



CLARKE
TECHNOLOGY

Encore

S28/L28/S33/L33/S38/L38

Section II

Parts and Service Manual

Order Parts Here:



(79049B)

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.

Replacing a Defective Brush Head Hall Affect Sensor (L Series only)(See figure 35)

1. Remove the brush head actuator assembly from the machine.
2. Loosen the locking nut on the brush head hall affect sensor at the top of the brush head actuator.
3. Unscrew the brush head hall affect sensor (Part Number 46742A) from the top of the brush head actuator.
4. Screw in the new brush head hall affect sensor into the top of the brush head actuator until it touches the metal disk on the motor gear. Unscrew the brush head hall affect sensor from the top of the brush head actuator three (3) complete turns.
5. Using the supplied jam nut, lock the brush head hall affect sensor down using loctite thread locker.
6. Reinstall the brush head actuator assembly on the machine.

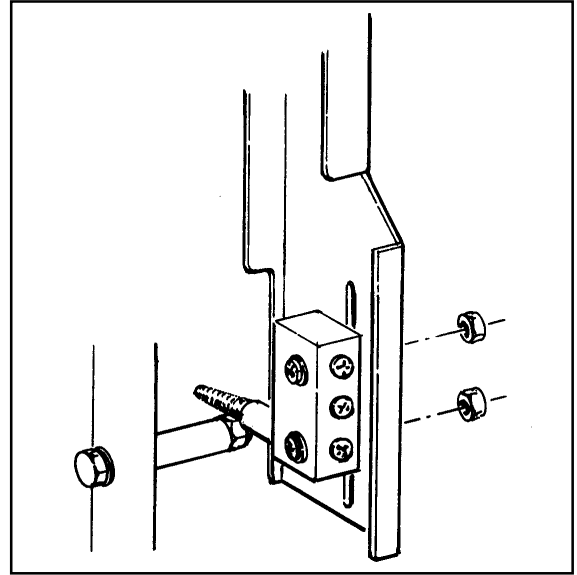


Figure #34

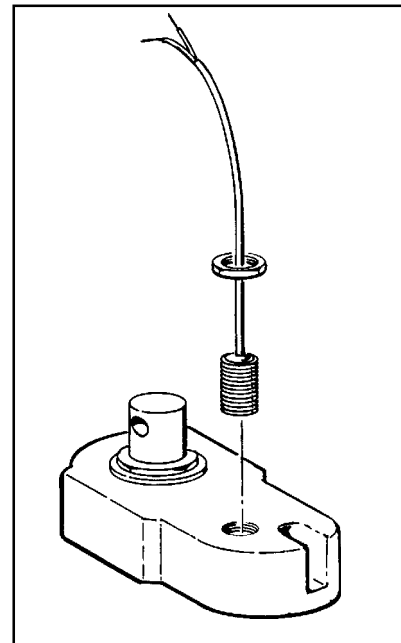
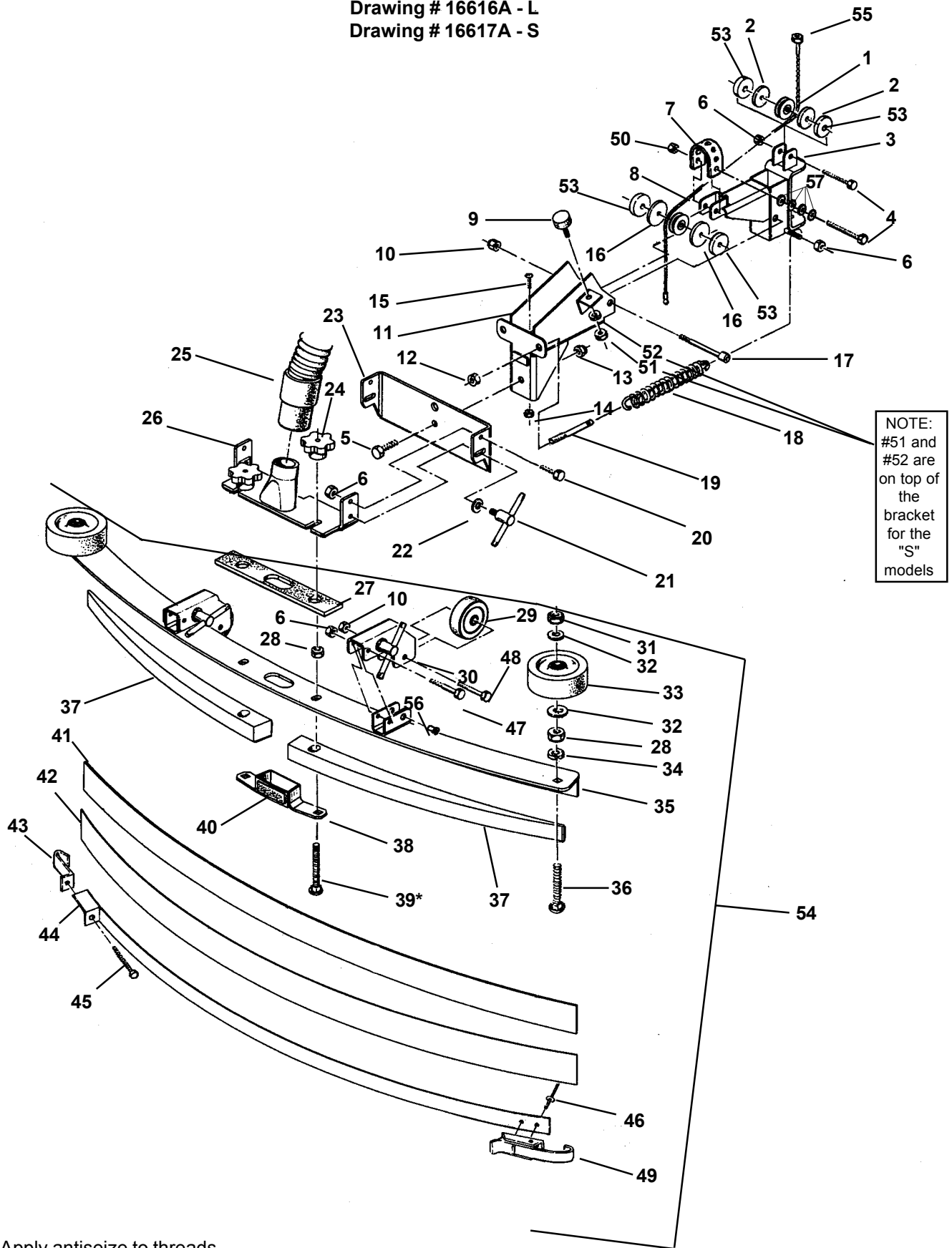


Figure #35

CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
 Squeegee/Swing Arm Assembly Drawing 11/99
 Drawing # 16616A - L
 Drawing # 16617A - S



NOTE:
 #51 and
 #52 are
 on top of
 the
 bracket
 for the
 "S"
 models

* Apply antiseize to threads

**CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Squeegee/Swing Arm Assembly Parts List 11/99**

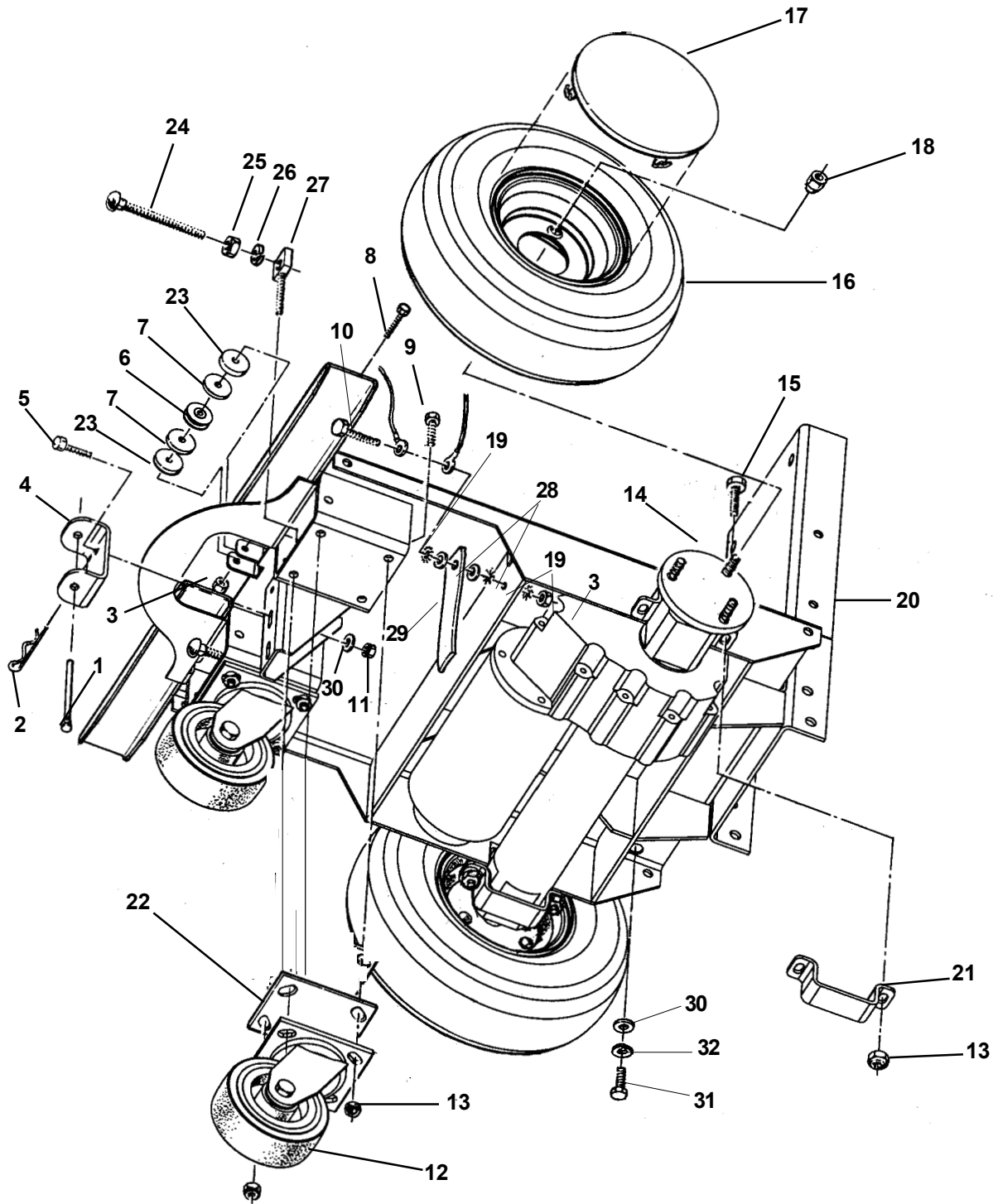
| Ref # | Part No. | Description | Qty | Model |
|-------|----------|---------------------------|-----|-------|
| 1 | 57275A | Pulley | 2 | All |
| 2 | 87623A | Washer, Nylon 1/4x1/4x1/8 | 2 | All |
| 3 | 60452A | Swing Arm, Front | 1 | All |
| 4 | 86004A | Screw, .25-20 x 1.50 | 2 | All |
| 5 | 85727A | Screw, .375-16 x 1.00 | 1 | All |
| 6 | 81104A | Nut, Hex ESNA SS | 6 | All |
| 7 | 38021A | Strap | 1 | All |
| 8 | 61679A | Cable, Lower | 1 | All |
| 9 | 51613A | Bumper | 1 | All |
| 10 | 920110 | Nut, ESNA | 3 | All |
| 11 | 60454A | Swing Arm, Rear | 1 | All |
| 12 | 920256 | Nut, Hex | 2 | All |
| 13 | 81105A | Nut, ESNA SS | 1 | All |
| 14 | 920296 | Nut, 10-24 ESNA SS | 1 | All |
| 15 | 962798 | Screw, 10-24 x .50 | 1 | All |
| 16 | 87624A | Washer, Nylon 1/2x1/4x1/8 | 2 | All |
| 17 | 80015A | Screw, Shoulder | 1 | All |
| 18 | 53423A | Spring, Squ. Pressure | 2 | All |
| 19 | 68016A | Stud | 2 | All |
| 20 | 170915 | Screw, SS Hex | 2 | All |
| 21 | 64905A | T Handle | 3 | All |
| 22 | 980651 | Washer, Flat .312 | 1 | All |
| 23 | 60678A | Pivot Bracket | 1 | All |
| 24 | 25201A | Knob | 2 | All |
| 25 | 35192A | Hose, Squeegee Rec. | 1 | All |
| 26 | 61267A | Tube Bracket | 1 | All |
| 27 | 34260B | Squeegee Gasket | 1 | All |
| 28 | 81301A | Nut, Jam SS | 4 | All |
| 29 | 59971A | Wheel | 2 | All |
| 30 | 65975A | Wheel Mount Bracket | 2 | All |
| 31 | 920248 | Nut, Jam | 2 | All |
| 32 | 980645 | Washer, Flat | 4 | All |
| 33 | 59950A | Guide Wheel | 2 | All |
| 34 | 980638 | Washer, Lock | 2 | All |

NOTE: When changing squeegee blades, it might be necessary to loosen screw #39; install and secure blades with clamp #44; then retighten screw #39. This will allow for different thickness.

| Ref # | Part No. | Description | Qty | Model |
|-------|----------|----------------------------|-----|-------|
| 35 | 69673A | Squeegee Base | 1 | 28 |
| | 69674A | Squeegee Base | 1 | 33 |
| | 69675A | Squeegee Base | 1 | 38 |
| | 69636A | Squeegee Base, 29" acc. | 1 | 28 |
| 36 | 85610A | Screw, PN Phillips | 2 | All |
| 37 | 38710A | Spacer | 2 | 28 |
| | 38711A | Spacer | 2 | 33 |
| | 38715A | Spacer | 2 | 38 |
| | 38713A | Spacer, 29" accessory | 2 | 28 |
| 38 | 62712A | Air Duct | 1 | All |
| 39 | 80011A | Screw, .375-16 x 3.00 | 2 | All |
| 40 | 37016A | Grip Pad | 1 | All |
| 41* | 30914A | Blade, Inner | 1 | 28 |
| | 30915A | Blade, Inner | 1 | 33 |
| | 30934A | Blade, Inner | 1 | 38 |
| | 30930A | Blade, Inner Ribbed 29" | 1 | 28 |
| 42* | 30912A | Blade, Outer | 1 | 28 |
| | 30913A | Blade, Outer | 1 | 33 |
| | 30935A | Blade, Outer | 1 | 38 |
| | 30931A | Bade, Outer 29" acc. | 1 | 28 |
| 43 | 62421A | End Clamp | 1 | All |
| 44 | 62442A | Clamp, Weld | 1 | 28 |
| | 62443A | Clamp, Weld | 1 | 33 |
| | 62444A | Clamp, Weld | 1 | 38 |
| | 62441A | Clamp, Weld 29" acc. | 1 | 28 |
| 45 | 86004A | Screw, .25-20 x 1.50 Hex | 1 | All |
| 46 | 170932 | Rivet | 2 | All |
| 47 | 85702A | Screw, .25-20 x 1.75 | 2 | All |
| 48 | 85816A | Screw, .312-18 x 1.75 | 2 | All |
| 49 | 55722A | Squeegee Strap Latch | 1 | All |
| 50 | 81217A | Nut, 1/2-20 | 1 | All |
| 51 | 920208 | Nut, Hex 1/4-20 | 1 | All |
| 52 | 980657 | Washer, 1/4 Lock | 1 | All |
| 53 | 87625A | Washer, Nylon 1/4x1/4x1/32 | 4 | All |
| 54 | 18815K | Asm., Squeegee | 1 | 28 |
| | 18816K | Asm., Squeegee | 1 | 33 |
| | 18817K | Asm., Squeegee | 1 | 38 |
| | 18818A | Asm., Squeegee* | 1 | 28 |
| 55 | 81303A | Nut, 1/4-28 | 1 | All |
| 56 | 54766A | Insert, Threaded 5/16-24 | 2 | All |
| 57 | 87026A | Washer | 4 | All |

* See accessory page

CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Traverse System Assembly Drawing 12/00
Drawing 19021A

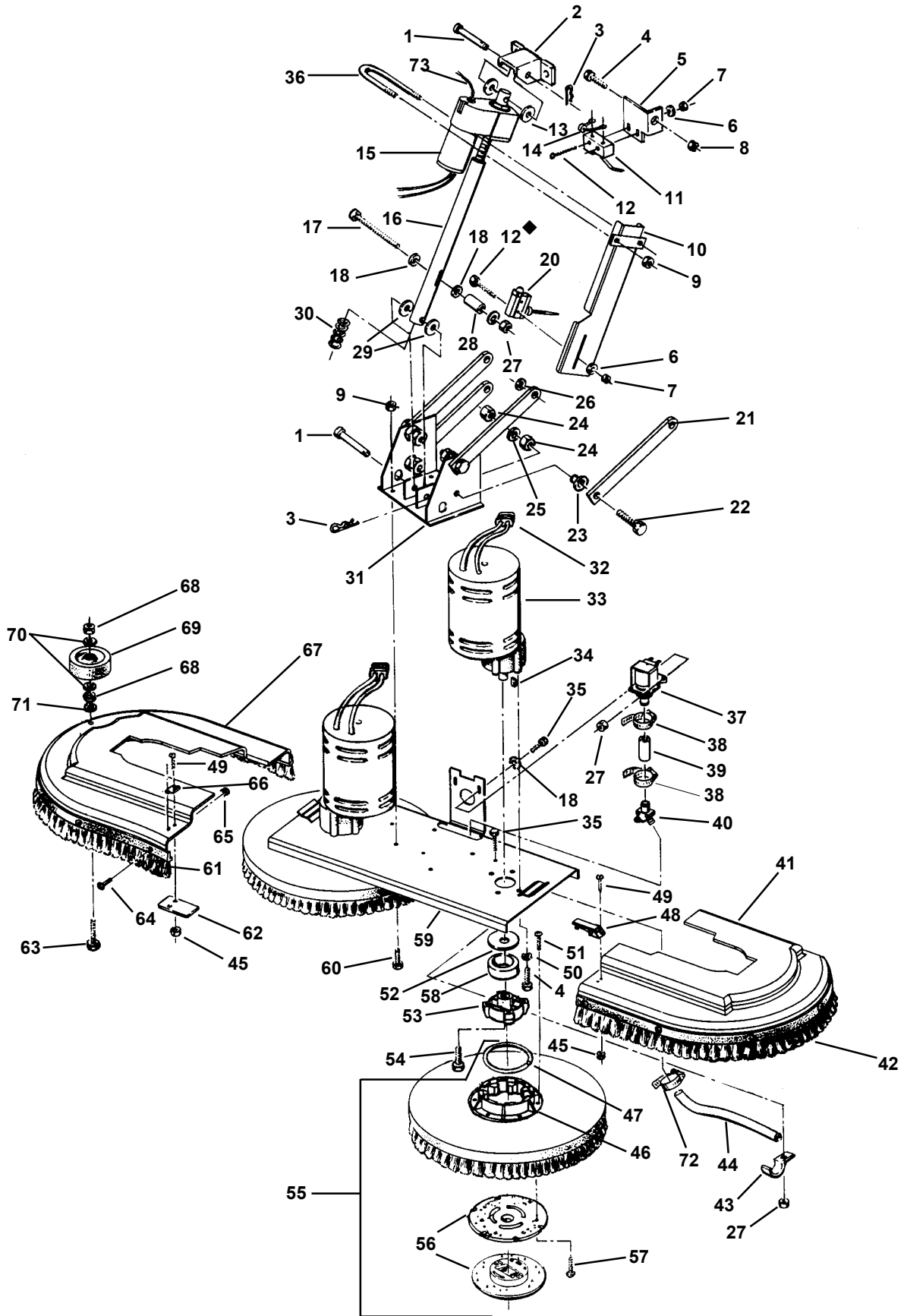


**CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
 Traverse System Assembly Parts List 12/00
 Drawing 19021A**

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

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

CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Brush Head Assembly Drawing 7/00
Drawing # (i) 11453A, 11449A, 11452A
Drawing # (ix) 11448A, 11445A, 11450A



**CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Brush Head Assembly Parts List 7/00**

| Ref # | Part No. | Description | Qty | Model |
|--------|----------|---|-----|-------------|
| 1 | 82501A | Pin | 2 | All |
| 2 | 63433A | Main Frame | Ref | All |
| 3 | 766780 | Hair Pin | 2 | All |
| 4 | 962244 | Screw, .375-16x.75 | 9 | All |
| 5 | 69883A | Switch Bracket | 1 | All |
| 6 | 980608 | Washer, #6 | 4 | All |
| 7 | 920056 | Nut, #6-32 ESNA | 4 | All |
| 8 | 81105A | Nut, .375-16 ESNA | 1 | All |
| 9 | 920110 | Nut, .312-18 ESNA | 6 | All |
| 10 | 65972A | Switch Mount | 1 | All |
| 11 | 47374A | Lever, Switch | 1 | All |
| 12 | 962980 | Screw, #6-32x1.00 PN | 4 | All |
| 13 | 38708A | Nylon Spacer | 2 | All |
| 14 | 42401A | Diode | 1 | L series |
| 15 | 50208A | Actuator & Tube Asm. | 1 | S series |
| | 50209A | Actuator & Tube Asm. (includes item #73) | 1 | L series |
| 16 | 69188A | Head Pressure Tube | 1 | All |
| 17 | 85744A | Screw, .25-20x2.75 | 1 | All |
| 18 | 87007A | Washer, Flat .25 | 5 | All |
| 19 | | | | |
| 20 | 47422B | Whisker Switch | 1 | All |
| 21 | 63032A | Linkage Bar | 4 | All |
| 22 | 85838A | Screw, .50-201.50 | 8 | All |
| 23 | 67705B | Sleeve Bearing | 8 | All |
| 24 | 920278 | Nut, Jam 50-20 | 16 | All |
| 25 | 980626 | Washer, Lock .50 | 8 | All |
| 26 | 980673 | Washer * | 4 | All |
| 27 | 81104A | Nut, .25-20 ESNA | 5 | All |
| 28 | 38725A | Sleeve | 1 | All |
| 29 | 38723A | Nylon Spacer | 2 | All |
| 30 | 53421A | Head Pressure Spring | 1 | L series |
| | 53422a | Head Pressure Spring | 1 | S series |
| 31 | 65966A | Brush Head Mount | 1 | All |
| 32 | 41601A | Connector | 4 | All |
| | 41602A | Housing | 4 | All |
| 33**** | 45033A | Brush Motor .75 HP | 2 | S28/L28/S33 |
| | 45036A | Brush Motor 1.00 HP | 2 | L33/S38/L38 |
| 34 | 915102 | Key | 2 | All |
| 35 | 170915 | Screw, Hex | 4 | All |
| 36 | 80044A | "U" Bolt | 1 | All |
| 37 | 48703A | Electric Valve | 1 | All |
| 38 | 722030 | Hose Clamp | 2 | All |
| 39 | 30455A | Hose | 1 | All |
| 40 | 38014A | Solution Splitter | 1 | All |
| 41 | 35250B | Left Brush Housing | 1 | 28 |
| | 35244B | Left Brush Housing | 1 | 33 |
| | 35246B | Left Brush Housing | 1 | 38 |
| 42 | 38242A | Left Skirt | 1 | 28 |
| | 38244A | Left Skirt | 1 | 33 |
| | 38246A | Left Skirt | 1 | 38 |

| Ref # | Part No. | Description | Qty | Model |
|-------|----------|---------------------------------------|-----|---------|
| 43 | 782002 | Clamp | 2 | All |
| 44 | 30453A | Brush Hose | 2 | All |
| 45 | 81109A | Nut, 8-32 ESNA SS | 4 | All |
| 46 | 833802 | Gimbal, Female | 2 | All |
| 47 | 838301 | Brush Holder Spring | 2 | All |
| 48 | 55721A | Latch | 1 | All |
| 49 | 962992 | Screw, 8-32x.62 SS | 4 | All |
| 50 | 980638 | Washer, Lock .375 | 8 | All |
| 51 | 962495 | Screw, .25-20x1.00Pn Hd | 6 | All |
| 52 | 59856A | Rubber Washer | 2 | All |
| 53 | 34400B | Gimbal, Male | 2 | All |
| 54 | 962714 | Screw, .312-18x.75 Soc. | 2 | All |
| 55 | 11427B | Poly Brush Assembly-14 | 2 | 28 |
| | 11424B | Poly Brush Assembly-17 | 2 | 33 |
| | 11434B | Poly Brush Assembly-19 | 2 | 38 |
| | 11426B | Grit Brush Assembly-14 | 2 | 28 |
| | 11425B | Grit Brush Assembly-17 | 2 | 33 |
| | 11433B | Grit Brush Assembly-19 | 2 | 38 |
| | 17521C | Pad Driver Assembly-14 | 2 | 28 |
| | 17520C | Pad Driver Assembly-17 | 2 | 33 |
| | 17524B | Pad Driver Assembly-19 | 2 | 38 |
| 56 | 56941A | Center-Lok Asm. (Pad Driver Only) | 2 | All |
| 57 | 962737 | Screw, 10-16x.88 (Pad Driver Only) | 6 | All |
| 58 | 61658A | Gimbal Collar | 2 | All |
| 59 | 66232A | Brush Plate-28 | 1 | 28 |
| | 66233A | Brush Plate-33 | 1 | 33 |
| | 66234A | Brush Plate-38 | 1 | 38 |
| 60 | 85811A | Screw, .312-18x.75 Hex | 4 | All |
| 61 | 38243A | Right Skirt | 1 | 28 |
| | 38245A | Right Skirt | 1 | 33 |
| | 38247A | Right Skirt | 1 | 38 |
| 62 | 69186A | Latch Tab | 1 | All |
| 63 | 85610A | Screw, .375-16x2.5 SS Pn | 1 | All |
| 64 | 85616A | Screw, 10-22x.62 Pn SS | 11 | 28 |
| | 85616A | Screw, 10-22x.62 Pn SS | 12 | 33 38 |
| 65 | 82004A | "T" Nut 10-32 | 11 | 28 |
| | 82004A | "T" Nut 10-32 | 12 | 33 38 |
| 66 | 55451A | Keeper | 1 | All |
| 67 | 30016A | Right Brush Housing | 1 | S28 |
| | 30017A | Right Brush Housing | 1 | L28 |
| | 30012A | Right Brush Housing | 1 | S33 |
| | 30013A | Right Brush Housing | 1 | L33 |
| | 30014A | Right Brush Housing | 1 | S38 |
| | 30015A | Right Brush Housing | 1 | L38 |
| 68 | 920248 | Nut, .375-16 Jam Thin ESNA | 2 | All |
| 69 | 59950A | Guide Wheel | 1 | All |
| 70 | 980645 | Washer, Flat .375 | 2 | All |
| 71 | 980638 | Lockwasher | 1 | All |
| 72 | 722021 | Hose Clamp | 2 | All |
| 73*** | 46742A | Brush Head Sensor | 1 | Lseries |
| **NI | 77353A | Label, Front Motor | 1 | Sseries |
| **NI | 77352A | Label, Front Motor | 1 | Lseries |
| **NI | 77091A | Label, Moving Parts | 2 | All |

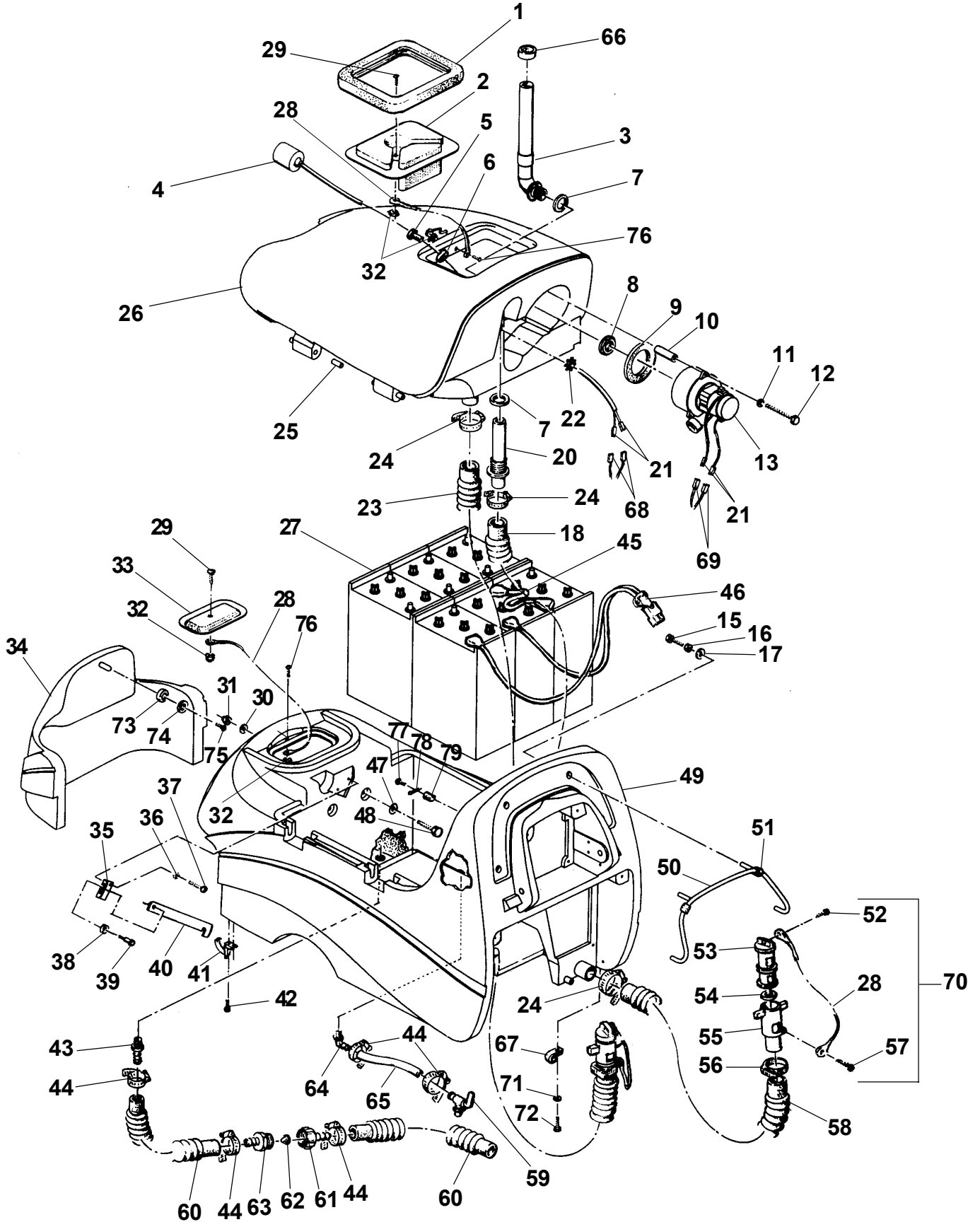
*Used only as required to square up linkage bars #21 to the frame.

**Attach to Brush Motor.

***See page 27 for installation

****Includes Item #32

CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Solution/Recovery System Assembly Drawing 5/00



**CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Solution/Recovery System Assembly Parts List 5/00**

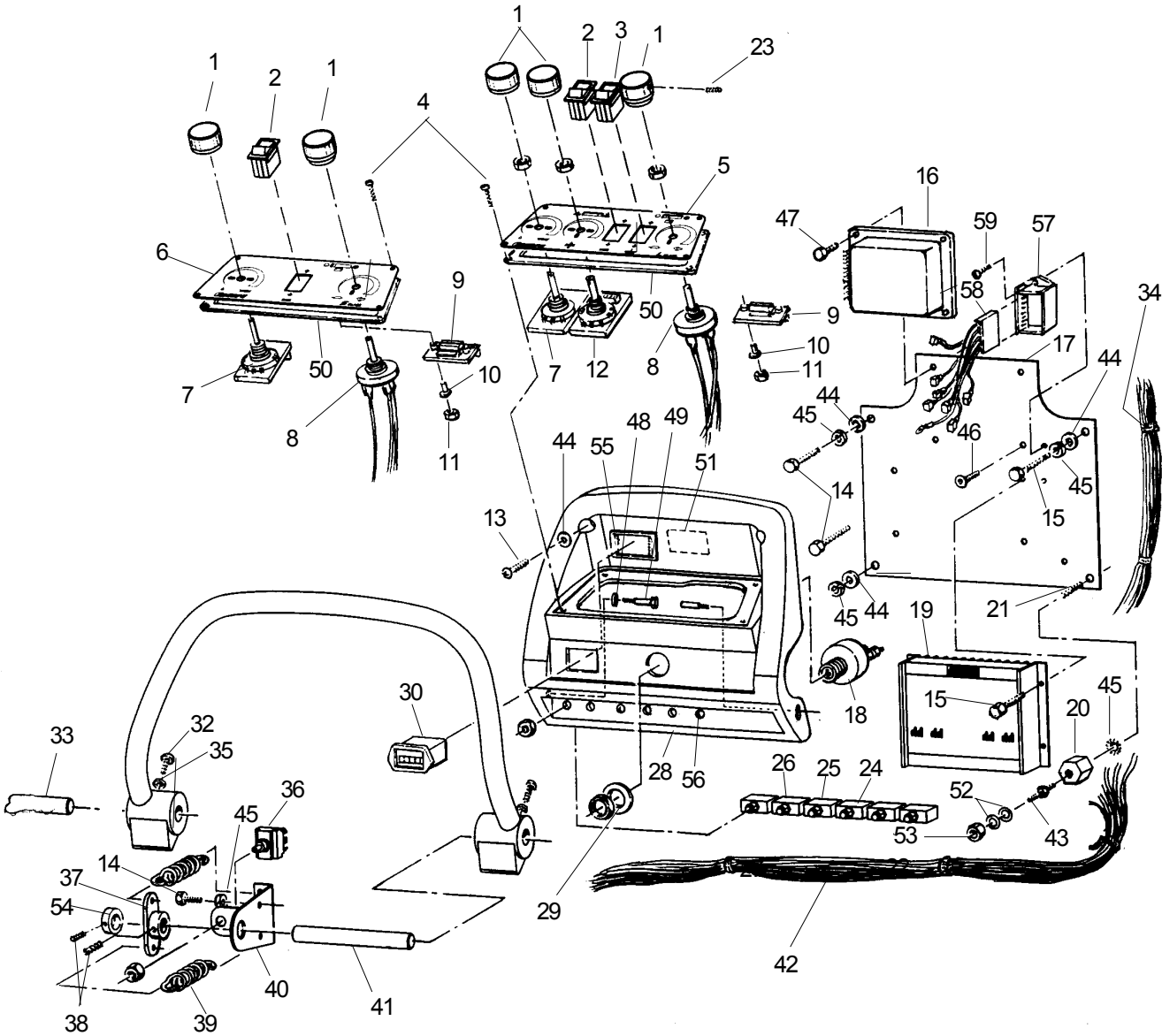
| Ref # | Part No. | Description | Qty | Model |
|-------|----------|--|-----|-----------|
| 1 | 34265A | Recovery Lid Gasket | 1 | All |
| 2 | 36204A | Recovery Lid | 1 | All |
| 3 | 39338A | Stand Tube | 1 | All |
| 4 | 40002A | Float Switch (include #5 & 2 each #21 & #68) | 1 | All |
| 5 | 56459A | 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 | 38813C | 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 |

*Recommended torque
175 ± 5 inch/ pounds.

(NI*) = Not Illustrated

| Ref # | Part No. | Description | Qty | Model |
|-------|----------|---|-----|----------|
| 35 | 69879A | Support Bracket | 1 | All |
| 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 | 962027 | Screw, 8-32x.50 Pn. | 4 | All |
| 43 | 50359A | Solution Tank Adapter | 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 | 38812C | 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 | 30453Au | 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 | 1 | All |
| 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*) |

CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
 Control Housing Assembly Drawing 7/00
 Drawing# 13712A (IX) and 13713A (I)

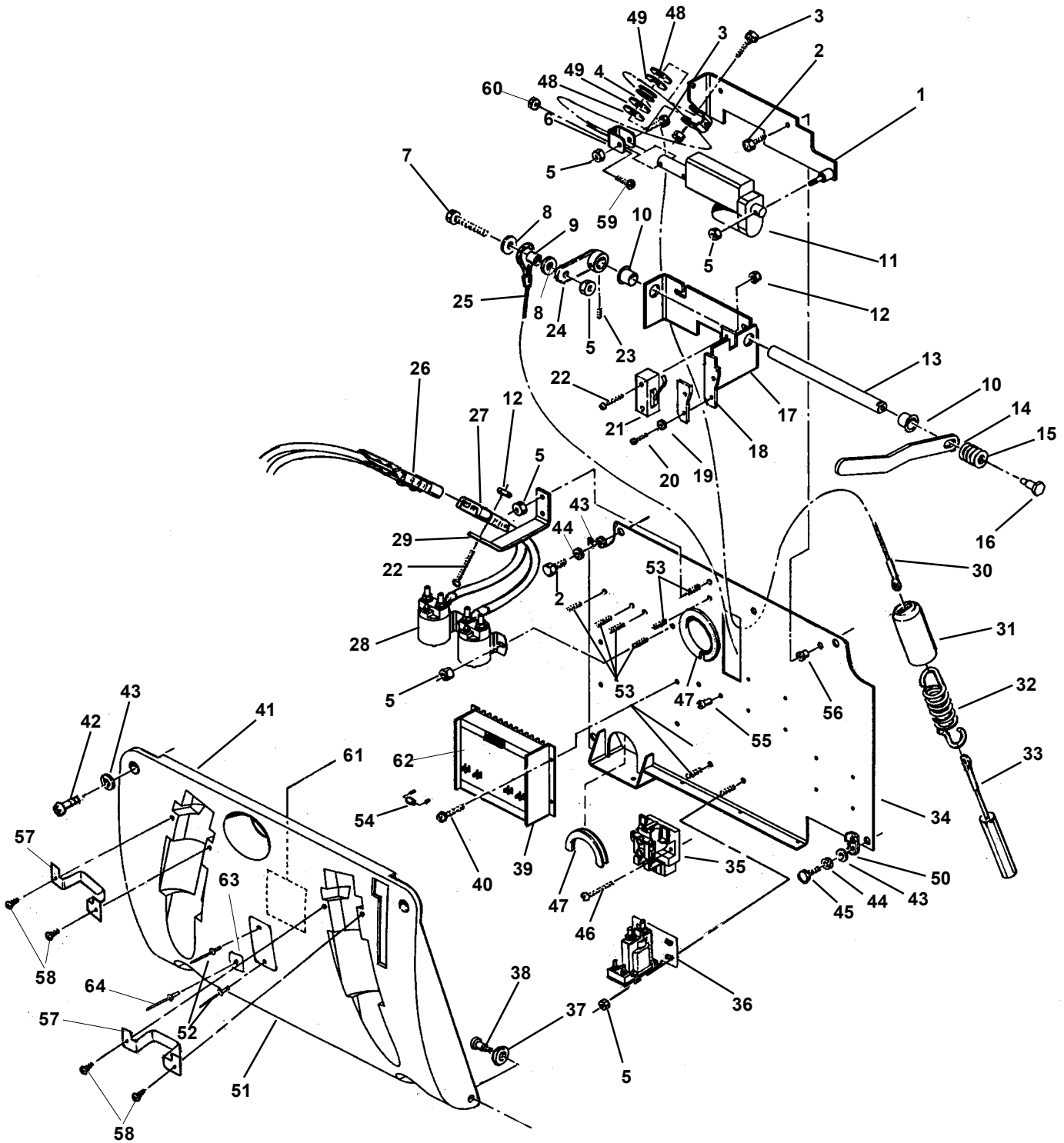


**CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Control Housing Assembly Parts List 7/00**

| Ref # | Part No. | Description | Qty | Model |
|-------|----------|------------------------------------|-----|----------|
| 1 | 55502A | Knob | 2 | S series |
| | 55502A | Knob | 3 | L series |
| 2 | 47381B | Switch, Head up & down Rocker | 1 | All |
| 3 | 47383A | Switch, Squeegee/Vac 3 Pos./Rocker | 1 | L series |
| 4 | 85612A | Screw, 10-24 x .375 Pn. | 6 | All |
| 5 | 77344B | Control Panel Label | 1 | L series |
| | 60060A | Control Panel | 1 | L series |
| 6 | 77343B | Control Panel Label | 1 | S series |
| | 60058A | Control Panel | 1 | S series |
| 7 | 44308A | Solution Flow Module | 1 | All |
| 8 | 49700B | Speed Control Harness | 1 | All |
| 9 | 44416B | Battery Meter | 1 | All |
| 10 | 38724B | Spacer | 2 | All |
| 11 | 920056 | Nut, 6-32 ESNA | 2 | All |
| 12 | 50170A | Head Pressure Adjustor | 1 | L series |
| 13 | 85391A | Screw, .25-20 x .62 Pn | 2 | All |
| 14 | 962139 | Screw, .25-20 x .62 | 5 | L series |
| | 962139 | Screw, .25-20 x .62 | 2 | S series |
| | 962992 | Screw 8-32 x .75 Pn | 4 | L series |
| 16 | 41153A | Head Pressure Control Board | 1 | L series |
| 17 | 66241A | Upper Electrical Panel | 1 | L series |
| 18 | 47380A | Key Switch | 1 | All |
| 19 | 41154A | Actuator Control Board | 1 | L series |
| 20 | 854849 | Insulator | 1 | All |
| 21 | 170781 | Screw, 1/4-20 x 3/4 Set | 1 | All |
| 22 | 41431A | Circuit Breaker 35A | 2 | All |
| 23 | 962262 | Screw, 8-32 x .25 Set | 3 | L series |
| | 962262 | Screw, 8-32 x .25 Set | 2 | S series |
| 24 | 41448A | Circuit Breaker 30A Scr. | 1 | All |
| 25 | 41422A | Circuit Breaker 25A Scr. | 1 | All |
| 26 | 41423A | Circuit Breaker 5A | 1 | All |
| 27 | 41430A | Circuit Breaker 1.5A | 1 | L series |
| 28 | 35243B | Control Housing | 1 | L series |
| | 35252B | Control Housing | 1 | S series |
| 29 | 87052A | Nylon Washer, Key Switch | 1 | All |
| 30 | 912226 | Hour Meter | 1 | All |
| 31 | 24309A | Control Handle | 1 | All |
| 32 | 85390A | Screw, .25-20 x 1.25 Pn | 2 | All |
| 33 | 66549A | Pin, Left Hand | 1 | All |
| 34 | 49778A | Actuator, Control Harness | 1 | L series |
| 35 | 170892 | Washer, Lock .25 | 2 | All |
| 36 | 10052A | Toggle Switch | 1 | All |
| 37 | 60662A | Centering Bracket | 1 | All |
| 38* | 962304 | Screw, Set .312-18 x .5 | 4 | All |
| 39 | 53038A | Control Handle Spring | 2 | All |
| 40 | 61266A | Control Bracket | 1 | All |
| 41 | 66548A | Pin, Right Hand | 1 | All |
| 42 | 49777A | Main Harness (L Series Only) | 1 | L series |
| | 49779A | Main Harness (S Series only) | 1 | S series |
| 43 | 83302A | Stud | 1 | All |
| 44 | 87007A | Washer | 2 | S series |
| | 87007A | Washer | 5 | L series |
| 45 | 980657 | Lock Washer | 6 | L series |
| | 980657 | Lock Washer | 3 | S series |
| 46 | 54763A | Insert | 8 | L series |
| 47 | 85613A | Screw, 8-32 x 7/8 | 4 | L series |
| 48 | 980651 | Washer, Nylon IDxODx.034 | 1 | All |
| 49 | 80043A | Screw, Shoulder | 1 | All |
| 50 | 30022A | Gasket, Panel | 1 | S series |
| | 30025A | Gasket, Panel | 1 | L series |
| 51 | 77350B | Label, Control Wiring | 1 | L series |
| | 77351B | Label, Control Wiring | 1 | S series |
| 52 | 87026A | Washer | 2 | All |
| 53 | 81104A | Nut, 1/4-20 ESNA | 1 | All |
| 54 | 61651A | Collar | 1 | All |
| 55 | 66871A | Retainer Key/Hour Meter | 1 | All |
| 56 | 60042A | Stud, 5/16 x 1/4-20 Thread | 1 | All |
| 57 | 40083B | Module Sequencer | 1 | All |
| 58 | 40085A | Harness, Sequencer | 1 | All |
| 59 | 85388A | Screw, 10-24 x 1/2 | 2 | L Series |

*#38 must use red loctite set screws.

CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Rear Cover Assembly Drawing 5/00
Drawing 13712A & 13713A



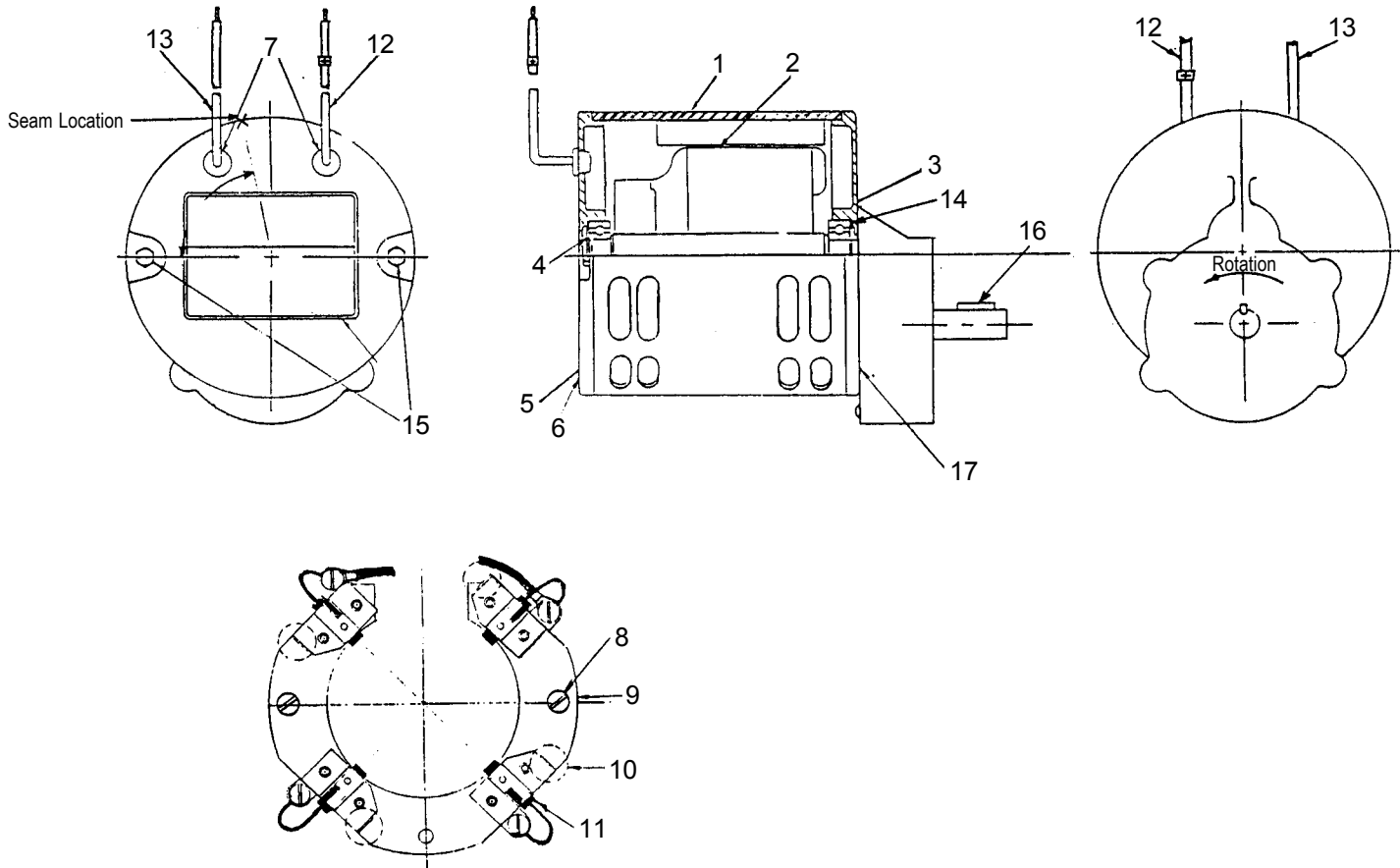
**CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Rear Cover Assembly Parts List 6/01**

*#23 must use red
loctite.

| Ref # | Part No. | Description | Qty | Model |
|-------|----------|----------------------------------|-----|----------|
| 1 | 61264A | Actuator, Mount Bracket | 1 | L series |
| 2 | 962139 | Screw, .25-20x.62 Hex | 5 | All |
| 3 | 86004A | Screw, .25-20x1.50 Hex | 2 | L series |
| 4 | 57275A | Cable Pulley | 1 | L series |
| 5 | 81104A | Nut, .25-20 ESNA | 11 | L series |
| | 81104A | Nut, .25-20 ESNA | 9 | S series |
| 6 | 69872A | Pulley Bracket | 1 | L series |
| 7 | 85700A | Screw, .25-20x1.00 Hex | 1 | S series |
| 8 | 87026A | Washer, Flat .25 | 2 | S series |
| 9 | 608210 | Spacer | 1 | S series |
| 10 | 902731 | Nylon Bearing | 2 | S series |
| 11 | 40102A | Actuator | 1 | L series |
| 12 | 920056 | Nut, 6-32 ESNA | 2 | L series |
| | 920056 | Nut, 6-32 ESNA | 4 | S series |
| 13 | 67476A | Shaft | 1 | S series |
| 14 | 65629A | Squeegee Lever | 1 | S series |
| 15 | 438360 | Spring | 1 | S series |
| 16 | 960510 | Shoulder Screw | 1 | S series |
| 17 | 61265A | Squeegee Lift Bracket | 1 | S series |
| 18 | 68643A | Wear Plate | 1 | S series |
| 19 | 980675 | Washer | 2 | S series |
| 20 | 962546 | Screw, 10-24 x .50 Pn | 2 | S series |
| 21 | 47374A | Switch | 1 | S series |
| 22 | 962980 | Screw, 6-32 x 1.00 Pn | 2 | L series |
| | 962980 | Screw, 6-32 x 1.00 Pn | 4 | S series |
| 23* | 962304 | Screw, .312-18 x .50 Set | 2 | S series |
| 24 | 65628A | Lever Weld. | 1 | S series |
| 25 | 61682A | Upper Cable Assembly | 1 | S series |
| 26 | 41208A | Battery Cable | Ref | All |
| 27 | 41140A | Cable Assembly | 1 | All |
| 28 | 41801A | Solenoid - Main / Brush | 2 | All |
| 29 | 69878A | Plug Bracket | 1 | All |
| 30 | 61681A | Upper Cable, Asm. | 1 | L series |
| 31 | 58409A | Sleeve | 1 | L series |
| 32 | 53424A | Cable Spring | 1 | L series |
| 33 | 61680A | Cable Assembly Spring | 1 | L series |
| 34 | 69372A | Lower Electrical Panel | 1 | All |
| 35 | 46309A | Relay - Squeegee Up / Down | 1 | L series |
| 36 | 40125A | Solenoid - Vac | 1 | All |
| 37 | 980651 | Washer | 2 | All |
| 38 | 80043A | Shoulder Screw | 2 | All |
| 39 | 41135C | Traverse, Control Board | 1 | All |
| 40 | 962992 | Screw, 8-32 x.74 Pn | 4 | All |
| 41 | 32410B | Rear Cover | 1 | L series |
| | 32418B | Rear Cover | 1 | S series |
| 42 | 85391A | Screw, .25-20 x.62 Pn | 2 | All |
| 43 | 87007A | Washer | 6 | All |
| 44 | 980657 | Washer, Lock | 4 | All |
| 45 | 85806A | Screw, 1/4-20 x 3/4 Hex | 1 | All |
| 46 | 85614A | Screw, 8-32 x 7/8 PN | 2 | L series |
| 47 | 193951 | Trim, 4 1/2" & 8" | 1 | All |
| 48 | 87625A | Washer, Nylon 1 1/4 x 1/4 x 1/32 | 0-4 | L series |
| 49 | 87624A | Washer, Nylon 1 1/2 x 1/4 x 7/8 | 2 | L series |
| 50 | 98465A | Clamp, Metal 7/18 | 1 | All |
| 51 | 77079A | Label, w/Brake Warning | 1 | |
| | 77080A | Label, w/o Brake Warning | 1 | |
| 52 | 930093 | Rivet | 2 | All |
| 53 | 83307A | Stud, 1/4-20 | 8 | All |
| 54 | 42405A | Diode | 1 | All |
| 55 | 54763A | Insert | 6 | L series |
| | 54763A | Insert | 4 | S series |
| 56 | 54764A | Insert | 2 | All |
| 57◆ | 60233A | Hose Bracket | 2 | All |
| 58 | 962957 | Screw, 10-16 x 1/2 | 4 | All |
| 59 | 962798 | Screw | 1 | L Series |
| 60 | 920296 | Nut | 1 | L Series |
| 61 | 77354A | Label | 1 | L Series |
| | 77355A | Label | 1 | S Series |
| 62 | 77194B | Label, Traverse | 1 | All |
| 63 | 77221A | Serial Tag | 1 | All |
| 64 | 83010A | Rivet, Pop | 1 | All |

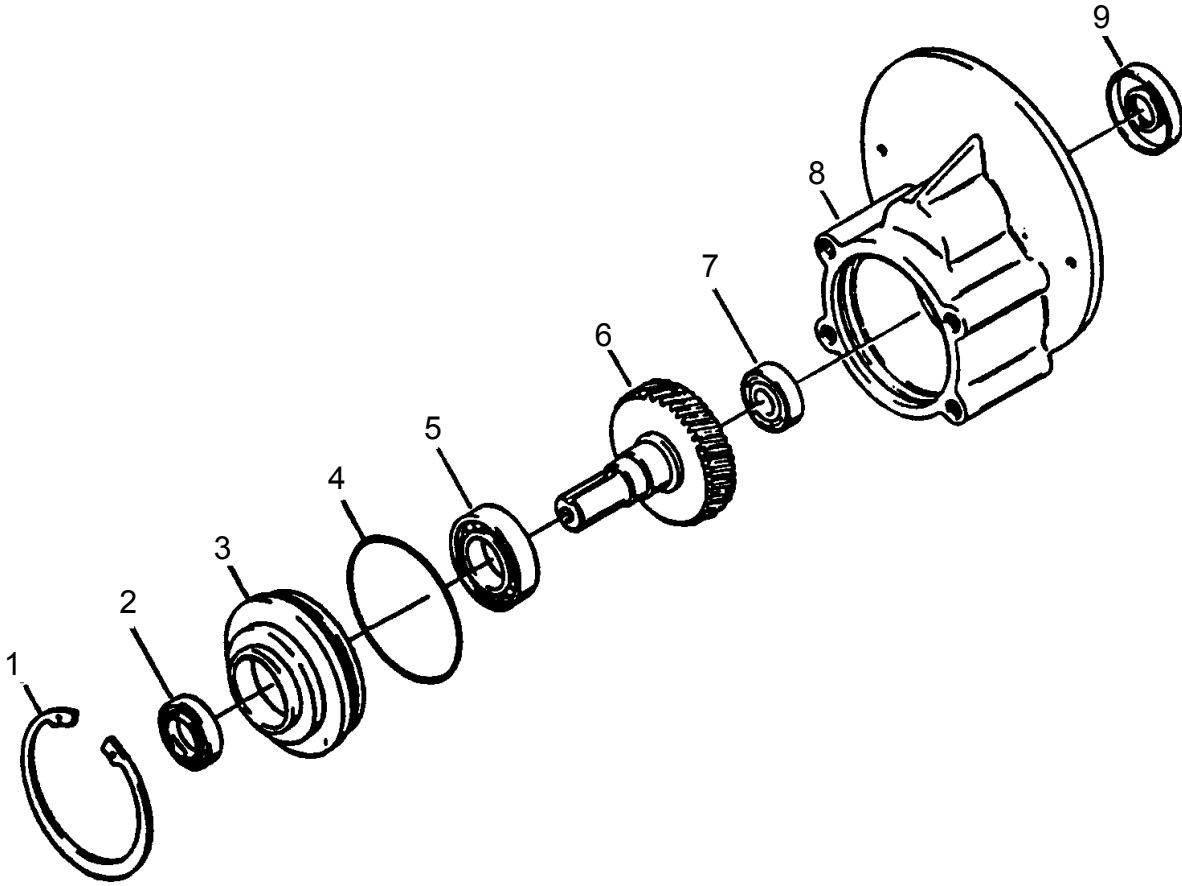
NOTE: ◆ indicates a
change has been made
since the last publication
of this manual.

CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Brush Motor #45033A (S33, L28, S28)
Brush Motor #45036A (L38, L33, S38)



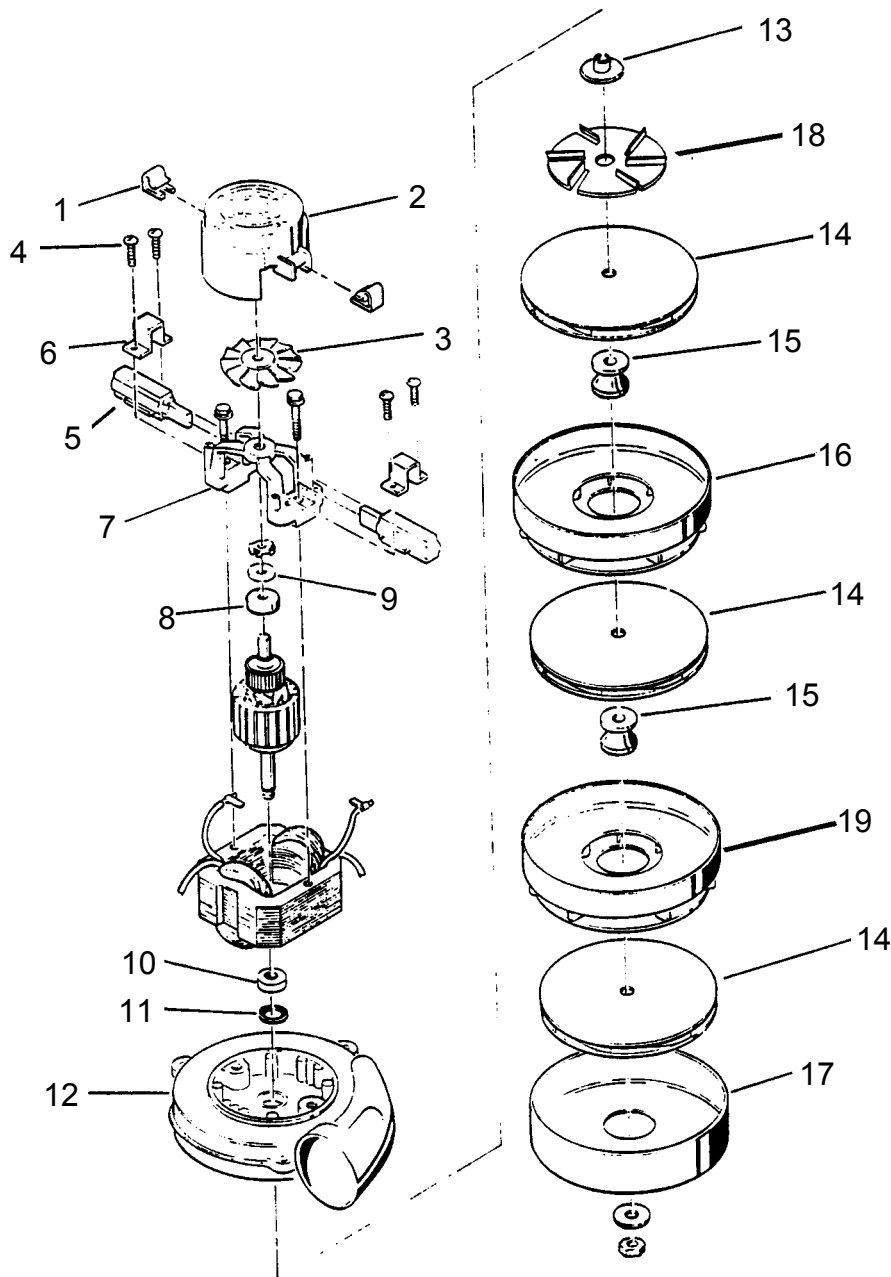
| Ref # | Part No. | Description | Qty | 45036A | 45033A |
|-------|----------|---|-----|--------|--------|
| 1 | 56478A | Stator Assembly (w/Magnets & Clips) | 1 | x | |
| | 46734A | Stator Assembly (w/Magnets & Clips) | 1 | x | |
| 2 | 40312A | Armature Asm.(w/B.E. & F.E. bearings) | 1 | x | |
| | 40318A | Armature Asm.(w/B.E. & F.E. bearings) | 1 | x | |
| 3 | 902654 | Bearings B.E. | 1 | x x | |
| 4 | 902550 | Bearing F.E. | 1 | x x | |
| 5 | 51840A | Commutator Bracket Assembly (w/Brush BRD Assembly Leads) | 1 | x x | |
| 6 | 50520A | Commutator Bracket | 1 | x x | |
| 7 | 56480A | Strain Relief | 2 | x x | |
| 8 | 962546 | Brush Board Screw | 2 | x x | |
| 9 | 50517A | Brush Board Asm. (w/springs & brushes) | 1 | x x | |
| 10 | 448396 | Brush Spring | 4 | x x | |
| 11 | 40826A | Brush Assembly | 4 | x x | |
| 12 | 55657A | Lead Assembly, Positive | 1 | x x | |
| 13 | 55656A | Lead Assembly, Negative | 1 | x x | |
| 14 | 59805A | Helical Washer | 1 | x x | |
| 15 | 50515A | Thru Bolt | 2 | x x | |
| 16 | 44809A | Shaft Key | 1 | x x | |
| 17 | 54238A | B.E. Bracket Assembly (Gear Box) | 1 | x x | |

**CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Gear Box #54238A 10/97**



| 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. |

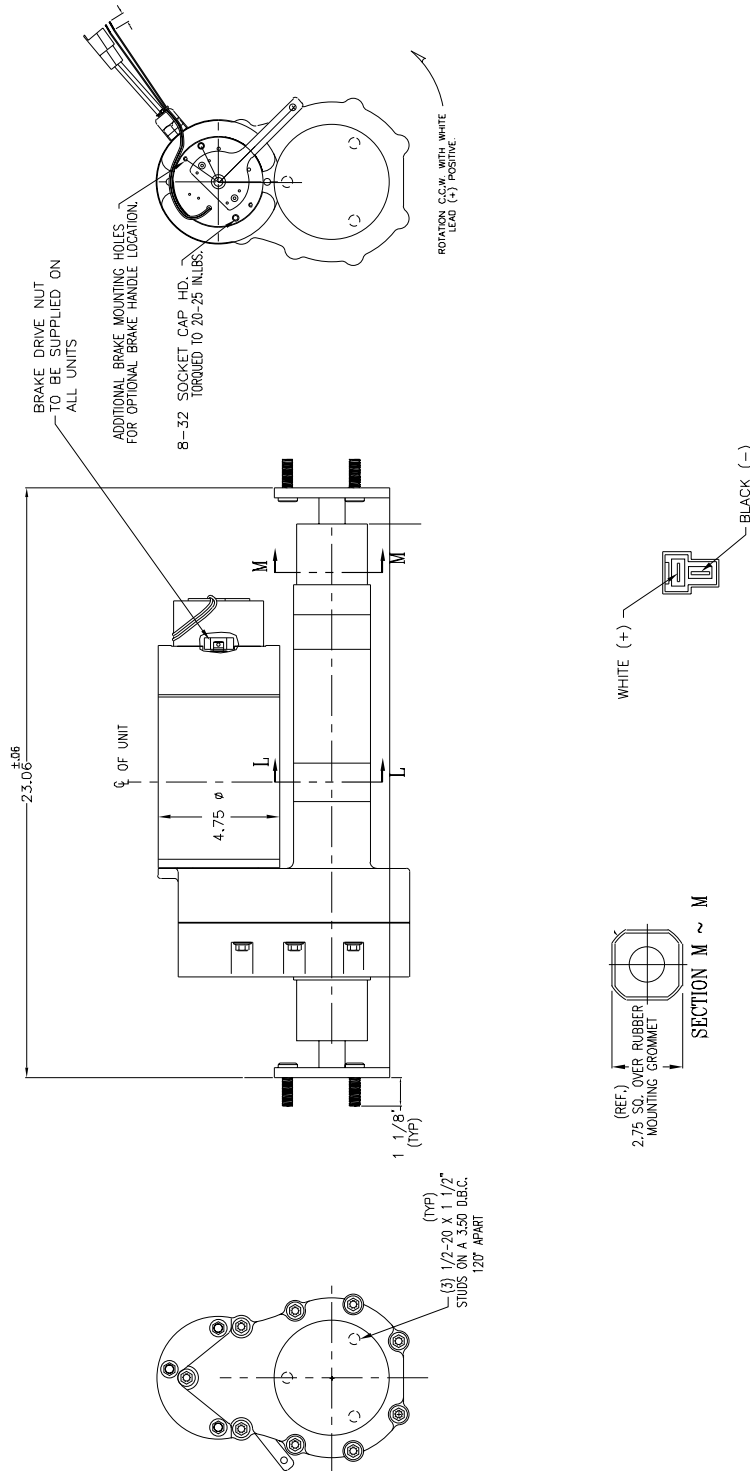
**CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
Vac Motor Assembly #45019A 10/97**



| 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 TECHNOLOGY Encore
Stature Transaxle Parts 8/00
PN 59111A, PN 59117A, and 59117B
Transaxle has Silver Motor**



BRAKE ASSEMBLY PROCEDURE:

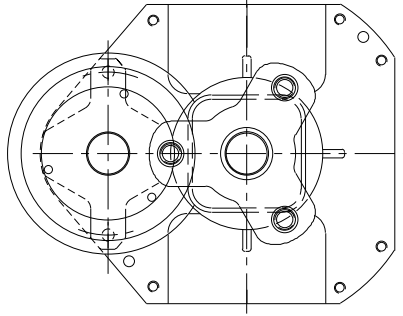
1. POP PLASTIC BRAKE NUT COVER OUT OF COMMUTATOR ENDBELL USING A SCREW DRIVER OR KNIFE.
2. LEAVING BRAKE ENGAGED, CAREFULLY LINE UP HEX BRAKE NUT WITH HEX IN CENTER OF BRAKE PAD, SLIDE BRAKE ASSEMBLY ON OVER NUT, AND ROTATE ENTIRE ASSEMBLY TO ACHIEVE REQUIRED BRAKE HANDLE LOCATION. CARE MUST BE TAKEN HERE TO NOT DAMAGE BRAKE PAD. PROPER LINE-UP IS ESSENTIAL.
3. APPLY LOCTITE BRAND THREADLOCKER #242 TO BOTH 8-32 X 2-1/8" LONG SOCKET CAP HEAD SCREWS (SUPPLIED) AND TORQUE TO 20-25 IN. LBS.
4. TY-RAP BRAKE COIL LEADS AND MOTOR LEADS TOGETHER ABOVE STRAIN RELIEF.

59111A - FAST START UNIT
59117A - SOFT START UNIT
59117B - SOFT START UNIT

| Spare Parts List | | |
|-------------------------------|----------|-----|
| Description | Part No. | Qty |
| Transaxle Mount (Urethane) | 40110A | 2 |
| Motor Brush Assembly | 40111A | 2 |
| Motor Brush Spring | 40112A | 2 |
| Male, Electrical Housing | 912206 | 1 |
| Male, Electrical Terminal Pin | 912207 | 2 |
| Cord & Terminal Assembly | 40113A | 1 |
| Motor Asm. (Replacement) | 45049A | 1 |
| Gearbox Asm. (Replacement) | 63706A | 1 |
| Parking Brake Kit (electric) | 10676A | 1 |
| Parking Brake Replacement | 51200B | 1 |

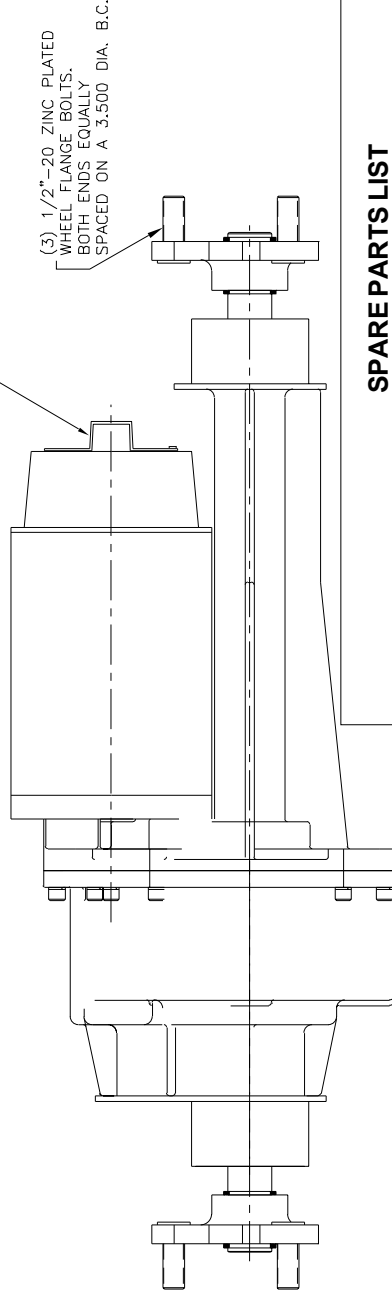
**CLARKE TECHNOLOGY Encore L33/L38
Imperial Transaxle Parts 8/00
PN 59116A
Transaxle has black motor
All models after SN#YH**

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



| PERMANENT MAGNET MOTOR | |
|------------------------|----------|
| MFC. IN USA | |
| MODEL | 4BC-2800 |
| RPM | 1200 |
| VOLT. | 36 VDC |
| AMP. | 15 |
| DUTY | CONT |
| DATE | |
| HP | .50 |
| F | |
| INS. CL. | |
| MOUNT | FLANGE |
| SHAFT | TANG |
| AMB. | |
| SER. NO. | |
| 18:1 RATIO | |

SHAFT EXTENSION GUARD
BRAKE MTC. PROVISIONS
AVAILABLE WHEN REQUIRED



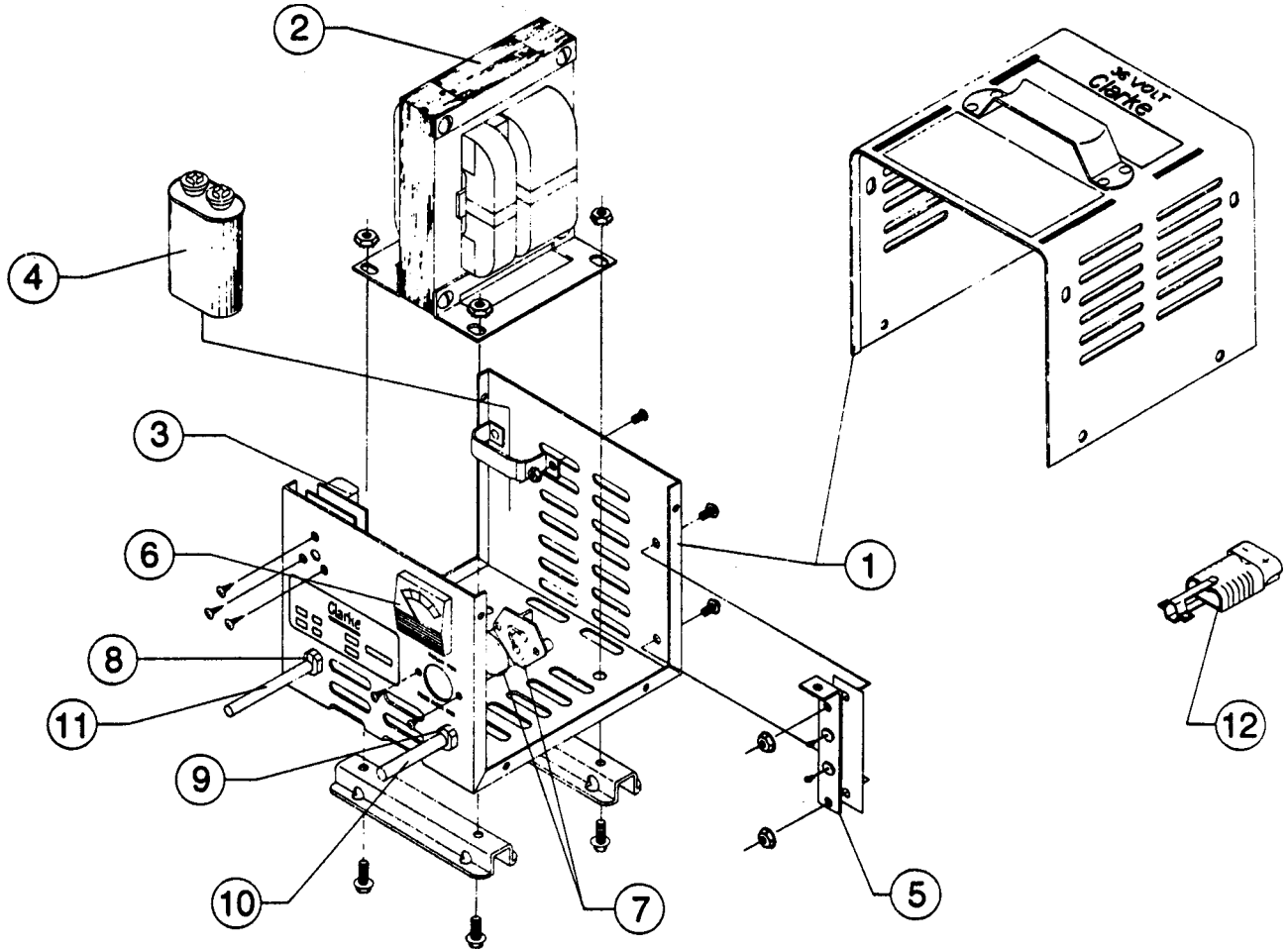
59116A Imperial Transaxle (black motor)

| Part # | Description | Qty |
|-----------------|---------------------------------------|-----|
| 36508A | Transaxle Ribber Mount | 2 |
| 51720A | Brushes (Set of 4, including springs) | 1 |
| 30074A | Cap, Brush | 1 |
| 912206 | Male Electrical Housing (connector) | 1 |
| 912207 | Male Electrical Pin (connector) | 2 |
| 1 69195A | Coupler, Rubber | 1 |
| 52663A | Steel Ring, Coupler | 1 |
| 45048A | Motor, Replacement | 1 |
| 54282A | Gearbox Replacement | 1 |
| 10684A | Parking Brake Kit (electric) | 1 |
| 51201C | Parking Brake Replacement | 1 |

Parking Brake Spare Parts

| Part No. | Description | Qty |
|----------|---------------------|-----|
| 51097A | Pad, Friction | 1 |
| 51098A | Hub, Shaft | 1 |
| 80121A | Key, 4 MM - Hub | 1 |
| 80122A | Set Screw, M3 - Hub | 1 |

**CLARKE TECHNOLOGY Encore S28/S33/S38 and L28/L33/L38
36 Volt Battery Charger 10/97**



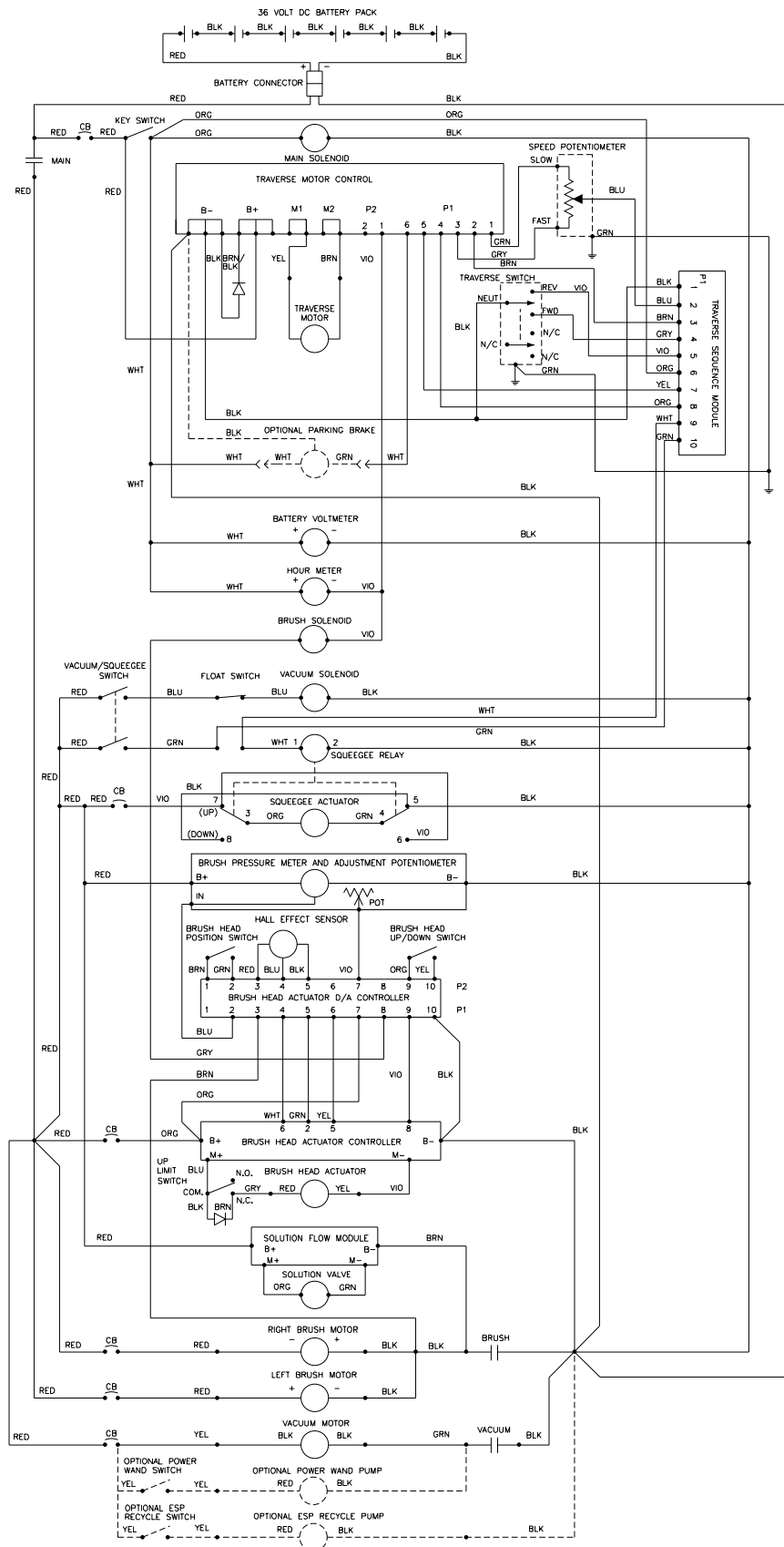
WARNING: All electrical repairs must be performed by qualified personnel only.

PARTS LIST FOR BATTERY CHARGERS

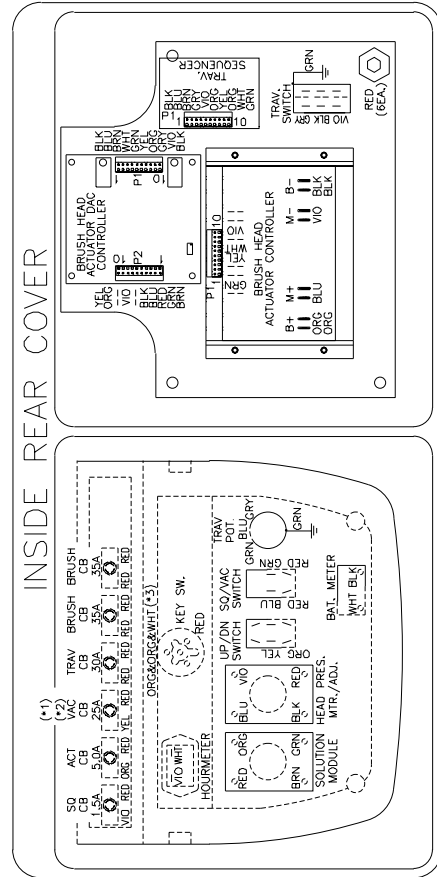
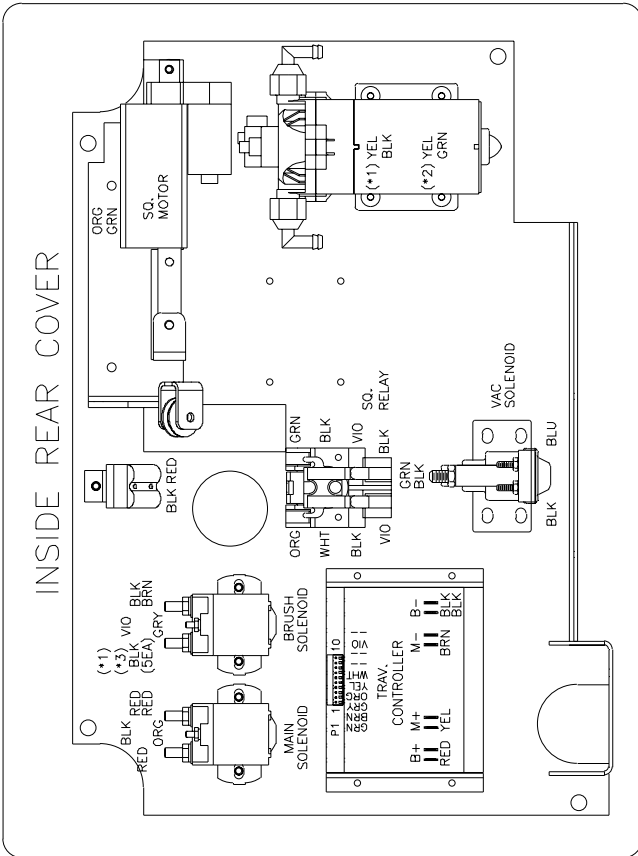
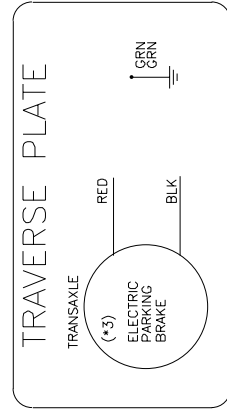
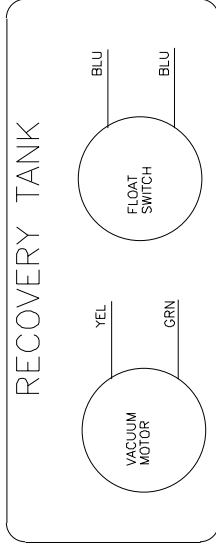
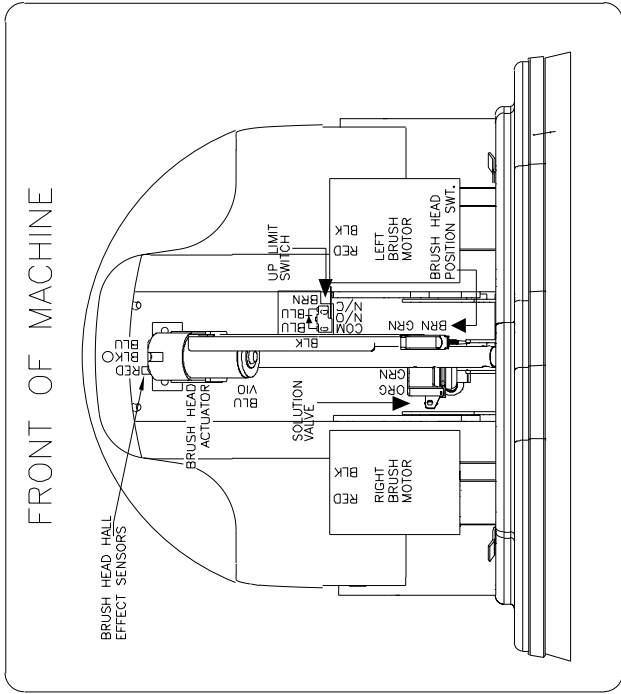
40506A - 36 Volt D.C., 25A, 115 Volt A.C., 60 Hz
 40505A - 36 Volt D.C., 25A, 230 Volt A.C., 50 Hz
 40507A - 36 Volt D.C., 25A, 230 Volt A.C., 60 Hz
 40514A - 36 Volt D.C., 36A, 115 Volt A.C., 60 Hz
 40515A - 36 Volt D.C., 36A, 230 Volt A.C., 50Hz

| 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 |

CLARKE TECHNOLOGY Encore L28/L33/L38 Electrical Schematic 4/99



CLARKE TECHNOLOGY Encore L28/L33/L38 Connection Diagram 11/99



(*)1 ESP RECOVERY SYSTEM OPTION.
 (*)2 POWERMIND SYSTEM OPTION.
 (*)3 ELECTRIC PARKING BRAKE OPTION.