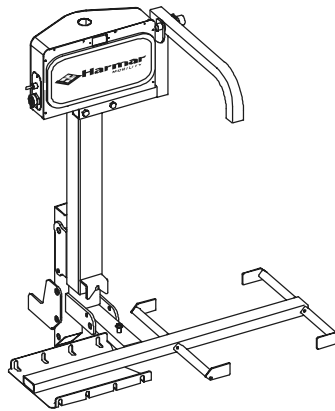
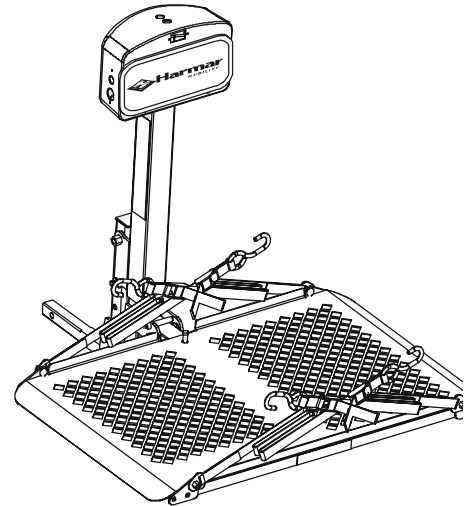


AL010 Micro Scooter Lift



AL030 Power Tote for
Manual Wheelchairs



AL050 Micro Power Chair Lift



Read manual thoroughly before attempting to install or operate lift.

This manual has been provided to assist you with lift installation and operation. For further assistance please contact your authorized Harmar Mobility dealer or Harmar's Technical Services department.

Tel: 800.833.0478

Fax: 866.234.0478

Email: tech@harmar.com

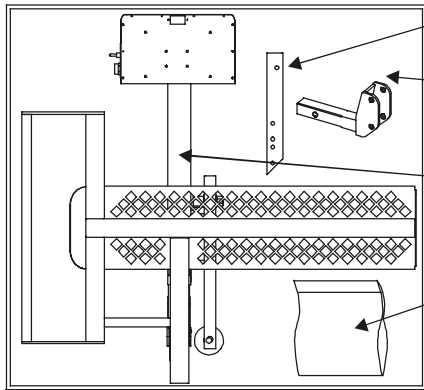
Dealer:

Serial Number:

Unpackaging the Lift

Check the contents of the box against the package check list to be sure that all parts are included with the lift that are required for proper installation. If any parts are missing or if any damage is noted, immediately contact your Harmar Dealer. DO NOT attempt to install or use the lift with any missing or damaged parts.

AL010 - Micro Scooter Lift



HITCH POST

CLASS 2 Hitch Adapter

LIFT BODY

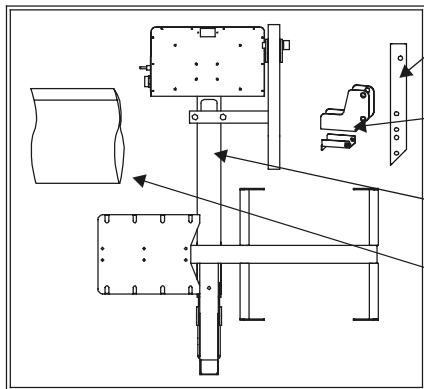
HARDWARE PACK

OR

OPTIONAL CLASS 3



AL030 - Manual Wheelchair Lift



HITCH POST

HITCH ADAPTER and Stabilizer

LIFT BODY

HARDWARE PACK

OR

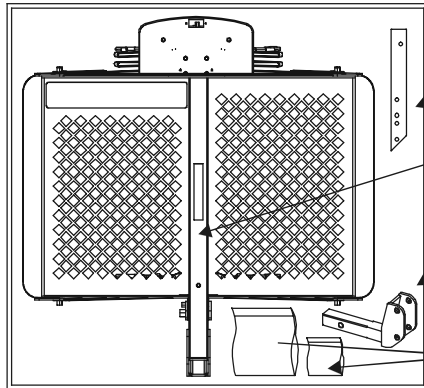
OPTIONAL CLASS 2

OPTIONAL CLASS 3

OR



AL050 - Micro Power Chair Lift



HITCH POST

LIFT BODY

CLASS 2 Hitch Adapter

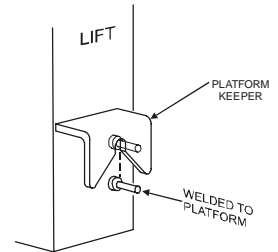
HARDWARE PACK

OR

OPTIONAL CLASS 3

U-Bolt
HARDWARE PACK

NOTE: The Platform will not be allowed to unfold until the platform has been lowered at least 1 inch.



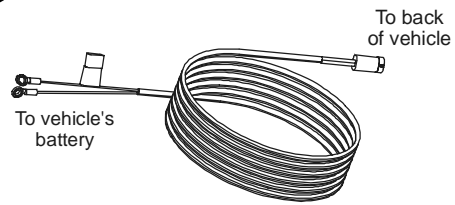
Models AL010 and AL050 are packaged with a standard Class 2 hitch adapter. Model AL030 is packaged with a standard Class 1 flat bar style hitch adapter and stabilizer. If a different model hitch adapter or a Swing Away option is required, separate parts must be ordered.

Vehicle Wiring Instructions

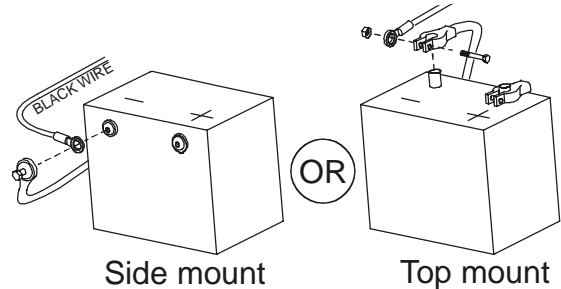


Harness requires direct connection to vehicle battery. Do not connect harness to a secondary power source.

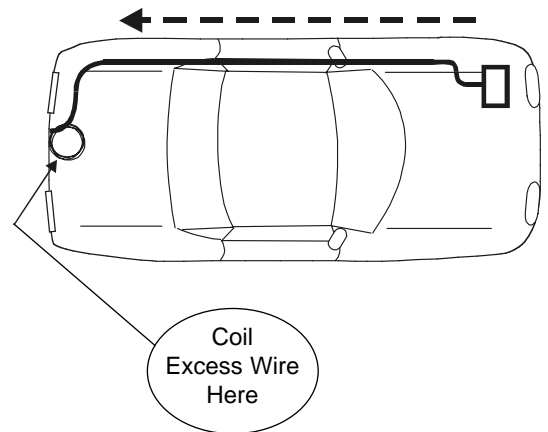
Unwind the harness and lay it flat on the ground. One end of the harness has a black plug; this runs to the back of the vehicle.



BEGIN ROUTING THE HARNESS AT THE VEHICLE BATTERY. Connect the black wire to the negative terminal of the battery. Do not connect the positive terminal yet.

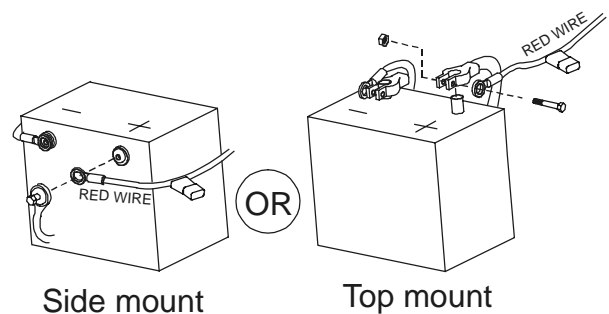


Run wiring harness under, or if possible, through the vehicle, using cable ties provided to secure the harness to the vehicle. Position the harness away from the fuel tank, exhaust system, brake and fuel lines and any possible pinch points. Harness should be positioned where it will not come in contact with any road debris.

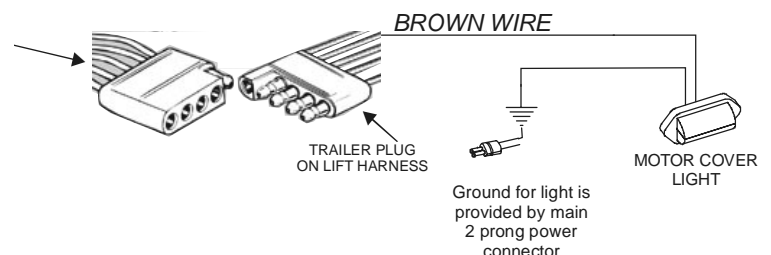


The harness may be too long for the vehicle. **DO NOT CUT OR SHORTEN THE HARNESS.** Use cable ties provided to coil excess wire and secure it to the vehicle frame. Rear plug should be secured even to the vehicle's trailer hitch.

Connect the red wire to the positive battery terminal.



Wire in a standard 4-contact female flat trailer connector to the vehicle's taillights. This will provide power for the motor cover light.

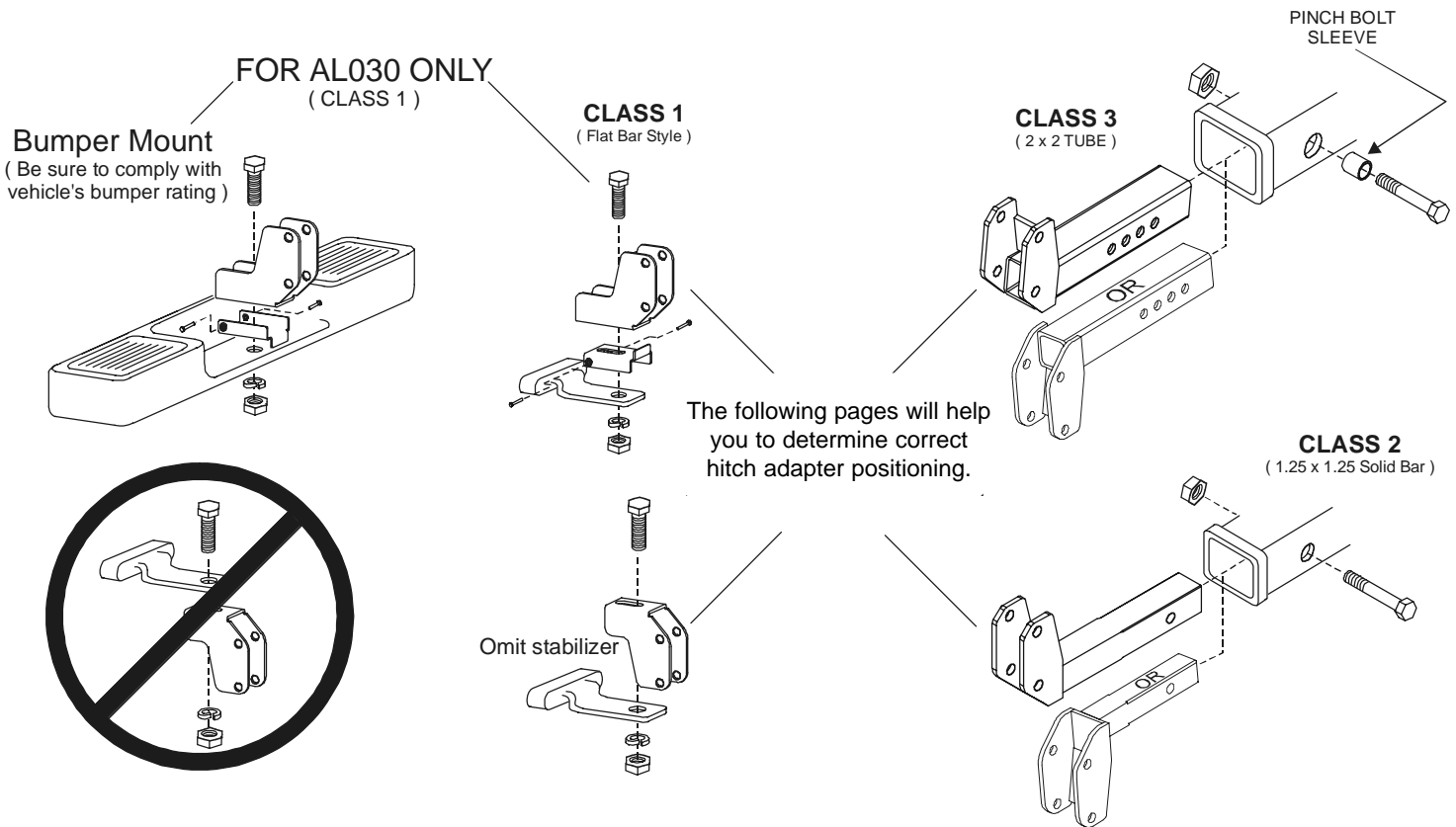


Hitch Adapters

Before installing an outside lift on your vehicle the vehicle must be equipped with the correct hitch. If you are unsure whether your vehicle has, or can accept a hitch, contact your local hitch installer or visit www.hitch-web.com for vehicle hitch compatibility information.

Please note, your lift comes equipped with a license plate hold light. To power this light vehicle must have a standard 4-contact trailer light harness. Contact your local hitch installer for more information.

Trailer light wiring is designed to power license plate light ONLY. Attempting to run your lift from ANY secondary power source may cause your lift to operate poorly and could potentially cause damage to the motor. All Harmar lifts must be wired directly to the vehicle battery.

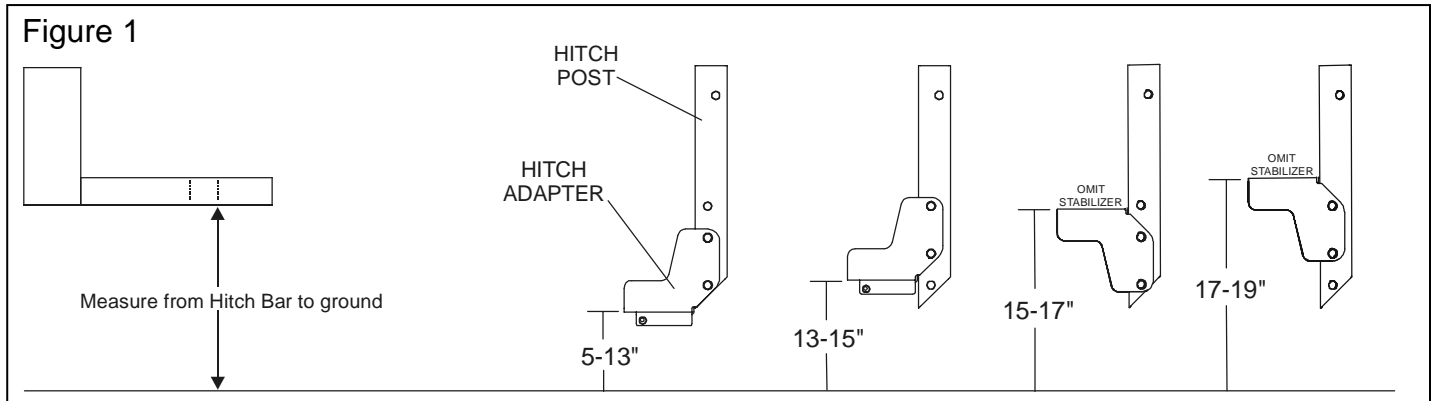


Hitch receivers **MUST** be installed so that it sits parallel to the ground. An improperly installed hitch can affect the operation of your lift. Some vehicles will require suspension to be supplemented. Contact your local hitch installer or refer to your vehicle's owners manual for further guidance.

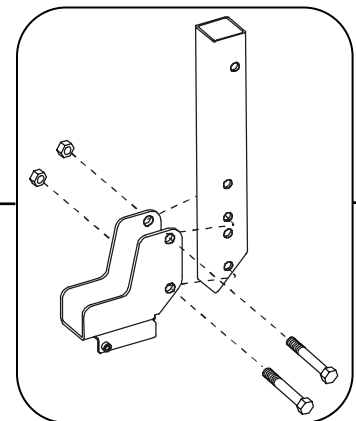
Installing the Lift

To prepare your lift for installation you must connect the lift to the Hitch Post and Hitch Adapter provided. Proper positioning is determined by the height of the vehicle hitch.

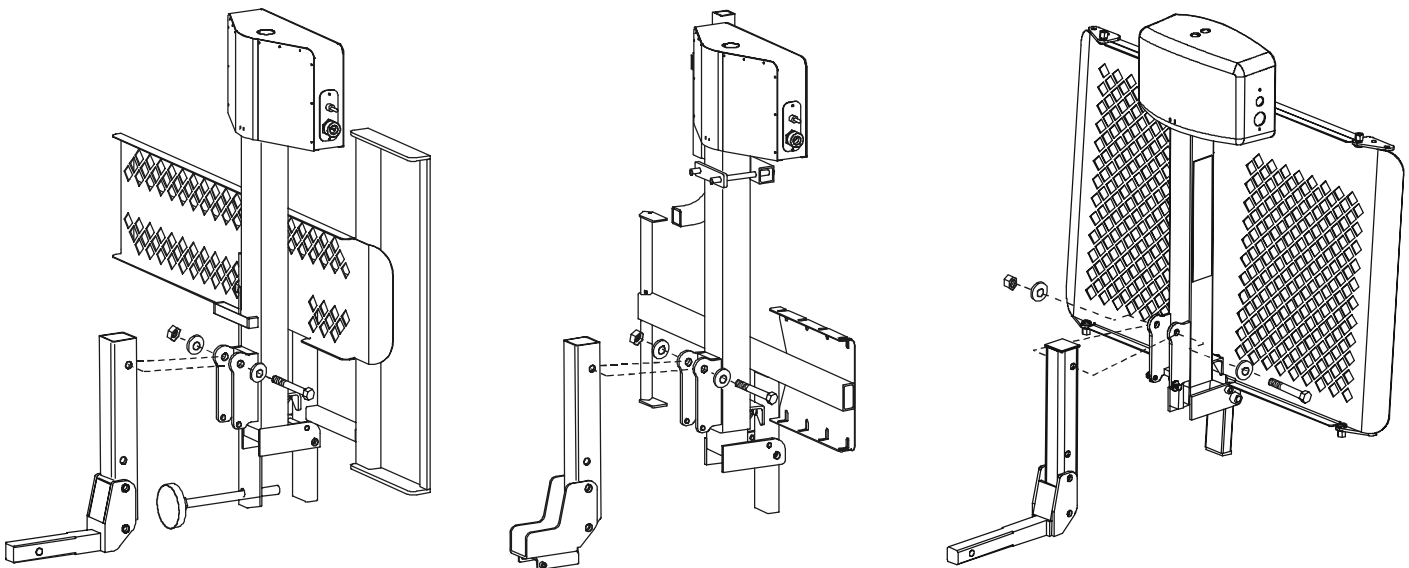
1. Measure the distance from the bottom of the hitch receiver on the vehicle to the ground.
2. Refer to Figure 1 below to determine correct placement of the hitch adapter.
3. Connect hitch post to lift.



Once you have determined correct configuration, connect the Hitch Post to the Hitch Adapter following the diagram to the right using hardware supplied ($1/2$ - $13 \times 3-1/2$ " HHCS and lock nuts).



Position the folded lift to the rear of the vehicle with the motor box folded away from the vehicle. With assistance, carefully lift the unit up to the Hitch Post and attach it using the $1/2$ " bolt, washers and lock nut provided.



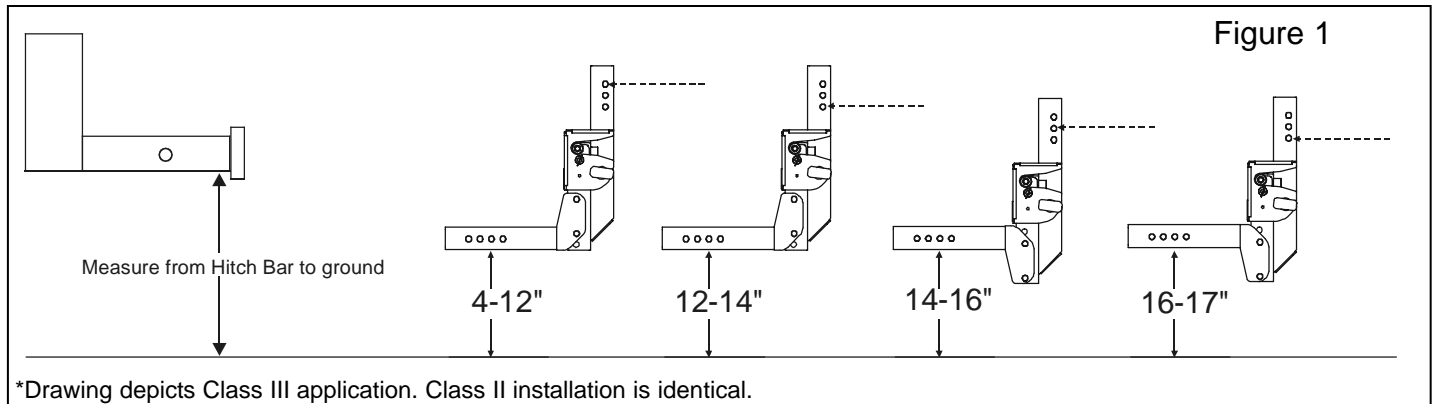
Installing the Lift With Swing Away Option



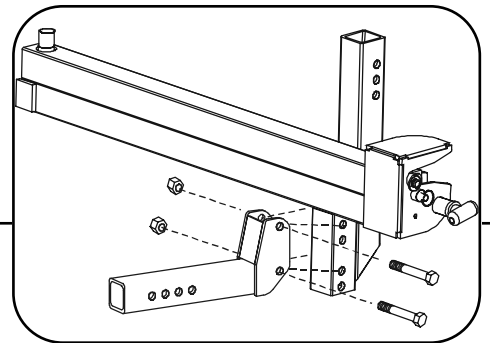
Class I Hitch Adapter may NOT be used when installing a Swing Away.

To prepare your lift for installation with a Swing Away you must connect the lift to the Swing Away and Hitch Adapter provided. Proper positioning is determined by the height of the vehicle hitch.

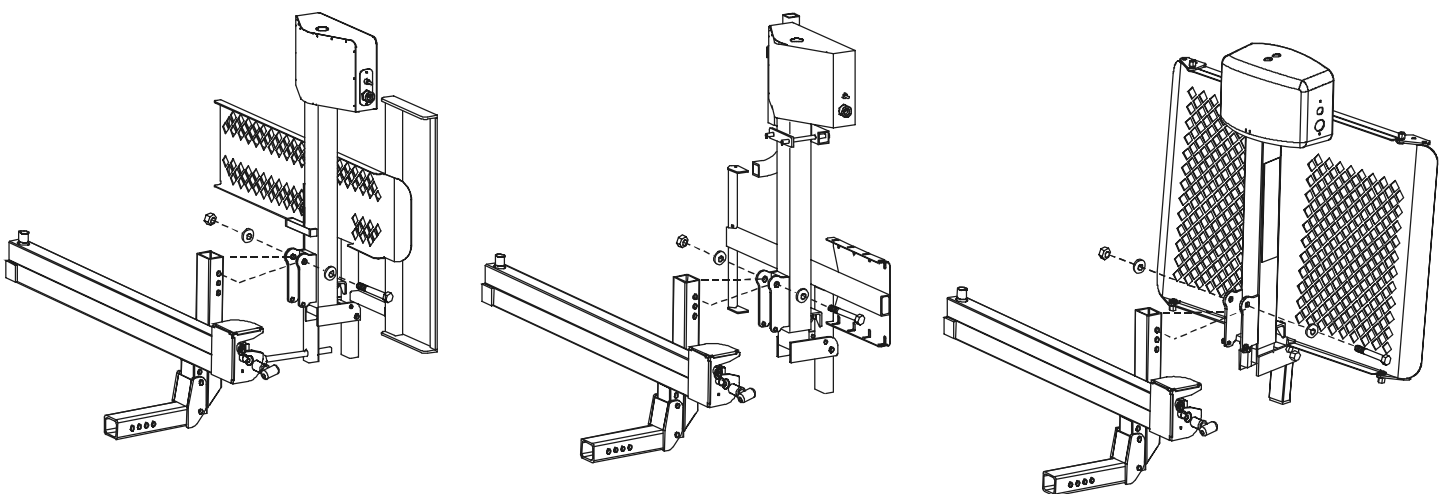
1. Measure the distance from the bottom of the hitch receiver on the vehicle to the ground.
2. Refer to Figure 1 below to determine correct placement of the hitch adapter.
3. Connect hitch post to lift.



Once you have determined correct configuration, connect the Swing Away to the Hitch Adapter following the diagram to the right using hardware supplied (1/2 - 13 x 3-1/2" HHCS and lock nuts).



Position the folded lift to the rear of the vehicle with the motor box folded away from the vehicle. With assistance, carefully lift the unit up to the Swing Away and attach it using the 1/2" bolt, washers and lock nut provided.

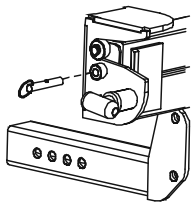


Swing Away Operation

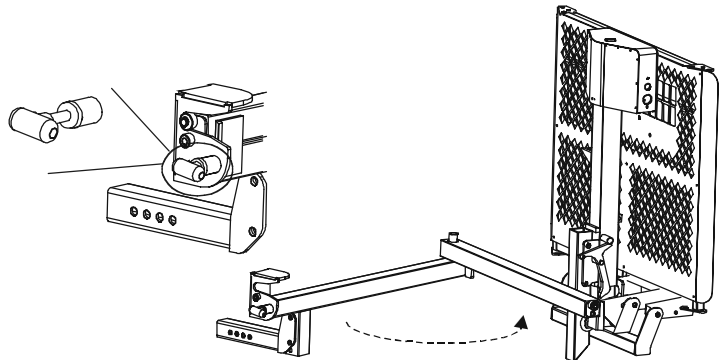
The Swing Away is an optional accessory that allows for full access to vehicle trunk, lift gate or tailgates. A swing away may be added to an existing lift at any time.

Opening the Swing Away

1. Remove the safety pin



2. Pull out on the red handle while pushing away on the lift.



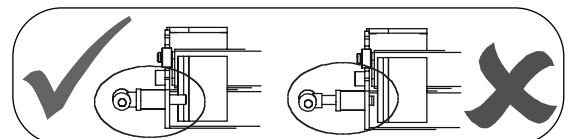
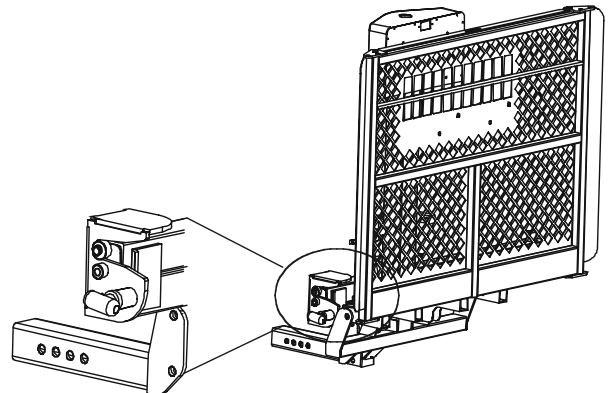
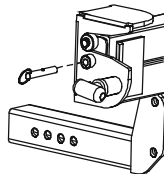
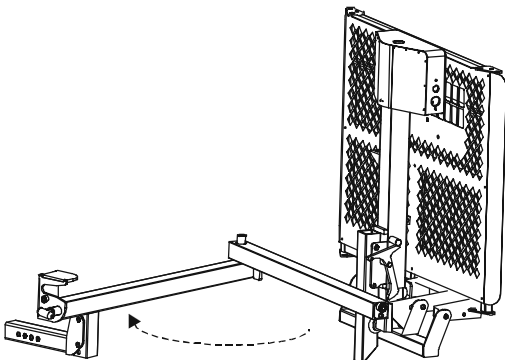
CAUTION! Never operate the swing away with a chair or scooter still on the lift. This will result in damage to the swing away, lift and potentially cause damage to the vehicle and scooter or power chair. Always ensure that vehicle is on level ground before operating swing away. Failure to do so could result in injury or damage to the lift or vehicle.

Closing the Swing Away

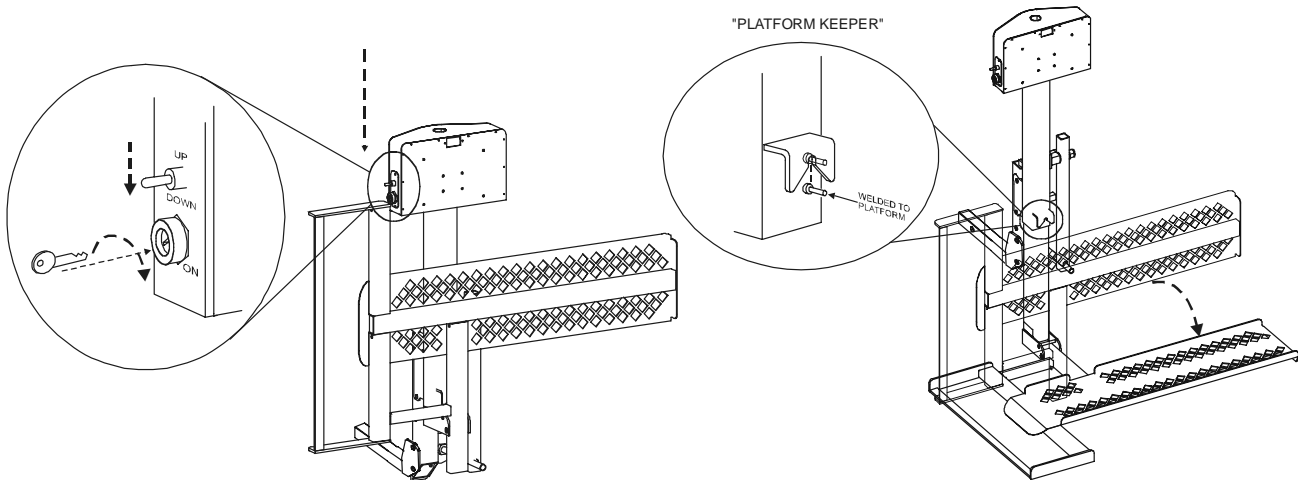
1. Close swing away as you would a vehicle door, taking care to stand clear of latching mechanism.

2. Install safety pin.

3. Verify red knob has fully retracted.

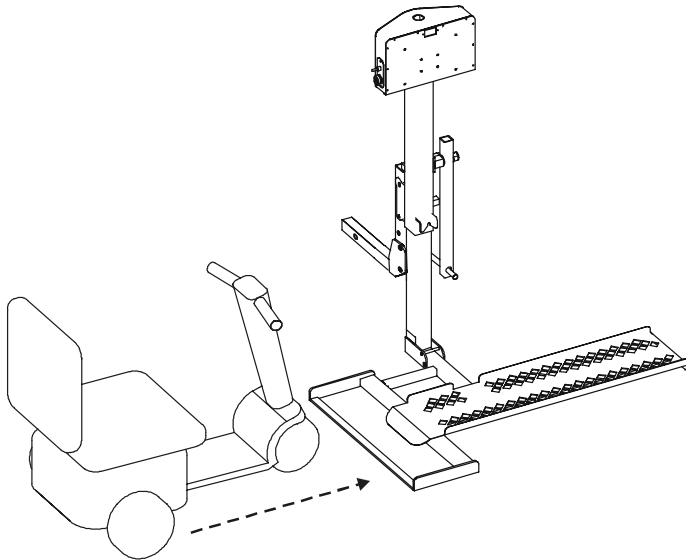


AL010 Lift Operation

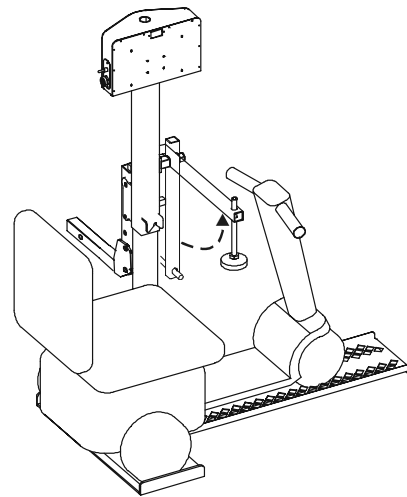


1 Insert Key and switch to "ON" position
Press down on Toggle switch momentarily.

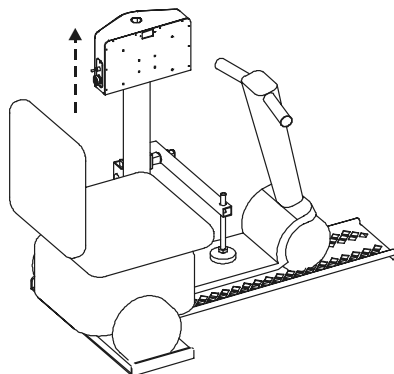
2 Once platform has been lowered at least an inch, unfold the platform. Continue lowering to the ground.



3 Drive scooter onto platform as shown.



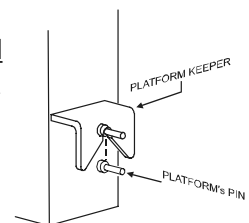
4 Raise hold down arm.



5 Raise platform until hold down foot depresses scooter's deck or until lift's motor ratchets.

To remove the scooter and prepare the lift for unloaded travel, follow above steps in reverse order and reverse the direction of the arrows.

Lift should be raised with the platform folded and until the lift's motor ratchets. Verify that the platform keeper has engaged the platform's pin.



- Keep hands feet and other objects clear of platform as it lowers to the ground.
- Always verify that scooter is securely held down to the lift before attempting to transport.
- On some scooters it may be necessary to temporarily move the steering tiller forward to clear the hold down arm as it lowers into the locked position
- Scooters equipped with pneumatic (air-inflated) tires must have properly inflated tires at all times. Improper tire inflation may change the height of the deck, thereby changing the hold-down force required.
- Use caution when driving over speed bumps, potholes, railroad tracks or other sudden road changes. Failure to drive carefully and slowly over such obstacles can result in damage to your lift, vehicle or scooter.
- Use care when entering steep driveways. Enter and exit at an angle to avoid dragging lift on the ground.
- Always confirm that lift platform has been fully raised before transporting scooter or unoccupied lift. Failure to do so can result in serious damage to you lift or vehicle.

Manual Override Feature

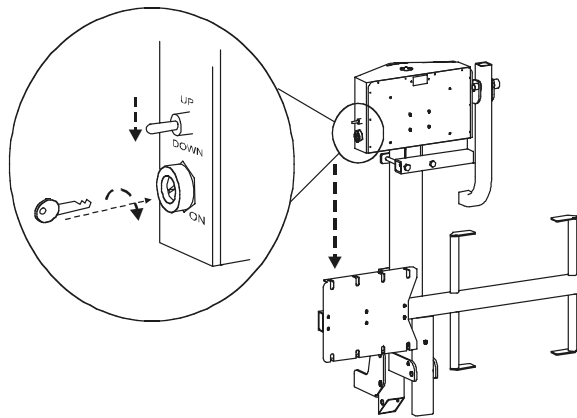
This lift is equipped with a Manual Override feature for use if the vehicle or the lift should ever lose power. Harmar recommends the manual override be used only by Harmar Mobility Authorized Dealers and qualified mechanics such as roadside assistance technicians.



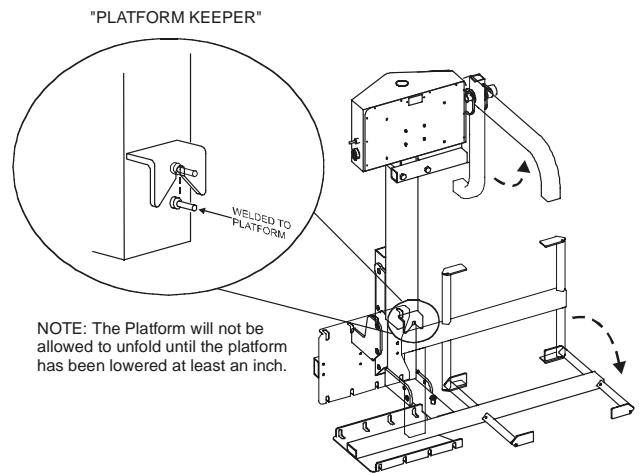
CAUTION: TO AVOID THE RISK OF SERIOUS INJURY, NEVER ATTEMPT TO OPERATE THE MANUAL OVERRIDE WHILE THE LIFT IS PLUGGED IN TO THE VEHICLE.

To ensure safety the lift must be unplugged and the key turned to the off position before manual backup is engaged. To engage manual backup remove the cap from the top of motor box cover and, using a 3/8" socket, turn the wrench clockwise to raise the lift or counter clockwise to lower the lift.

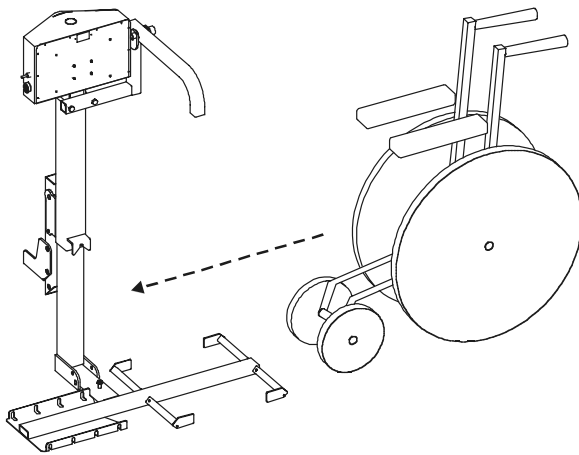
AL030 Lift Operation



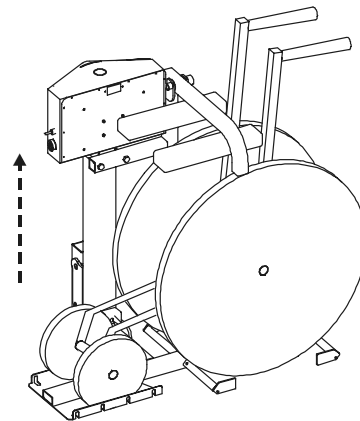
- 1 Insert Key and switch to "ON" position
Press down on Toggle switch momentarily.



- 2 Once platform has been lowered at least an inch, unfold the platform. Continue lowering to the ground. Raise hold down arm.



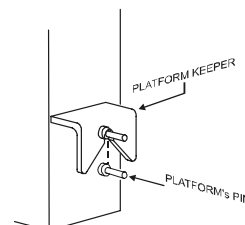
- 3 Roll folded chair onto platform as shown.



- 4 Raise the lift until hold down arm has contacted wheelchair's arm rests.
Remove key if desired.

To remove the chair and prepare the lift for unloaded travel, follow above steps in reverse order and reverse the direction of the arrows.

Lift should be raised with the platform folded and until the lift's motor ratchets. Verify that the platform keeper has engaged the platform's pin.



AL030 Safety and Maintenance

- Keep hands feet and other objects clear of platform as it lowers to the ground.
- Always verify that wheelchair is securely held down to the lift before attempting to transport.
- Wheelchairs equipped with pneumatic (air-inflated) tires must have properly inflated tires at all times. Improper tire inflation may change the hold-down force required.
- Use caution when driving over speed bumps, potholes, railroad tracks or other sudden road changes. Failure to drive carefully and slowly over such obstacles can result in damage to your lift, vehicle or chair.
- Use care when entering steep driveways. Enter and exit at an angle to avoid dragging lift on the ground.
- Always confirm that lift platform has been fully raised before transporting wheelchair or unoccupied lift. Failure to do so can result in serious damage to you lift or vehicle.

Manual Override Feature

This lift is equipped with a Manual Override feature for use if the vehicle or the lift should ever lose power. Harmar recommends the manual override be used only by Harmar Mobility Authorized Dealers and qualified mechanics such as roadside assistance technicians.



CAUTION: TO AVOID THE RISK OF SERIOUS INJURY, NEVER ATTEMPT TO OPERATE THE MANUAL OVERRIDE WHILE THE LIFT IS PLUGGED IN TO THE VEHICLE.

To ensure safety the lift must be unplugged and the key turned to the off position before manual backup is engaged. To engage manual backup remove the cap from the top of motor box cover and, using a 3/8" socket, turn the wrench clockwise to raise the lift or counter clockwise to lower the lift.

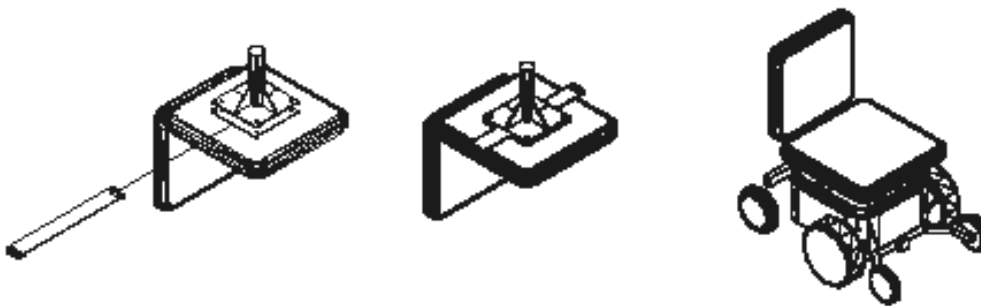
AL050 Power Chair Preperation

There are 2 options on how to attach the strap hooks to the chair that are included with the lift.

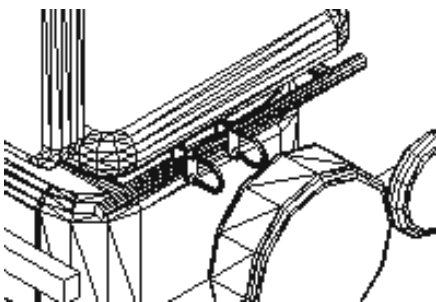
Anchor Plate: The Anchor Plate is a bar that is 20" long and 2 1/2" wide with 2 holes in each end. This plate will work with any chair that has a center seat post that attaches to the bottom of the seat. Attach the Anchor Plate by the following steps.

1. Remove the seat from the chair and turn it over.
2. Loosen the screws that attach the plate to the bottom of the seat. Allow enough room to slide the Anchor Plate between the seat and the seat plate.
3. Attach the Anchor Plate in the center of the seat plate with the holes on each end extending evenly on each side of the seat.
4. Retighten the screws that hold the seat plate to the bottom of the seat.
5. Replace the seat on the chair.

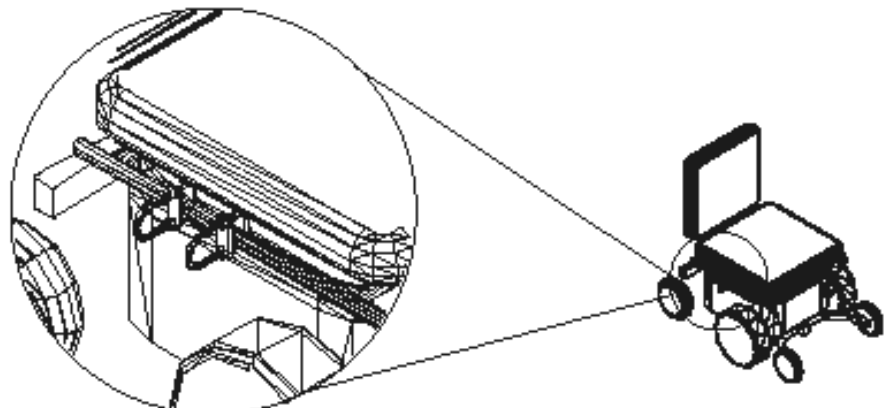
The Anchor Plate should extend about 1-1/2" out from the side of the seat cushion. This will allow the user to attach the strap hooks to the Anchor Plate to secure the chair to the lift.



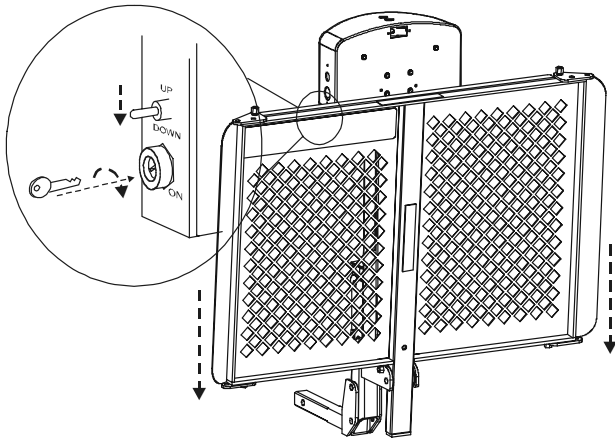
Anchor U-Bolts: The U-Bolts are included to be used with Power Chairs that do not have a center seat post. On this type of chair, the seat is normally attached to a tubular frame. Attach the U-Bolts, one on each side, to the frame as shown below. Make sure that the loop extends to the outside of the chair to allow the strap hooks to be attached by the end user.



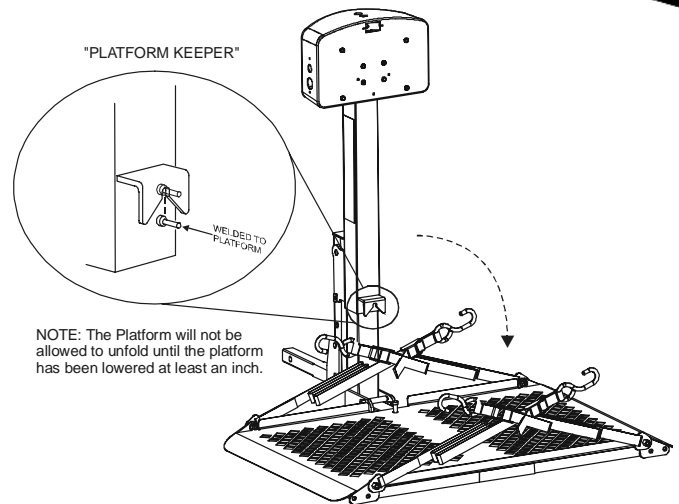
Each type of chair will differ slightly and the placement of the U-bolts will differ between different models and manufacturers. Place the Anchor U-Bolts towards the center of the seat if possible. Because of the different types of seats, you may be forced to attach the Anchor U-Bolts more towards the front or rear of the seat, but we recommend attachment as close as possible to the center of the seat



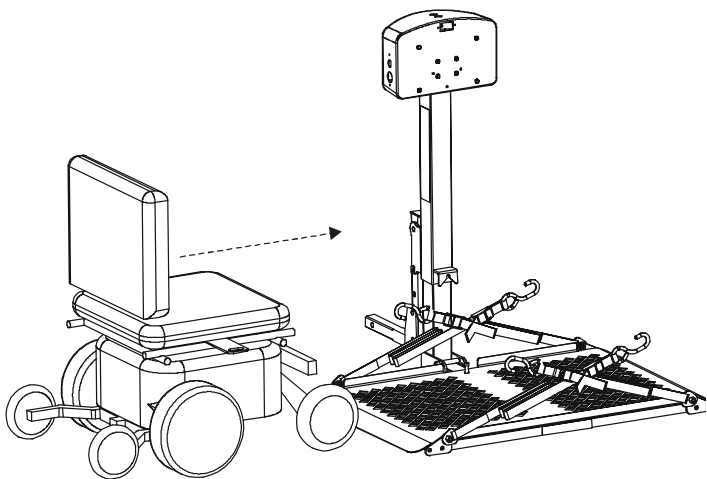
AL050 Lift Operation



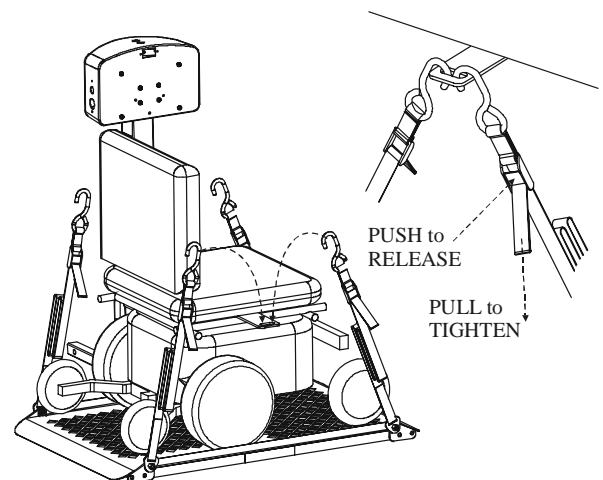
- 1 Insert Key and switch to "ON" position
Press down on Toggle switch momentarily.



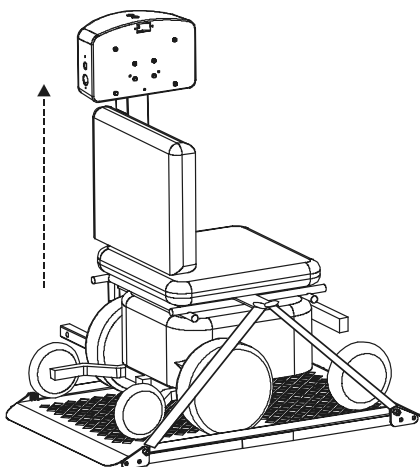
- 2 Once platform has been lowered at least an inch, unfold the platform. Continue lowering to the ground.



- 3 Drive chair onto platform as shown.



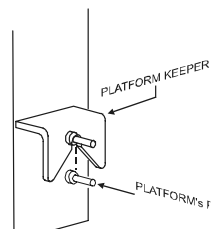
- 4 Strap the chair down using the 4 straps located on each corner of the platform.



- 5 Raise platform with toggle switch, until motor's ratchet sound is heard.

To remove the chair and prepare the lift for unloaded travel, follow above steps in reverse order and reverse the direction of the arrows.

Lift should be raised with the platform folded and until the lift's motor ratchets. Verify that the platform keeper has engaged the platform's pin.



AL050 Safety and Maintenance

- Keep hands feet and other objects clear of platform as it lowers to the ground.
- Always verify that power chair is securely held down to the lift before attempting to transport.
- Use caution when driving over speed bumps, potholes, railroad tracks or other sudden road changes. Failure to drive carefully and slowly over such obstacles can result in damage to your lift, vehicle or chair.
- Use care when entering steep driveways. Enter and exit at an angle to avoid dragging lift on the ground.
- Always confirm that lift platform has been fully raised before transporting power chair or unoccupied lift. Failure to do so can result in serious damage to you lift or vehicle.

Manual Override Feature

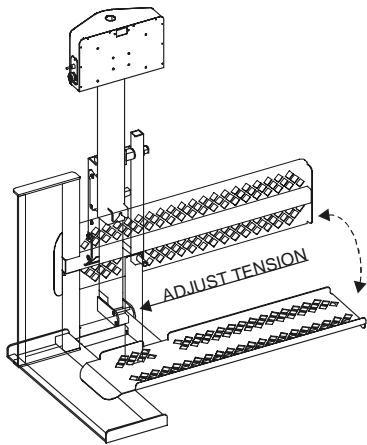
This lift is equipped with a Manual Override feature for use if the vehicle or the lift should ever lose power. Harmar recommends the manual override be used only by Harmar Mobility Authorized Dealers and qualified mechanics such as roadside assistance technicians.



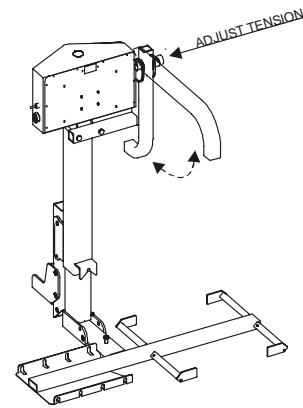
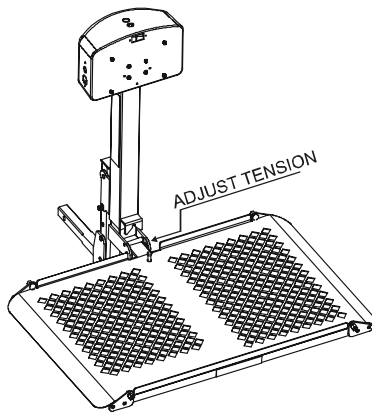
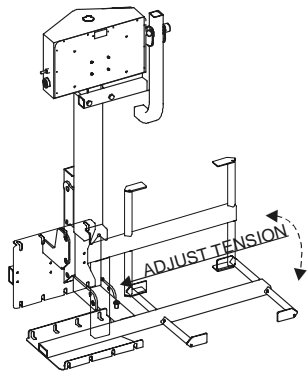
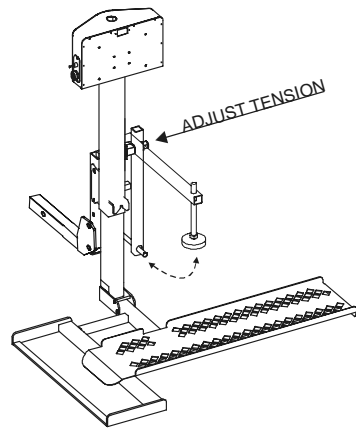
CAUTION: TO AVOID THE RISK OF SERIOUS INJURY, NEVER ATTEMPT TO OPERATE THE MANUAL OVERRIDE WHILE THE LIFT IS PLUGGED IN TO THE VEHICLE.

To ensure safety the lift must be unplugged and the key turned to the off position before manual backup is engaged. To engage manual backup remove the cap from the top of motor box cover and, using a 3/8" socket, turn the wrench clockwise to raise the lift or counter clockwise to lower the lift.

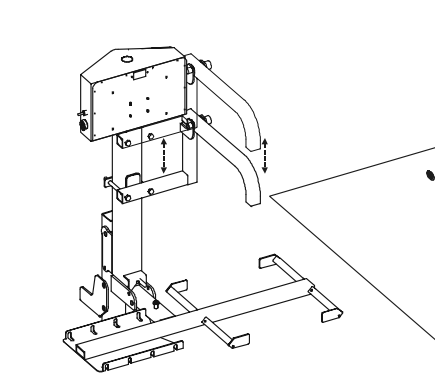
AL010, AL030 and AL050 Lift Adjustments



The hinge points are equipped with tensioning washers. The amount of force required to move these parts is determined by the tension of these washers. To adjust, simply loosen or tighten the bolt and nut located by arrows. **The tension is set at the factory and should need no adjustment. This is noted for reference only.**



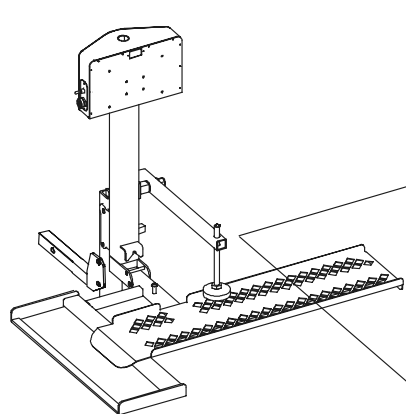
AL010 and AL030 HOLD DOWN ARM ADJUSTMENT



Loosen nuts here

- Slide arm up or down tube
- Tighten after adjustment

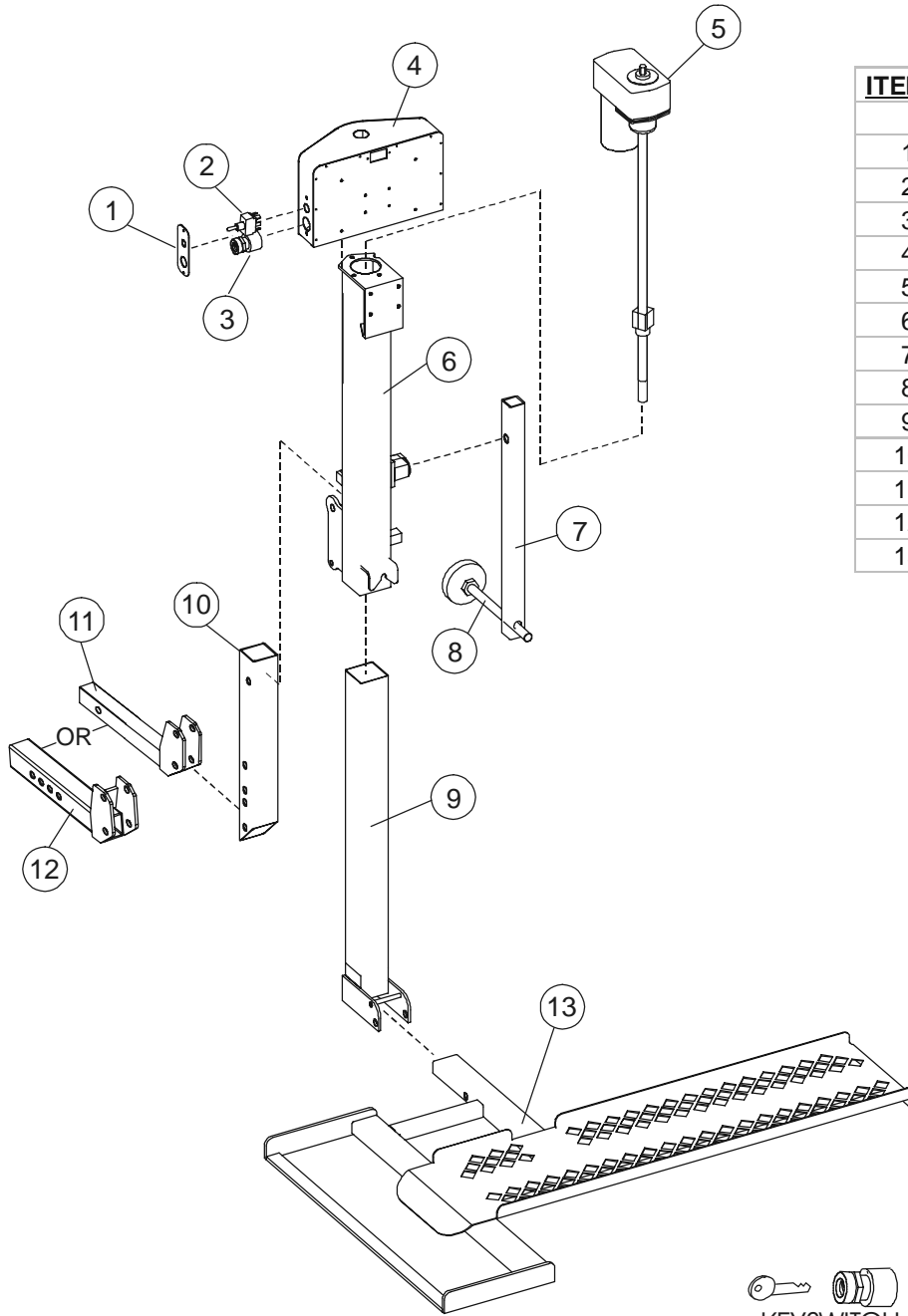
LIFT SHOULD HOLD WHEELCHAIR FIRMLY WITH THE PLATFORM FULLY RAISED (RAISED UNTIL MOTOR RATCHETING IS HEARD)



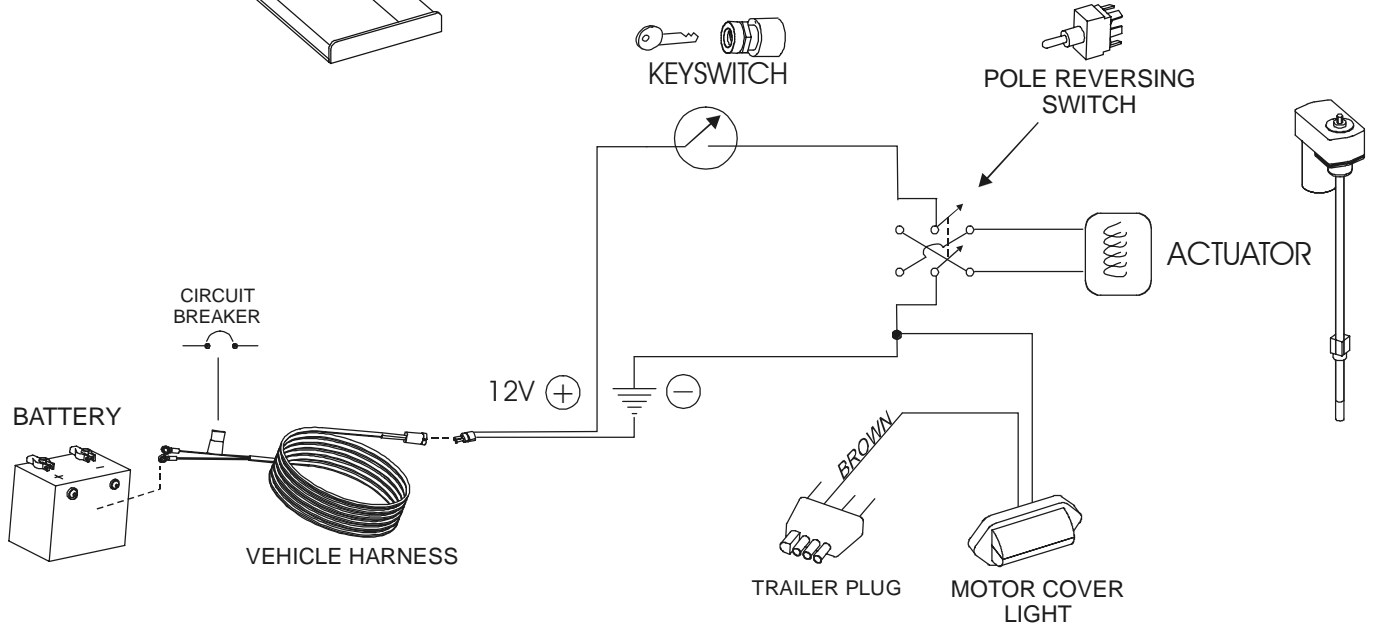
- Loosen top nut and bottom nut
- Turn threaded rod to lengthen or shorten foot
- Tighten both nuts

LIFT SHOULD HOLD SCOOTER FIRMLY WITH THE PLATFORM FULLY RAISED (RAISED UNTIL MOTOR RATCHETING IS HEARD)

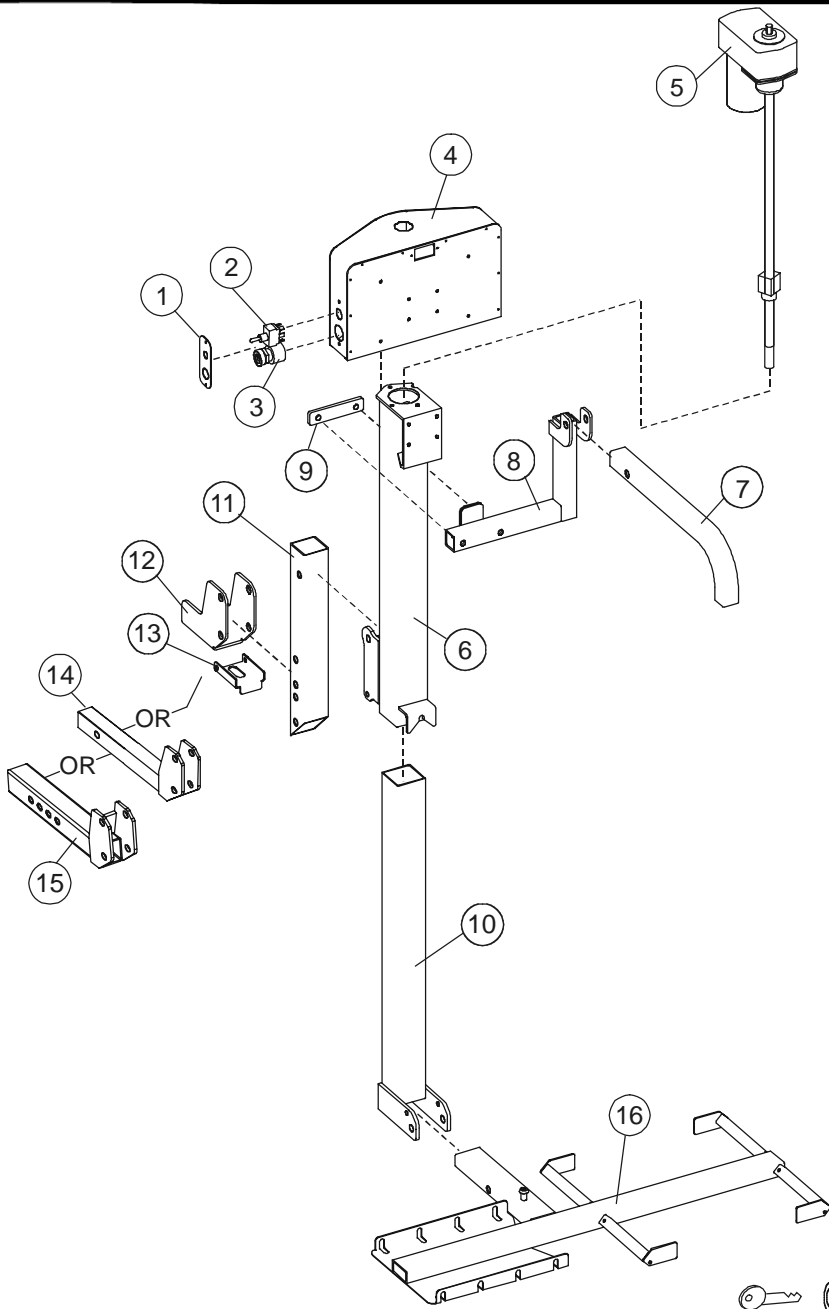
AL010 Micro MP



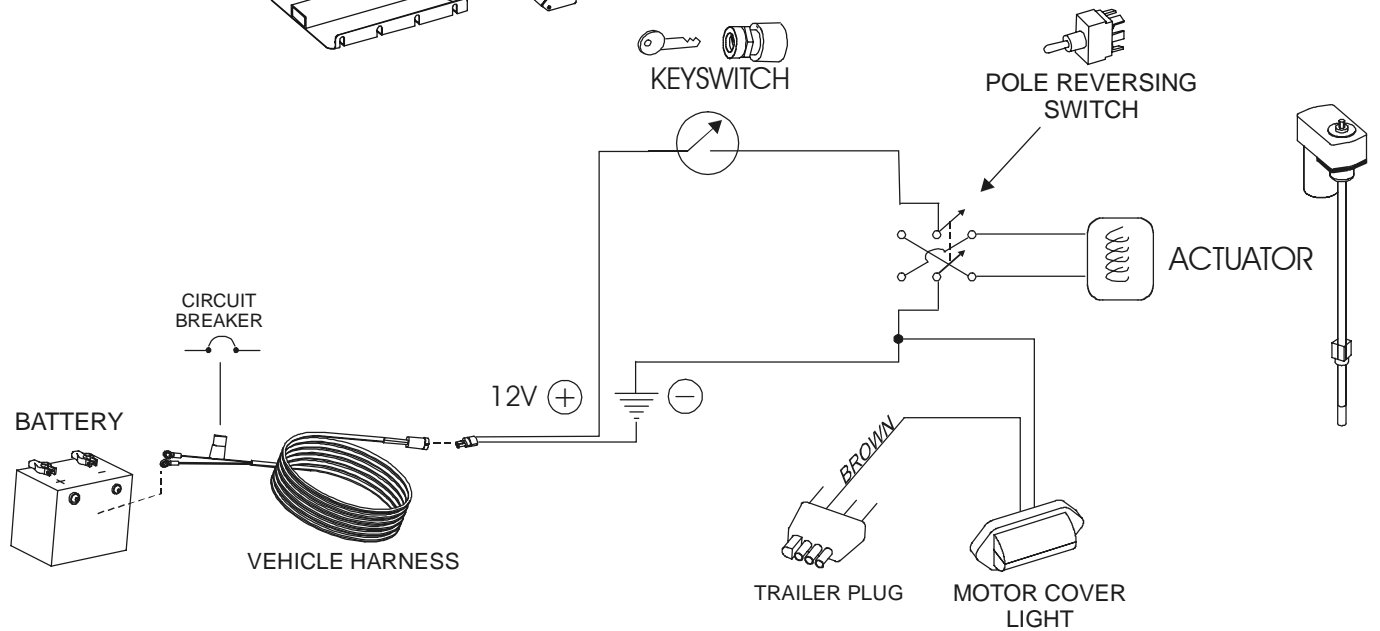
ITEM #	DESCRIPTION	PART #
1	SWITCH PLATE	ALA12055
2	TOGGLE SWITCH	ALA12010
3	KEY SWITCH	ALA12015
4	MOTOR COVER	ALA12050
5	ACTUATOR	ALA10010
6	OUTER TUBE - AL010	ALA0103
7	HOLD DOWN ARM - AL010	ALA010017
8	HOLD DOWN FOOT	ALA18020
9	INNER TUBE AL010 / AL030	ALA0300
10	HITCH POST	ALA129
11	CLASS 2 HITCH ADAPTER	AL126
12	CLASS 3 HITCH ADAPTER	ALA123
13	PLATFORM - AL010	ALA0112



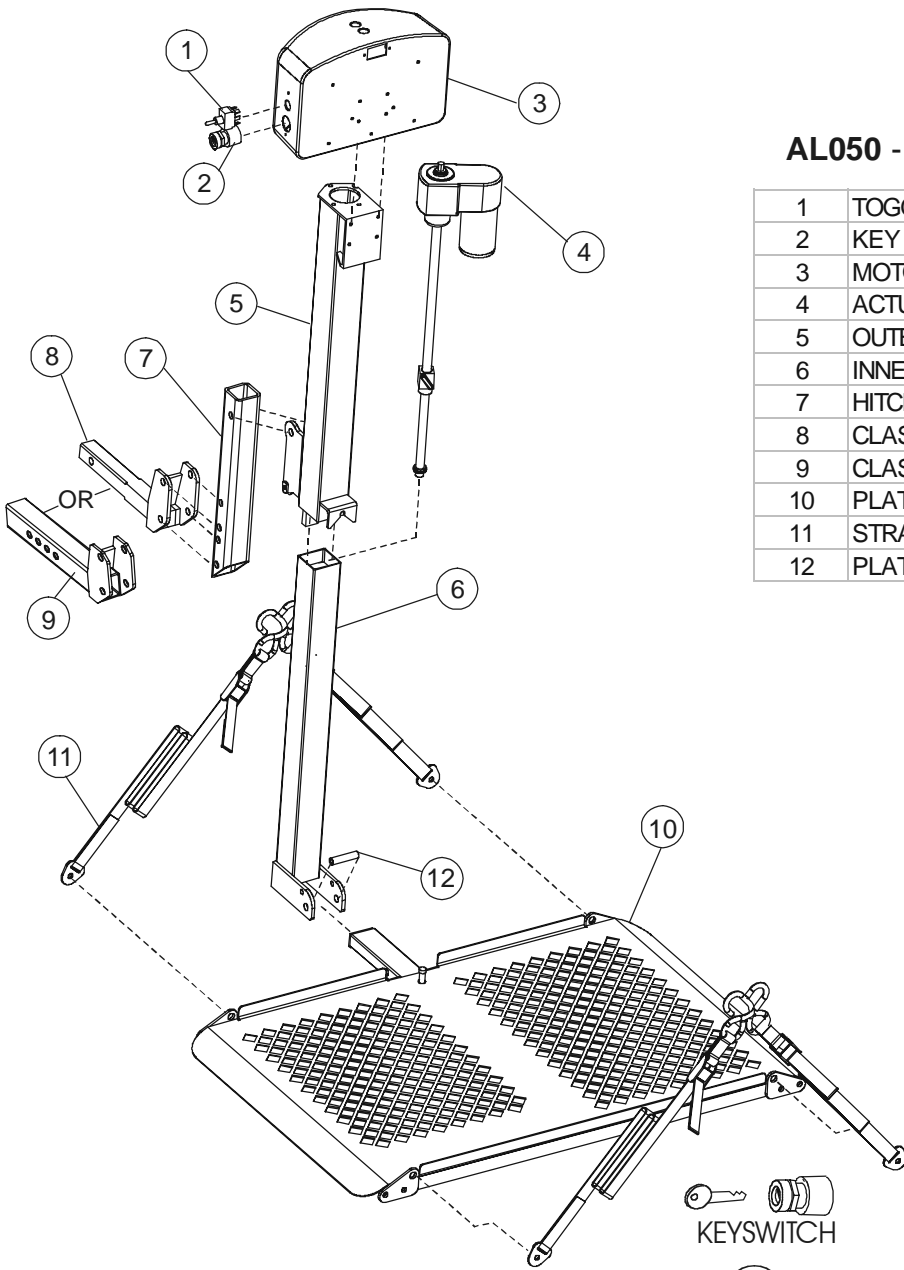
AL030 Power Tote



ITEM #	DESCRIPTION	PART #
1	SWITCH PLATE	ALA12055
2	TOGGLE SWITCH	ALA12010
3	KEY SWITCH	ALA12015
4	MOTOR COVER	ALA12050
5	ACTUATOR	ALA10010
6	OUTER TUBE - AL030	ALA0303
7	HOLD DOWN ARM - AL030	ALA0305
8	HOLD DOWN ARM MOUNT	ALA0307
9	HOLD DOWN ARM BACK PLATE	ALA03020
10	INNER TUBE AL010 / AL030	ALA0300
11	HITCH POST	ALA129
12	CLASS 1 HITCH ADAPTER	ALA01090
13	CLASS 1 STABILIZER	ALA01097
14	CLASS 2 HITCH ADAPTER	AL126
15	CLASS 3 HITCH ADAPTER	ALA123
16	PLATFORM - AL030	ALA0312

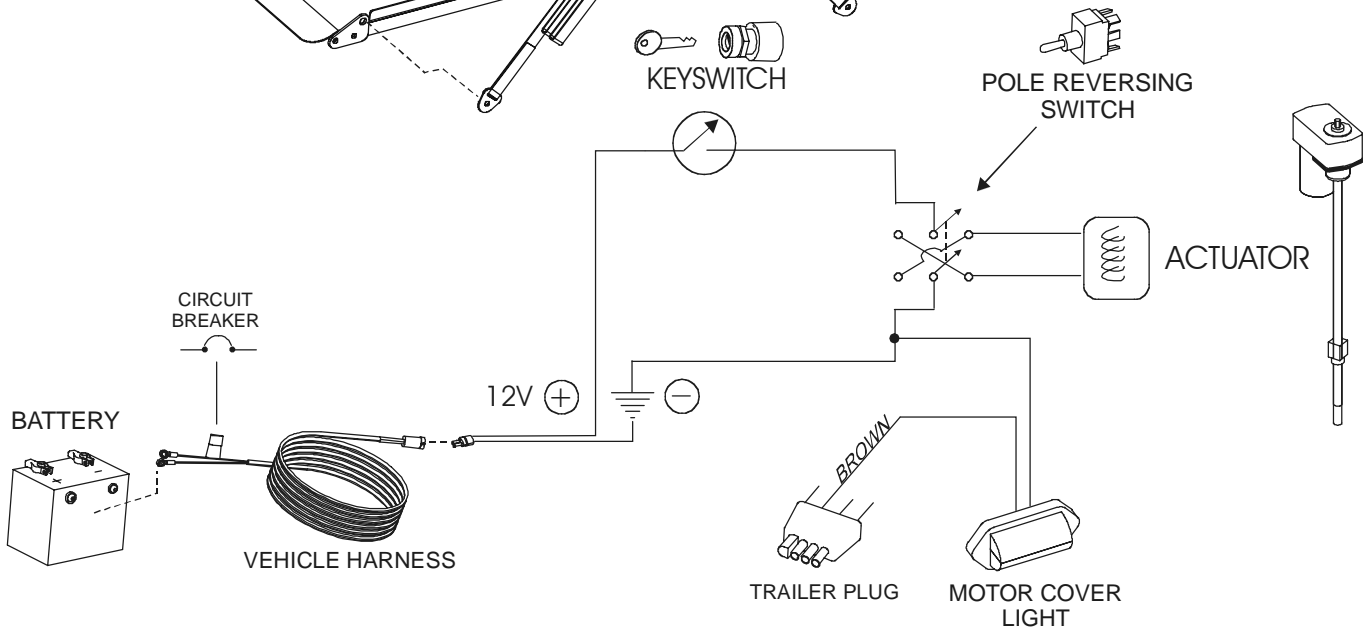


AL050 Micro Power Chair Lift



AL050 - MICRO POWER CHAIR LIFT

1	TOGGLE SWITCH	ALA12010
2	KEY SWITCH	ALA12015
3	MOTOR COVER	ALA12050
4	ACTUATOR	ALA10010
5	OUTER TUBE	ALA0303
6	INNER TUBE	ALA0300
7	HITCH POST	ALA129
8	CLASS 2 HITCH ADAPTER	AL126
9	CLASS 3 HITCH ADAPTER	ALA123
10	PLATFORM - AL050	ALA0312
11	STRAP ASSY	ALA69073
12	PLATFORM ANGLE TUBE	H05010



Teoubleshooting Guide

Problem	Possible Cause	Suggestions
<p>Lift does not operate Lift operates slowly</p>	<p>Electrical Connections</p>	<p>Verify that battery connections are clean with good contact. Inspect full length of wiring harness. Test the electrical connection by powering lift through a fully charged shop battery using a secondary harness.</p>
<p>Intermittent power to lift</p>	<p>Circuit Breaker</p>	<p>Circuit breaker resets itself automatically, to test for a malfunction check for power at the lift with a test lamp.</p>
	<p>Electrical Connections</p>	<p>See item #1 top of page</p>
<p>Hold-down will not stay upright or is difficult to move. Lift platform is difficult to move.</p>	<p>Improper adjustment at pivot points</p>	<p>Tighten or loosen bolts until hold-down arm or platform operates smoothly, with some resistance.</p>
<p>There is a ratcheting sound when the lift goes all the way up or all the way down.</p>	<p>N/A</p>	<p>This is normal, indicating that the clutch is activating when the lift reaches lowest or highest position.</p>
<p>There is excessive wire left over after connecting harness to vehicle.</p>	<p>Coil excess wire under vehicle and secure with cable ties provided.</p>	<p>Extra wire is provided for applications with a swing away. Do not cut harness in case a swing away is added at a later time.</p>
<p>The license plate light does not work.</p>	<p>Electrical connection</p>	<p>Light should be connected to a 4-prong trailer plug. If no plug exists the light may be wired directly to the vehicle lights or license plate light</p>
<p>The lift does not reach the ground when completely lowered. Lift bottoms out while entering driveways or going over bumps.</p>	<p>Hitch adapter positioning or incorrect hitch adapter.</p>	<p>Check the connection of the hitch adapter to the hitch post. Normal range of operation is 5-19 inches, measured from the bottom of the hitch to the ground. Higher vehicles require special hitch adapters, which can be obtained from a Harmar Mobility Authorized Dealer. Lift should be installed at the highest adjustment point possible.</p>
<p>Keys to the lift have been lost or stolen.</p>		<p>Contact your Harmar Mobility Authorized Dealer for replacement keys.</p>

