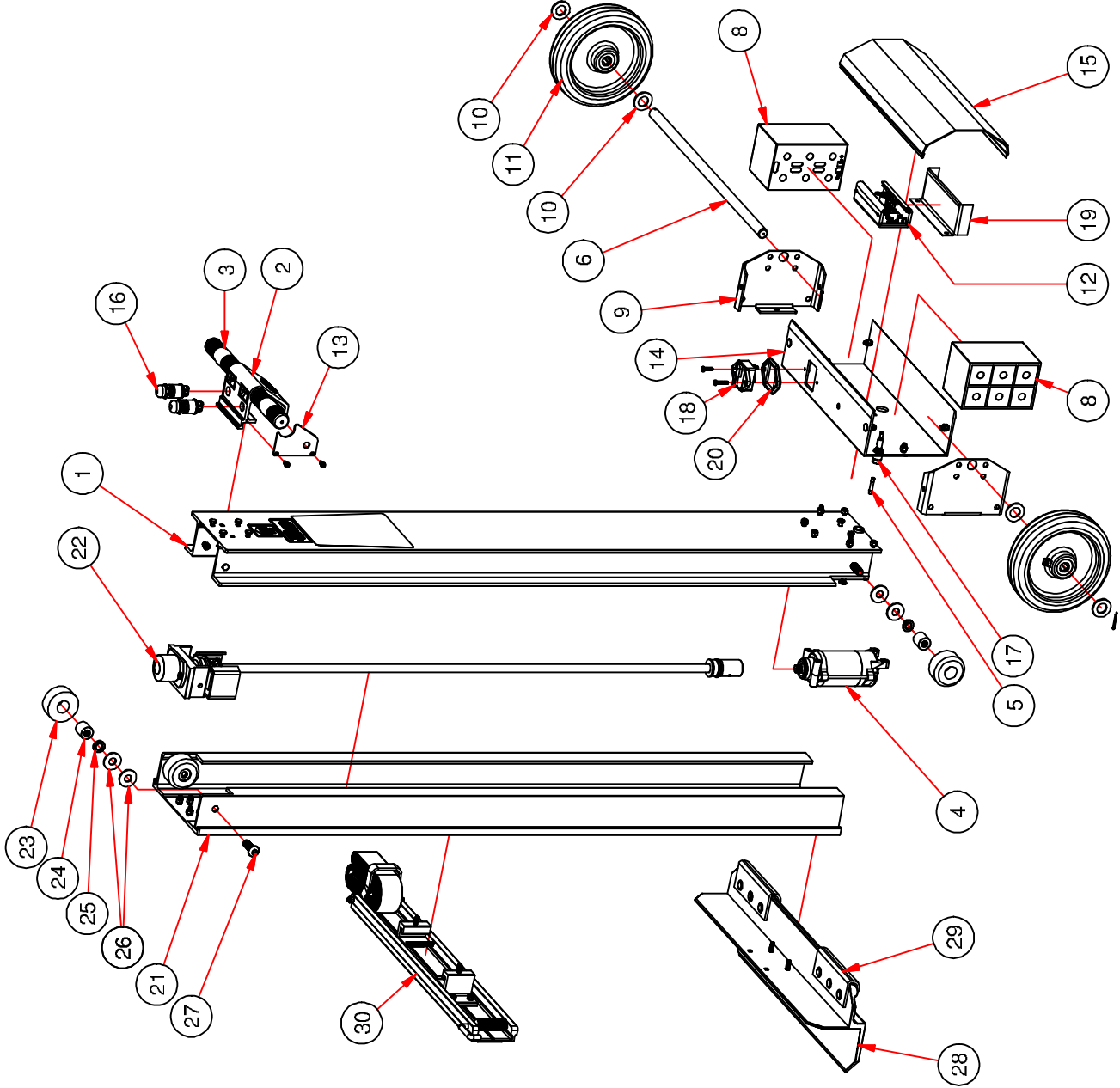
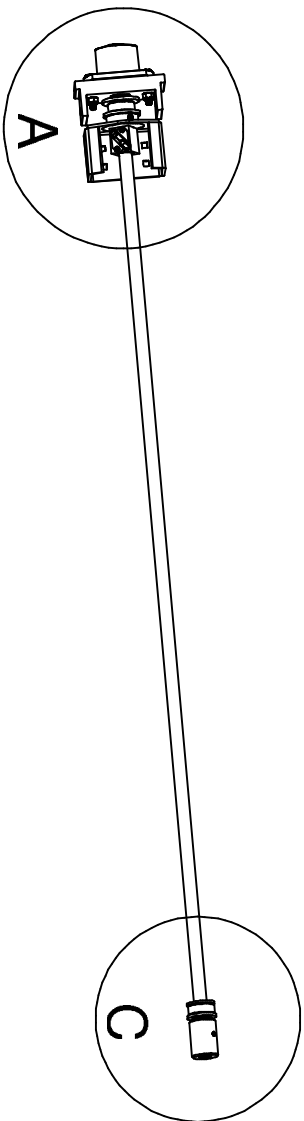
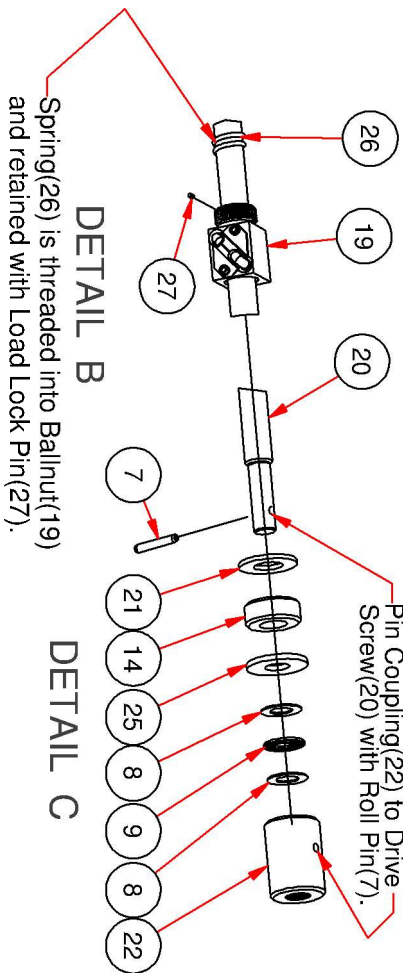
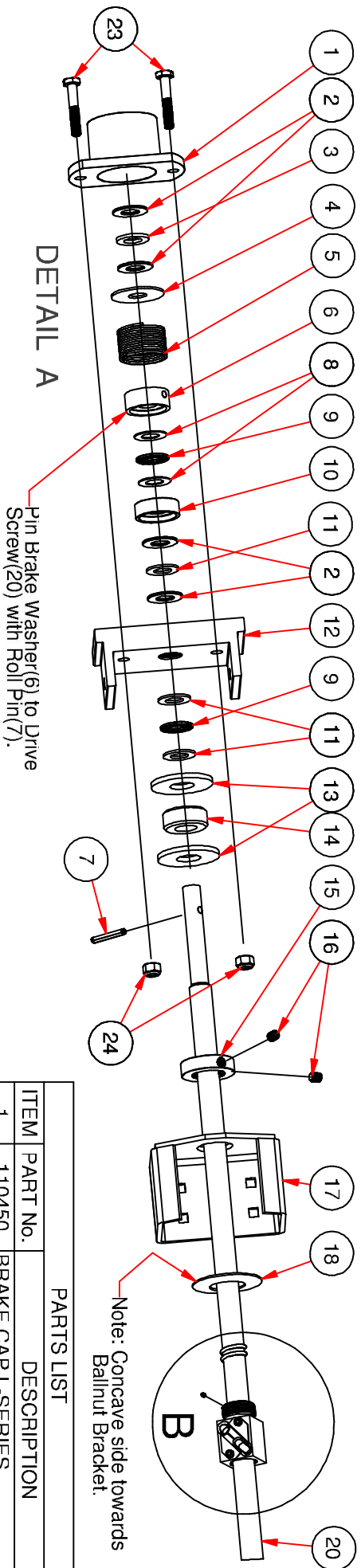


PARTS LIST	
ITEM	DESCRIPTION
1	INNER FRAME L-1
110010	INNER FRAME L-2
2	HANDLE HOUSING LS
055310	HANDLE GRIP LS
315610	MOTOR ASSEMBLY L-SERIES
5	FUSE 5 AMP AGC
310311	3/4"WHEEL AXLE PF
316050	BATTERY PACK SUB ASSEMBLY LS LH
330610	AXLE SUPPORT BRACKET LE PF
10	050060 WASHER 3/4 SAE
11	055232 8" RUBBER WHEEL 3/4" LS
12	052810 SOLID STATE CONTROLLER
13	110055 HANDLE HOUSING COVER
14	110170 BATTERY BOX ALUMINUM L-1
15	110160 BATTERY BOX COVER
16	050210 SWITCH PUSH BUTTON 2 TERMINAL
17	052690 FUSE HOLDER
18	051364 CIRCUIT BREAKER 100A
19	310430 BATTERY SPACING BRACKET
20	051425 GASKET - CIRCUIT BREAKER
21	110100 OUTER FRAME L-1
110000	OUTER FRAME L-2
22	310010 SCREW ASSEMBLY L-1
310020	SCREW ASSEMBLY L-2
23	055250 ROLLER WHEEL L SERIES
24	055251 ROLLER AXLE LS
25	050780 WASHER 1/2"LOCK
26	055640 WASHER 1/2"PLATE 1 3/8"LS
27	055300 BOLT HXSOC BUTTON 1/2 x 1 1/2 LS
28	110140 TOE PLATE ASSEMBLY L1/L2
29	410060 BOTTOM RUBBER GUARD
30	410020S ALUMINUM STRAPBAR ASSEMBLY



MODEL L-1/L-2

REPLACEMENT COMPONENT LIST

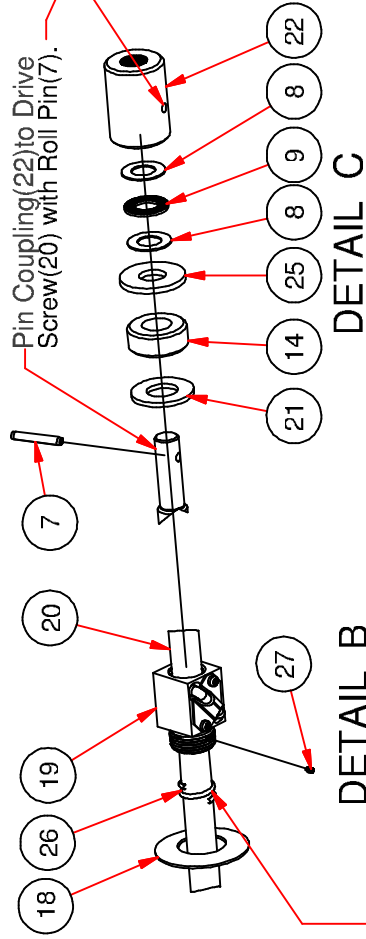
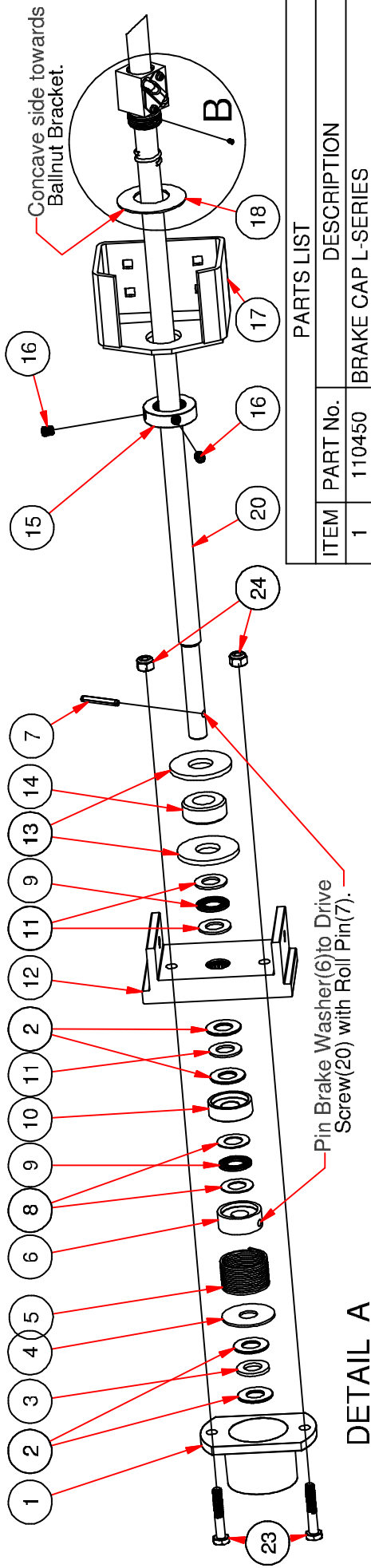


PARTS LIST

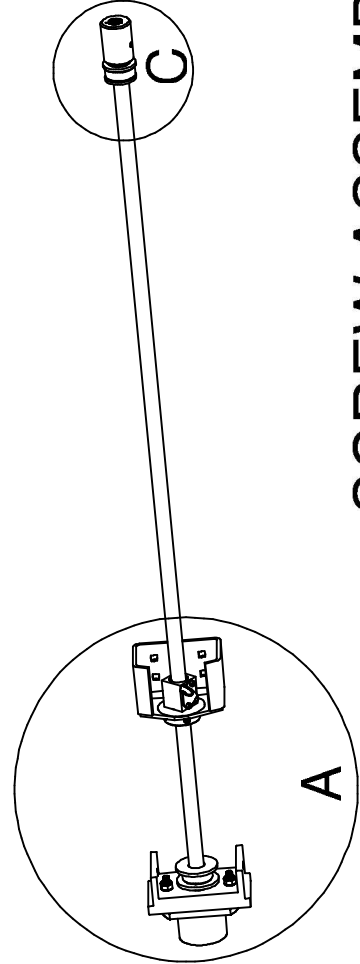
ITEM	PART No.	DESCRIPTION
1	110450	BRAKE CAP L-SERIES
2	050840	WASHER THRUST BRONZE .060
3	050140	WASHER THRUST STEEL 1/2" .090
4	150940	WASHER RETAINER
5	050800	BRAKE SPRING
6	050820	WASHER TOP BRAKE DRIVE
7	051680	ROLL PIN 3/16"
8	050810	WASHER THRUST STEEL 1/2"x .030
9	050120	BEARING THRUST STEEL
10	050850	WASHER BOTTOM BRAKE DRIVE
11	050920	WASHER THRUST STEEL 1/2"x .060
12	310070	BEARING RETAINER ASSEMBLY
13	050040	PLATE WASHER 5/8"
14	100700	URETHANE BUMPER
15	052090	BALLNUT LOCKNUT 5/8"SCREW
16	050550	SET SCREW 1/4-20NC x 5/16
17	310250	BALLNUT BRACKET
18	050830	WASHER DISC SPRING 5/8"
19	050170	BALLNUT 5/8"
20	102040	DRIVE SCREW 5/8"
21	051850	WASHER 5/8"
22	300840	COUPLING
23	050640	BOLT 1/4-20NC x 1 1/2"
24	050610	LOCK NUT 1/4-20NC
25	055640	PLATE WASHER 1/2"
26	050171	LOAD LOCKING SPRING
27	102045	LOAD LOCK PIN

SCREW ASSEMBLY L-1, LE-1

P/N 310010



ITEM	PART No.	DESCRIPTION
1	110450	BRAKE CAP L-SERIES
2	050840	WASHER THRUST BRONZE .060
3	050140	WASHER THRUST STEEL 1/2" .090
4	150940	WASHER RETAINER
5	050800	BRAKE SPRING
6	050820	WASHER TOP BRAKE DRIVE
7	051680	ROLL PIN SPIROL 3/16"x 1 1/8"
8	050810	WASHER THRUST STEEL 1/2"x .030
9	050120	BEARING THRUST STEEL
10	050850	WASHER BOTTOM BRAKE DRIVE
11	050920	WASHER THRUST STEEL 1/2"x .060
12	310070	BEARING RETAINER ASSEMBLY LS
13	050040	WASHER 5/8"PLATE ZINC
14	100700	URETHANE BUMPER 1/2"L x 5/8"ID
15	052090	BALLNUT LOCKNUT 5/8"DRIVE SCREW
16	050550	SET SCREW 1/4-20NC x 5/16
17	310250	BALLNUT BRACKET ALUMINUM
18	050830	WASHER DISC SPRING 5/8"
19	050170	BALLNUT 5/8 SQUARE
20	110220	DRIVE SCREW 5/8 x 41.437"
21	051850	WASHER 5/8 SAE ZINC
22	300840	COUPLING PAINT FINAL
23	050640	BOLT 1/4-20NC x 1 1/2"HH GR5 ZINC
24	050610	NUT 1/4-20 RING LOCK ZINC
25	055640	WASHER 1/2"PLATE 1 3/8"LS
26	050171	SPRING LOAD LOCKING
27	102045	PIN LOAD LOCK



SCREW ASSEMBLY L-2, LE-2(34/32)

PN 310020

Procedure for Repairing the L-Series Drive Screw Assembly

NOTE: Read all instructions carefully before attempting to make repairs to any part of the drive screw assembly. Refer to the Screw Assembly Drawing. For this procedure, it will be necessary to remove any accessories like an extended toeplate, screw guard, strapbars, etc.

Procedure to Disassemble Machine

1. Place machine on a suitable work bench with the machine resting on its wheels and rear handles (toeplate up). Activate the unit until it is extended approximately half-way. Disconnect the power supply by way of the circuit breaker.
2. Remove four nuts retaining the toeplate to the outer frame. Remove the two bolts and nuts fastening the bearing retainer (12) and inner frame. The outer frame can now be slid off the inner frame in the direction of the handles.

Brake Assembly Replacement

1. With reference to the Screw Assembly drawing for the particular model, remove the two 1/4"bolts(23) and nuts (24). Proceed to remove the brake cap(1), two bronze thrust washers(2), steel washer(3), washer retainer(4) and brake spring(5).
2. Drive out the 3/16" roll pin(7) taking care not to bend the screw shaft. Place a suitable support underneath the brake drive top washer(6) for this operation.
3. Remove the brake drive top washer(6), two steel thrust washers(8), thrust washer(9), brake drive bottom washer (10), two bronze thrust washers(2), and the steel thrust washers(11).

NOTE: At this point, if it is intended to replace the Bearing Override or Ballnut, complete those procedures first before continuing with the brake re-assembly.

4. As per the screw assembly drawing, replace the brake assembly components (Brake Assembly Kit P/N 400150) in reverse order as follows:

Items: 2-11-2-10-8-9-8-6-7-5-4-2-3-2

During assembly, place a few drops of light machine oil on the thrust bearing(9) only. Remember to support the brake drive top washer(6) when installing the 3/16" roll pin(7).

5. Install brake cap(1) and insert the 1/4"bolts(23) and fasten with the nuts(24). Go to procedure for re-assembly of machine.

Override Bearing Assembly

1. Remove the brake assembly as outlined in the Brake Assembly procedure.

2. Continue the disassembly by removing the two steel thrust washers(11), steel thrust bearing(9), two plate washers(13), and the urethane bumper(14).

NOTE: At this point, if it is intended to replace the Ballnut or removing the Drive Screw for service/replacement, complete those procedures first before continuing with the override bearing replacement.

3. As per the screw assembly drawing, replace the override bearing components (Bearing Override Kit P/N 400160) in reverse order as follows:

Items: 13-14-13-11-9-11-12

Apply a few drops of light machine oil to thrust bearing(9) and the roller bearing in the bearing retainer(12).

4. Replace the brake assembly components as per the Brake Assembly instruction step 4.

Drive Screw Removal & Installation

1. Remove the brake assembly as outlined in the Brake Assembly procedure.
2. Remove the override bearing assembly as outlined in the Override Bearing Assembly procedure.
3. Apply a band of tape around the drive screw(20) at each end of the ballnut(19). This will prevent the ballnut from disengaging the drive screw until the appropriate time. The set screws(16) in the ballnut locknut(15) may be loosened and the locknut removed. Remove the drive screw(20) through the ballnut bracket(17) and remove the spring disc washer(18) from the drive screw.

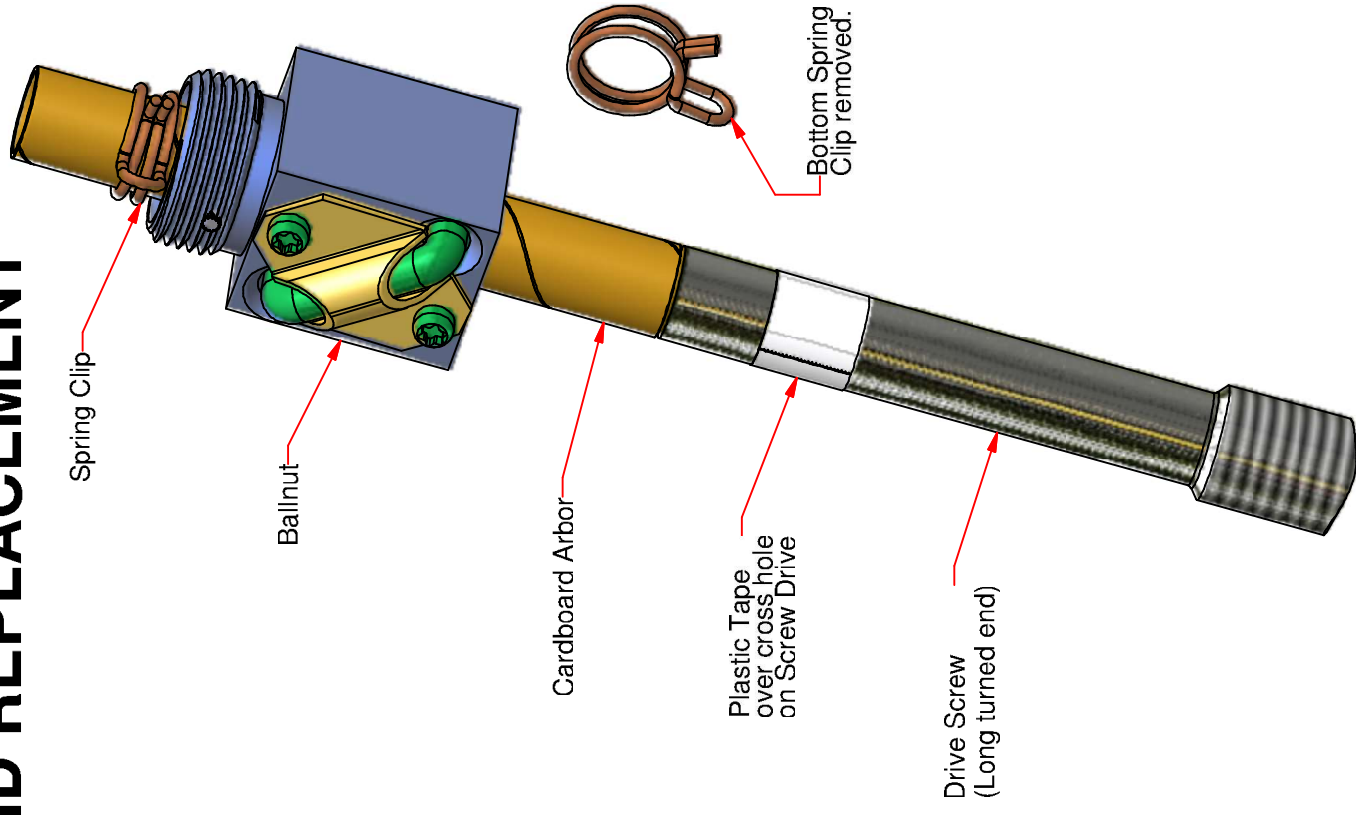
NOTE: At this point, if it is intended to remove the ballnut (19) for replacement, complete the Ballnut Replacement procedure first, before re-installing the drive screw.

4. To re-install the drive screw(20), place the spring disc washer(18) over the ballnut thread, insuring the concave side of the washer is oriented away from the square body of the ballnut. Insert the drive screw(20) through the ballnut bracket (17) as per the assembly drawing. Thread the ballnut locknut(15) onto the ballnut(19) but do not tighten. Remove the tape either side of the ballnut, if applied.
5. Continue the re-assembly process by returning to step 3 of the Override Bearing Procedure.

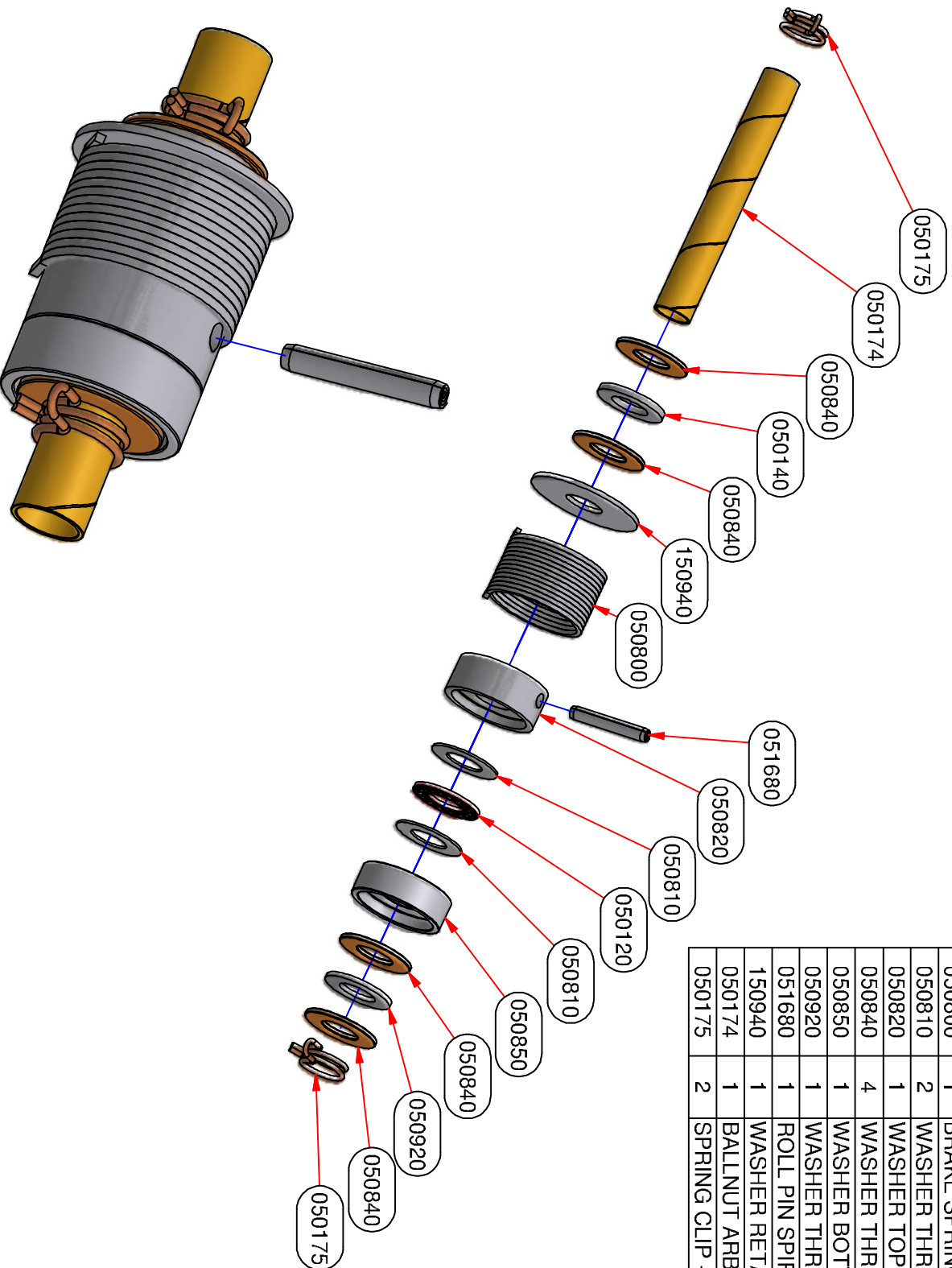
BALLNUT REMOVAL AND REPLACEMENT

PROCEDURE:

1. To begin, the screw assembly must be removed from the unit. Follow the procedure for Drive Screw removal and replacement.
2. Remove the tape from the drive screw that is keeping the ballnut in position, if installed.
3. Apply one layer of thin plastic tape banding around the long turned end of the screw over the cross hole. This is the end that the ballnut will be removed.
4. Stand the drive screw vertically with the long turned end up. Thread the ballnut up the screw until it is completely disengaged from the thread. The tape over the cross hole prevents the balls in the ballnut from falling out into the cross hole.
5. Place a Cardboard Arbor firmly against the end of the screw, insuring that it is centered and square, and slide the ballnut up onto the cardboard arbor. Attach spring clips to both ends of the arbor to retain the ballnut.
6. To install a ballnut, the reverse happens. Remove the spring clip from the cardboard arbor on the square end of the ballnut. Be sure the arbor does not disengage the arbor or all the balls in the ballnut will fall out.
7. Place the end of the arbor firmly, centered and square, onto the long turned end of the drive screw. Slide the ballnut off the arbor onto the screw, over the tape and engage the drive screw thread. Allow the ballnut to spin down the screw to approximately halfway along its length. Band tape around the screw at both ends of the ballnut to keep the ballnut in position.
8. Remove the plastic tape from the cross hole.
9. Return to the instruction for the installation of the Drive Screw, step 4.

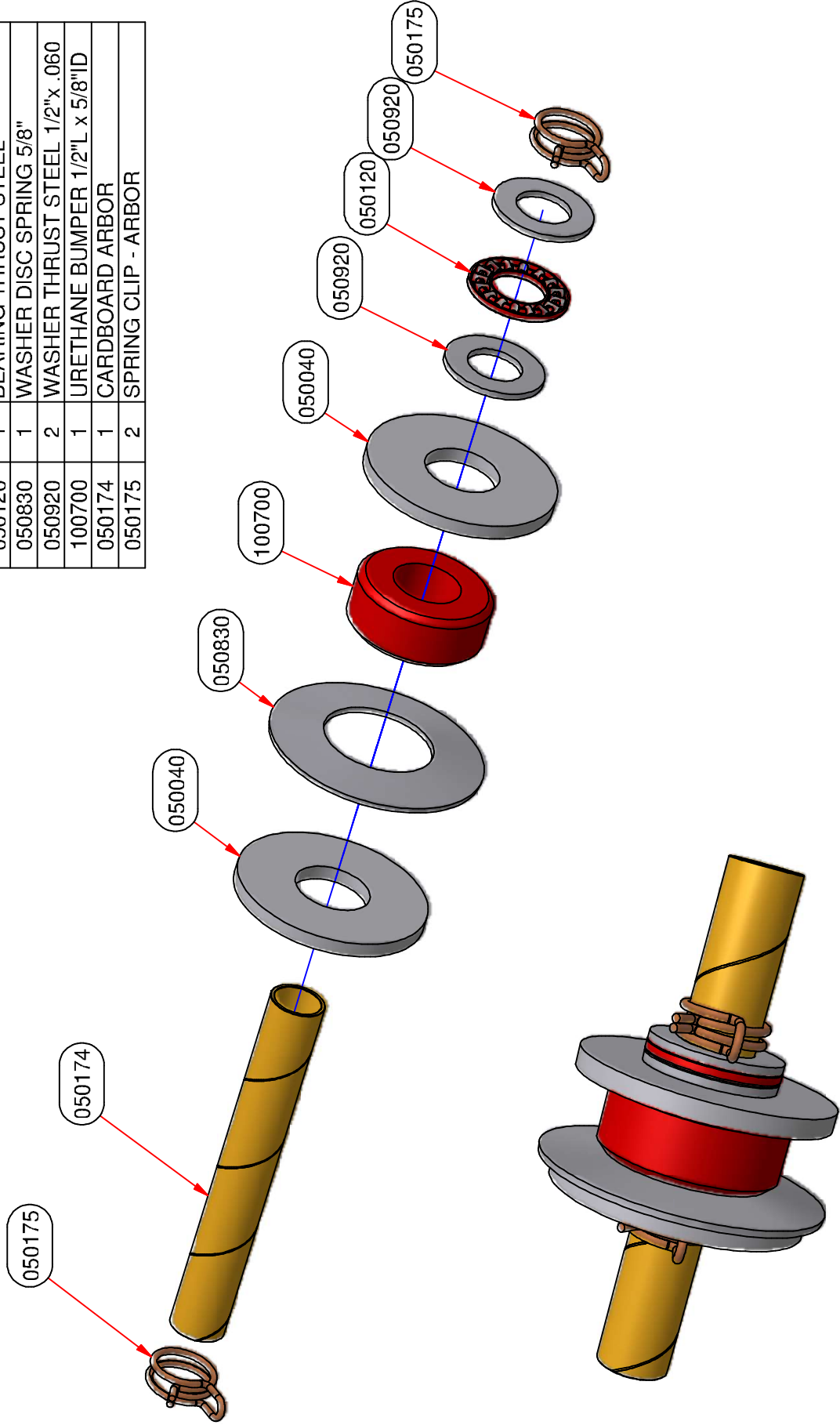


PARTS LIST		
PART No.	QTY	DESCRIPTION
050120	1	BEARING THRUST STEEL
050140	1	WASHER THRUST STEEL 1/2" .090
050800	1	BRAKE SPRING
050810	2	WASHER THRUST STEEL 1/2" x .030
050820	1	WASHER TOP BRAKE DRIVE
050840	4	WASHER THRUST BRONZE .060
050850	1	WASHER BOTTOM BRAKE DRIVE
050920	1	WASHER THRUST STEEL 1/2" x .060
051680	1	ROLL PIN SPIROL 3/16" x 1 1/8"
150940	1	WASHER RETAINER
050174	1	BALLNUT ARBOR
050175	2	SPRING CLIP - ARBOR



BRAKE ASSEMBLY KIT PN 400150

PARTS LIST	
PART No.	QTY DESCRIPTION
050040	2 WASHER 5/8"PLATE ZINC
050120	1 BEARING THRUST STEEL
050830	1 WASHER DISC SPRING 5/8"
050920	2 WASHER THRUST STEEL 1/2"x .060
100700	1 URETHANE BUMPER 1/2"L x 5/8"ID
050174	1 CARDBOARD ARBOR
050175	2 SPRING CLIP - ARBOR

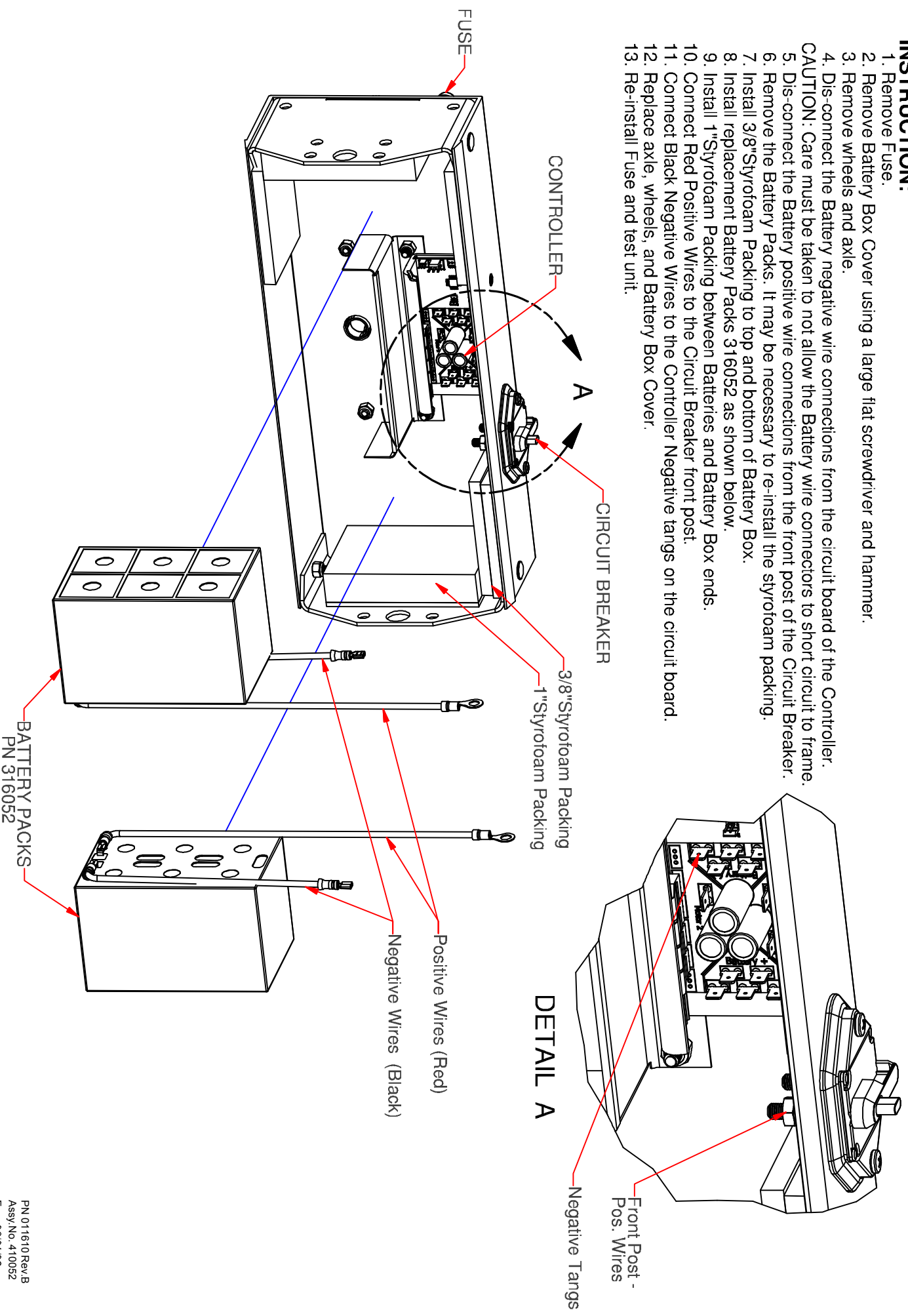


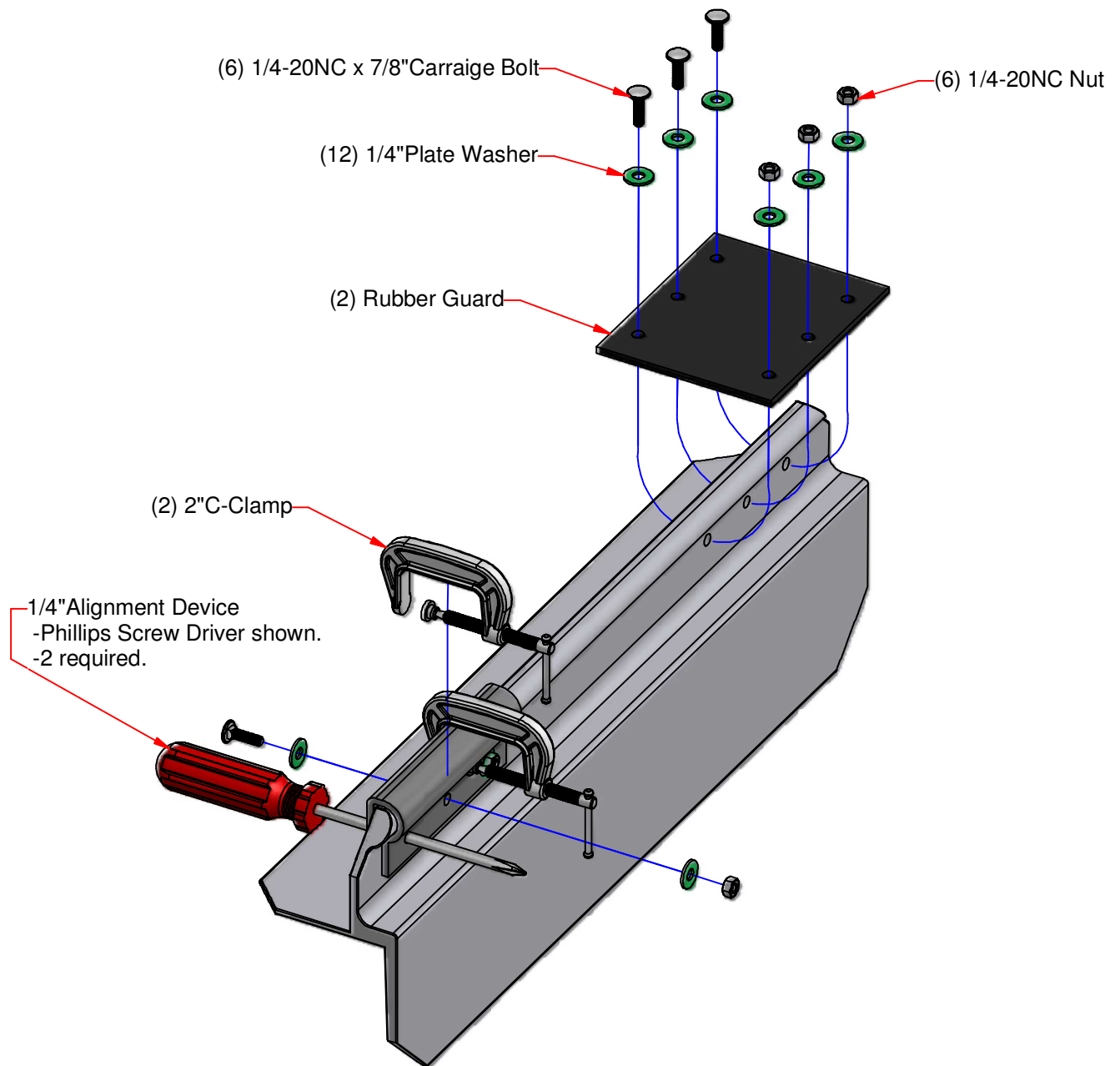
BEARING OVERRIDE KIT PN 400160

INSTALLATION OF SEALED BATTERIES IN POWERMATE L-SERIES REPLACEMENT BATTERY PACK No. 410052

INSTRUCTION:

1. Remove Fuse.
 2. Remove Battery Box Cover using a large flat screwdriver and hammer.
 3. Remove wheels and axle.
 4. Dis-connect the Battery negative wire connections from the circuit board of the Controller.
- CAUTION:** Care must be taken to not allow the Battery wire connectors to short circuit to frame.
5. Dis-connect the Battery positive wire connections from the front post of the Circuit Breaker.
 6. Remove the Battery Packs. It may be necessary to re-install the styrofoam packing.
 7. Install 3/8"Styrofoam Packing to top and bottom of Battery Box.
 8. Install replacement Battery Packs 316052 as shown below.
 9. Install 1"Styrofoam Packing between Batteries and Battery Box ends.
 10. Connect Red Positive Wires to the Circuit Breaker front post.
 11. Connect Black Negative Wires to the Controller Negative tangs on the circuit board.
 12. Replace axle, wheels, and Battery Box Cover.
 13. Re-install Fuse and test unit.





PROCEDURE:

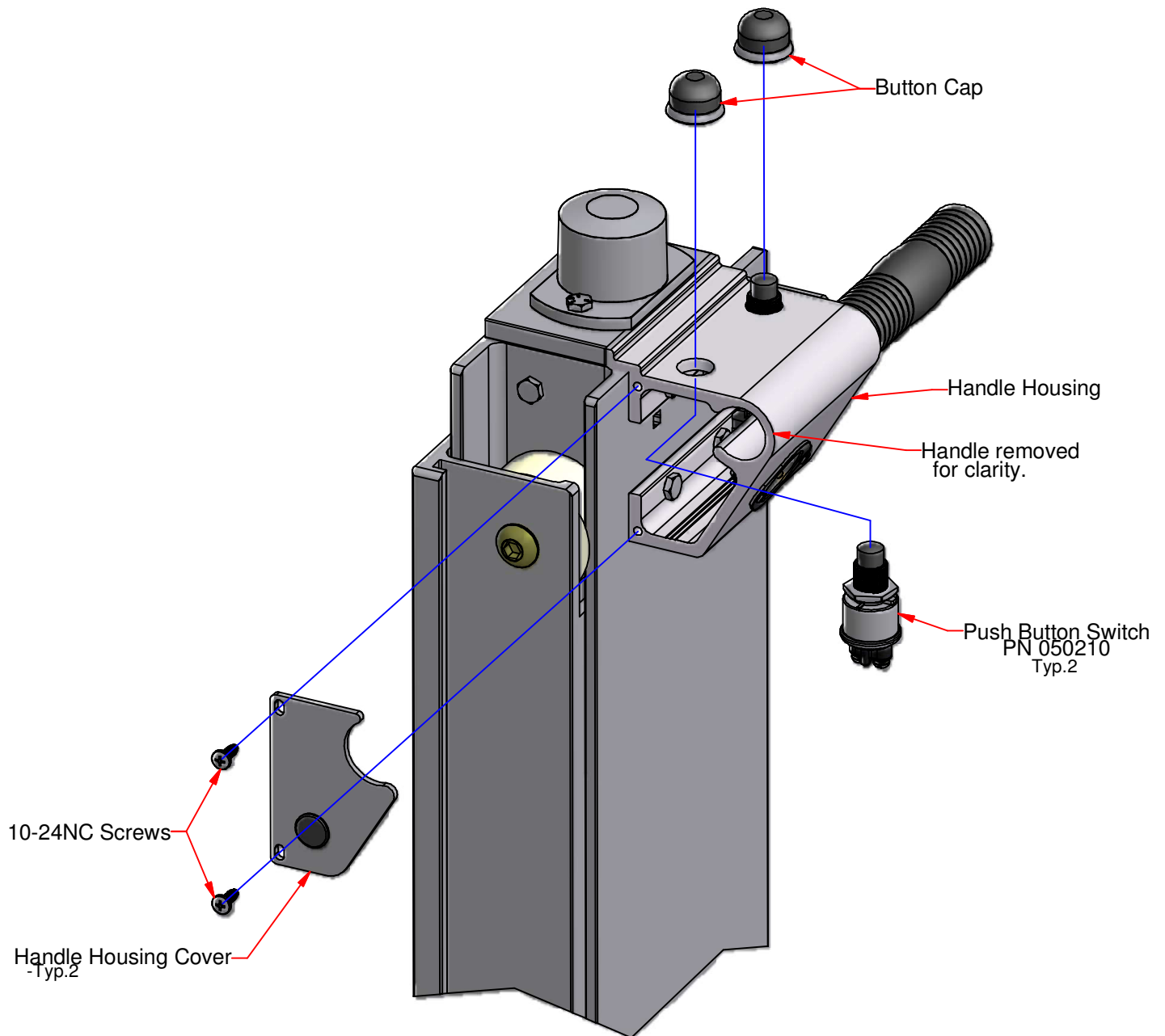
Tools required: Two 1/4" drifts, screwdrivers (Phillips), or pry type tools.
 - used to pull and align holes in rubber to holes in toeplate.
 - 7/16" socket wrench.
 - Two 2" C-clamps.

1. Extend PowerMate unit approximately 15" and rest the unit face down (wheels up) on a suitable work surface. The floor may also be used. Note: The view above is shown as the toeplate only for clarity.
2. Remove the 1/4" Nuts with the 7/16" wrench and dis-assemble the old Rubber Guard.
3. Use the screw driver type tools to align the holes of the new Rubber Guard and the Toeplate.
4. Apply the two 2" C-Clamps either side of the center hole leaving room to apply a Washer.
5. Insert a Carriage Bolt and Washer through the center hole as shown, and place a Washer on the exposed thread. Applying thumb pressure to the head of the Bolt, start the 1/4" Nut onto the thread. Remove the C-Clamps and tighten the 1/4" Nut with the 7/16" wrench.
6. Re-install the C-Clamps adjacent to another hole, remove the alignment device, and repeat the Bolt installation step 5.

BOTTOM RUBBER GUARD REPLACEMENT

Replacement Kit No. 410060

PN 011620 Rev.C
 Assy. No. 410060
 Eng. 02/09/09

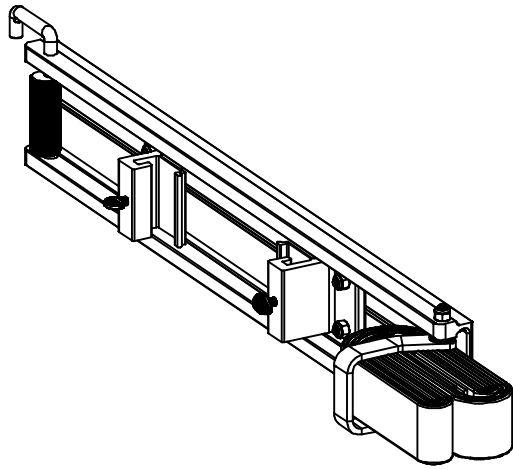


PROCEDURE:

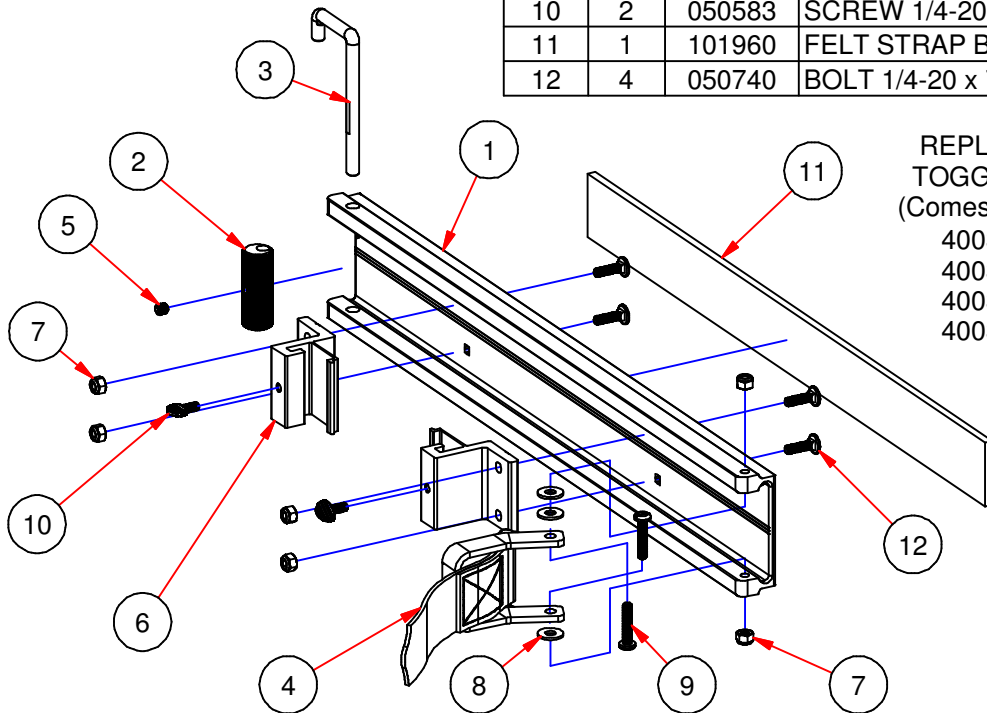
Tools required: Phillips screwdriver, water pump pliers, 1/4" slot screw driver.

1. Remove Handle Housing Covers(2) by removing the 10-24NC Screws(2 each).
2. Remove the Button Caps using water pump pliers.
3. Pull the Push Button Switches down and out of the Handle Housing.
4. Remove the screws retaining the wiring to the Push Button Switches using the 1/4" screwdriver.
5. Re-attach the wiring to the replacement Push Button Switches.
6. Re-insert the Push Button Switches into the Handle Housing.
7. Screw on the Button Caps and tighten with the water pump pliers.
8. Install the Handle Housing Covers with the 10-24NC Screw.

PUSH BUTTON REPLACEMENT L-SERIES



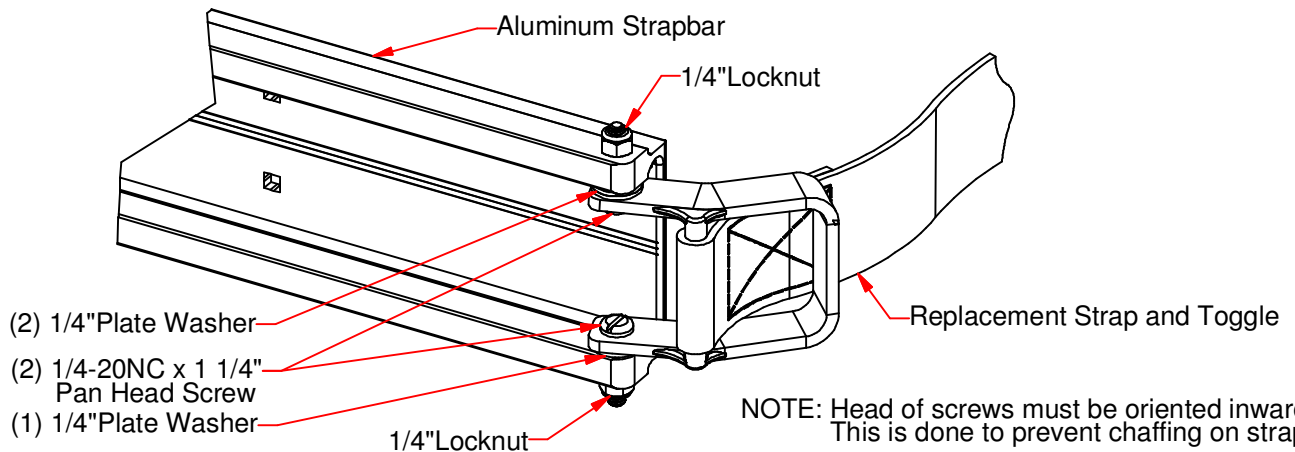
PARTS LIST			
ITEM	QTY	PART No.	DESCRIPTION
1	1	310130	STRAP BAR ALUMINUM L-1 L-2
2	1	310040	CAM FINAL PAINT
3	1	302110	CAM HANDLE FINAL PAINT
4	1	310530	STRAP 10' c/w TOGGLE
		300500	STRAP 12' c/w TOGGLE
		300600	STRAP 14' c/w TOGGLE
		300490	STRAP 16' c/w TOGGLE
5	1	050990	SCREW HEXSOC SET 5/16-18 x 5/16
6	2	110020	STRAPBAR CONNECTOR LS
7	6	050610	NUT 1/4-20 RING LOCK ZINC
8	3	050070	WASHER PLATE 1/4 ZINC
9	2	050580	SCREW PAN HD SLOT 1/4-20x1 1/4
10	2	050583	SCREW 1/4-20NC THUMB
11	1	101960	FELT STRAP BAR 1/4"x 2"x 23"
12	4	050740	BOLT 1/4-20 x 7/8 CARRIAGE ZINC



REPLACEMENT STRAP/
TOGGLE KITS AVAILABLE
(Comes with fastener hardware):

- 400310 - 10 ft. Strap
- 400320 - 12 ft. Strap
- 400300 - 14 ft. Strap
- 400340 - 16 ft. Strap

STRAPBAR ASSEMBLY L-SERIES



NOTE: Head of screws must be oriented inwards.
This is done to prevent chaffing on strap.

REPLACEMENT STRAP INSTALLATION

TOOLS REQUIRED: 7/16" Wrench, 5/16" Flat Screw Driver.

STORAGE PROCEDURE

If the equipment is not to be used for an extended period of time (over 3 months) then the following storage procedure should be completed by a knowledgeable service person.

1. Remove the front drive screw guard (if installed). Extend the main frames fully. Clean and lubricate the drive screw with light machine oil. Replace the drive screw guard.
2. Disable the equipment by placing the safety toggle switch in the "Off" (O) position.
3. Store the equipment in a dry / dust-free location.
4. Check every 3 months that the battery is fully charged.
5. Before returning the equipment to service, it should be examined by a trained and competent service person.

BATTERY CARE

The 12 volt DC battery system is maintenance free and sealed. The gelled electrolyte inside the battery requires no maintenance whatsoever throughout its life. *DO NOT ATTEMPT TO OPEN THESE BATTERIES.*

The best battery life and equipment performance will be attained by keeping the battery fully charged.

The equipment has a small female battery charging receptacle located near the control handles. This receptacle is connected directly to the battery.

The battery charger output wire has a mating male plug.

The receptacle and plug are keyed to ensure proper connection. Insertion and locking of the male plug into the female receptacle connects the battery charger to the battery. Once connected the battery charger automatically commences charging. The charger stops when the battery is fully charged.

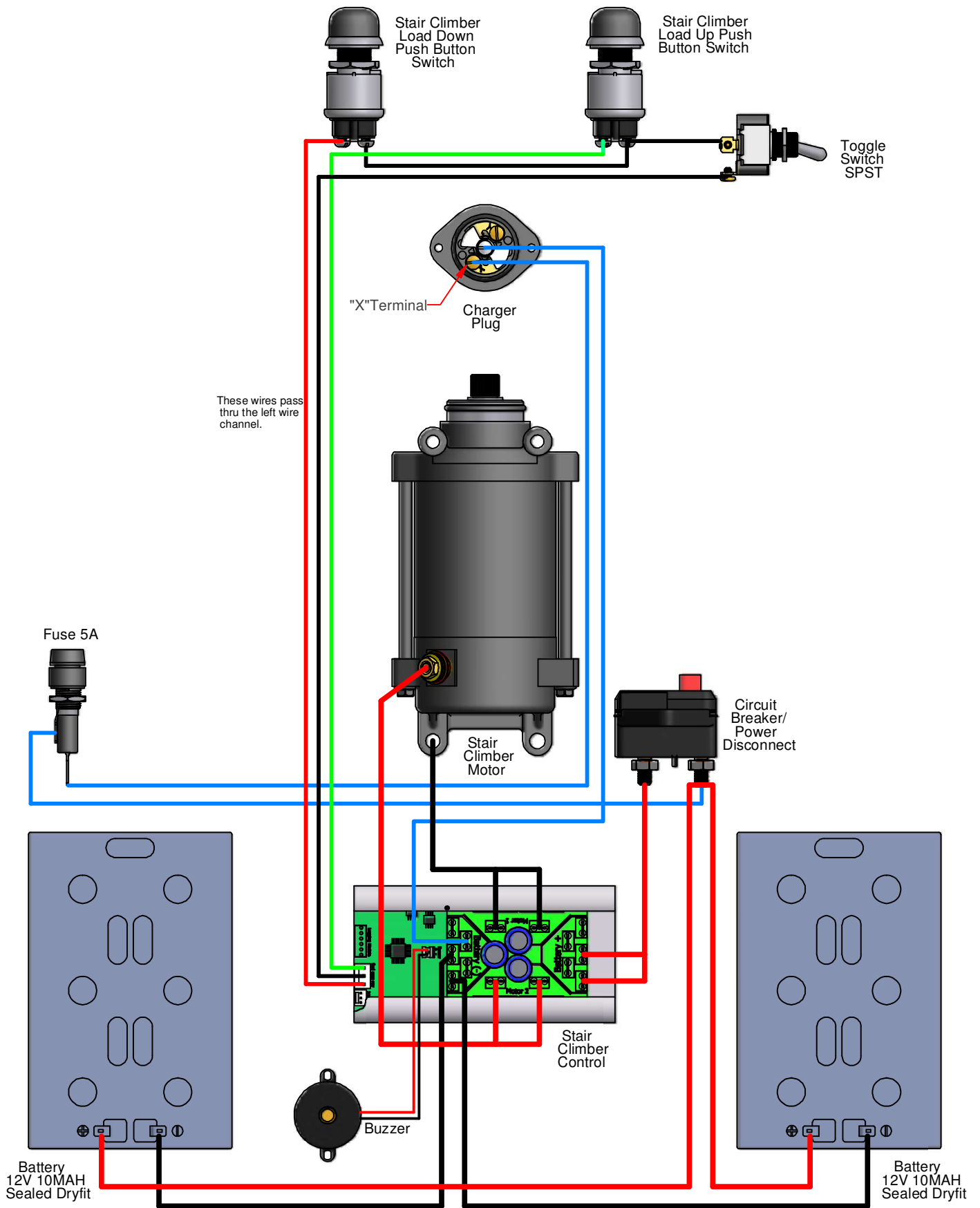
MAINTENANCE AFTER EVERY YEAR OF OPERATION

This equipment is designed for use as a heavy duty lifting device. To ensure operator safety and continuing trouble free operation, have the equipment thoroughly checked by a trained and competent service person at least once a year. This maintenance should be performed using the following procedure.

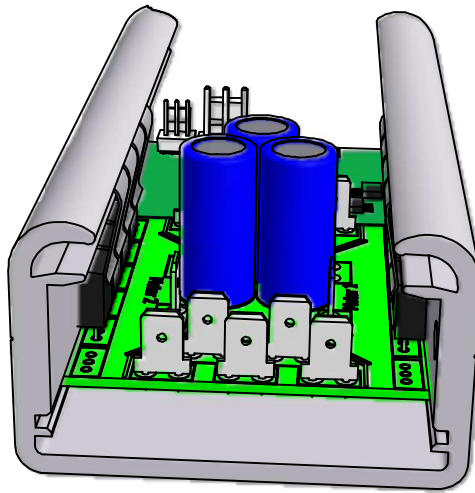
1. Place a load of at least 300 pounds (140 kilograms) on the equipment. Cycle the equipment up and down several times in order to evaluate its current condition. This load test will help reveal the condition of the drive and brake systems, the frame structures and the electrical components. Improper conditions may be exhibited by excessive vibration, unusual noise or slow operation.
2. Check the inner and outer frame assemblies for bending, flattening, twisting, looseness or worn surfaces of the frame members. Check the frame roller tracks for cracks and worn surfaces.
3. Check the rollers for free rotation. Lubricate the roller axles with light machine oil.
4. Check that the two main frame wheels and main frame axle are in good condition. Lubricate the two main frame wheels with multi-purpose grease.
5. Check that the strapbar mounting hardware is secure. Check that the load binding straps are not cut or frayed and that the strap locking handles are secure.
6. Remove the drive screw as outlined under "Drive Screw Removal and Installation". Clean the drive screw and ballnut. Do not remove the ballnut from the drive screw.
7. Check for a close running fit between the drive screw and the ballnut. There should be no wobble or excessive clearance and the ballnut should run smoothly and freely. There is a small tube on the side of the ballnut for the re-circulation of the ball bearings. Check that the 2 tube halves are fastened tightly together. Check that the area of the outside threads at the top of the ballnut is in good condition. If any of these checks reveal a problem, replace the ballnut as outlined in the manual.
8. If during the test of the equipment in step #1, there was excessive vibration, check the drive screw for straightness. Replace the drive screw as outlined in the manual if the drive screw is at all bent.
9. Check that the ballnut locknut, drive coupling, top and bottom red urethane bumpers and brake cap are all in good condition.
10. Replace all of the components for the brake assembly and the override bearing as outlined elsewhere in this manual.
11. Check that the electric motor armature, brushes and bearings are in good condition.
12. Reassemble the drivescrew assembly and electric motor in the equipment as outlined elsewhere in this manual.

13. Replace the 2 rubber grips on the heelplate of the outer frame.
14. Remove the control handle assembly and replace the two pushbuttons.
15. Check that all electrical wire connections are secure.
16. Check that the battery and battery charger are in good condition and that the battery is fully charged.
17. Repeat the equipment load test from step #1. Cycle the equipment up and down several times in order to evaluate its condition.

! WARNING - All repairs, electrical or mechanical, should be carried out only by a trained and competent service person. Use only approved repair parts; any others may create a hazard.



POWERMATE L-SERIES WIRING DIAGRAM



STAIR CLIMBER SOLIDSTATE CONTROLLER

The Stair Climber Solid State Controller is a fully solid state Pulse Width Modulated (PWM) controller. Its advanced microprocessor based control implements a state-of-the-art power MOSFET motor drive. Advanced features provide improved functionality, smoother operation, reduced mechanical stress, and protects against abuse and system faults.

ADVANTAGES

- Reduced peak current reduces power loss in batteries, motor, and cabling.
- Reduced peak current reduces battery stress, increased service life.
- Reduced peak torque reduces mechanical stress, increasing service life of the gear train and motor.
- Smooth operation "feel" by controlled acceleration and deceleration (motor voltage ramp-up and ramp-down) eliminating jerkiness.
- Automatically slows speed with heavy loads, improving control and safety.
- Overload protection shuts off if lift load is too heavy.
- Protects batteries by limiting minimum loaded voltage to 8.5 volts.
- Internal protections for many types of internal and external faults.
- Protects controller by inhibiting operation if battery voltage is too high.
- Detects battery+ or battery- short to frame and inhibits motor operation.
- Limits continuous operation to <30 seconds. Control wiring fault protection.
- Alerts to low or excess control heating (from over-use).
- Alerts to overload or excess continuous run time (control fault).
- Alerts to battery+ or battery- short to frame.
- Alerts to internal controller faults.
- Low standby power of less than 20mA.

SPECIFICATIONS

Operating Voltage Range:	8.5V - 14.4V
Maximum Voltage:	16.0V (non-operating)
Over-voltage shut-off	15.5V
Motor Current Limit:	100 Amps (+10%, -5%)
Output Time Rating (@100 Amps):	1.5Min. Minimum (ambient & initial temp<25°C)
Continuous Current (Ambient<25°C)	65 Amps (75 Amps in Le-Series Unit)
Maximum Run without stop:	25 to 30 Seconds (software limited)
Input control current, Max.(@ 13V)	0.3 mA
Standby Current (@12.6V)	< 18mA
Buzzer or LED output:	5 Volts, maximum 15mA
Standby Time (25% charge remains)	40 days (start with 20 AH battery, fully charged)
Operating Temperature Range:	-25°C to 50°C
Storage Temperature Range:	-40°C to 85°C

FAULT ALERTS

Faults are indicated by a buzzer producing a series of beeps to indicate various faults as follows:

One Beep - Overload condition (too much weight on Unit) - **Reduce Load**

- Maximum run time (25-30sec.) exceeded - **Release and re-apply switch**

Two Beeps - Low Battery - **Recharge Battery**

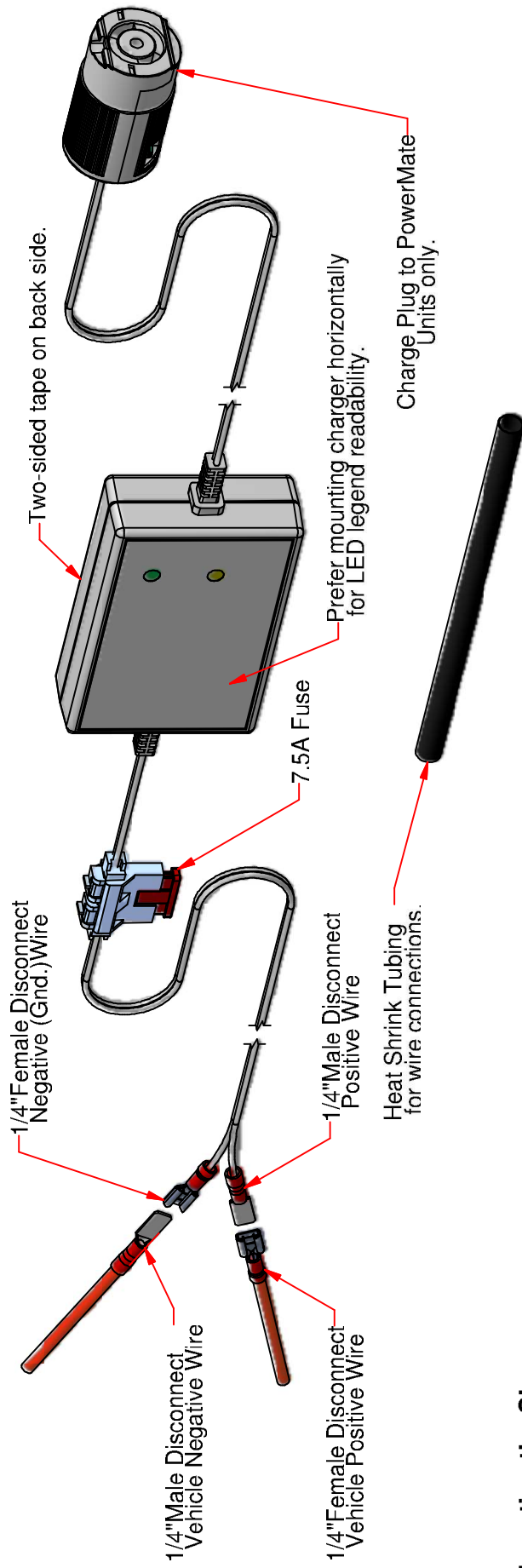
Three Beeps- Battery+ or Battery- shorted to frame. **HALT USE AND RETURN FOR REPAIR**

System Fault - **FAULTY UNIT -HALT USE AND RETURN FOR REPAIR**

Four Beeps - Overheating due to excessive use (many minutes) - **Allow five minutes to cool**

BATTERY CHARGER REMOTE INSTALLATION INSTRUCTION

CHARGER PN 400216



Locating the Charger:

Determine the position in the vehicle the PowerMate Unit will be using as it's charging station. The Battery Charger should be mounted in a position that will allow visibility of the charger and give easy access for the charger output wire (6 feet) and charge plug to the PowerMate Unit. The charger is equipped with adhesive backing for mounting to any flat surface.

NOTE: The mounting location should be free from moisture, dirt, and other contaminants. The charger should be mounted where the air is free to move around it. It should never be located in a box, compartment, or covered by any object. Doing so may result in excess heating and reduced performance. Do not expose the charger to any type of water spray. Do not immerse in water or any liquid. Should the charger become wet inside it should be disconnected immediately and returned to the manufacturer for refurbishment. Mount where the charger and its cables will not be physically damaged.

Input Wiring:

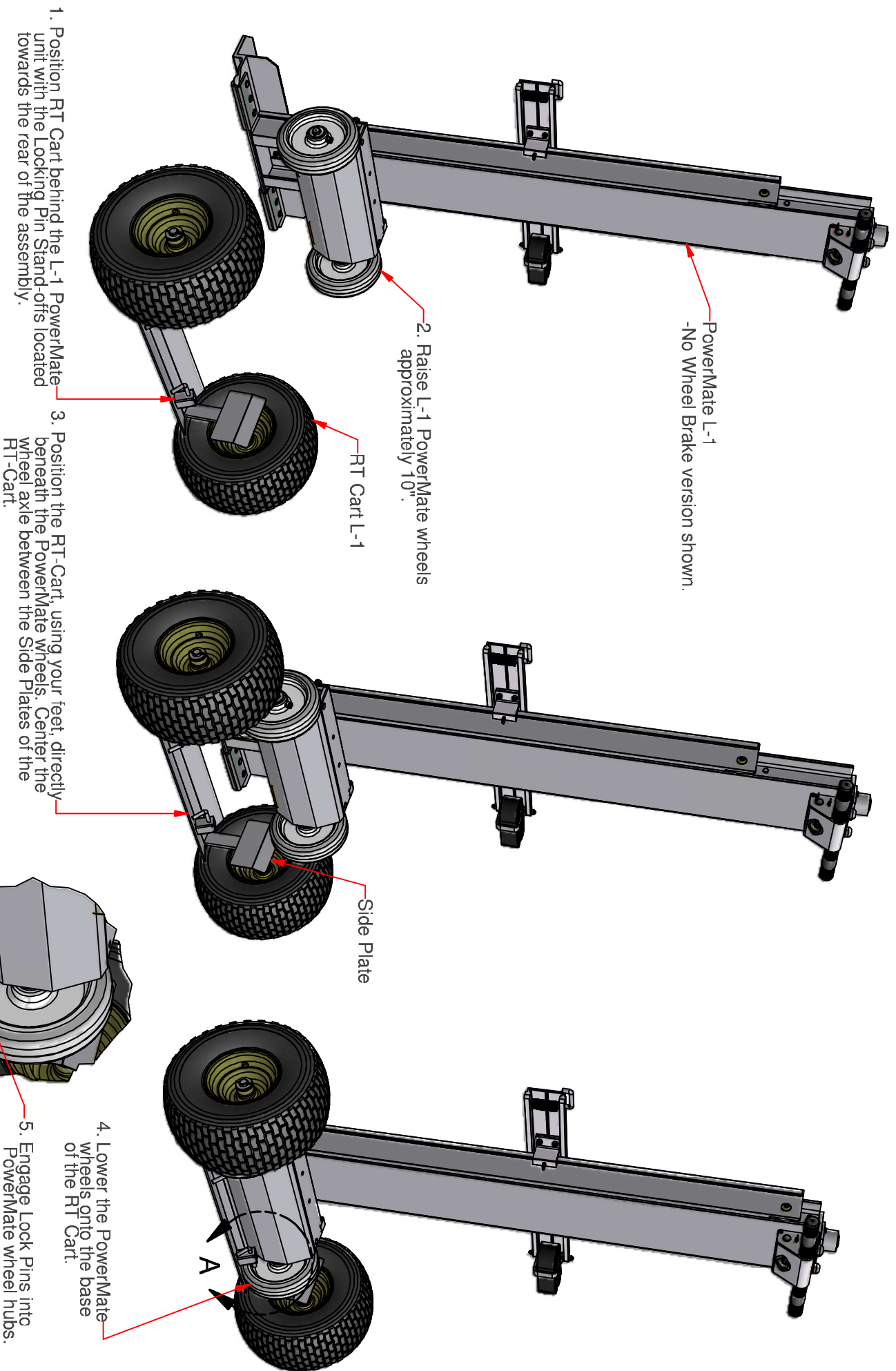
The installation will require a negative ground contact, and a positive wire coming from the vehicle battery. It is the installers responsibility to ensure the wire is of proper size capable of carrying at least 7 Amps continuous. In order to ensure maximum performance of the charger, the following wire sizes are recommended:

EXTENSION LENGTH	MINIMUM WIRE GAUGE
Up to 10 feet	12 AWG
11 feet to 20 feet	10 AWG
21 feet to 30 feet	8 AWG
Over 30 feet	Not recommended

Attach a 1/4" Male Terminal Disconnect to the negative (Gnd.) wire and a 1/4" Female Terminal Disconnect to the positive wire. Slip on a piece of Heat Shrink Tubing (provided) over the lead in connections and connect the lead in wires to the mating charger input wires. Slide the Heat Shrink Tubing over the connections and shrink. Secure all wires to prevent damage. Wire loom material may be used. It is the installer's responsibility to ensure the wiring to the vehicle battery and negative ground point are properly protected and secure.

NOTE: Refer to the Battery Charger Manufacturers documents provided for safety and operating instructions. Take into consideration that this charger has been modified for remote location mounting.

PN 010720 Rev.C
Assy. No. 400216
Eng. 01/19/08



1. Position RT Cart behind the L-1 PowerMate unit with the Locking Pin Stand-offs located towards the rear of the assembly.

2. Raise L-1 PowerMate wheels approximately 10".

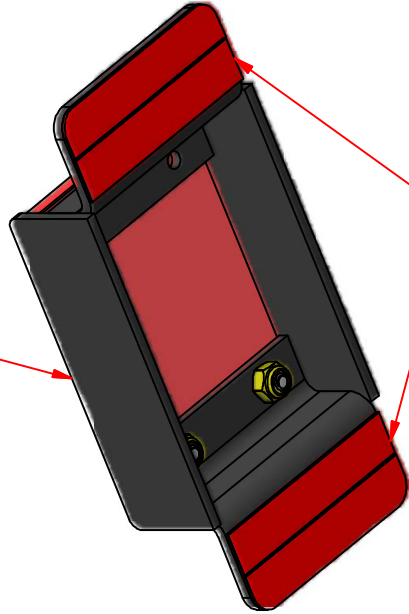
3. Position the RT-Cart, using your feet, directly beneath the PowerMate wheels. Center the wheel axle between the Side Plates of the RT-Cart.

4. Lower the PowerMate wheels onto the base of the RT Cart.

5. Engage Lock Pins into PowerMate wheel hubs.

RT CART L-1 ATTACHMENT INSTRUCTION

Switch Guard Assembly

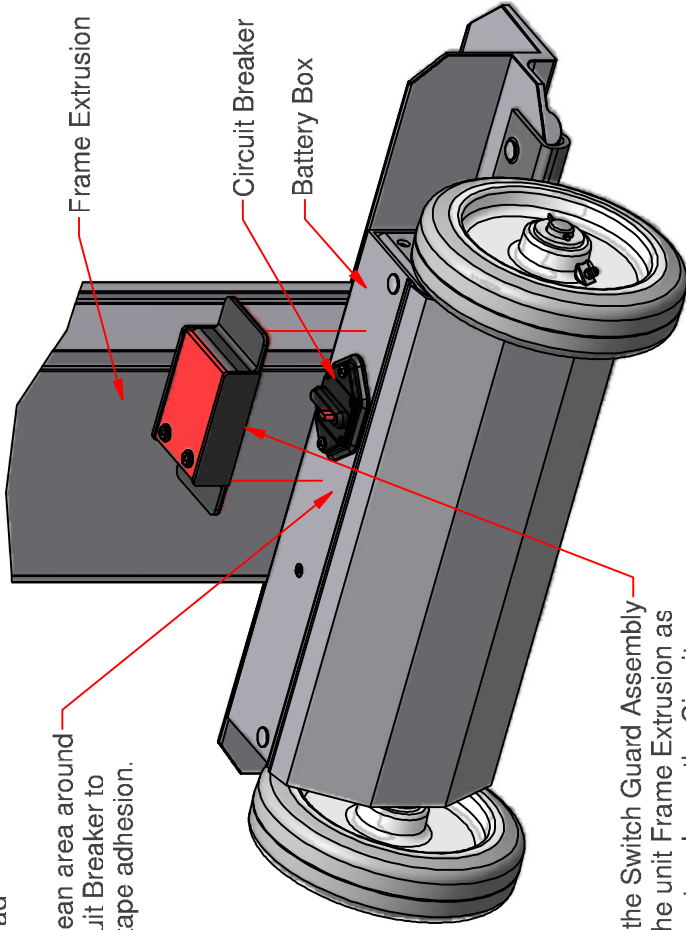


Scrub Pad



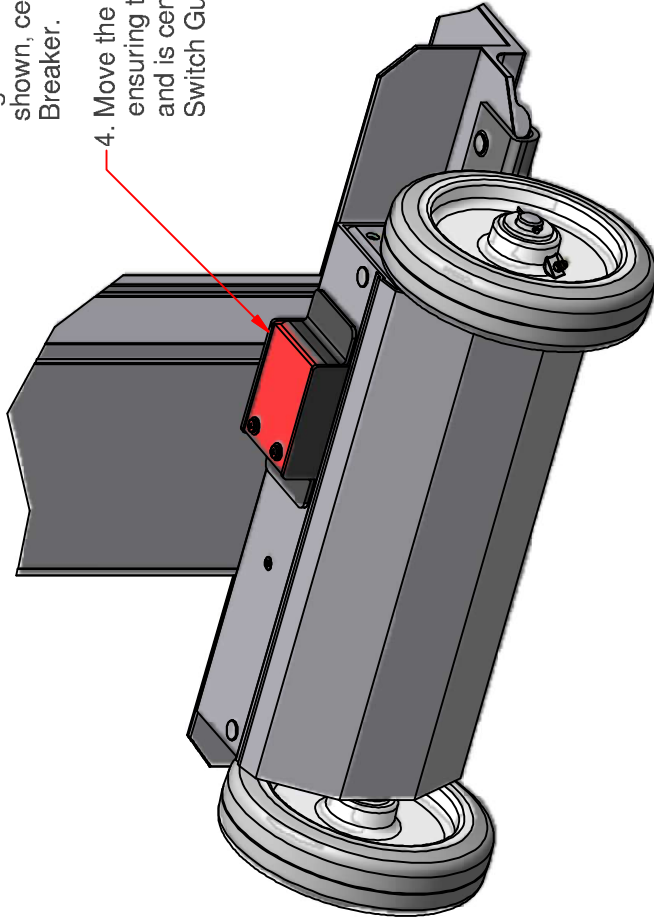
1. Scrub/clean area around the Circuit Breaker to ensure tape adhesion.

2. Remove the protective covering from the double sided tape on the base of the Switch Guard Assembly.

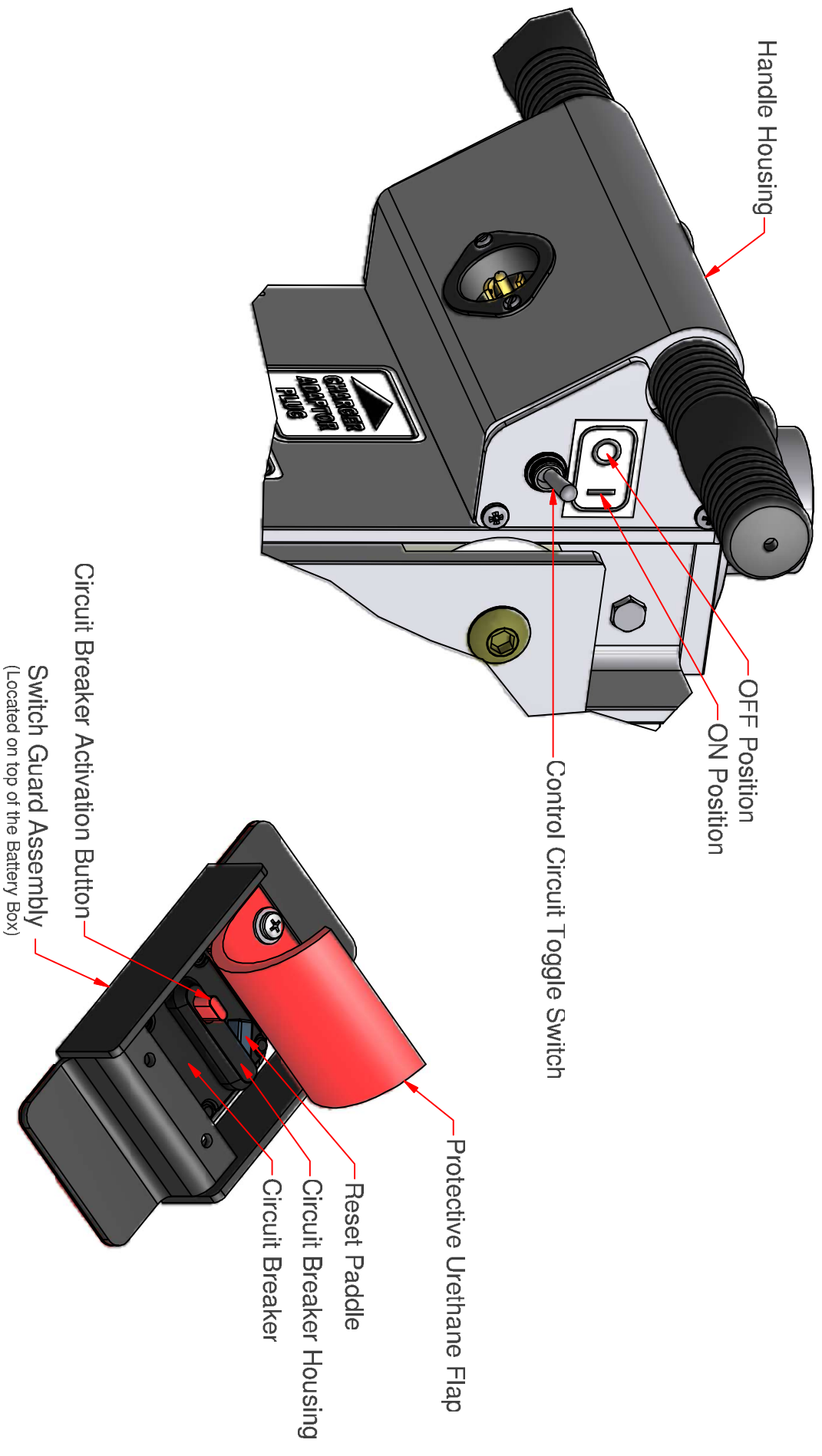


3. Position the Switch Guard Assembly against the unit Frame Extrusion as shown, centered over the Circuit Breaker.

4. Move the Switch Guard Assembly down to make contact with the Battery Box, ensuring the Switch Guard maintains contact with the unit Frame extrusion and is centered over the Circuit Breaker. Apply even pressure to the top of the Switch Guard to ensure total tape engagement.



SWITCH GUARD INSTALLATION DRAWING



INSTRUCTION:

To start PowerMate operation the Unit will require activation. To begin, lift the Protective Urethane Flap on the Switch Guard and press the Reset Paddle until it snaps into position inside the Circuit Breaker Housing. The Control Circuit Toggle Switch, located under the right handle on the Handle Housing, is now moved to the ON position by pushing it forward. The PowerMate is ready for operation.

Whenever the PowerMate Unit is not in use, or when the Unit is on the Battery Charger, the Red Circuit Breaker Activation Button must be depressed and the Control Circuit Toggle Switch must be moved to the rearward OFF position. This will de-activate the PowerMate Unit by disconnecting the power supply.

STARTING THE POWERMATE

PowerMate ACCESSORIES/SPARE PARTS FOR ALUMINUM MODELS

**400215
IN-VEHICLE CHARGER**

The MobileCharge 12E charges your PowerMate from the vehicle 12V system. When the vehicle is off, it will continue to charge for 2.5 hrs, protecting the vehicle battery. The 3-stage charging profile extends battery life and is independent of vehicle system voltage.



Battery Charger Remote Kit shown. In-Vehicle Charger comes with accessory port plug.

**400216
BATTERY CHARGER REMOTE KIT**

Our hard-wired MobileCharge 12E smart charging system keeps your PowerMate charged as it remains in the back of your vehicle. It will never draw the vehicle battery down below 70% capacity so your vehicle will always have enough power to start the engine.

**414300
ROUGH TERRAIN CART L-1/P-2
(For PowerMates without Wheel Brakes)**

perfect for moving heavy loads across gravel, grass, mud, snow, delivering to new construction sites and row housing.



Depth 16 inch 40.64 cm
Width 38 1/4 inch 97.16 cm
Height 16 inch 40.64 cm
Weight 37lb. 16.8 kg

**414305 ROUGH TERRAIN CART L-1/P-2
(For PowerMates with Wheel Brakes)**

perfect for moving heavy loads across gravel, grass, mud, snow, delivering to new construction sites and row housing.



Depth 16 inch 40.64 cm
Width 38 1/4 inch 97.16 cm
Height 16 inch 40.64 cm
Weight 37lb. 16.8 kg

**404210
STEP EXTENSION**

Comes with Mat Assembly and can be placed at the top or bottom of a staircase to create more room and a better turning surface for maneuvering your PowerMate with its load. Allows you to complete 17% more moves.



Step Extension = 20"x 28" Mat Assembly = 22"x 44"

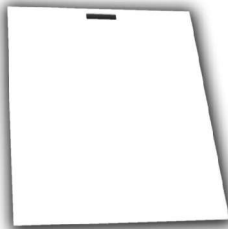
**414100
L-1 WHEEL BRAKES**



Depth 3 1/4 inch 8.26 cm
Width 5 1/4 inch 13.35 cm
Height 6 1/2 inch 16.51 cm
Weight 12 1/2 lb. 5.67 kg

**304200
PIVOT PAD/MAT ASSEMBLY**

Available in two sizes, the Pivot Pad is made of durable material which allows you to turn the PowerMate, with its load, on a dime. Move your loads effortlessly around tight corners while protecting your customer's property.



Pivot Pad = 24" wide x 30" long x 1/4" thick
Mat Assembly = 28" wide x 44" long x 1/4" thick

L P INTERNATIONAL INC.

P.O. Box 696, 151 Savannah Oaks Dr.,
Brantford, ON N3T 5P9

TEL: (519)759-3292 FAX: (519) 759-3298

1-800-697-6283

www.powermate.info

PowerMate ACCESSORIES/SPARE PARTS FOR ALUMINUM MODELS

<p>410040 HOT WATER TANK ATTACHMENT</p>  <p>Depth 6" 15.2 cm Width 18 1/4" 46.35 cm Height 4 1/2" 10.79 cm</p> <p>Depth 12 3/4" 32.38 cm Width 18 1/4" 46.35 cm Height 4 1/2" 10.79 cm</p> <p>1. Top piece fits over Strapbar. 2. Bottom piece fits over toeplate.</p>	<p>410053 SEALED BATTERY PACK 12V 20Ah</p>  <p>For L-1 Units Ser. No. 30550 and higher.</p>
<p>410190 EXTENDED TOEPLATE DEPTH</p>  <p>Depth 13" 33.02 cm Width 22" 55.88 cm Height 4 3/4" 12.06 cm</p>	<p>410210 BATTERY CHARGER</p>  <p>Solidstate charger with automatic shut-off. Safe to leave plugged into the PowerMate at all times. Will not overcharge the battery.</p>
<p>410020S EXTRA STRAPBAR</p> <p>400310 10' Strap 3.05m 400320 12' Strap 3.65m 400300 14' Strap 4.24m 400340 16' Strap 4.87m</p> 	<p>050390 TWIST LOCK PLUG</p>
<p>410061 CYLINDER ATTACHMENT</p>  <p>Depth 6" 15.24 cm Width 18" 45.72 cm Height 4" 10.16 cm</p>	

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Warranty

Every **PowerMate**[®] Safety Moving System supplied by L P INTERNATIONAL INC. including accessories, with the exception of batteries, straps and shear pins is guaranteed against faulty workmanship and defective materials for a period of one year from date of purchase, when given normal use and maintenance in accordance with operation manual.

The above warranty will apply only to the original purchaser.

L P INTERNATIONAL INC. do not hold themselves responsible for any damage caused by atmospheric or chemical influences nor defects due to unskilled operation, lack of maintenance and use of unprescribed lubricants. Neither do they accept responsibility for normal wear and tear and consequences therefrom. Warranty Service is available through your local authorized dealer or distributor. Warranty is void if serviced by unauthorized persons.

Machine Model _____ Serial No. _____



Manufactured By:
L P INTERNATIONAL INC.

MAILING ADDRESS

P.O. BOX 696, 151 SAVANNAH OAKS DR.
BRANTFORD, ONTARIO, CANADA
N3T 5P9

USA MAILING ADDRESS:
P.O. BOX 1132
LEWISTON, N.Y., 14092-8132

PHONE: (519) 759-3292
1-800-697-6283
FAX: (519) 759-3298



DAILY MAINTENANCE SCHEDULE

NOTE: If attempting any service repair work, disconnect the battery by depressing the red button on the circuit breaker.

- Inspect unit frame for structural damage.
- Inspect wheels and tires. Grease the wheels if required. Ensure the cotter pins are in place.
- Inspect all bolts and fasteners are in place and secure.
- Inspect the load straps for damage. Nicks or tears are not acceptable.
- Inspect the push button switches for condition and operation. Make sure the wiring is secure.
- Test the circuit breaker for operation. Cycle the unit testing for operation, direction and smoothness.
- Observe the roller operation in the outer frame rails. Oil rollers as required. Inspect the drive screw and ballnut for damage, bending during operation, and lubrication.
- Ensure the operating manual is readily available for reference.
- Keep the battery fully charged.

FOR PARTS AND SERVICE CONTACT:

1-800-697-Mate

