

# Moto-Cart Jr Electric Lift Service Manual



LIFT PRODUCTS INC  
PO BOX 349  
ELM GROVE WI 53122  
262-521-5720 FAX 262-521-5725  
Toll Free 877-543-8776

Models: JRMC-11-ELT

S/N \_\_\_\_\_

Customer \_\_\_\_\_

**LIFT PRODUCTS, INC.**

# LIFT PRODUCTS, INC.

## REGISTRATION INFORMATION

(To validate your warranty and receive updated service bulletins, please complete this form)

Date \_\_\_\_\_ Model No. \_\_\_\_\_

How did you first hear of Lift Products?

- Magazine Ad (Specify which magazine) \_\_\_\_\_  
 Recommended by a dealer (Name of Dealer) \_\_\_\_\_  
 Received information in the mail \_\_\_\_\_  
 Internet \_\_\_\_\_  
 Other (Please specify) \_\_\_\_\_

What factors caused you to choose Lift Products? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe how and where products are being used? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name of person completing this form \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Street Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax No. \_\_\_\_\_

Purchased From:

Name of Dealer \_\_\_\_\_

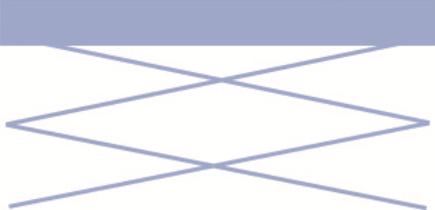
Street Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

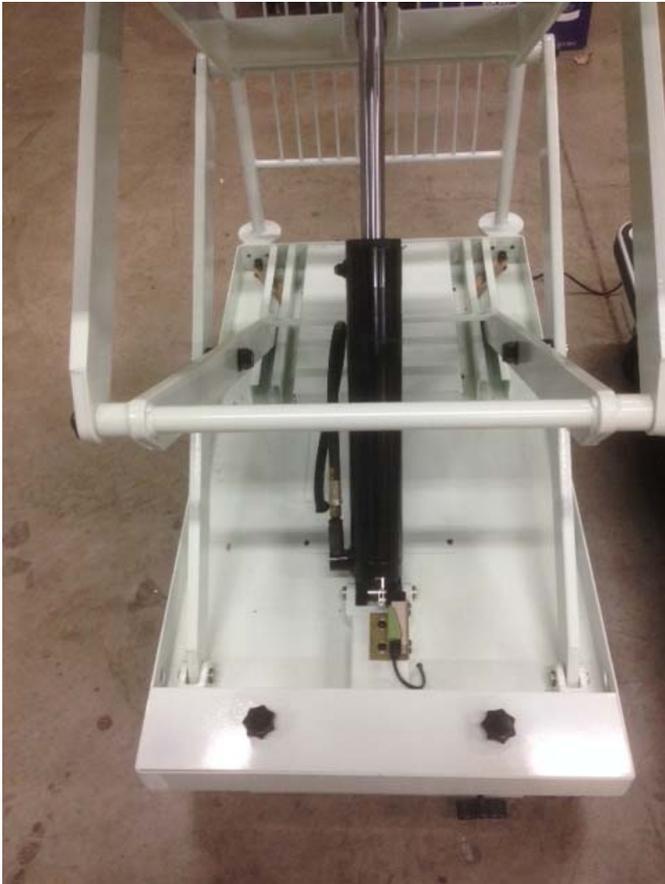
Phone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

Please fax this form to 262-521-5725.

# LIFT PRODUCTS, INC.



Location of the charger for the JRMC-11-ELT is located:



It is important to read and follow all the instructions and safety information contained in the Operation Manual prior to use.

We hope the carts will make your job easier and more fun. The Moto-Cart JR. can boost the productivity in your organization and reduce injuries caused by repetitive pushing or pulling a manual platform cart with heavy load. Therefore, you will create a safe working environment and minimize the worker's compensation insurance cost.

The cart is a battery power mobile platform truck used from moving materials, parts, or machinery from one location to another without having to manually carry the load or push a wheeled cart. These heavy push or pull cart applications can occur anywhere.

If these carts need constant pushing or pulling from one location to another and cause fatigue to the employee moving the load, than it is a perfect application for our battery powered, electric cart.

### **PACKING LIST**

- (1) Folded Cart
- (8) M8x20 Screw

### **SPECIFICATIONS**

- Motor 24 volt/370 watts Battery 2x12 v/40 Ah sealed lead acid Battery
- Battery Charger 100-220V-50/60Hz<1.5A AC/24VDC
- Charge Time: 7 hours
- Controlled Curtis 70A 24V

### **OPERATION**

1. **Turn ON Power**  
Insert the power key into the switch lock and turn clockwise to the "ON" position. All the battery display lights should be on indicating the batteries are full and ready to work.
2. **Check the Status**  
The status light should be on steadily if the electric and driving systems are OK. If it flashes, check the clutch engagement first.
3. **Forward Motion**  
Start your cart stand behind the tiller and hold the "bull-horns" with two hands. Look straight ahead. Press the upward throttle lever by your two-hands four fingers slowly to start moving forward. The speed should increase as you press more.
4. **Stop Cart**  
Slowly releasing your four fingers from the throttle lever will reduce the speed and stop the cart.
5. **Emergency Stop**  
Just simply release your fingers quickly. The Cart should stop within 4.5 feet at full forward speed.

Touch the Emergency stop button to stop the Trolley.

6. **Reverse Motion**

Press the downward throttle lever by your two-hands four fingers slowly to start moving reverse.

7. **Forward Steering**

Look straight ahead. When you need to turn right, you turn the “Caster” to the left. Vice a versa for the left turn.

**Reverse Steering: The operation is the opposite as forward.**

**Move Manually (free wheeling):**

**Manual:** You push or pull the Cart by disengaging the clutch in the transaxle.

**Power:** You can push or pull the Cart by pressing the free-wheel button by your right hand finger and operating by your left hand.

**WARNING:** Before you operate, practice in a open area for at least one hour to get familiar with the Cart and gain the operation skills. The brake may not be effective when engaged on inclines greater than the grade with allowed load. Be alert!

**EMERGENCY STOP**

In case of out-of-control, turn the power off or pull safety button immediately.

**SAFETY INSTRUCTIONS**

We disclaim all responsibility for any personal injury or property damage, which may occur as a result of improper or unsafe use of its products. The following guidelines are intended to assist you in the safe operation of your cart. Should you have any questions about the correct operation of your Cart, please contact dealer.

Your cart can negotiate grass, gravel, dirt, and sand surfaces, as well as hard paved or carpeted surfaces. However, extra caution should be taken when operating your unit on uneven surfaces other than flat surfaces.

If unintended motion or brake release occurs, turn the power OFF as quickly as it is safe.

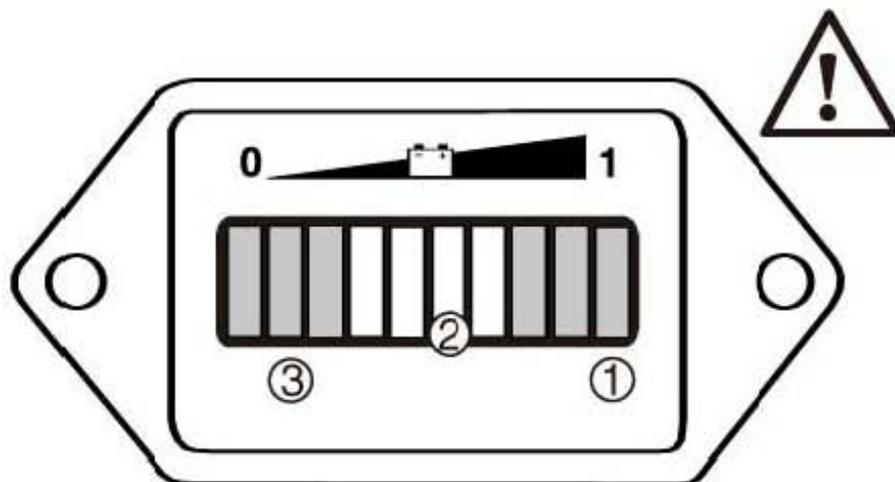
**IN SUMMARY:**

- **DO NOT** try to climb sharp curbs.
- **DO NOT** drive over obstacles exceeding 5cm in height.
- **DO NOT** make an abrupt change in high speed or while traveling on an incline.
- **DO NOT** attempt to make fast turn on flat surfaces.
- **DO NOT** climb inclines greater than 8° degrees or a rise of 2 meters in 10 meters.
- **DO NOT** back onto uneven surfaces or inclines.
- **DO NOT** attempt to operate your unit in a stalled condition, such as traveling up to steep an incline. This may cause the circuit breaker or thermal cut out to trip, rendering your unit temporarily immobile.
- **DO NOT** operate unit when the red battery indicator light is flashing.

## BATTERY CHARGING

To ensure the best performance and maximum battery life, we recommend frequent battery charging. Your Cart comes with an on-board battery charger for your ease and convenience. The console battery display makes charging simple and easy. Follow these steps for battery charging.

1. The console battery display:



- Only when the battery is properly charged is the right-most green LED lit.
  - As the battery's state-of-charge decreases, successive LEDs light up, only one on at a time.
  - The 3rd-from-left red LED flashes, indicating "energy reserve" (70% depth of discharge).
  - The 3 left-most LEDs alternately flash, indicating "empty" (80% of depth of discharge).
2. On a level dry surface, turn off the power key and plug the AC cord into the charger socket located on the fiber-glass compartment. Plug the other end of the AC cord into a grounded wall outlet.
  3. Charge the battery for 6-8 hours depending on the usage before charging. Disconnect the AC cord, insert key into tiller and check if all green lights are on.
  4. There is no possible way to overcharge the battery since the charging voltage in the floating stage is set constant. In general, you may start charging after work and disconnect it in the next morning.

**WARNING:** You must turn off power before charging. Otherwise it may damage the electric circuit.

## **MAINTENANCE SCHEDULE**

In order to obtain the best performance and last its service life, please maintain your unit according to the following schedule and instructions.

### **DAILY**

1. Test brake effectiveness before you drive.
2. Recharge batteries fully every night.

### **WEEKLY**

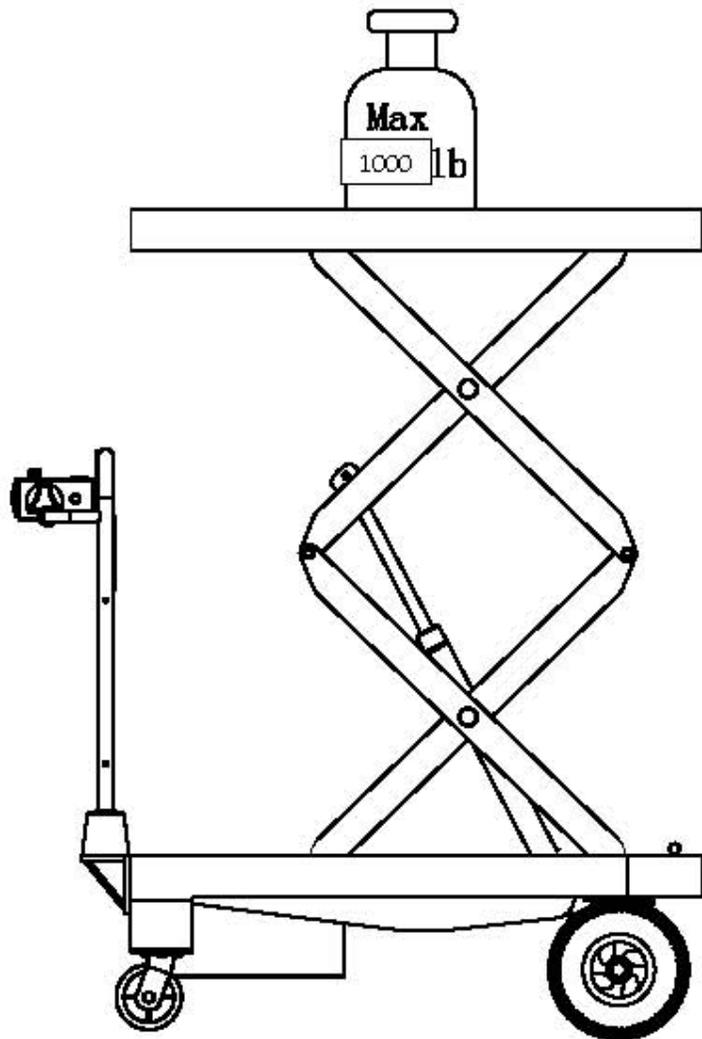
1. Check tire pressure. Pressure should be 40-50 psi.
2. Check and tighten the throttle screw.

### **MONTHLY**

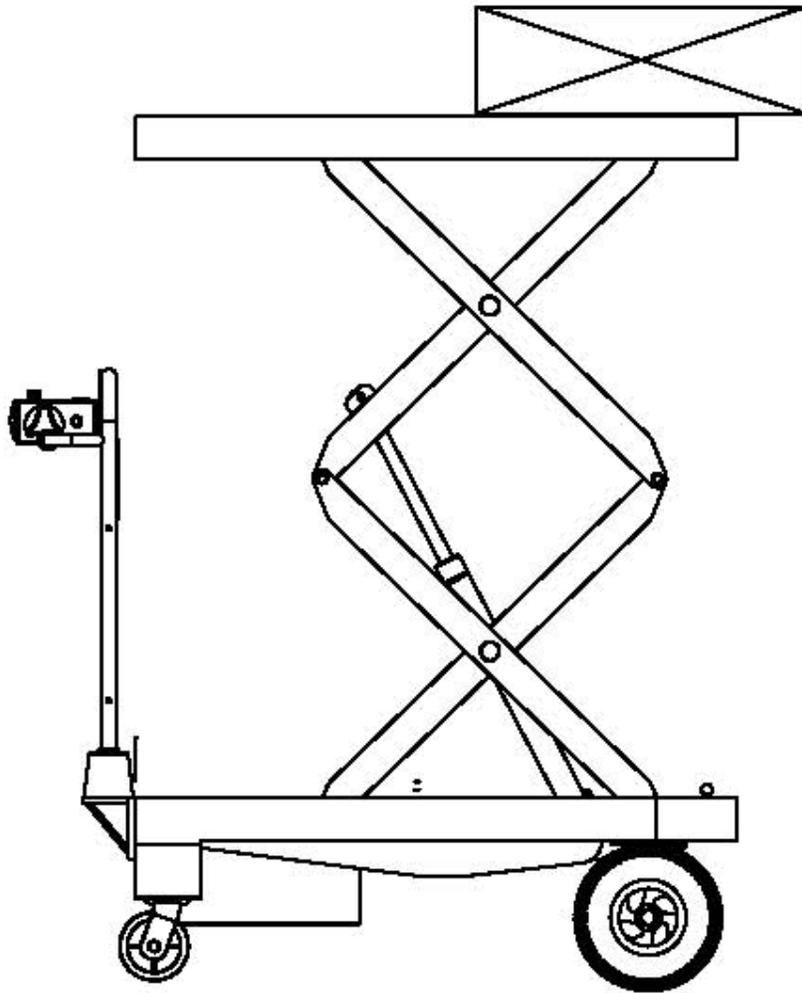
1. Check battery condition. Clean battery terminals if necessary.
2. Check all electrical wire connectors to eliminate loose connections.
3. Tighten all exposed screws and nuts.
4. Check wheel bearings by spinning tires and checking for free rotation.

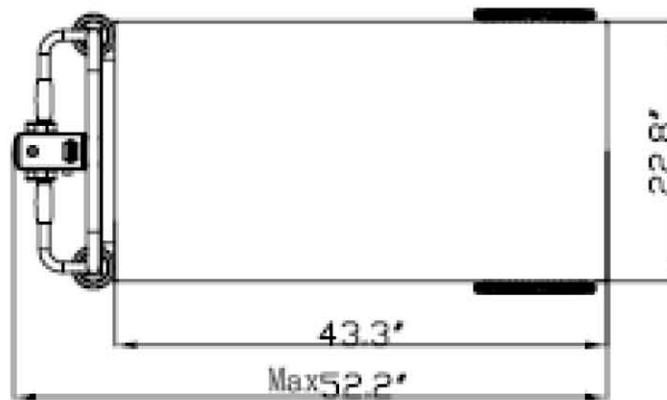
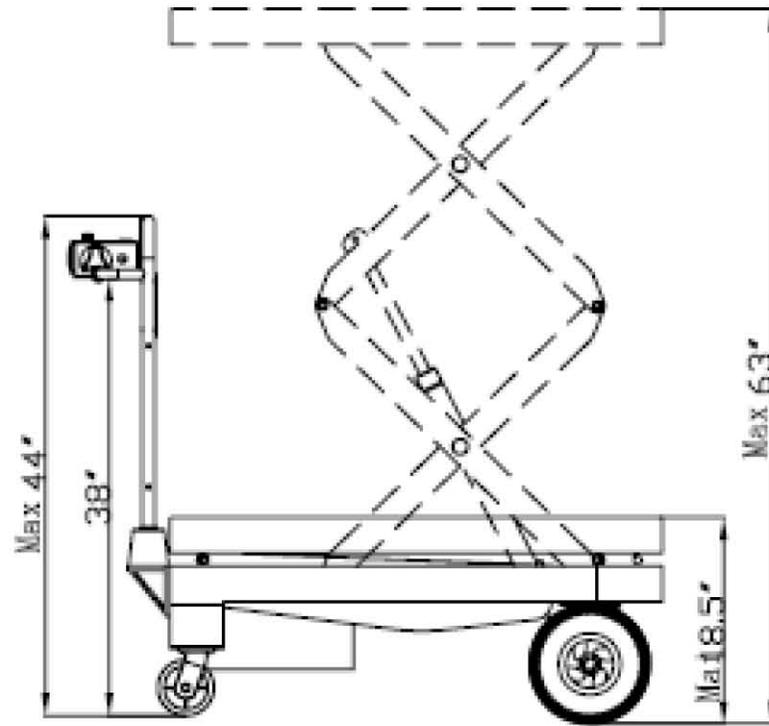
### **THROTTLE ADJUSTMENT**

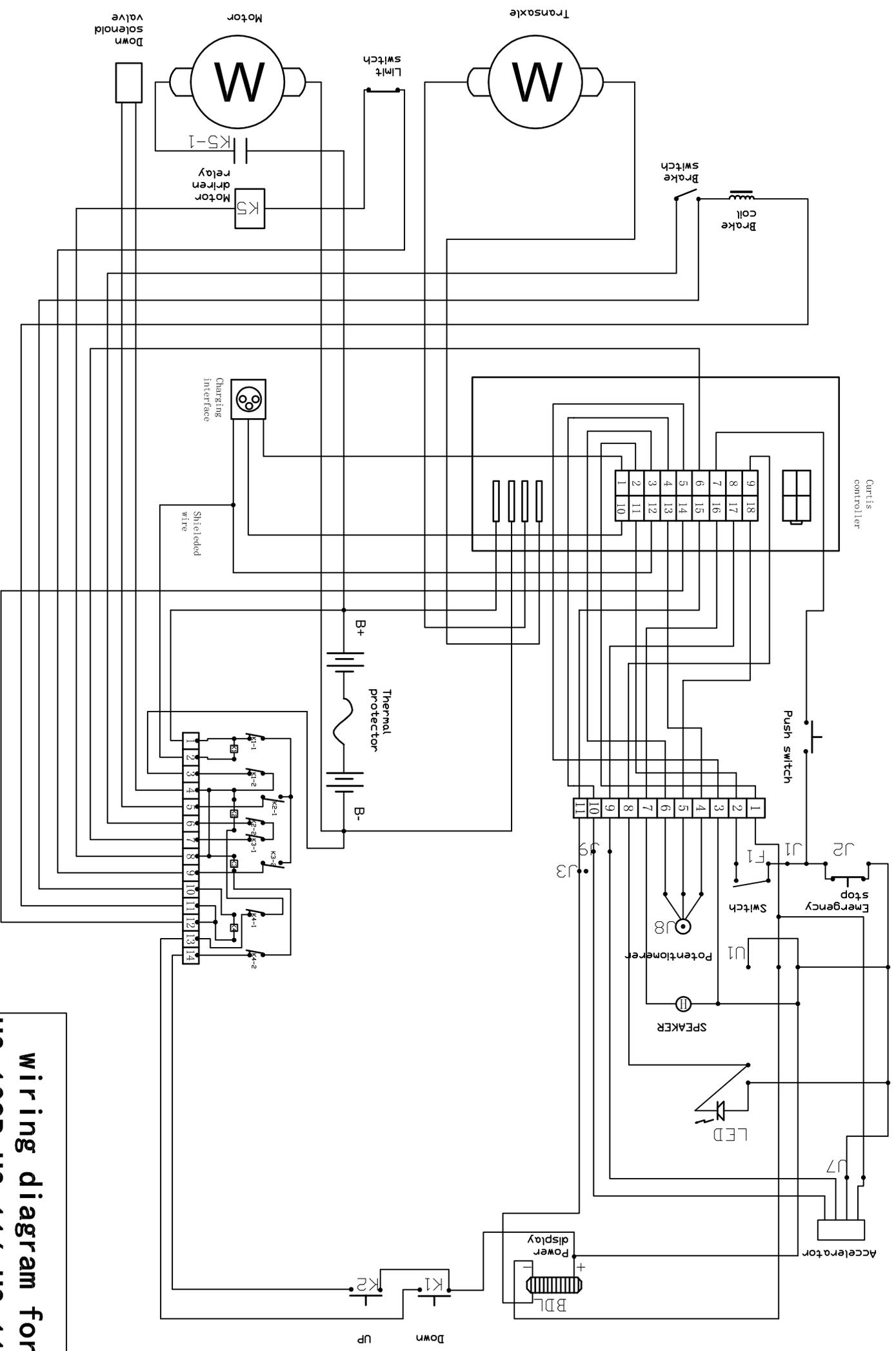
1. Release the clutch lever, thus the motor can rotate freely.
2. Note on the throttle control potentiometer, when the control lever is swinging, how the mount plate retain one end of the spring while the control bracket pulls the other end of the spring in the direction of rotating. As the lever rotates in the opposite direction, the other spring end is pulled in the opposite direction.
3. With key in and speed setting at low, rotate the throttle lever until you just hear the brake release click and motor starts running. Notice the angle rotated between the lever and the Cart horn.
4. Rotate the throttle lever in the opposite direction till just brake releases clicks, notice the angle rotated between the lever and the Cart horn in this direction.
5. If the angles are not identical, loosen control bracket screws, rotate potentiometer shaft a few degrees by using a flat screw driver and then retighten it.
6. Repeat until the reverse, neutral, and forward are in proper ranges.
7. Make sure throttle control lever is parallel to tiller handle. If the lever is not parallel, full range rotation in on direction will not be possible, resulting in loss of speed in that direction.



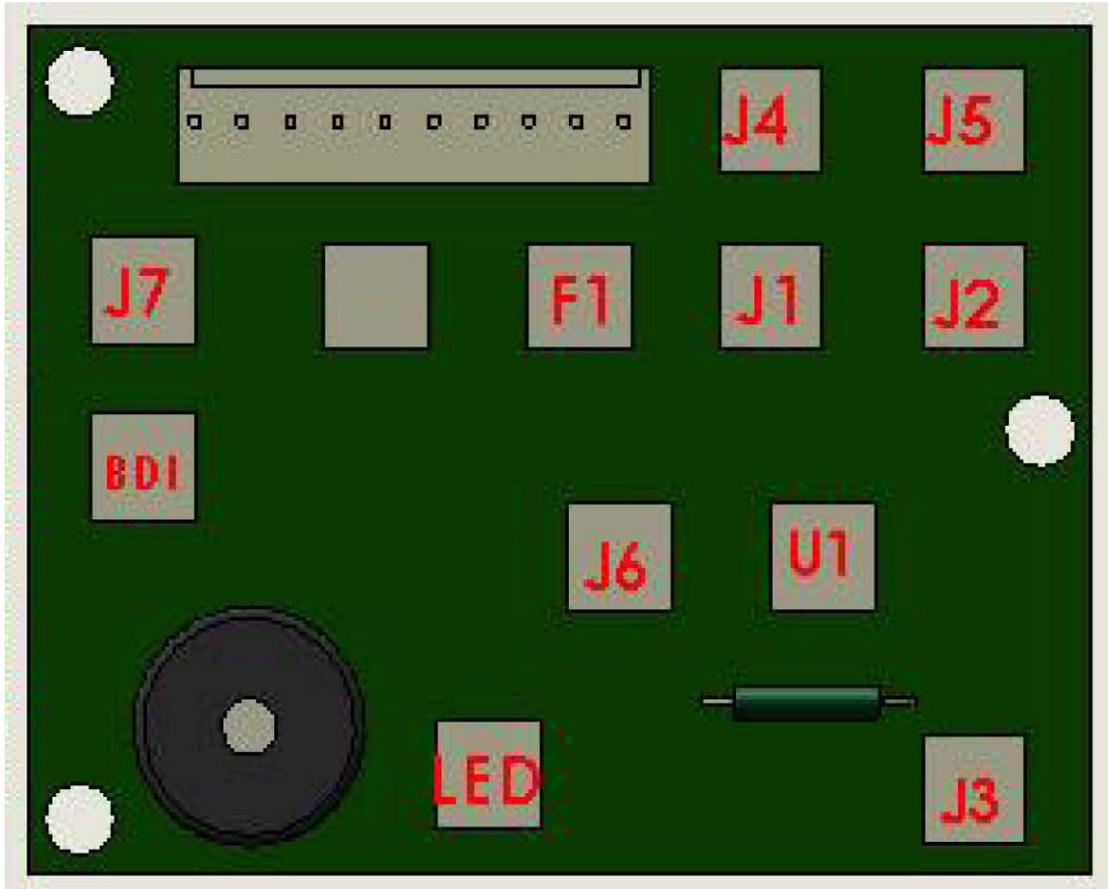
Reduces Capacity By 50%



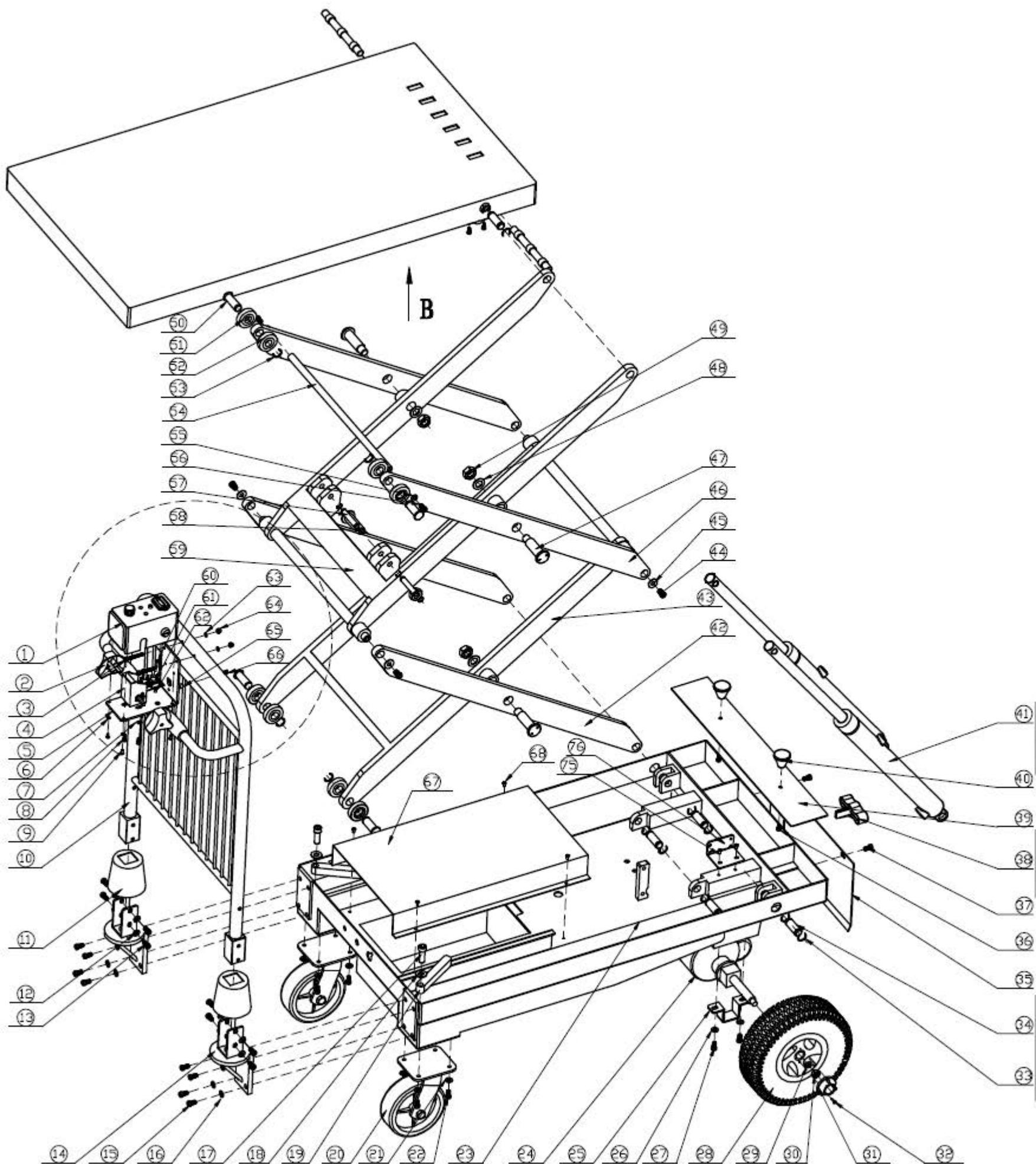


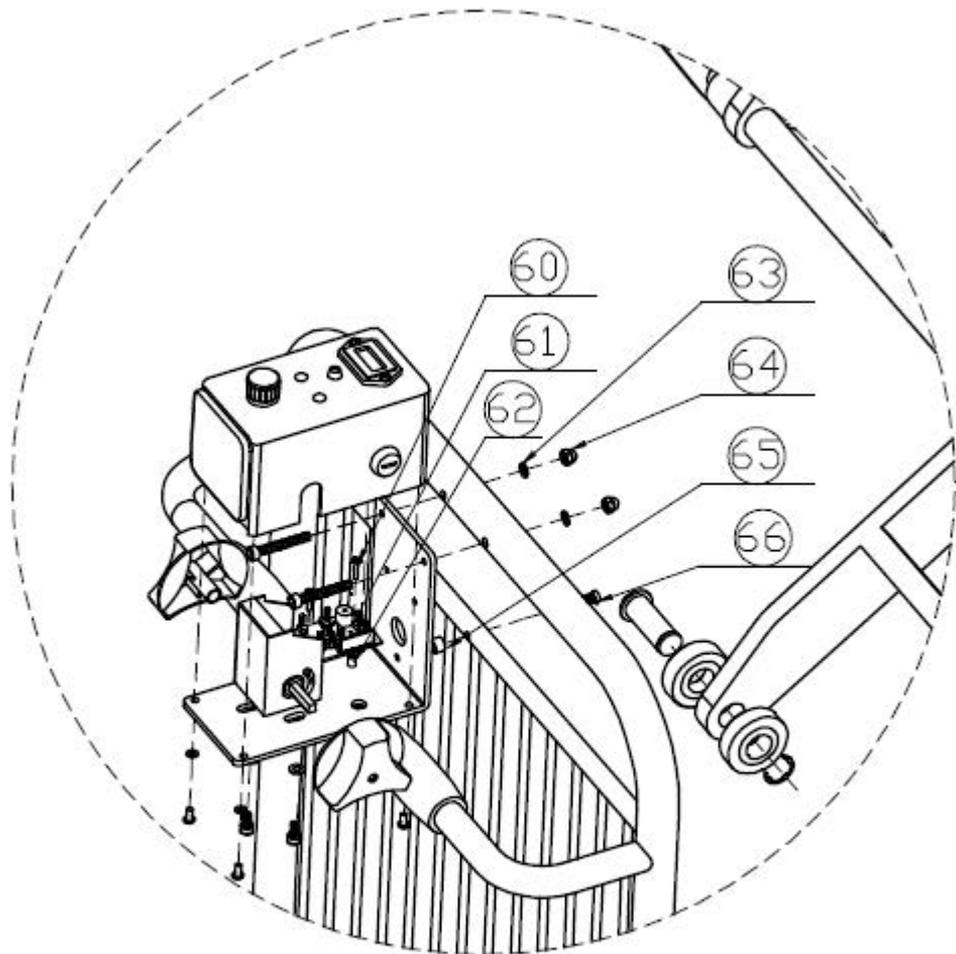


wiring diagram for  
HG-109B, HG-116, HG-116B



| Item | Name                            | Item | Name                                    |
|------|---------------------------------|------|---|
| F1   | Fuse                            | J6   | Electro-Mechanical Disk Brake           |
| J1   | Key Switch                      | J7   | Accelerator Throttle (Black White Line) |
| J2   | Emergency Stop                  | BDI  | Battery Fuel Gauge (0-5V)               |
| J3   | Power Accelerator (Orange Line) | LED  | Failure Indicator Light                 |
| J4   | Horn Switch                     | U1   | Battery Fuel Gauge (DC24V)              |
| J5   | Horn                            |      |   |





2 : 1

| Item | Description                           | Qty | Item | Description                        | Qty |
|------|---------------------------------------|-----|------|------------------------------------|-----|
| 1    | Box                                   | 1   | 39   | charger cap                        | 1   |
| 2    | Button                                | 2   | 40   | charger handle                     | 2   |
| 3    | M6x38 Hexagon screw                   | 2   | 41   | cylinder                           | 2   |
| 4    | throttle                              | 1   | 42   | Lower support piece                | 2   |
| 5    | mount                                 | 1   | 43   | Under the scissors inside the fork | 1   |
| 6    | Φ4 Flat gasket                        | 4   | 44   | M10x14 Hexagon screw               | 4   |
| 7    | Φ5 Flat gasket                        | 2   | 45   | Φ10 Flat gasket                    | 4   |
| 8    | M5x10 Hexagon screw                   | 2   | 46   | upper support piece                | 2   |
| 9    | Half Cross head screw M4x10           | 4   | 47   | Center short-axis                  | 4   |
| 10   | handle                                | 1   | 48   | Φ18 Flat gasket                    | 4   |
| 11   | cover                                 | 2   | 49   | M18 Hex Nut Outer                  | 4   |
| 12   | Φ8 Flat gasket                        | 8   | 50   | short axle of pulley               | 4   |
| 13   | M8x15 Hexagon screw                   | 8   | 51   | pulley 1                           | 4   |
| 14   | handle mount                          | 2   | 52   | pulley2                            | 4   |
| 15   | M8x16 Hexagon screw                   | 8   | 53   | Φ18 outer circlip                  | 4   |
| 16   | Φ8 Flat gasket                        | 8   | 54   | long support rod                   | 1   |
| 17   | M12x40 Hexagon screw                  | 2   | 55   | Φ8 Flat Gasket                     | 2   |
| 18   | Φ12 Flat gasket                       | 2   | 56   | M8x30 Hexagon screw                | 2   |
| 19   | safety rod                            | 2   | 57   | Cylinder Pin                       | 2   |
| 20   | caster                                | 2   | 58   | Φ12 outer circlip                  | 4   |
| 21   | Φ8 Flat gasket                        | 8   | 59   | Scissors Fork                      | 1   |
| 22   | M8x20 Hexagon screw                   | 8   | 60   | Half Cross head screw M6x10        | 2   |
| 23   | chassis                               | 1   | 61   | circuit board                      | 1   |
| 24   | transaxle                             | 1   | 62   | support of circuit board           | 2   |
| 25   | tire mount                            | 2   | 63   | Φ6 Flat gasket                     | 2   |
| 26   | Φ8 Flat gasket                        | 4   | 64   | M6 cap-type nut                    | 2   |
| 27   | M8x20 Hexagon screw                   | 4   | 65   | Aluminum sleeve                    | 1   |
| 28   | front tire                            | 2   | 66   | Half Cross head screw M4x35        | 1   |
| 29   | Φ10 Flat gasket                       | 2   | 67   | battery cap                        | 1   |
| 30   | M10 Locknut                           | 2   | 68   | Half Cross head screw M4x8         | 4   |
| 31   | cover of front tire                   | 2   | 69   | upper cap                          | 1   |
| 32   | Half Cross head screw M3x10           | 4   | 70   | axle of upper cap                  | 2   |
| 33   | Φ18 outer circlip                     | 12  | 71   | M6x16 Hexagon screw                | 8   |
| 34   | Upper & lower fork Fixed Pin Cylinder | 6   | 72   | big holder                         | 2   |
| 35   | protection board of transaxle         | 1   | 73   | small holder                       | 1   |
| 36   | Half Cross head screw M6x10           | 2   | 74   | 6204 bearing                       | 6   |
| 37   | M8x15 Hexagon screw                   | 2   | 75   | Half Cross head screw M5x10        | 2   |
| 38   | transaxle handle                      | 1   | 76   | limit switch mount                 | 1   |



P.O. Box 349  
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Phone: 262-521-5720  
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## Quotation

www.liftproducts.com

### **MOTO CART JR POWER DRIVEN CART WARRANTY**

Lift Products, Incorporated warrant this product against defects in manufacturing, materials, or workmanship for a period of twelve (12) months from the date of consumer purchase, covering parts only. Defective parts will be repaired or replaced with new or reconditioned parts at the company's option. **A dated sales receipt is required for warranty parts.** Exclusion and exceptions as listed below. This entire warranty is limited to the original consumer only and is not transferable.

#### **Lift Products Drive System:**

\*The Moto-Cart System (consisting of the motor and transaxle only) carrier a twelve (12) month pro-rated warranty from the date of consumer purchase.

#### **Batteries and Charging System:**

\*Lift Products supplied batteries carry a six (6) month warranty from the date of original shipment. The battery charger is also covered under warranty for six (6) months

\*Battery charger is not covered by this warranty if factory supplied and installed batteries are not used.

#### **Item and Services Not Covered by this Warranty:**

\*Labor, service calls transportation to or from the service center or dealer, or other charges imposed by the dealer or service center to make the repairs on the product.

\*Defects caused by unauthorized work performed on the product.

\*Part failure resulting from failure to maintain the product as a specified in the owner's manual.

\*Product or part failure caused by unauthorized modification of the product.

Unauthorized modification of this product voids this entire warranty.

\*Any part, accessory, or modification-authorized or not, placed on the product which is not manufactured, supplied, or installed by Lift Products Incorporated.

\*Tires, tubes, wheels, casters, drive chains, drive belts, motor brushes, bulbs, fused, and other normal wear items are not covered by this warranty.

\*Shipping damage is not covered by this warranty. Please contact the freight carrier for information on how to file a freight claim.

\*Any warranty or claim made by the dealer or agent contrary to, or in addition to, this warranty.

#### **To exercise this limited warranty, the consumer must proceed as follows:**

\* Return the product to the dealer for the warranty work. Lift Products will repair or replace the defective part(s)(at the company's option) if the defect is a result of manufacturing, materials, or workmanship during warranty period.

\*If the dealer is unable to perform the warranty repair or is unable to provide warranty service, the dealer may return the product, freight prepaid, to the factory. The dealer will be billed normal factory labor charges.

#### **Warranty Limitations and Exclusions:**

To the maximum extent permitted by the applicable law, this limited warranty excludes any claim for incidental or consequential damages and is in lieu of any implied or other warranties. Lift Products, Inc. reserves that right to make changes to this warranty at any time without notice.

**Consumer Name:** \_\_\_\_\_ **Purchased From:** \_\_\_\_\_

**Model Number:** \_\_\_\_\_ **Date of Purchase:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_