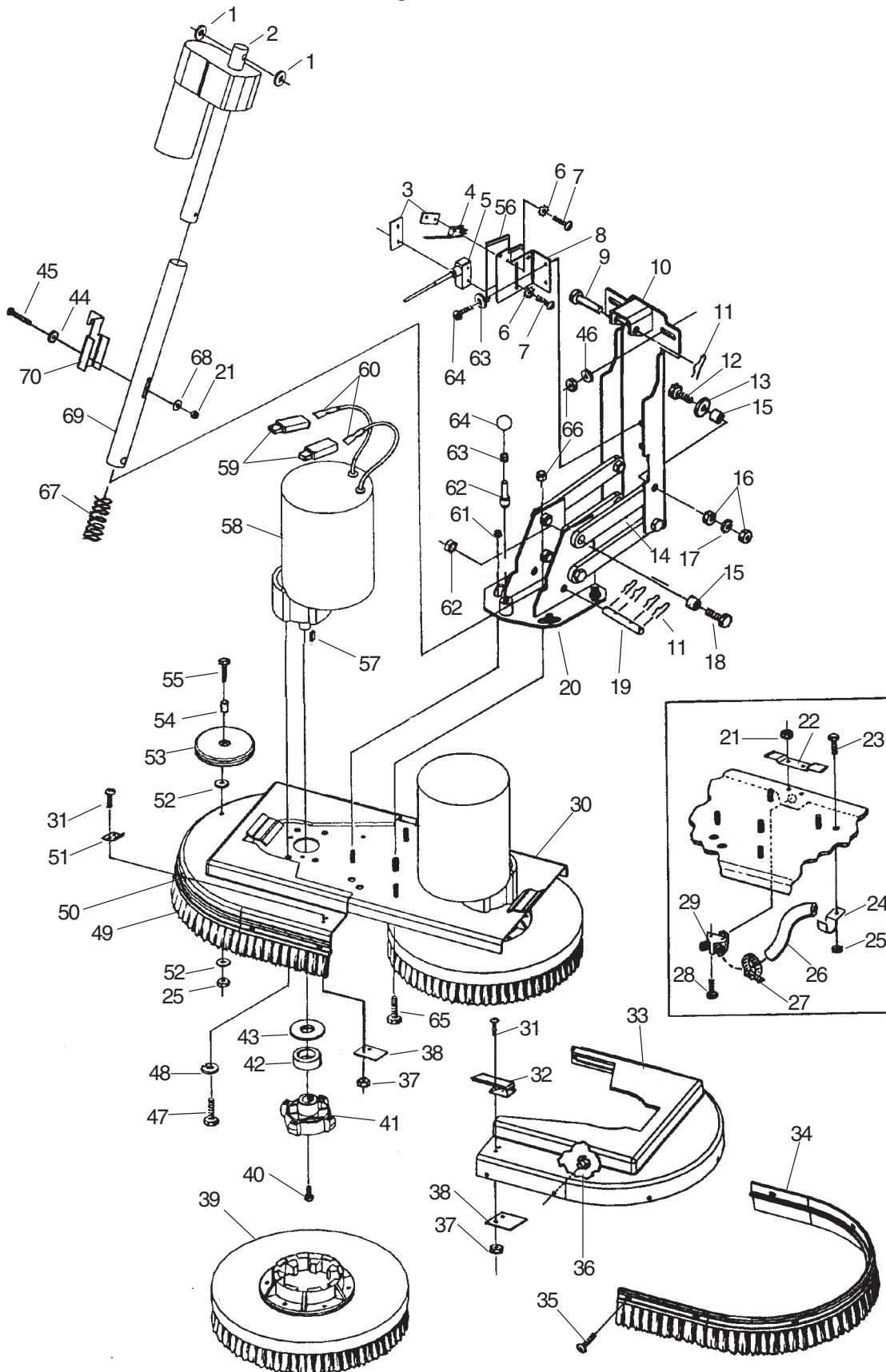
American-Lincoln®  
Encore L25HD  
Frame Axle Assembly Drawing 10/06  
Drawing 10183A



**American-Lincoln®**  
**Encore L25HD**  
**Frame Axle Assembly Parts List 10/06**

Ref. #	Part No.	Description	Qty
1	85700A	Screw, ¼-20 x 1	1
2	85811A	Screw, 5/16-18 x ¾	6
3	980652	Washer, 5/16 Lock	6
4	980651	Washer, flat 5/16	6
5	60328A	Squeegee Mount	Ref
6	60260B	Frame Assembly	1
7	50968A	Caster, Assembly	1
8	54085A	Wheel, Traverse, Foam Filled	2
9	50967A	Transaxle w/mounting hubs	1
10	60289A	Mount, Transaxle	2
11	87031A	Washer, flat 3/8 SS	4
12	170883	Washer, 3/8 Lock	4
13	80103A	Screw, 3/8-24 x 1 Hex SS	4
14	57423A	Ring, Snap Retainer	-
15	87616A	Washer, Nylon	-
16	980205	Washer, 5/16 Fender	2
17	962620	Screw, 5/16-24 x ¾	-
18	87026A	Washer, Flat, ¼ SS	8
19	81217A	Nut, ¼-20 SS Thin	1
20	81104A	Nut, ¼-20 ESNA SS	8
21	85395A	Screw, ¼-20 x ½ SS	2
22	980614	Washer, ¼ Starlock	5
23	59789A	Valve Solution	Ref
24	81105A	Nut, 3/8-16 ESNA	Ref
25	87031A	Washer, Flat 3/8 SS	Ref
26	Ref	Solution Tank	Ref
27	980205	Washer, 5/16	Ref
28	85734A	Screw, 3/8-16 x 2	Ref
29	69639A	Strap, Static	1
30	10135A	Flange, Transaxle Wheel Kit	
31	77267A	Label, Tie Down	4
32	81108A	Nut, 3/8-24 ESNA	4

**American-Lincoln®**  
**Encore L25HD**  
**Brush Head Assembly Drawing 5/03**  
**Drawing #10185A**



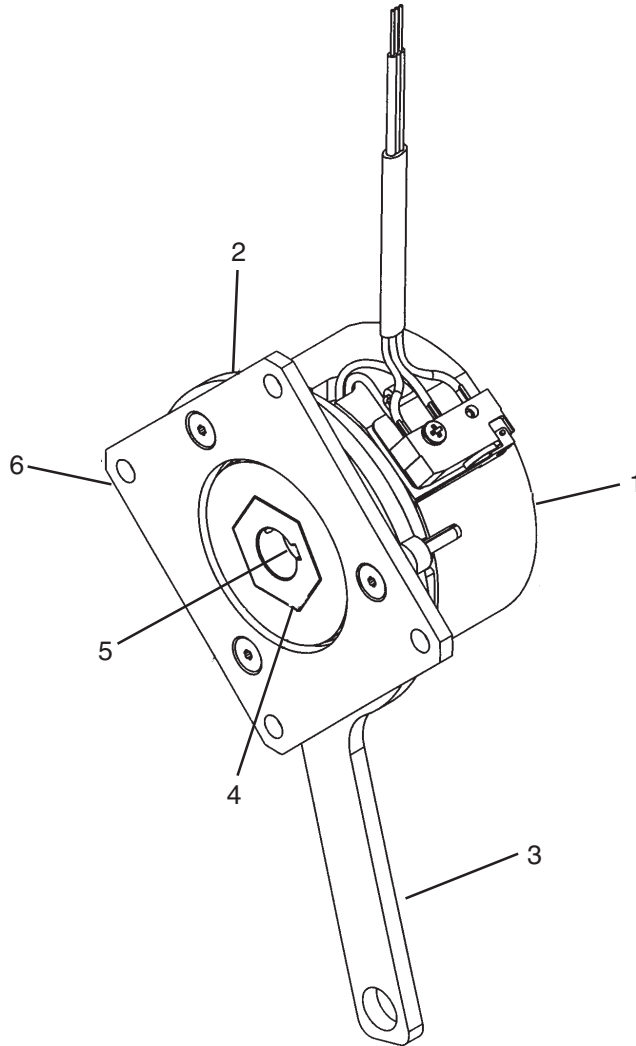
**American-Lincoln®**  
**Encore L25HD**  
**Brush Head Assembly Parts List 10/06**  
**Drawing #10185A**

Ref. #	Part No.	Description	Qty
1	38708A	Washer, Spacer Nylon	2
2	50950B	Actuator	1
3	60265A	Plate, Nut	2
4	47374A	Switch, Lever	1
5	47422B	Switch, Whisker	1
6	980608	Washer, #6	4
7	962980	Screw, 6-32 x 1	4
8	60251A	Mount, Switch	1
9	82501A	Pin	1
10	60236A	Bracket, Brush Head	1
11	766780	Pin, Hair	5
12	85838A	Screw, ½ x 20 x 1½	4
13	980673	Washer	4*
14	63058A	Bar, Linkage	4
15	67705B	Bearing, Sleeve	8
16	920278	Nut, ½-20 SS	8
17	980626	Washer, ½ Lock	4
18	80100A	Screw, ½-20 x 1 Hex Head	4
19	80091A	Pin, Brush Lift	1
20	60483A	Mount, Brush Head	1
21	81217A	Nut, ¼-20 ESNA .218 Height	3
22	60335A	Bracket, Brush Housing	1
23	170915	Screw, ¼-20 x ¾ SS	2
24	782002	Clamp, Hose	2
25	81104A	Nut, ¼-20 ESNA	3
26	34705A	Hose, Solution	2
27	722030	Clamp, Hose	2
28	962989	Screw, ¼-20 x 1½	2
29	38014A	Solution Splitter	Ref
30	51312A	Plate, Brush Head	1
31	962992	Screw, 8-32 x 5/8 SS	4
32	55721A	Latch, Brush Housing	1
33	30053A	Housing, Left Brush	1
34	30051A	Skirt, Left	1
35	85616A	Screw, 10-32 x 5/8 SS	12
36	82004A	Nut, "T" 10-32	12

Ref.#	Part No.	Description	Qty
37	81109A	Nut, 8-32 SS ESNA	4
38	60337A	Plate, Latch Brush	2
39	Page 24	Brush/Pad Assemblies	
40	962714	Screw, 5/16-18 x ¾ Soc.	2
	85811A	Screw, 5/16-18 x ¾ Hex	-
41	34400B	Gimbal Male	2
42	61658A	Gimbal, Collar	2
43	59856A	Washer, Rubber	2
44	80102A	Washer, ¼	1
45	85702A	Screw, ¼-20 x 1¾	1
46	87031A	Washer, 3/8 Flat	Ref
47	962244	Screw, 3/8-16 x ¾	8
48	980638	Washer, Lock 3/8	8
49	30052A	Skirt, Right	1
50	30295A	Housing, Right Brush	1
51	55451A	Keeper	1
52	87039A	Washer, ¼	2
53	30048A	Wheel, Guide	1
54	60248A	Sleeve Guide Wheel	1
55	85301A	Screw, ¼-20 x 1¼	1
57	915102	Key (included w/Item 58)	2
58	40186A	Motor, Brush	2
59	41602A	Housing	4
60	41601A	Connector	4
61	920110	Nut, 5/16-18	4
62	80109A	Nut, ½-20 Jam S.S.	4
63	980603	Washer, #10	2
64	80108A	Screw, 10-24 x ½	2
65	85811A	Screw, 5/16-18 x ¾ Hex	4
66	81105A	Nut, 3/8-16 SS ESNA	1
67	53421A	Spring, Head Pressure	1
68	87007A	Washer, Flat, ¼"	1
69	60238A	Tube, Head Pressure	1
70	60249A	Switch, Actuator	1
NI	77091A	Label, Moving Parts	2

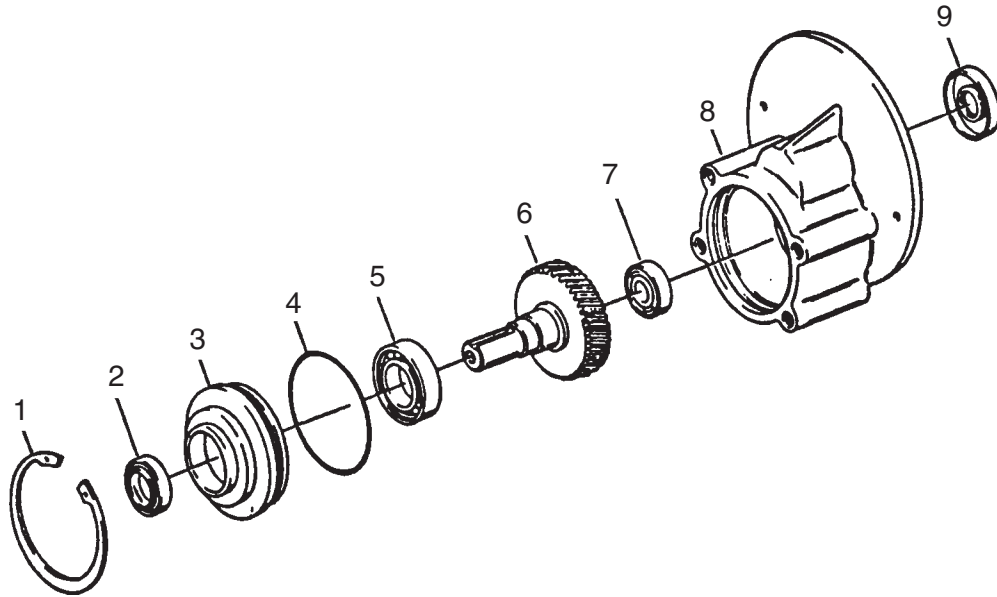
\* Used only as required to square up linkage bar #14 to the frame.

**American-Lincoln®**  
**Encore L25HD**  
**Optional Brake Drawing and Parts List 12/00**  
**10072A**



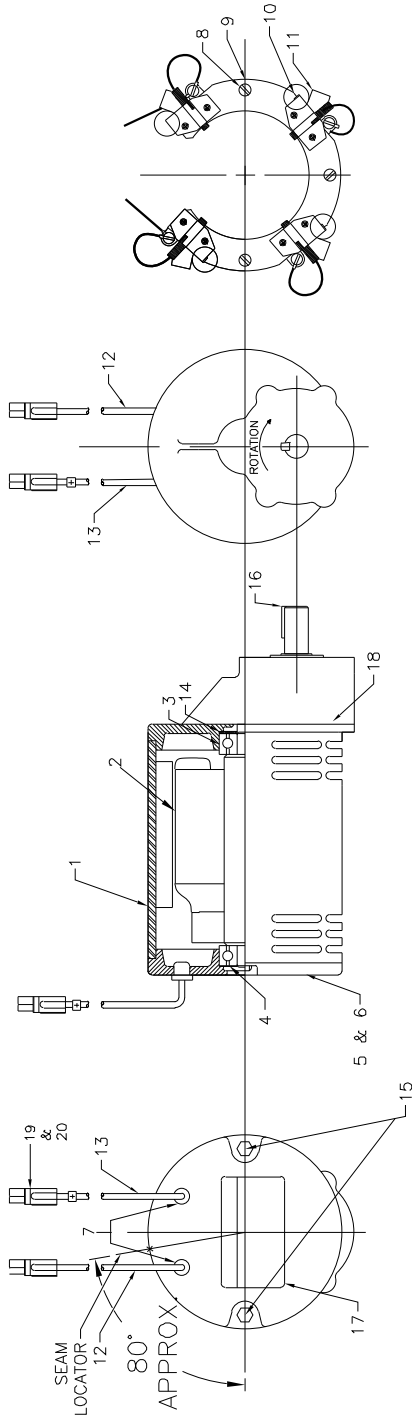
Ref #	Part No.	Description	Qty
1	30094A	Cover, Vinyl	1
2	30095A	Tie, Cover Retainer	1
3	10160A	Brake, Asm. 24V	1
4	80123A	Nut, Brake Drive	1
5	80125A	Key, 3/32 Sq. x 1/4 Lg.	1
6	60388A	Spacer	1
NI	80124A	Screw Set (Brake Nut to Motor Shaft)	2

**American-Lincoln®**  
**Encore L25HD**  
**Gearbox Assembly Drawing and Parts List 12/00**  
**Form #54238A**



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	1
7	902605	Bearing, Small	1
8	54883A	Housing	1
9	58144A	Seal, Oil Large	1
10	NI	Darina EP2 Grease	4 oz.

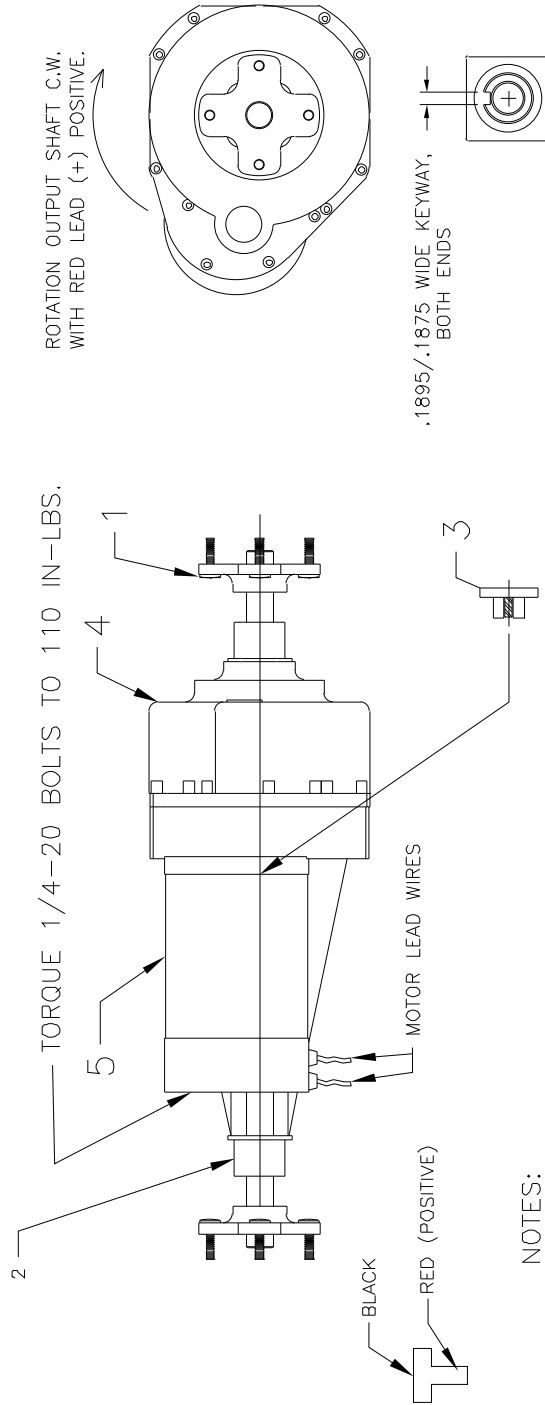
**American-Lincoln®**  
**Encore L25HD**  
**Brush Motor Drawing & Parts List 12/00**  
**Motor Asm. 40186A**



ITEM	DESCRIPTION	PART NUMBER		REQ'D
		IMPERIAL	ALTO	
1	STATOR FRAME ASS'Y (W/ CLIPS AND MAGNETS)	0502043	46734A	1
2	ARMATURE ASS'Y (W/BEARINGS)	0509137	10182A	1
3	BEARING B.E.	0566002	902654	1
4	BEARING F. E.	0566000	902550	1
5	COMM. BRACKET ASS'Y (W/ BRUSH BOARD ASS'Y AND LEAD ASS'Y)	0514532	N/A	1
6	COMMUTATOR BRACKET	0540022	50520A	1
7	STRAIN RELIEF	0596069	56480A	2
8	BRUSH BOARD SCREW	3538021	962546	2
9	BRUSH BOARD ASS'Y (W/ SPRINGS AND BRUSHES)	0515124	10186A	1
10	BRUSH SPRING	0571001	448396	4
11	BRUSH ASS'Y	0572007	51319A	4
12	LEAD ASS'Y	0578204	10187A	1
13	LEAD ASS'Y	0578203	10188A	1
14	HELICAL WASHER	0596125	N/A	1
15	THRU BOLT	0596174	50515A	1
16	SHAFT KEY	0596081	80501A	2
17	NAME PLATE	0574024	N/A	2
18	B. E. BRACKET ASS'Y (GEARBOX)	0522008	54238A	1
19	ANDERSON POWERPOLE CONNECTOR	0596152	41601A	2
20	ANDERSON POWERPOLE HOUSING	*	41602A	2

**American-Lincoln®**  
**Encore L25HD**  
**Transaxle Drawing 3/08**

Ref.	Part No.	Description	Qty.
1	10135A	Flange, Wheel Kit	2
2	51056A	Sleeve, Elastomeric	2
3	50983A	Coupling, Motor Drive	1
4	50982A	Transaxle, W/O Motor	1
5	50981A	Motor	1
NI◆	40628A	Brushes, Carbon	1

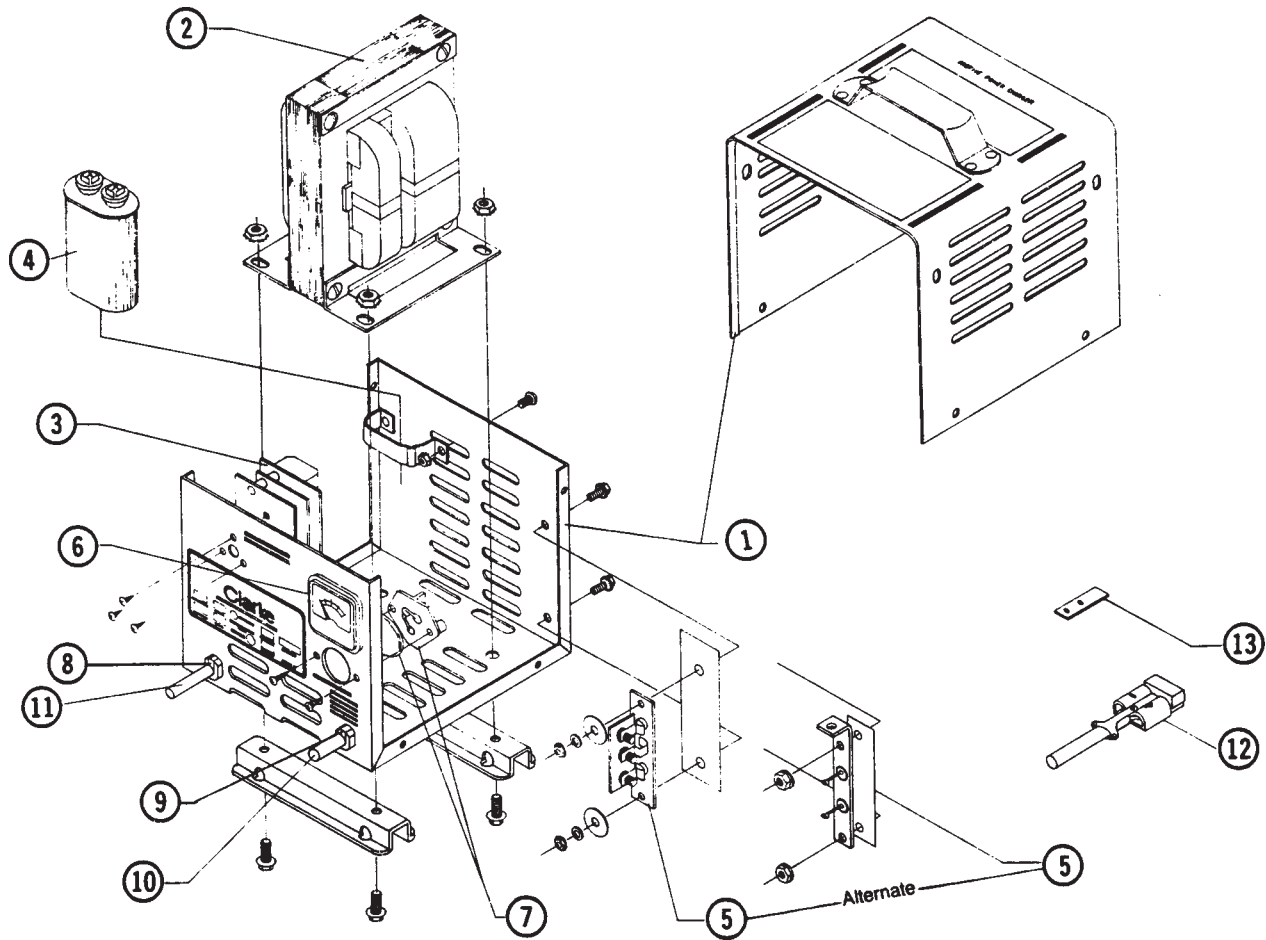


**NOTES:**

1. BALL AND NEEDLE BEARING CONSTRUCTION.
2. GEARBOX GREASE LUBRICATED AND LEAKPROOF.
3. AXLES TO BE RUST PROTECTED WITH PLATING
4. GEAR RATIO: 18:1
5. TRANSAXLE ASSEMBLY SUPPLIED WITH RUBBER MOUNT BUSHINGS INSTALLED.
6. MOTOR ASSEMBLY IS FIELD REPLACEABLE.
7. MOTOR FRAME ZINC PLATED.
8. WHEEL FLANGES & STUDS TO BE ZINC PLATED.
9. ELECTRICAL CONNECTORS - USE PACKARD HOUSING # 2984883 AND PACKARD TERMINAL # 2971859

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

**American-Lincoln®**  
**Encore L25HD**  
**Battery Charger (40512A & 40513A) Drawing and Parts List 3/08**



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

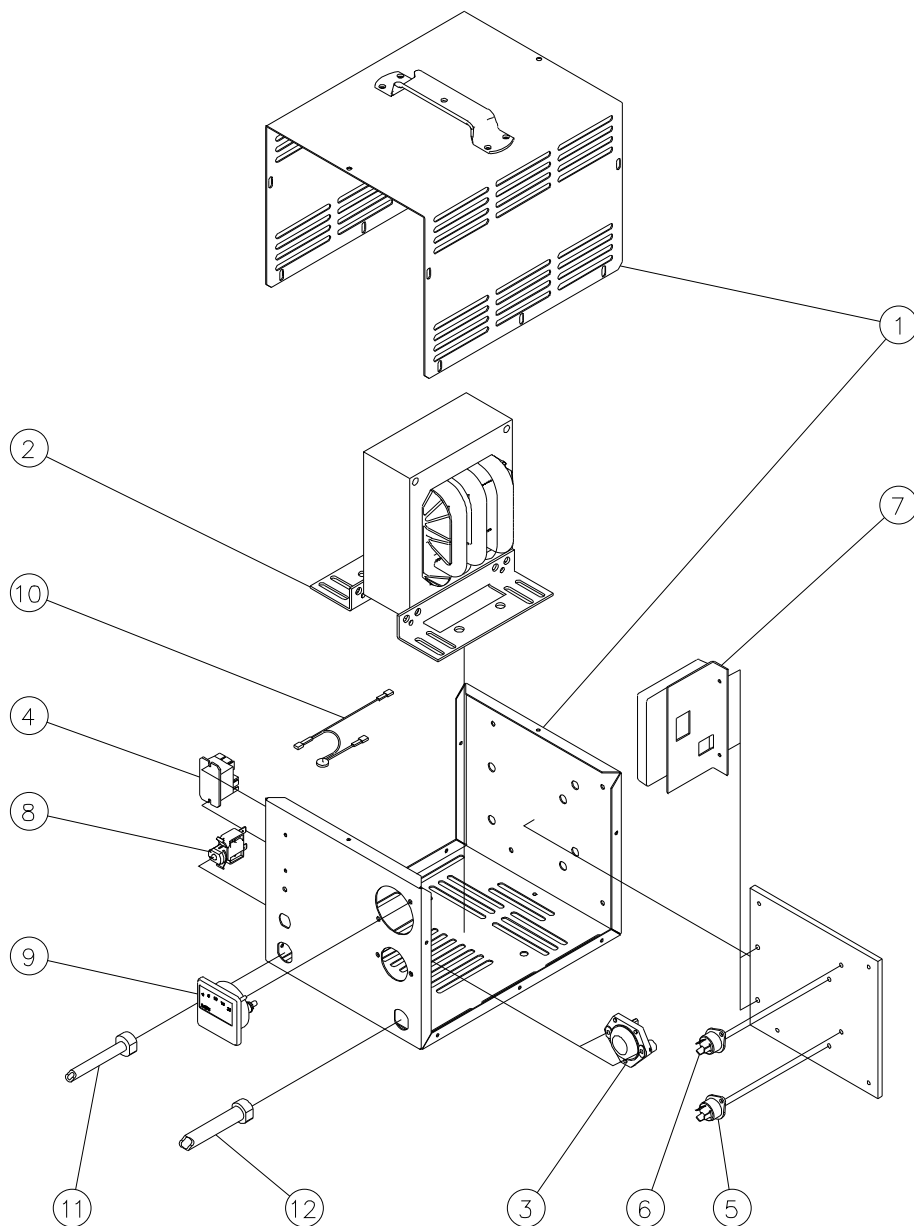
- ◆ **Charger #40512B:** 24 volt, 25 amp D.C., 115 volt, A.C., 60 Hz.
- Charger #40513A:** 24 volt, 25 amp D.C., 230 volt, A.C., 50 Hz

Ref. No.	Description	Charger 40512A	Charger 40513A
1	Charger Case	41129A	41128A
2	Transformer	48413A	48409A
3	Electronic Controller Kit	47500A	48200A
4	Capacitor, 660 V.A.C.	912132	912132
5	Heat Sink Assembly	912212	912212
6	Ammeter	40200A	40200A
7	Fuse Holder	912382	912382
8	Strain Relief, A.C. Cord	837525	837525
9	Strain Relief, D.C. Cord	747553	747553
10	D.C. Cord Assembly	51986A	51986A
11	A.C. Cord Assembly	51974A	908947
12	Housing, Red	911470	911470
13	D.C. Plug Lock Key	795020	795020

\* NOTE: Parts not available at this time.

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

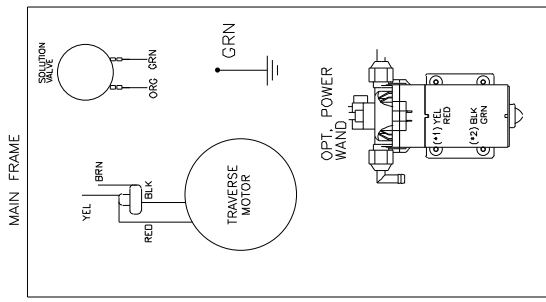
**American-Lincoln®**  
**Encore L25HD**  
**Remote Battery Charger (40512B & 40506B) Drawing and Parts List 5/06**



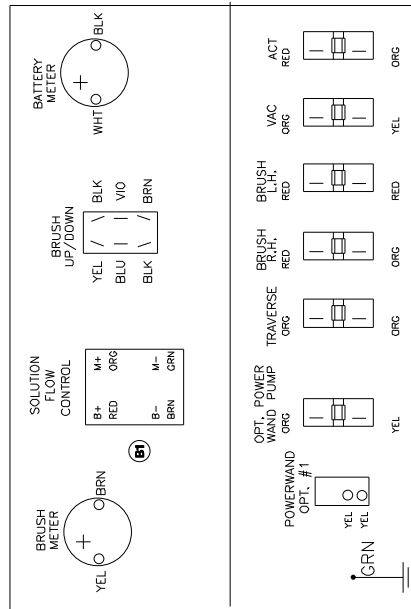
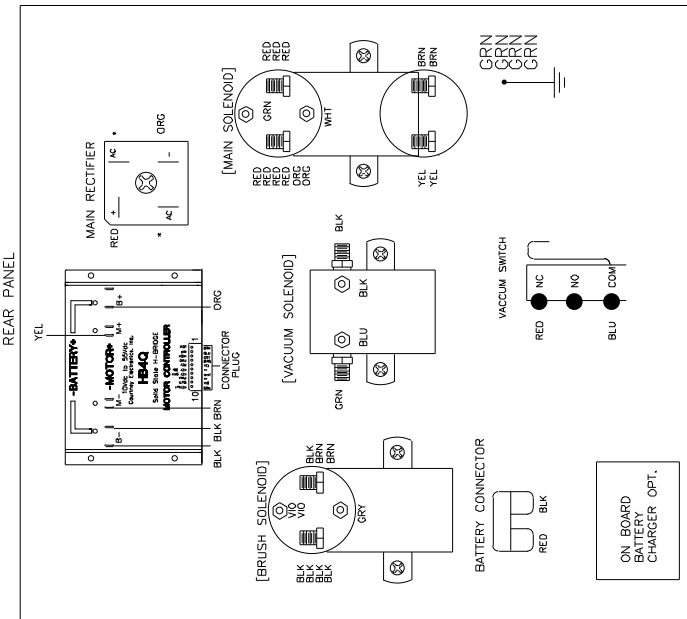
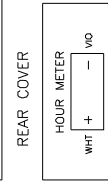
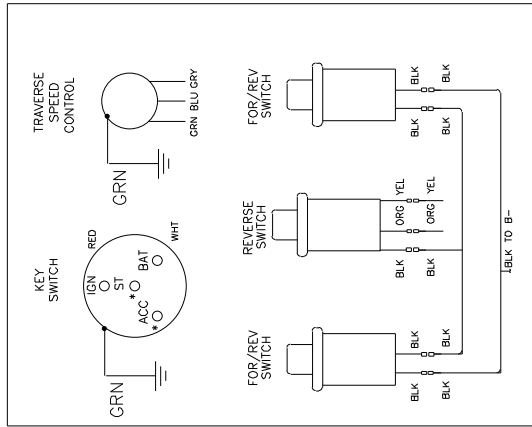
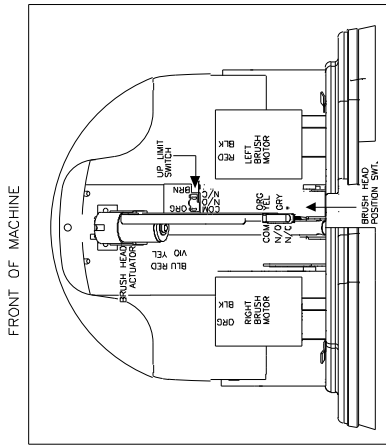
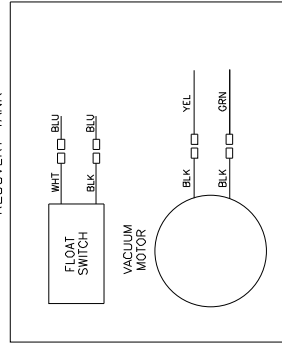
**WARNING: All electrical repairs must be performed by qualified personnel only.**

REF NO.	DESCRIPTION	40512B 24V 25A	40506B 36V 25A
1	CASE ASSEMBLY		
2	TRANSFORMER ASSEMBLY		
3	FUSE ASSEMBLY	912382	912382
4	D.C. RELAY		
5	SCR ASSEMBLY, BLUE & BROWN WIRES		
6	SCR ASSEMBLY, VIOLET & WHITE WIRES	11085A	11086A
7	ELECTRONIC CONTROLLER ASSEMBLY		
8	A.C. CIRCUIT BREAKER		
9	AMMETER		
10	A.C. SURGE PROTECTION		
11	A.C. CORDSET, 5-15P PLUG AND BUSHING		
12	D.C. CORDSET, SB50 GRAY PLUG W/ KEY		

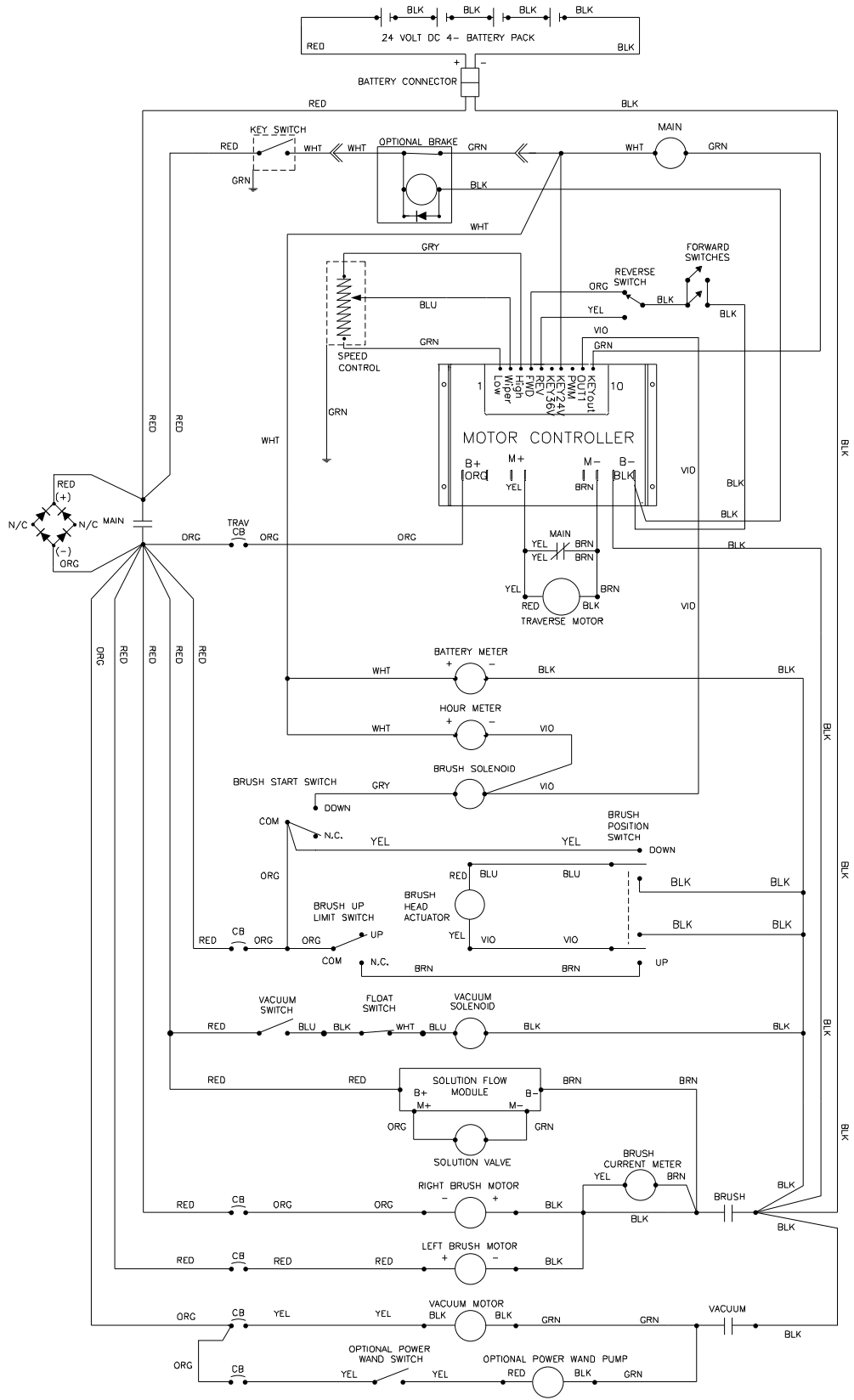
# American-Lincoln® Encore L25HD Connection Diagram (00445A - W) 12/00



\* = NOT CONNECTED  
OPT.#1 = POWERWAND OPTION



**American-Lincoln®**  
**Encore L25HD**  
**Electrical Schematic (00445A-E) 12/00**



ALL BRUSH SWITCHES ARE SHOWN IN THE BRUSH HEAD UP POSITION.



# CLARKE PRODUCT SUPPORT BRANCHES

## U. S. A. Locations

### PRODUCTION FACILITIES

**Clarke®**, Springdale, Arkansas  
2100 Highway 265  
Springdale, Arkansas 72764  
(479) 750-1000  
**Customer Service - 1-800-253-0367**  
**Technical Service - 1-800-356-7274**

### SERVICE FACILITIES

**Clarke®**, Elk Grove, Illinois 60007  
2280 Elmhurst Road  
(847) 956-7900

**Clarke®**, Denver, Colorado 80204  
1955 West 13th Ave.  
(800) 651- 3760

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

### SERVICE AND SALES FACILITY

**American Lincoln® / Clarke**, Madison Heights,  
Michigan 48071-0158  
29815 John R.  
(810) 544-6300

**American Lincoln® / Clarke**, Marietta, Georgia 30066  
1455 Canton Road  
(770) 218-2116

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**Clarke®**

**Clarke American Sanders**

**Customer Service Headquarters and Factory**  
2100 Highway 265  
Springdale, Arkansas 72764  
(479) 750-1000

**Technical Service**  
1-800-356-7274

## European Locations

### PRODUCTION FACILITIES

ALTO Danmark A/S, Aalborg  
Blytaekkervej 2  
DK-9000 Aalborg  
+45 72 18 21 00

ALTO Danmark A/S, Hadsund  
Industrikvarteret  
DK-9560 Hadsund  
+45 72 18 21 00

### SALES SUBSIDIARIES

ALTO US - Canada, Ontario (Canada)  
4080 B Sladeview Crescent Unit 1  
Mississauga, Ontario L5L 5Y5  
(905) 569 0266

ALTO Cleaning Systems Asia Pte Ltd., Singapore  
No. 17 Link Road  
Singapore 619034  
+65 268 1006

ALTO Deutschland GmbH, Bellenberg (Germany)  
Guido-Oberdorfer-Straße 2-8  
89287 Bellenberg  
+49 0180 5 37 37 37

ALTO Cleaning Systems (UK) Ltd., Penrith  
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Penrith  
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B.P. 44, 4 Place d'Ostwald  
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S-431 04 Molndal  
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ALTO Norge A/S, Oslo (Norway)  
Bjornerudveien 24  
N-1266  
+47 2275 1770

# **AMERICAN-LINCOLN U.S. AND CANADA LIMITED WARRANTY**

American-Lincoln warrants to the original end user, each new machine, new accessory and genuine replacement parts against defects in material and workmanship under normal use and service. Our obligation under this warranty is limited to repair or replacement of the defective item at our factory or by an Authorized Service Center. Warranty coverage shall begin on the date of purchase by the original end user (as evidenced by your invoice from the factory or Authorized Dealer). The warranty registration card should be completed and returned within 30 days of purchase. The warranty coverage period is specified below.

<b>GROUP</b>	<b>PARTS<sup>1</sup></b>	<b>LABOR<sup>2</sup></b>	<b>TRAVEL<sup>2,3</sup></b>
Industrial Rider Machines ( Battery)	2 years	6 months	6 months
Industrial Rider Machines (Internal Combustion)	2 years <sup>6</sup>	6 months <sup>6</sup>	6 months <sup>6</sup>
Encore L25HD / L26HD Walk Behind Scrubbers	3 years	1 year	90 days
Encore 20 / 33HD Walk Behind Scrubbers	1 year	1 year	90 days
Encore <sup>2</sup> Walk behind Scrubber	3 years	1 year	1 year
Accessories/Replacement Parts <sup>4</sup>	90 days	none	none
<b>EXCEPTIONS</b>			
Roto-mold Components	8 years	See Note 5	See Note 5
Stainless Steel Tanks	8 years	See Note 5	See Note 5
Vacuum Motors	1 year	1 year	None
Tires (not including rims)	Prorated over 1 year / First 90 days at 100%		
Batteries	Prorated over 1 year / First 90 days at 100%		
Internal Combustion Engines	See Separate Engine Warranty		
External Battery Chargers	As offered by manufacturer		
<b>NOTES:</b>			
1-Parts repaired or replaced are guaranteed for the remainder of the original machine warranty period.			
2-Coverage only applicable to products sold and used in the United States and Canada.			
3-Travel warranty coverage limited to 3 hours of round trip travel time to remedy a defective product or part.			
4-Not sold with the new machine. Includes roto-mold components, stainless steel tanks and vacuum motors when sold separately.			
5-Follows warranty offered on original machine.			
6-Two (2) years or 2,000 hours of normal operation, whichever occurs first.			

This warranty shall not apply to repairs resulting from accidents or misuse, damage in transit, overloading the capacity of the machine, failure due to lack of proper maintenance or care as described in the operating and maintenance instructions. Minor adjustments, such as tightening of screws or bolts not connected with the replacement of parts, are not covered. Replacement of expendable wear items such as scrub brushes, pad holders, carbon motor brushes, bulbs, bags, filters and various rubber/plastic parts are also not covered. Repairs or alterations by an organization other than the factory or an Authorized Service Center are not covered and will void any American-Lincoln warranty as to the parts or systems repaired or altered by a non-authorized organization.

**THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION OF THE LIMITED WARRANTIES STATED WITHIN. NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE EXCEPT AS EXPRESSLY STATED HEREIN. ANY STATUTORY IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, THAT ARE IMPOSED BY LAW DESPITE THE EXPRESS LIMITATION OR WARRANTIES ABOVE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE WRITTEN WARRANTY. BUYER UNDERSTANDS, ACKNOWLEDGES AND AGREES THAT THE REMEDIES PROVIDED UNDER THIS LIMITED WARRANTY ARE THE SOLE AND EXCLUSIVE REMEDIES AVAILABLE TO THE BUYER. AMERICAN-LINCOLN WILL NOT BE LIABLE FOR ANY OTHER OR ADDITIONAL DAMAGES, INCLUDING BUT NOT LIMITED TO INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE FURNISHING, PERFORMANCE, USE OF OR INABILITY TO USE THE MACHINE. ANY EXTENSIONS OF OR MODIFICATIONS MADE TO THIS WARRANTY BY A DEALER/DISTRIBUTOR OF AMERICAN-LINCOLN ARE THE SOLE RESPONSIBILITY OF THE DEALER/DISTRIBUTOR.**

All transportation or shipping charges resulting from the return of machines, parts, or accessories shall be the responsibility of the end-user. When returning, please provide an explanation of the problem and include the serial number of the machine as well as the name of the selling organization. The Technical Service department of the authorized Dealer Service Center or the factory will investigate and then contact you.

Transportation of hazardous waste or contaminated equipment is subject to various laws and regulations. In returning machines, parts, or accessories under this limited warranty, the end user must certify in writing that the machines, parts or accessories being returned have not been used for handling, clean up, or disposal of hazardous waste or hazardous materials including but not limited to such things as asbestos, anthrax etc. or if the machines, parts or accessories being returned have been used for handling, clean up, or disposal of hazardous waste or hazardous materials, then the end user must have the machines, parts or accessories decontaminated by licensed and qualified decontamination professionals and provide written certification of this decontamination signed by the decontamination professionals. These machines, parts or accessories are to be returned only to the local American-Lincoln Authorized Service Center for Warranty service along with decontamination certification.

AMERICAN-LINCOLN reserves the right to change its warranty policy without notice. This limited warranty supersedes all prior warranties for machines ordered and shipped after December 31, 2005.

**American-Lincoln®**

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