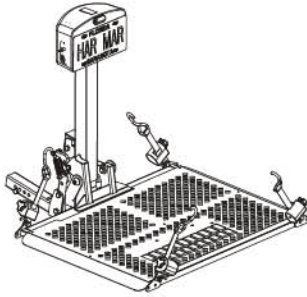
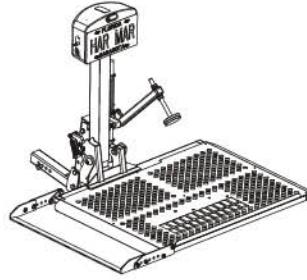




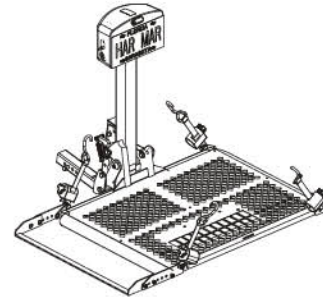
INSTALLATION & OWNER'S MANUAL



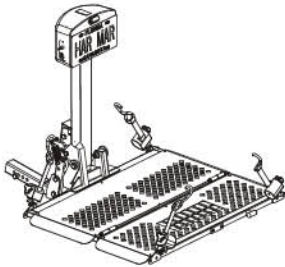
AL500 Universal Power Chair Lift
Capacity: 350 lbs



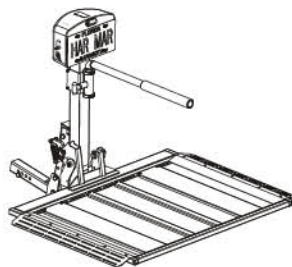
AL100 Universal Scooter Lift
Capacity: 350 lbs



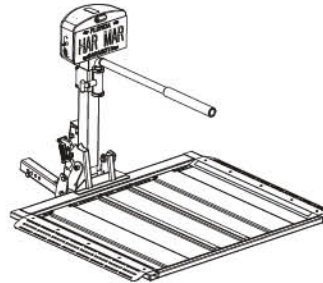
AL300 Universal Scooter/Power Chair Lift
Capacity: 350 lbs



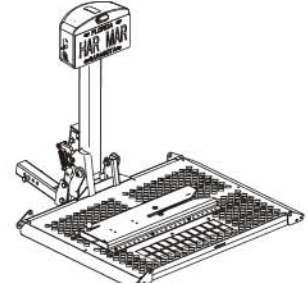
AL500P Folding Universal Power Chair Lift
Capacity: 350 lbs



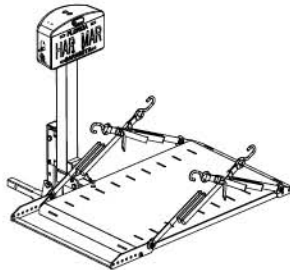
AL560 Auto Hold Down Power Chair Lift
Capacity: 350 lbs



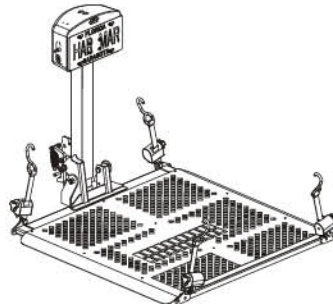
AL560XL Extra Wide Auto Hold Down Power Chair Lift
Capacity: 350 lbs



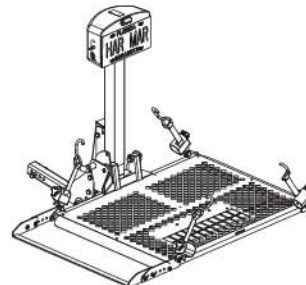
AL550 Auto Locking Power Chair Lift
Capacity: 350 lbs



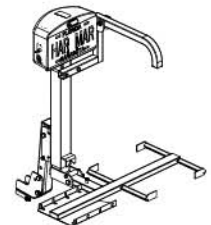
AL010/050 Micro Power Chair / Scooter Lift
Capacity: 135 lbs



AL301XL Extra Wide Universal Power Chair Lift
Capacity: 350 lbs



AL30RV Power RV Scooter / Power Chair Lift
Capacity: 350 lbs



AL030 Power Tote Folding Manual Wheelchair Lift
Capacity: 100 lbs

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 Service Department.

Tech: 866-378-6648
Fax: 941-308-7399
Email: tech@harmar.com

Harmar
2075 47th ST
Sarasota, FL 34234
Tel: 800-833-0478

Dealer /
Installer :

Please place information here

Serial Number:



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INSTALLATION

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SIGNAL WORDS	DEFINITION
 WARNING	Indicates a hazardous situation that if not avoided, could result in moderate to serious injury.
 CAUTION	Indicates a hazardous situation that if not avoided, could result in moderate to serious property damage.



INSTALLATION OVERVIEW

Never attempt to pickup the lift from the box, from the ground, or on/off a vehicle by yourself. If the proper installation procedure is followed, it will never require lifting, and practically installs itself.

Please read, follow, and fully understand the installation section of this manual before beginning. Knowledge of the lift's adjustments and valuable hints on technique will save time, and possible injury.

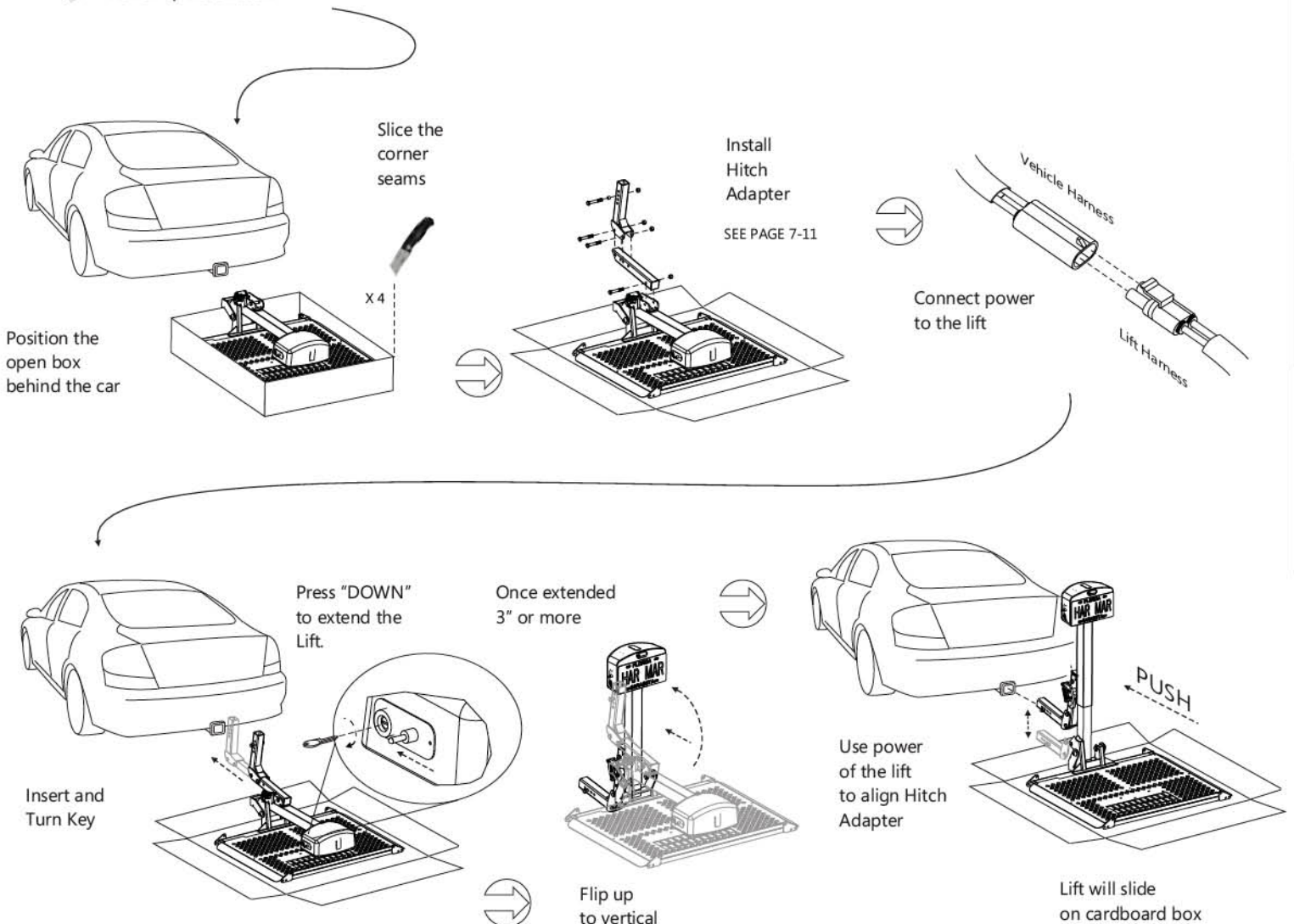


WARNING

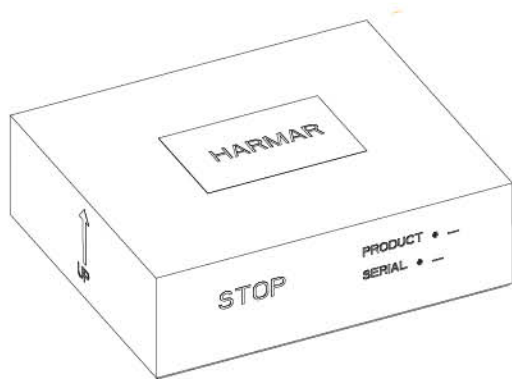
Quick Reference - Installation Procedure

As easy as 1-2-3!

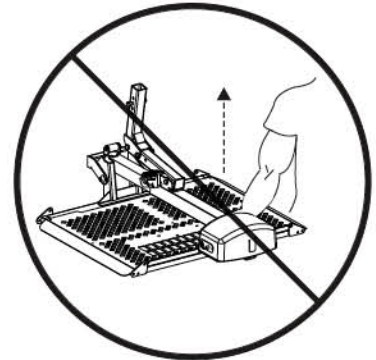
- 1 Install Vehicle Harness --- page 5 ----- Installing the vehicle harness first will assure you have power to the lift during installation. This allows the motor to do the lifting for you. (If this step is skipped, use a shop battery.)
- 2 Determine / Install Hitch Height / Adapter --- page 7-11 ----- Measuring the hitch to ground distance assures you select the proper orientation of the components the first time between the lift and the vehicle, so the platform reaches the ground while maintaining the best ground clearance.
- 3 Power up Installation



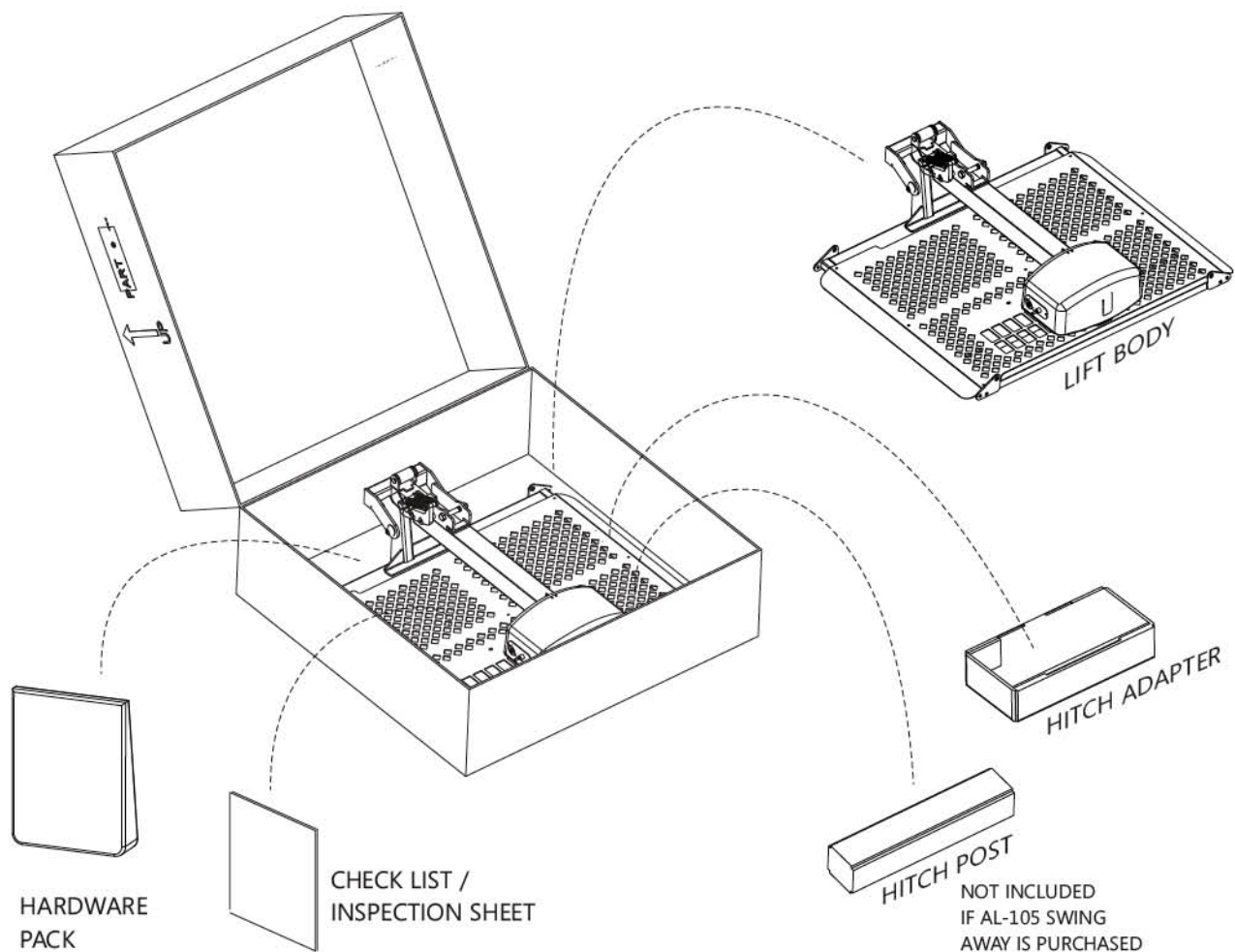
UNPACKING THE LIFT



**DO NOT
LIFT
FROM
MOTOR
COVER**



Be sure to check the contents of the box against the package checklist verifying all parts are included with the lift for a proper installation. If any parts are missing or damaged, immediately contact the distributor from which you purchased the lift. **DO NOT** attempt to install or use the lift with any missing or damaged parts.





REQUIRED TOOLS

The following is a suggested list of basic tools to have on hand during installation. Harmar lifts are designed to install with as little assembly by the installer as possible.



SOCKET SET
Specifically
7/16"
3/4"
3/8"



WRENCH SET
Specifically
7/16"
3/4"



ALLEN WRENCH
Specifically
1/8"
3/16"
5/16"



WIRE CUTTERS



NEEDLE NOSE PLIERS

#2 FLAT HEAD SCREWDRIVER



#2 PHILLIPS HEAD SCREWDRIVER




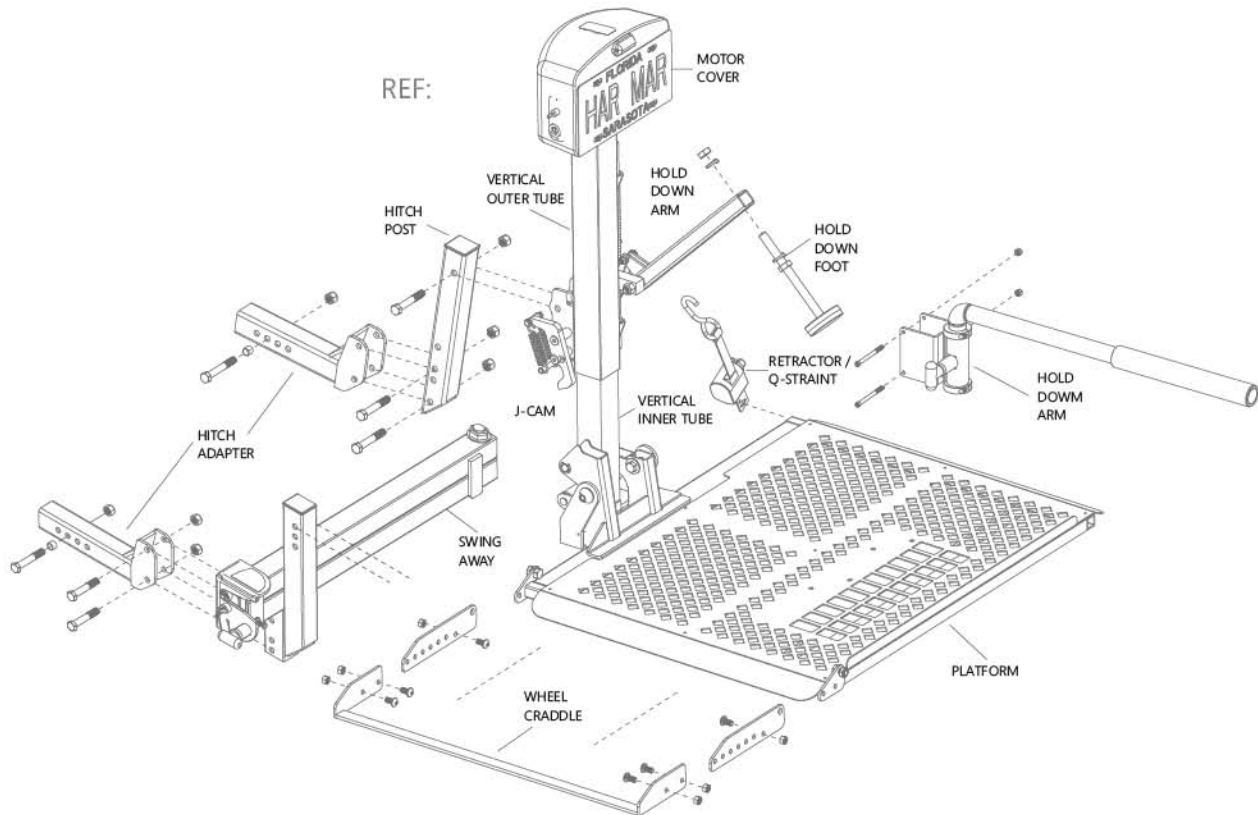
MARKING IMPLEMENT



TAPE MEASURE



As always, if you have any questions, concerns or comments, please feel free to contact Harmar's Technical Service Department at 1-800-833-0478 or "tech@hammar.com" 



WIRING THE VEHICLE



IMPROPER WIRING IS THE #1 CAUSE OF PROBLEMS IN THE OPERATION OF A VEHICLE LIFT.

FOLLOW THE WIRING INSTRUCTIONS CAREFULLY

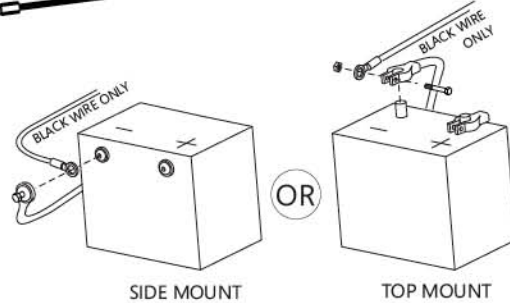
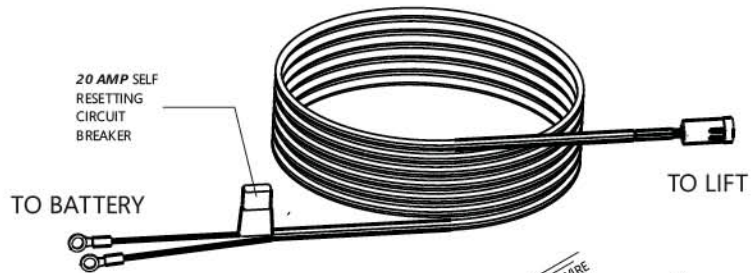
Located in the hardware pack is the vehicle wiring harness. The harness is manufactured to, and complies with the SAE J1128 requirements. The harness is approximately 23 feet long and will accommodate most vehicles. Follow these instructions to assure proper installation.

⚠ WARNING DO NOT CONNECT RED WIRE UNTIL THE VERY END.

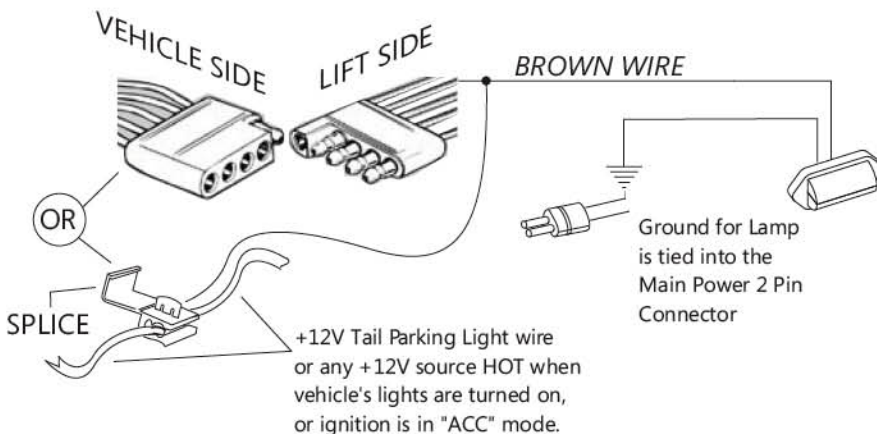
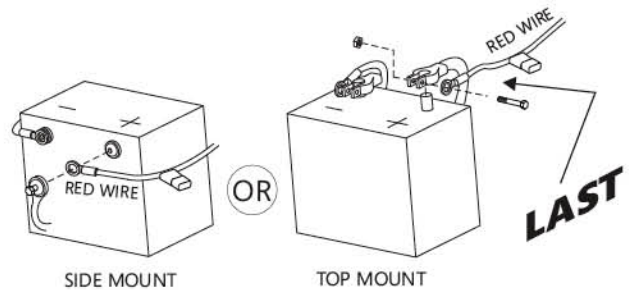
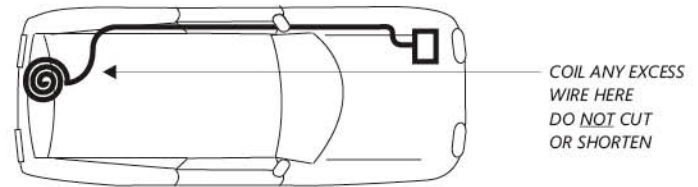
- 1 Unwind the harness and lay it flat. One end of the harness has a black connector. This is the lift end of the harness and goes to the trailer hitch area where the lift will mount.
- 2 Begin routing the wiring harness at the vehicle battery. Attach the black wire to the negative terminal on the battery. **DO NOT ATTACH THE RED WIRE UNTIL THE END.**
- 3 Run the wiring harness under, or when possible through the vehicle, back to the bumper / trailer hitch. Always locate the wiring where it cannot be snagged by road debris and away from the gas tank. Through the vehicle is best, gaining entry into the vehicle through the firewall. However if you wish to run the harness under the vehicle, use supplied wire ties to secure the wire against the frame, avoiding moving parts / hot parts such as exhaust. If the harness is too long, coil the excess wire and secure it to the frame / bumper with supplied wire ties.

⚠ CAUTION DO NOT CUT OR SHORTEN THE HARNESS.

- 4 Plug connector into the lift.
- 5 Attach red wire to the positive terminal on the battery.
- 6 A standard 4 contact trailer connector is also included with the lift. This is for the illumination of the license plate lamp. If your vehicle is not equipped with the proper connector, a wire splice, using the BROWN WIRE can be made to achieve the same result.



⚠ CAUTION
NEVER ATTEMPT TO CONNECT THE HARNESS TO A SECONDARY POWER SOURCE. ALWAYS CONNECT BOTH LEADS DIRECTLY TO THE BATTERY



TECH NOTE: MOTOR TEST

PROBING FOR 12 VOLTS MAY INDICATE A CONNECTION, BUT NOT NECESSARILY A SUFFICIENT CONNECTION. THE LIFT'S MOTOR CAN DRAW UP TO 30 AMPS AT SOME POINTS, REQUIRING ALL OF THE AVAILABLE WIRE TO FLOW PROPER CURRENT. POOR CONNECTIONS ARE THE #1 PROBLEM ASSOCIATED WITH A SLOW, INTERMITTENT, WARM, POORLY PERFORMING MOTOR. NOT ONLY WILL THE MOTOR PERFORM POORLY, BUT WILL PREMATURELY DETRIORATE.

IF A SINGLE STRAND OF A MULTI-STRAND WIRE IS MAKING CONTACT, 12V WILL APPEAR ON THE METER, OR TEST LIGHT, BUT WILL NOT ALLOW THE MOTOR TO OPERATE. IT IS ALWAYS BEST TO TEST BOTH CURRENT AND VOLTAGE, OR RUN THE MOTOR WITH KNOWN GOOD SHOP BATTERY OR POWER SOURCE WHEN TROUBLESHOOTING.



To install an Outside Lift on a vehicle, the vehicle must be capable of accepting a Class 2 or Class 3 Hitch. If you are unsure about the vehicle and hitch capability, contact a local hitch installer or the web sites below. The vehicle should also be wired with a standard 4 connector trailer wiring.

Listed below are three web sites of hitch companies that can be used as reference.



www.hitch-web.com, www.reeseprod.com, or www.draw-tite.com


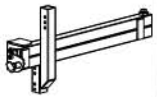
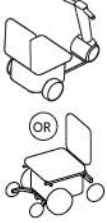



Be sure to use a hitch installer that is reputable, insured, and capable as their work has a direct reflection on the customers perception of a properly installed mobility lift.

NOT EVERY VEHICLE IS CAPABLE OF HAVING A HITCH INSTALLED

Calculate the weights of the lift, mobility device, and where applicable the swing away option, being certain that the total weight does not exceed the recommended tongue weight of the hitch. Different types of hitches are capable of bearing different amounts of weight.

The lift manufacturer suggests the installer observe the vehicles **Gross Vehicle Weight Rating** restrictions.

PRODUCT:	HITCH CLASS:	WEIGHT:	IF USED	CHAIR / SCOOTER	= <input type="text" value="lbs"/>	 WARNING Must <u>NOT</u> Exceed Hitch Manufacturer's Max Tongue Weight
AL010/050.....	2 or 3.....	70 lbs	 38 lbs	 OR  " x " lbs		
AL030.....	1,2 or 3.....	75 lbs				
AL100.....	2 or 3.....	95 lbs				
AL300.....	2 or 3.....	105 lbs				
AL301XL.....	2 or 3.....	117 lbs				
AL500.....	2 or 3.....	98 lbs				
AL500P.....	2 or 3.....	105 lbs				
AL550.....	2 or 3.....	112 lbs				
AL560.....	2 or 3.....	105 lbs				
AL560XL.....	2 or 3.....	115 lbs				

Some states have very strict license plate obstruction laws, so be sure to familiarize yourself with the local and state laws.

Assure the receiver tube of the hitch is installed parallel to the ground. This is not a recommendation, but a requirement. If the hitch is not properly installed it will affect the function of the lift.

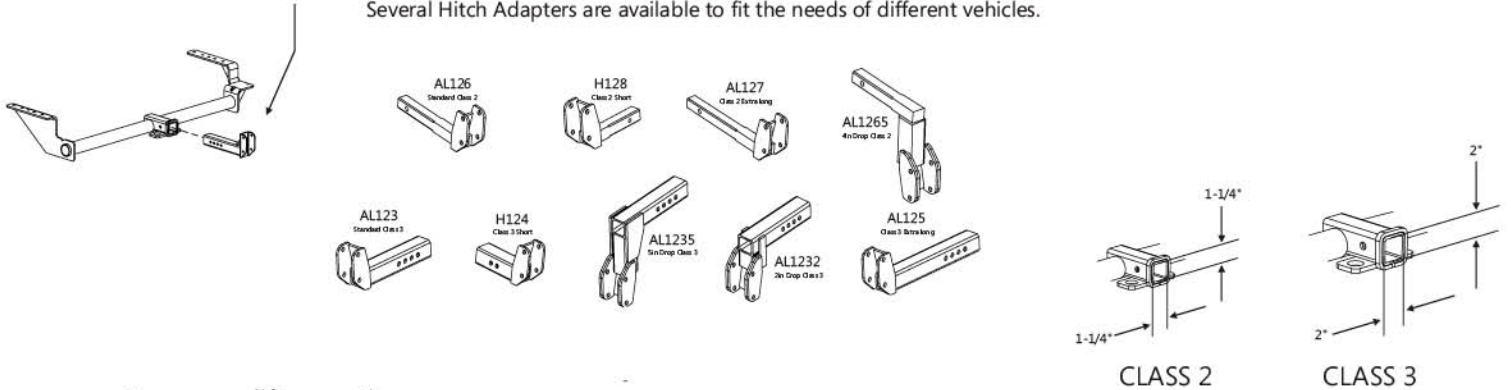
Some vehicles will require that the rear suspension be supplemented. The manufacturer recommends the installer contact a suspension specialist for additional technical support.

A vehicle with a Class 3 (Class 2 requires optional accessories) hitch and standard 4 connector wiring is ready for installation.

HITCH ADAPTERS



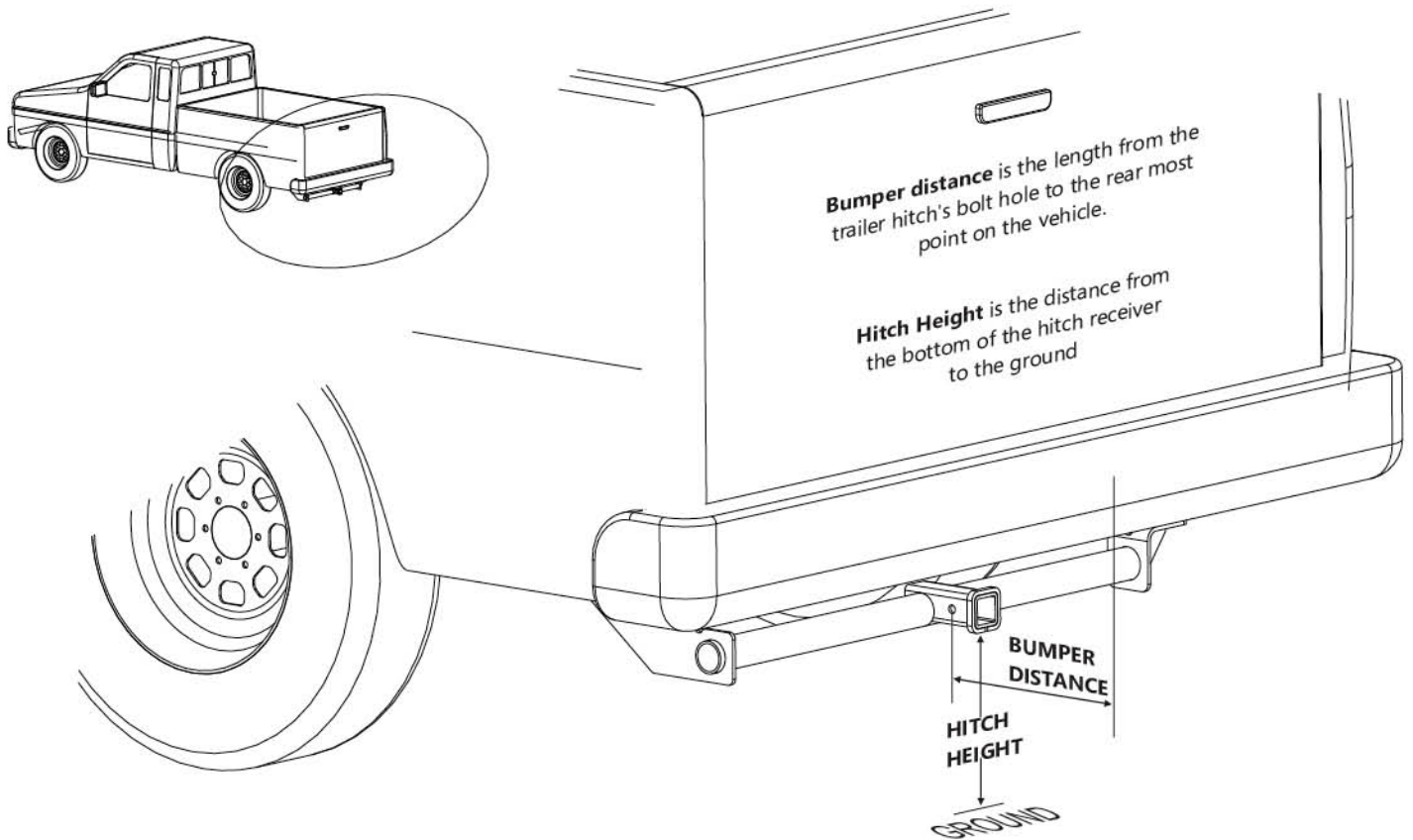
A **Hitch Adapter** is the interface between the lift and vehicle. It is a part that plugs into a vehicle's trailer hitch. Several Hitch Adapters are available to fit the needs of different vehicles.



For proper lift operation:

When selecting a Hitch Adapter you should determine the **Hitch Class**, measure **Bumper Distance**, and measure **Hitch Height**.

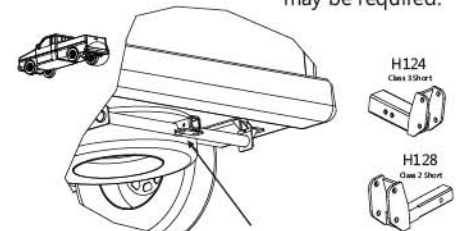
Usually printed on the trailer hitch, it can also be determined by measuring the inside of the receiver on the trailer hitch.



BUMPER DISTANCE CONFIGURATOR

IF:	X=0-7.5"	X=7.5"-10"	X=10"-13.5"
CLASS 3	AL123 (Standard Class 3)	AL125 (Class 3 Extra Long)	AL125 (Class 3 Extra Long)
CLASS 2	AL126 (Standard Class 2)	AL127 (Class 2 Extra Long)	Please contact Harmar's Technical Service Dept.

For SOME shallow hitches, ex. Spare Tire blocked hitches, a short Hitch Adapter may be required.

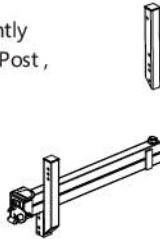




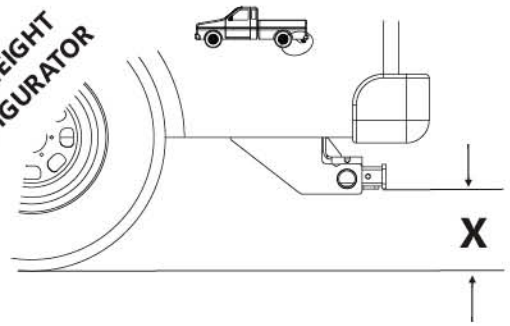
HITCH ADAPTERS

The effective range of the Hitch Adapter changes slightly if the Lift is equipped with the standard AL-107 Hitch Post ,

or if equipped with a Tail Gate / Back Hatch accessibility option, the AL-105 Swing Away



HITCH HEIGHT CONFIGURATOR



CLASS 3 HITCH

if X =	STANDARD MOUNT AL-107 HITCH POST (NO SWING AWAY)	OPTIONAL AL-105 SWING AWAY	if X =
6"			6"
7"			7"
8"			8"
9"			9"
10"			10"
11"			11"
12"			12"
13"			13"
14"			14"
15"			15"
16"			16"
17"			17"
18"			18"
19"			19"
20"			20"
21"			21"
22"			22"
23"		PLEASE CONTACT HARMAR FOR AVAILABILITY OF LARGER DROP ADAPTERS	23"
24"		PLEASE CONTACT HARMAR FOR AVAILABILITY OF LARGER DROP ADAPTERS	24"
25"		PLEASE CONTACT HARMAR FOR AVAILABILITY OF LARGER DROP ADAPTERS	25"
26"		PLEASE CONTACT HARMAR FOR AVAILABILITY OF LARGER DROP ADAPTERS	26"

CLASS 2 HITCH

if X =	STANDARD MOUNT AL-107 HITCH POST (NO SWING AWAY)	OPTIONAL AL-105 SWING AWAY	if X =
6"			6"
7"			7"
8"			8"
9"			9"
10"			10"
11"			11"
12"			12"
13"			13"
14"			14"
15"			15"
16"			16"
17"			17"
18"			18"
19"			19"
20"			20"
21"			21"
22"			22"
23"		PLEASE CONTACT HARMAR FOR AVAILABILITY OF LARGER DROP ADAPTERS	23"
24"		PLEASE CONTACT HARMAR FOR AVAILABILITY OF LARGER DROP ADAPTERS	24"
25"		PLEASE CONTACT HARMAR FOR AVAILABILITY OF LARGER DROP ADAPTERS	25"
26"		PLEASE CONTACT HARMAR FOR AVAILABILITY OF LARGER DROP ADAPTERS	26"

Should the measurement fall in between, ex. 18-1/2", round up if greater than or equal to 1/2", round down if less than 1/2".

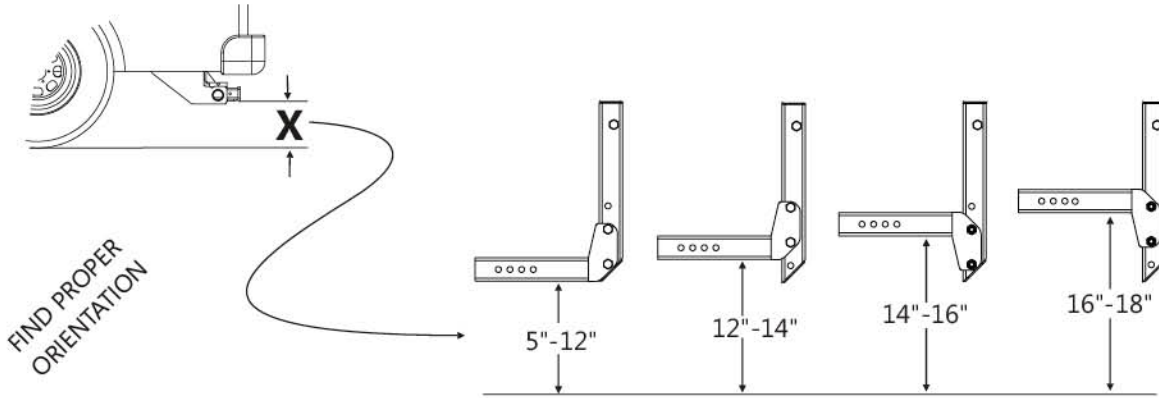
Combination Hitch Adapters are available (ex. Short Class 3, 5in Drop or Long Class 2, 2in Drop)

If you have any questions / concerns about selecting the appropriate Hitch Adapter for your application, please contact Harmar's Technical Service Department, and a highly trained representative will be happy to assist

INSTALLATION w/ HITCH POST



The Hitch Adapter's orientation and location can be utilized to achieve a range of different lift heights, optimizing the vehicle's ground clearance, while assuring the platform will reach the ground and lay flat at the end of travel. Please consult the diagram below to select the orientation needed for the vehicle, based off the Hitch Height. (Vehicles hitch receiver distance to the ground.)



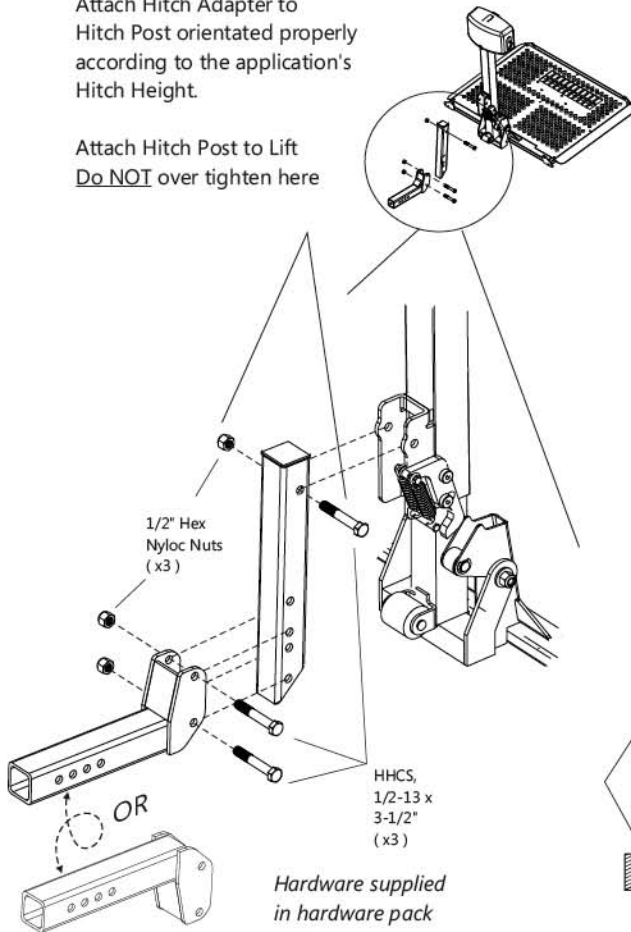
WARNING

Please refer to page 2 for a helpful procedure on performing this installation

1

Attach Hitch Adapter to Hitch Post orientated properly according to the application's Hitch Height.

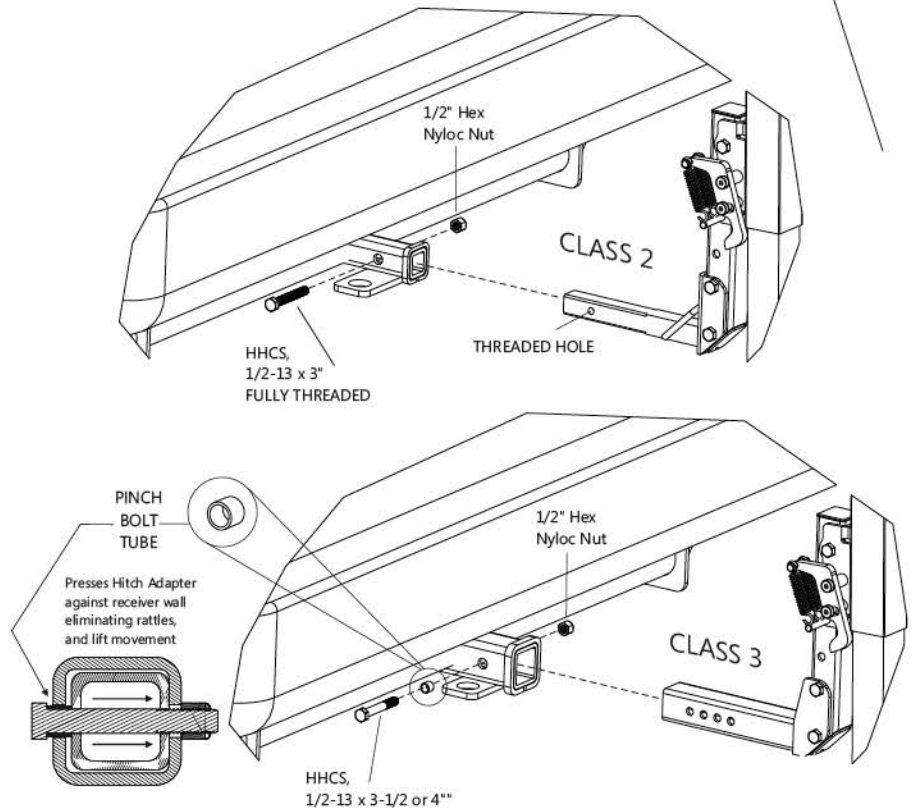
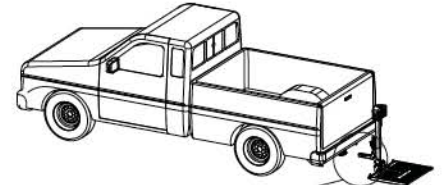
Attach Hitch Post to Lift
Do NOT over tighten here



2

Slide Hitch Adapter into vehicle's hitch receiver.

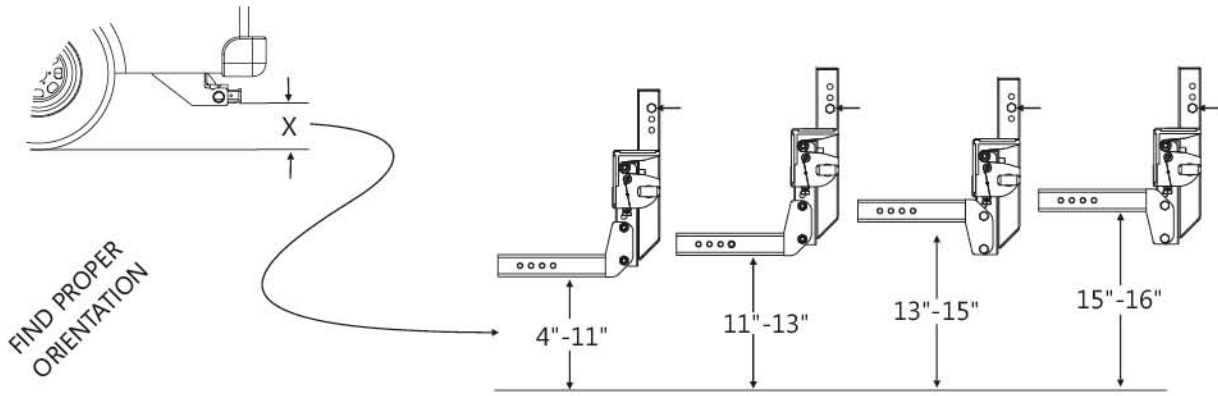
Fasten Adapter according to class of hitch.





INSTALLATION w/ SWING AWAY

The Hitch Adapter's orientation and location can be utilized to achieve a range of different lift heights, optimizing the vehicle's ground clearance, while assuring the platform will reach the ground and lay flat at the end of travel. Please consult the diagram below to select the orientation needed for the vehicle, based off the Hitch Height. (Vehicles hitch receiver distance to the ground.)



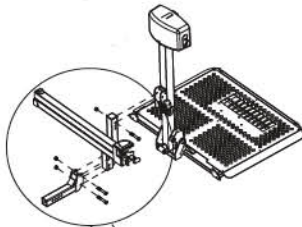
WARNING

Please refer to page 2 for a helpful procedure on performing this installation

1

Attach Hitch Adapter to Swing Away orientated properly according to the application's Hitch Height.

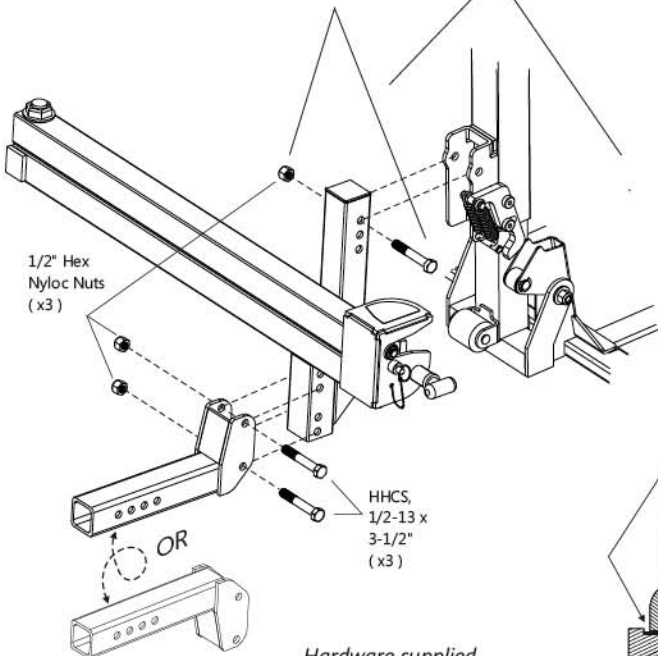
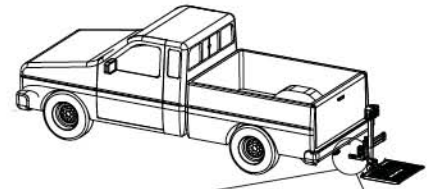
Attach Swing Away to Lift
Do NOT over tighten here



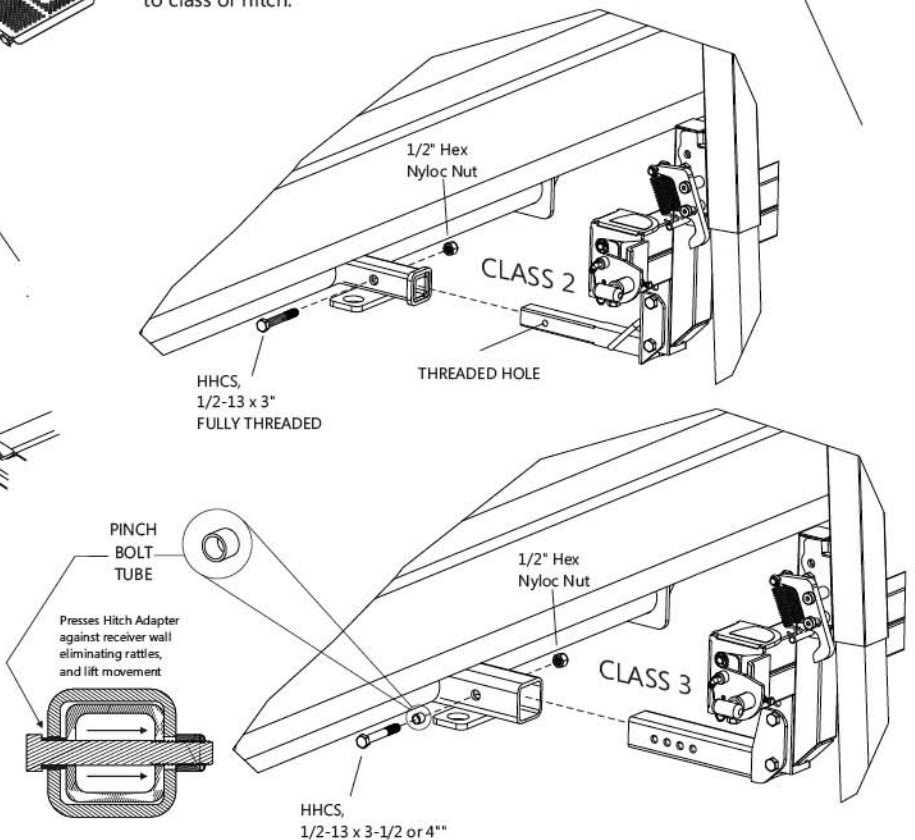
2

Slide Hitch Adapter into vehicle's hitch receiver.

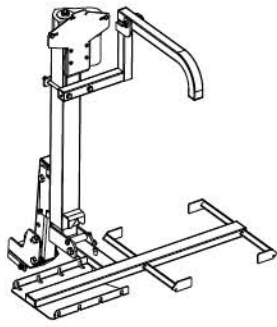
Fasten Adapter according to class of hitch.



Hardware supplied in hardware pack



AL030 POWER TOTE INSTALLATION

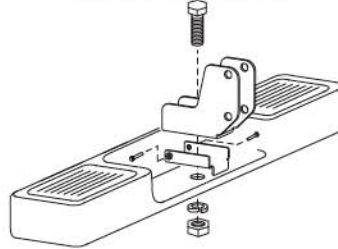


Ball Mount Hitch Adapter and stabilizer

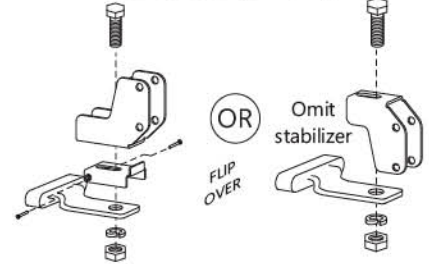


FOR AL030 ONLY
(Ball Mount Hitch adapter)

Bumper Mount
(Be sure to comply with vehicle's bumper rating)

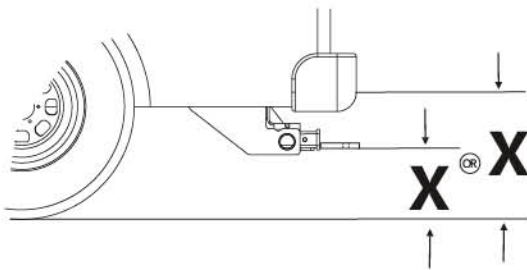


Flat Bar Style
(Be sure to comply with vehicle's bumper rating)



STANDARD EQUIPMENT SHIPPED w/ AL030 POWER TOTE

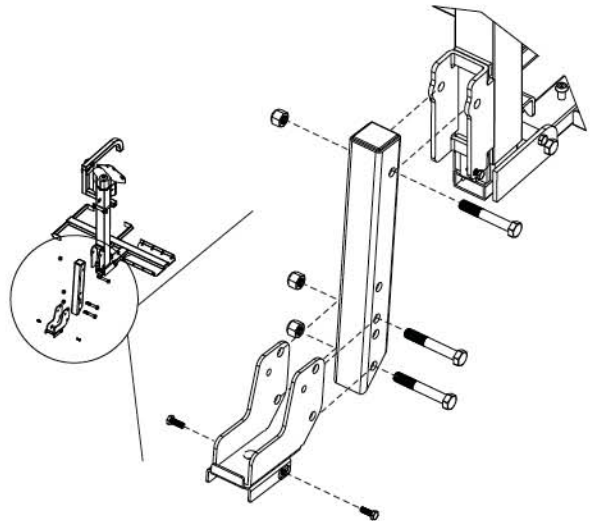
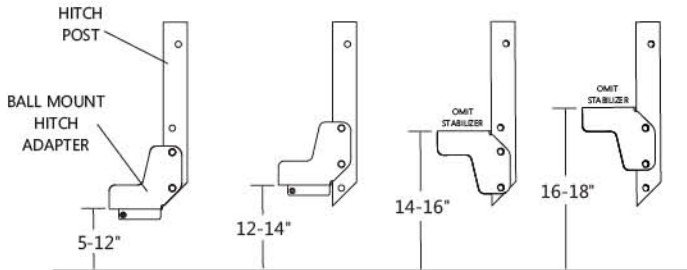
(AL030 can also be upgraded w/ Class 3 and Class 2 Hitch adapters)



WARNING
Do not attempt to mount up from under Flat Bar



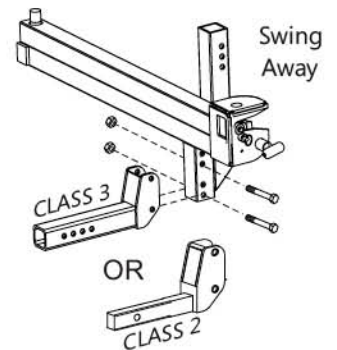
When using the Ball Mount Hitch adapter, Hitch Height is dependant on whether the Adapter will be located on the bumper, or on the flat bar of the vehicle.



WARNING
DO NOT USE BALL MOUNT ADAPTER w/ SWING AWAY

Only Class 3 or 2 Hitch Adapters can be used with a Swing Away

Please refer to "Installation w/ Swing Away" for mounting orientation





CHAIR PREPARATION

IF USING A LIFT WITH 4 STRAPS FOR SECUREMENT, THERE ARE 2 OPTIONS ON HOW TO ATTACH THE STRAP HOOKS TO THE CHAIR. EACH OPTION IS INCLUDED WITH THE LIFT.

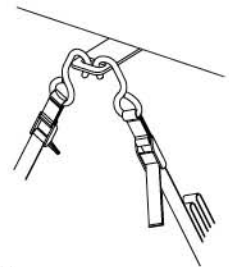
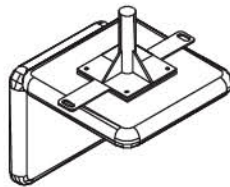
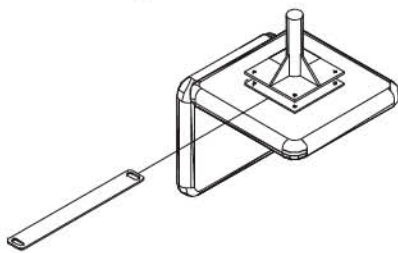
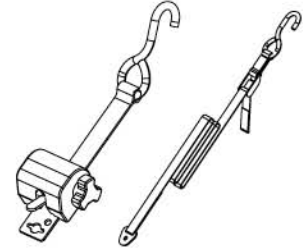
ANCHOR PLATE:

The Anchor Plate is a flat plate that is 20" long with a slot in each end. This plate will work with any chair or scooter that has a center seat post and attaches to the bottom of the seat.

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

Attach the Anchor Plate by the following steps:

1. Remove the seat from the chair.
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. Re-tighten the screws that hold the seat plate to the bottom of the seat.
5. Replace the seat on the chair.

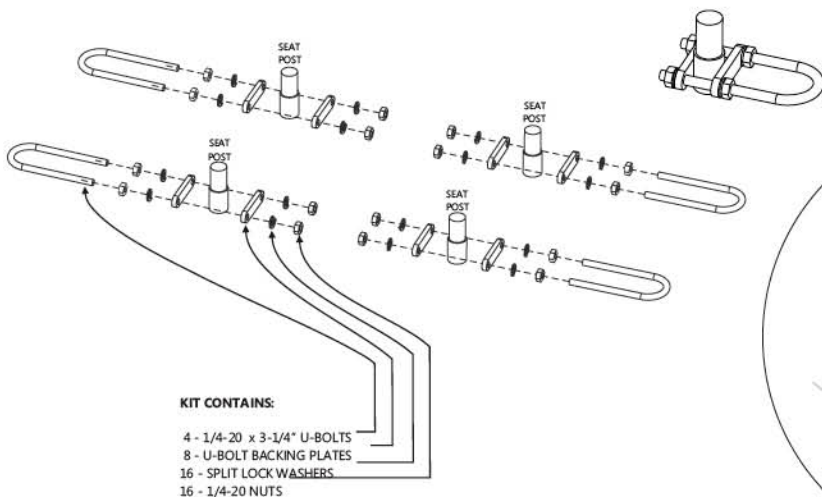


U-BOLT KIT:

The U-bolts are to be used with power chairs or scooters 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, two 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.

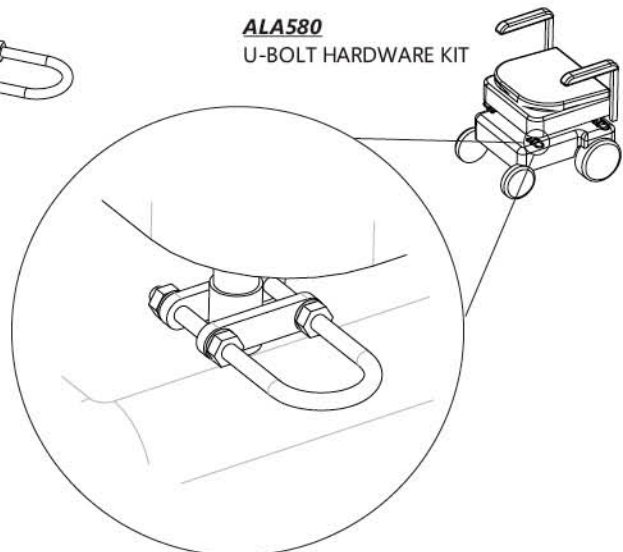
Each type of chair will differ slightly and the placement of the U-bolts will differ between different models and manufacturers. Place the U-bolts towards the center of the seat if possible. Because of the different types of seats, you may be forced to attach the U-bolts more towards the front or rear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



KIT CONTAINS:

- 4 - 1/4-20 x 3-1/4" U-BOLTS
- 8 - U-BOLT BACKING PLATES
- 16 - SPLIT LOCK WASHERS
- 16 - 1/4-20 NUTS

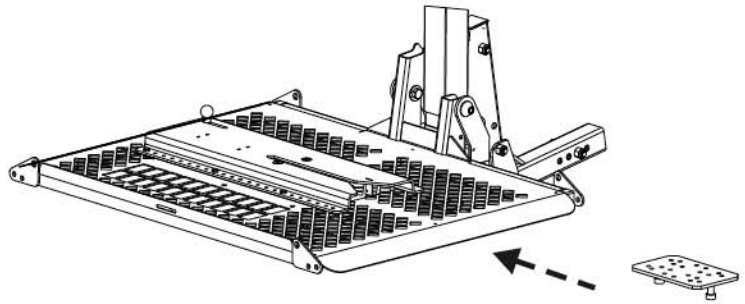
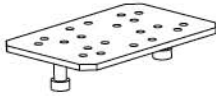
ALA580 U-BOLT HARDWARE KIT



CHAIR PREPARATION - AL550 only

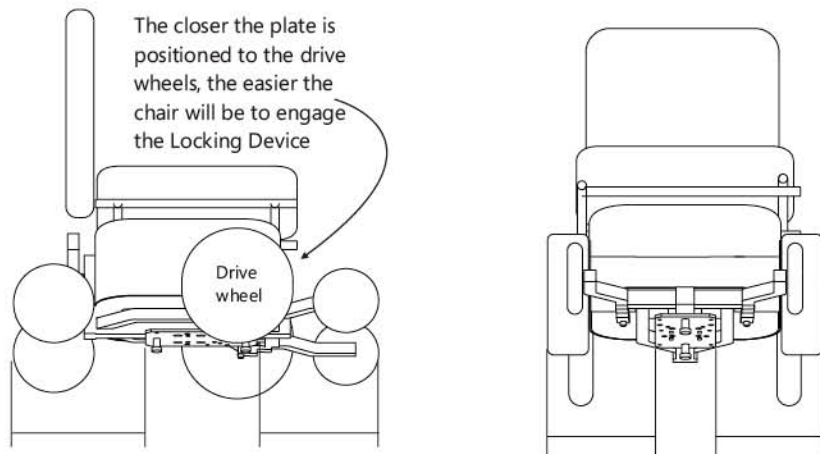


CHOOSING A LOCATION and
MOUNTING THE DOCKING DEVICE PLATE

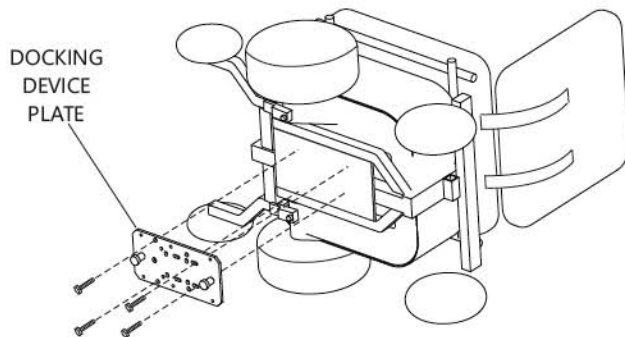


WARNING

Do not attempt to use this automatic lock down device on any folding, or take apart chairs unless recommended by Harmar.



Find approximate
center of the chair



DO ***NOT*** USE SPACERS HERE

SPACERS BELONG UNDER THE
STATION ON THE PLATFORM

Use existing holes where ever possible.

If too few, or no holes exist,
holes will need to be drilled.
Remove power chair's batteries,
and use plate as a template.
Drill as required.

Attach to chair using supplied
hardware.

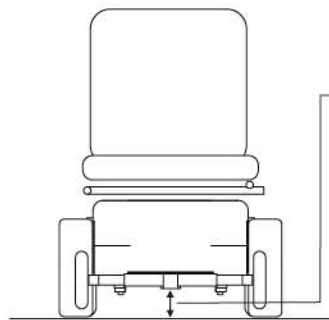
4---1/4-20 x 1.00" HHCS
4---1/4-20 Nylock Nut
ATTACHED TO PLATE

TIGHTEN ALL FASTENERS



AL550 only - LIFT PREPARATION

SETTING DOCKING DEVICE HEIGHT

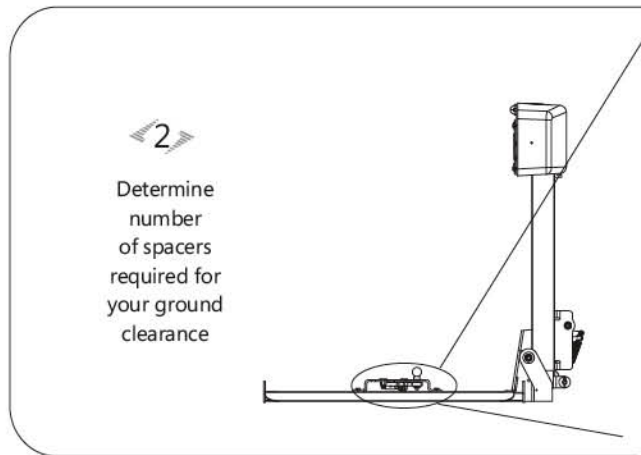


1

Measure distance of mounting surface to ground

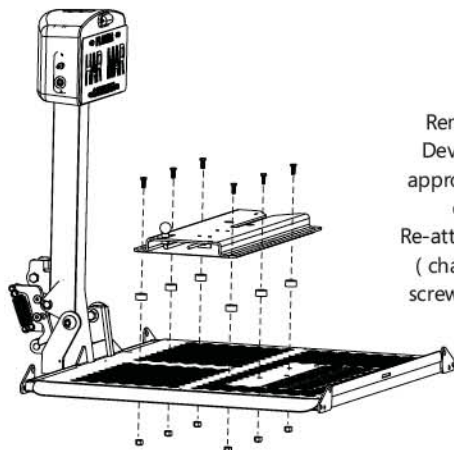
PRIOR TO MOUNTING DOCKING PLATE TO CHAIR

Ground clearance MUST be greater than or equal to 1.75"



2

Determine number of spacers required for your ground clearance



3

Remove Locking Device and insert appropriate number of spacers. Re-attach to platform. (change to longer screws if necessary)

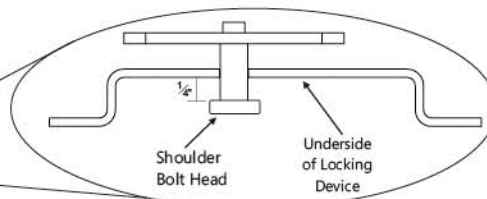
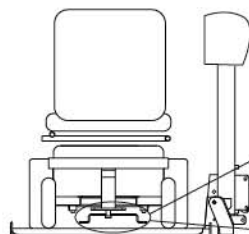
If ground clearance =	Then use:	Hardware Used: (from hardware pack)
1.75" - 2"	No Spacers	 Mounted on lift from factory 1" x6
2.25"	.25" spacers	
2.5"	.5" spacers	
2.75"	.75" spacers	 1.75" x6
3"	1" spacers	
3.25"	1" + .25" spacers	
3.5"	1" + .5" spacers	 2.5" x6
3.75"	1" + .5" + .25" spacers	
4"	1" + 1" spacers	
4.25"	1" + 1" + .25" spacers	 3.25" x6
4.5"	1" + 1" + .5" spacers	
4.75"	1" + 1" + .5" + .25" spacers	

Verify the head of the shoulder bolt is below the underside of the locking device. UP TO A 1/4" OF SPACE IS ACCEPTABLE

CAUTION

Perform lock down test on next page to assure installation of Docking Device Plate and Locking Device are correct.

Drive Chair onto Lift
look down the entry point of the locking device

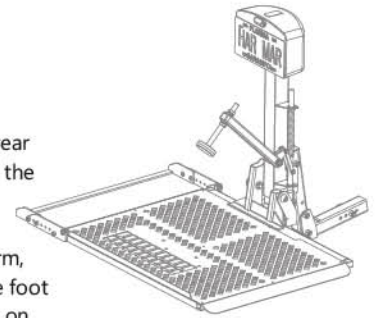




AL100

SETTING HOLD DOWN FOOT HEIGHT

With platform on the ground, drive scooter onto platform, from the left (driver's side) to right, until the rear wheels are located in the rear wheel spreader bar assembly. Stop when the rear tires contact the ramp of the platform.



Raise the platform until the motor's clutch is heard (top of travel). Loosen both nuts on the hold down arm, and raise or lower the foot to contact the scooter's deck. Lower the platform about 1-2 inches. Lower the foot once again to the scooter's deck. Raise the platform. Verify the hold down foot places adequate pressure on the scooter. **DO NOT** adjust the leg down so far that the top of the threaded rod does not protrude through the top of the pivot tube. Once the foot is adjusted to the proper position, tighten the jam nut to lock it in place.

Once the lift is properly adjusted, lower the platform to the ground and raise it back to the transporting position. Repeat this several times to make sure all parts are operating properly and that the scooter is properly secured. Next, remove the scooter from the lift and using the toggle switch, cycle the lift completely up and down to make sure that all parts are in working order and the lift folds up when it is empty.



WARNING

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 lock down position.



WARNING

Some scooters have pneumatic (air inflated) tires. If your scooter has this type tire, be sure the tires are properly inflated. Improper inflation of the tires will change the deck height of the scooter and therefore change the amount of clamping force the hold down arm places on the scooter. The scooter can fall off the lift if not properly secured.



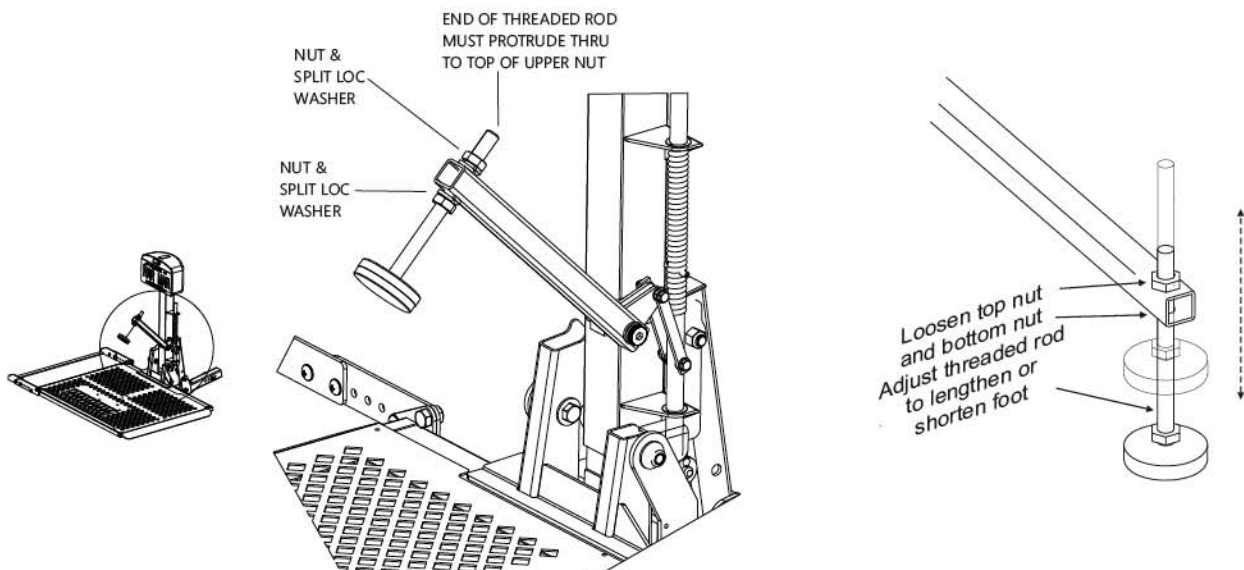
WARNING

Be sure to instruct the end user not to enter steep driveways straight on. Enter and leave at an angle to the street so that the lift platform does not drag on the ground.



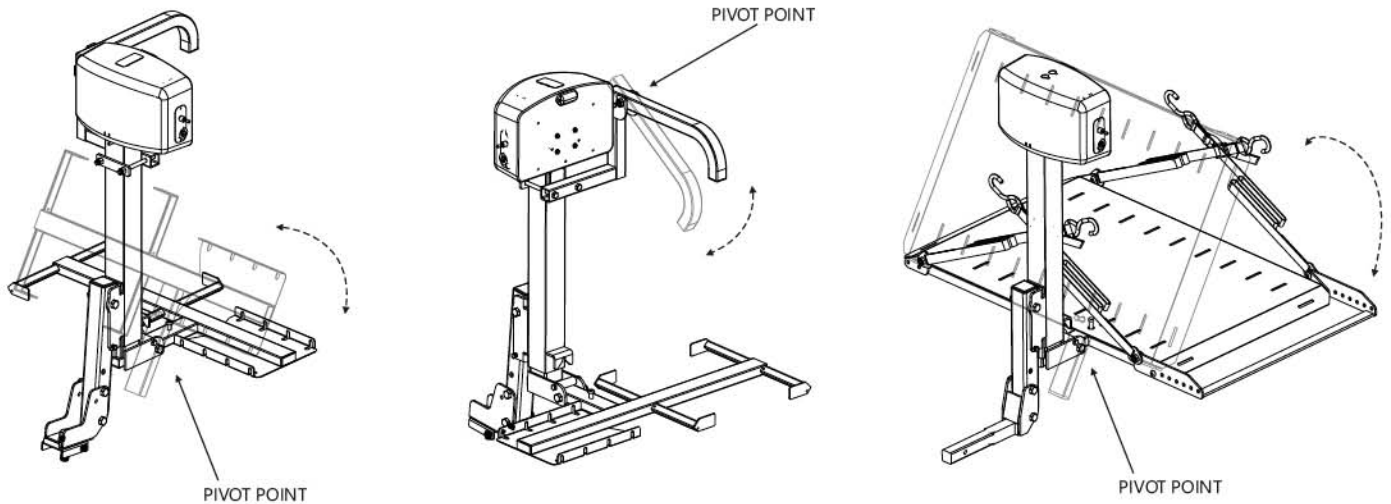
CAUTION

Drive the scooter off in REVERSE. When the scooter is clear off the platform, raise the platform by pushing up on the UP/DOWN switch.





MICRO LIFT PREPARATION

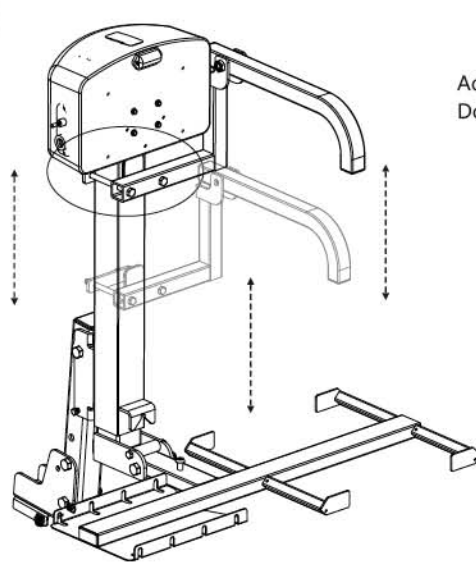
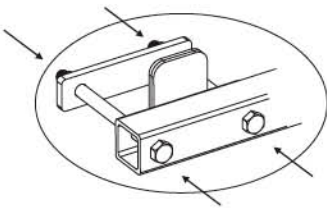


The manual folding hinge points of the AL010/050 and AL030 contain tensioning washers. The amount of force required to move these parts is determined by the tension of these washers. The tension also dampens the movement and allows a controlled operation of the folding of platform or hold down arm. To adjust, simply tighten or loosen the bolt and nut located at the pivot point. The tension is set at the factory and should not need adjustment. However if more or less resistance is desired, adjust accordingly.

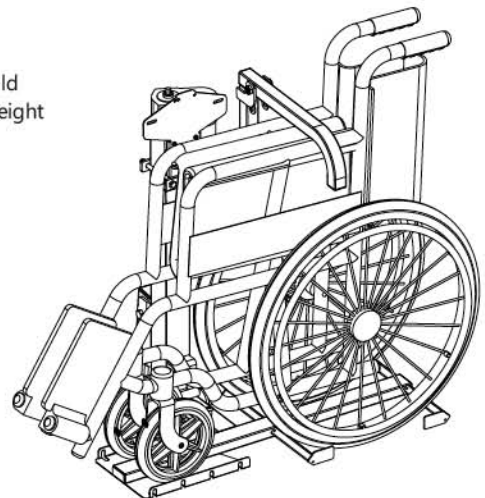


CAUTION

The AL030's Hold Down Arm height requires adjustment to properly clamp your specific wheelchair to the platform. Position the folded wheelchair on the platform being certain the large rear wheels fall into the cradles of the platform. Loosen the two bolts and nuts located in the drawing below. Allow the arm to rest on the padded armrests. Remove chair, and allow the arm bracket to fall approx 1 inch. Tighten bolts and nuts. Replace chair on platform and test the Hold Down Arm. Chair should be secure, and not moveable in any direction. Adjust as needed.



Adjusting Hold Down Arm height



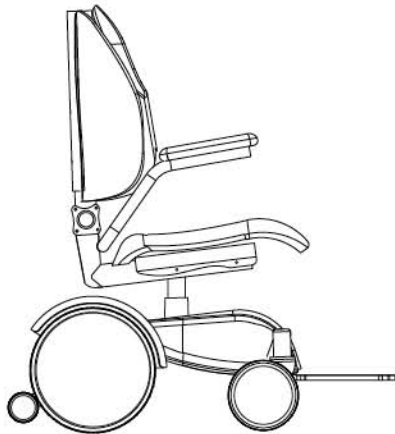
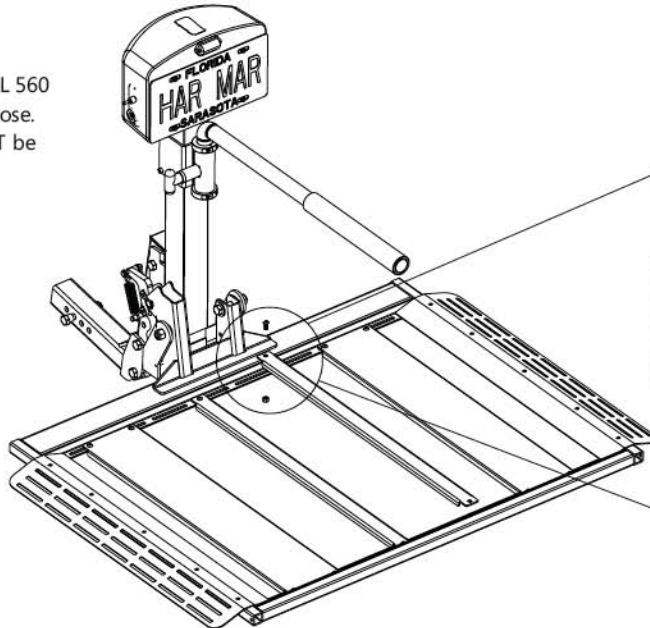
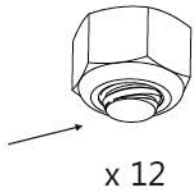
LIFT PREPARATION - AL560, AL560XL



CAUTION

For adjustment purposes ALL 560 platform components are loose. These screws and nuts MUST be tightened before use.

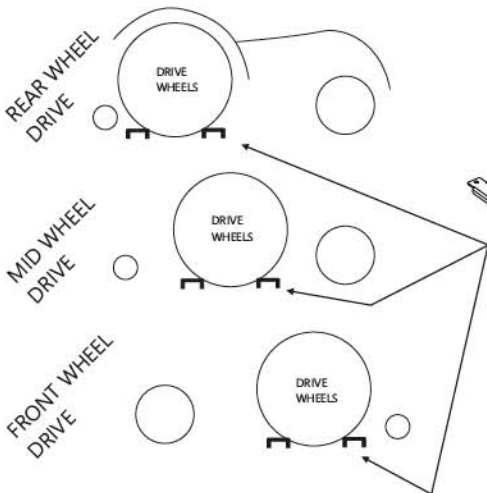
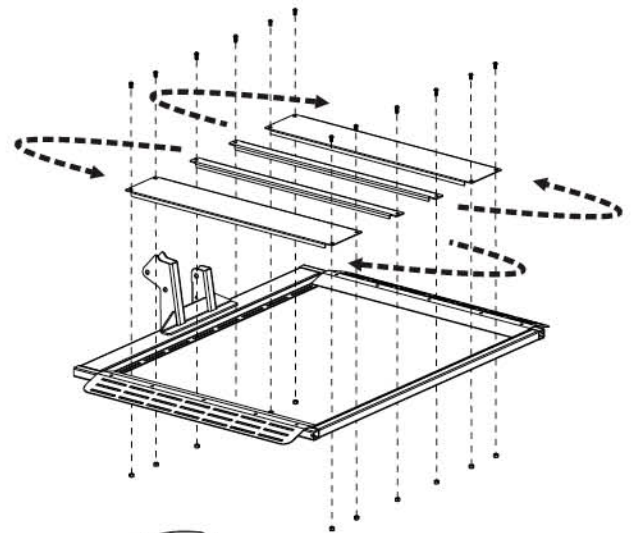
THREAD **MUST** PROTRUDE OUT THE TOP OF NYLON PORTION OF ALL THE NUTS



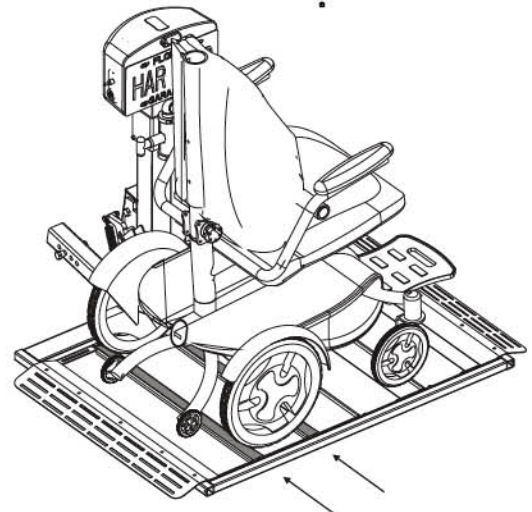
CAUTION

RE-ARRANGE PLATFORM SKINS AND CRADLES AS NEEDED TO CAPTURE THE DRIVE WHEELS

Estimate the chair's center position depending on driver's side or passenger's side entry preference. Locate the drive wheel's position. Adjust the 2 main cradle positions to match. Capture smaller wheels on the 2 larger skins.



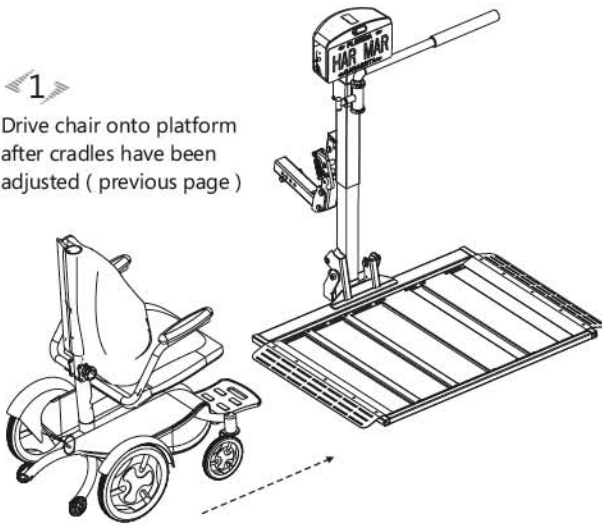
Drive chair onto platform. Verify chair is secure and does not move in any direction once positioned between the skins and cradles.



AL560, AL560XL - HOLD DOWN ARM ADJUSTMENT

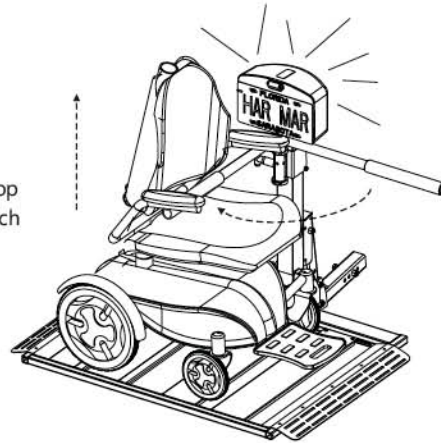
1

Drive chair onto platform after cradles have been adjusted (previous page)



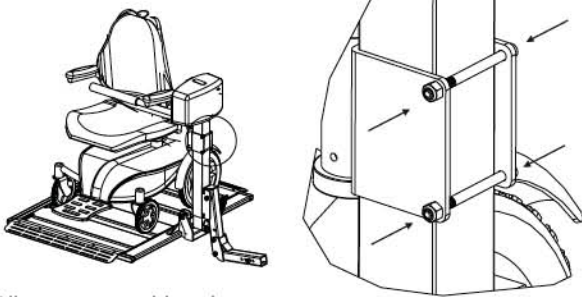
2

Raise platform to top of travel (until clutch is heard)



3

Loosen the 2 bolts and nuts in back of vertical tube.

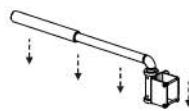


Allow arm assembly to lower until the arm contacts the seat

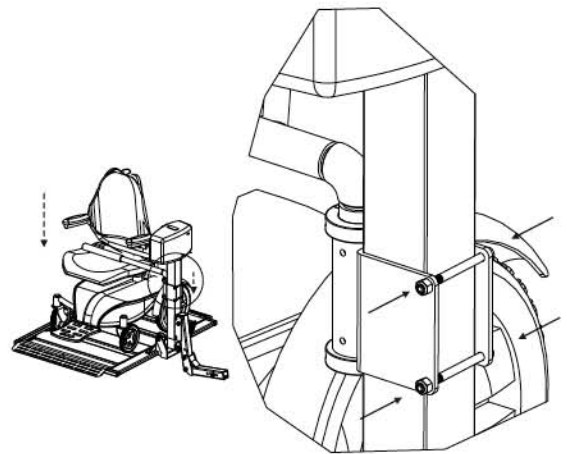
4

Lower the platform approx. 2" to 3"

Allow arm to drop with seat

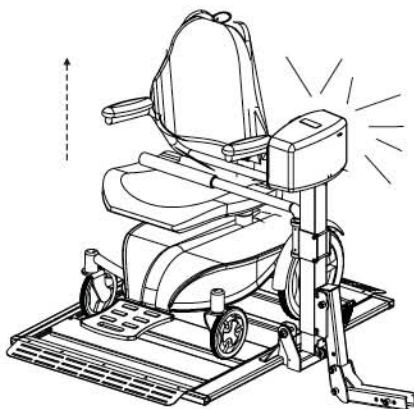


Re-Tighten the 2 bolts and nuts.



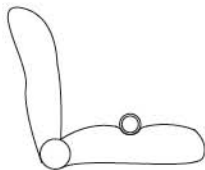
5

Run lift up until top of travel (clutch is heard)

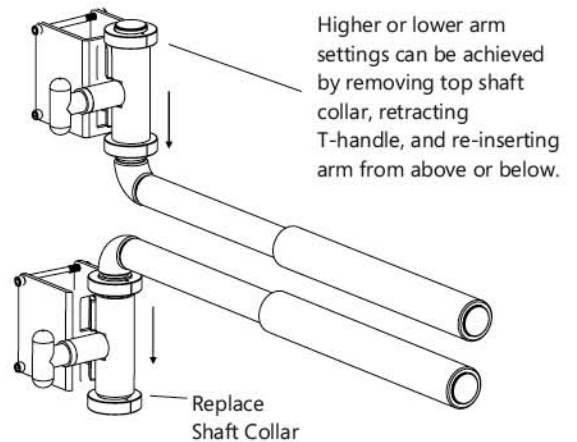


⚠ CAUTION

VERIFY ARM PRODUCES ENOUGH PRESSURE ON SEAT TO **FIRMLY** HOLD



Power chair to platform seat should be somewhat deformed by arm.

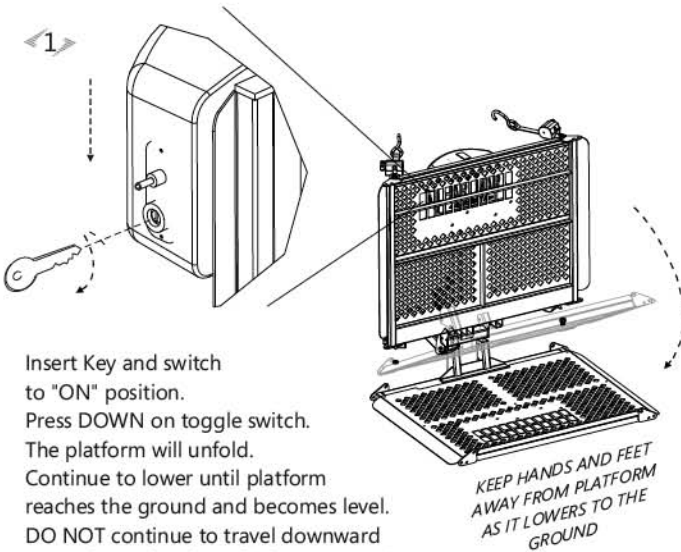


Higher or lower arm settings can be achieved by removing top shaft collar, retracting T-handle, and re-inserting arm from above or below.

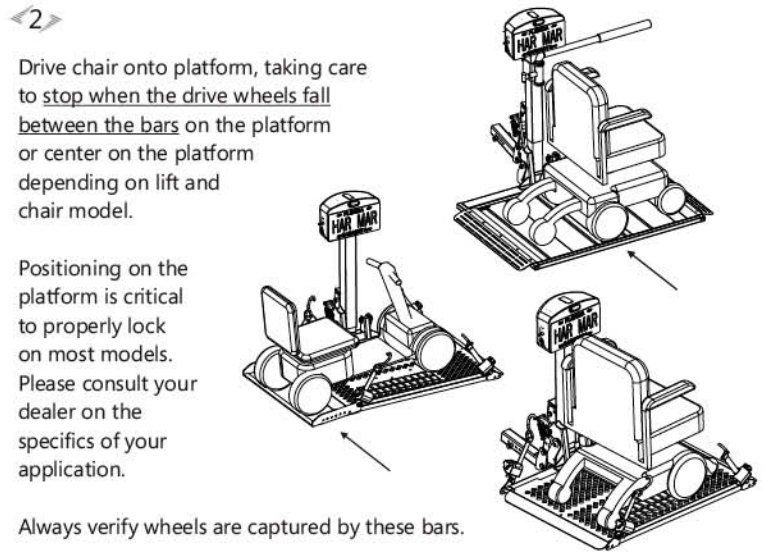
Replace Shaft Collar

This method allows the red T-handle to remain on the same side as the key and toggle switches.
OR
Entire assembly can be flipped IF desired for opposite T-handle location.

GENERAL OPERATION



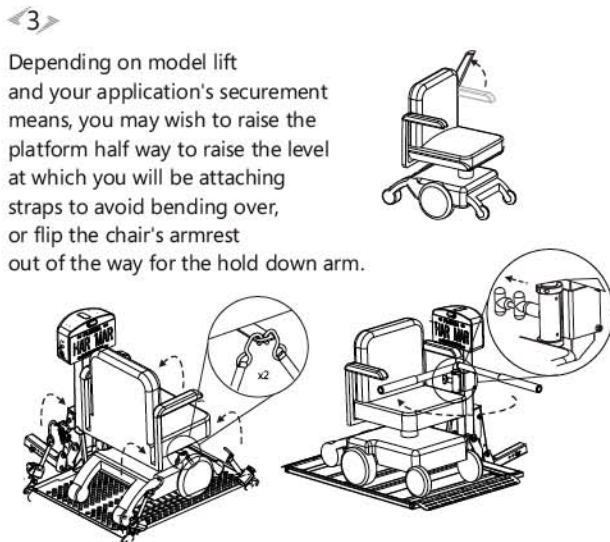
1
Insert Key and switch to "ON" position. Press DOWN on toggle switch. The platform will unfold. Continue to lower until platform reaches the ground and becomes level. DO NOT continue to travel downward so much so, that the vehicle starts to raise. This will damage the lift.



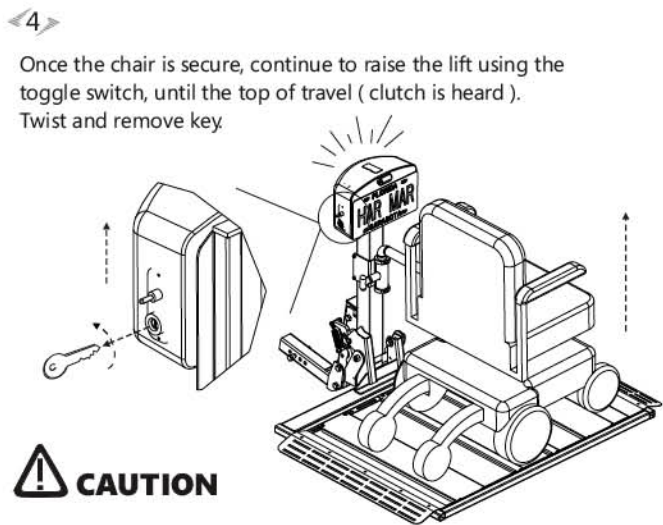
2
Drive chair onto platform, taking care to stop when the drive wheels fall between the bars on the platform or center on the platform depending on lift and chair model.

Positioning on the platform is critical to properly lock on most models. Please consult your dealer on the specifics of your application.

Always verify wheels are captured by these bars.



3
Depending on model lift and your application's securement means, you may wish to raise the platform half way to raise the level at which you will be attaching straps to avoid bending over, or flip the chair's armrest out of the way for the hold down arm.



4
Once the chair is secure, continue to raise the lift using the toggle switch, until the top of travel (clutch is heard). Twist and remove key.

CAUTION

ALWAYS Verify the chair or scooter is held firmly in place prior to transport.

Always run the lift to the top of travel for transport. The lift will make a ratchet type sound at the top, which is the best indication that all mechanism are locked and ready for travel.

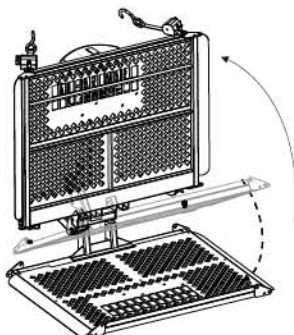
Never attempt to move the vehicle without the lift being in the full "up" or "stowed" position. This may cause damage to the lift.

Slow Down for pot holes, rough roads, railroad tracks etc... Excessive loads imposed from rough driving will damage your lift, and will not be covered by the warranty.

If any damage is noticed, stop using the lift immediately. Do not attempt to transport a chair or scooter with a compromised lift. Damage to your chair, lift, vehicle may occur. Take the lift to your nearest dealer, and have it evaluated prior to further use.

5
To unload, follow these instructions in reverse, and reverse the direction of the arrows.

When unloaded, the platform will automatically fold. (except AL010/050 and AL030)



These are generic instructions
CAUTION
Please follow the instruction suggested by your dealer as each application varies slightly depending on chair make and model.

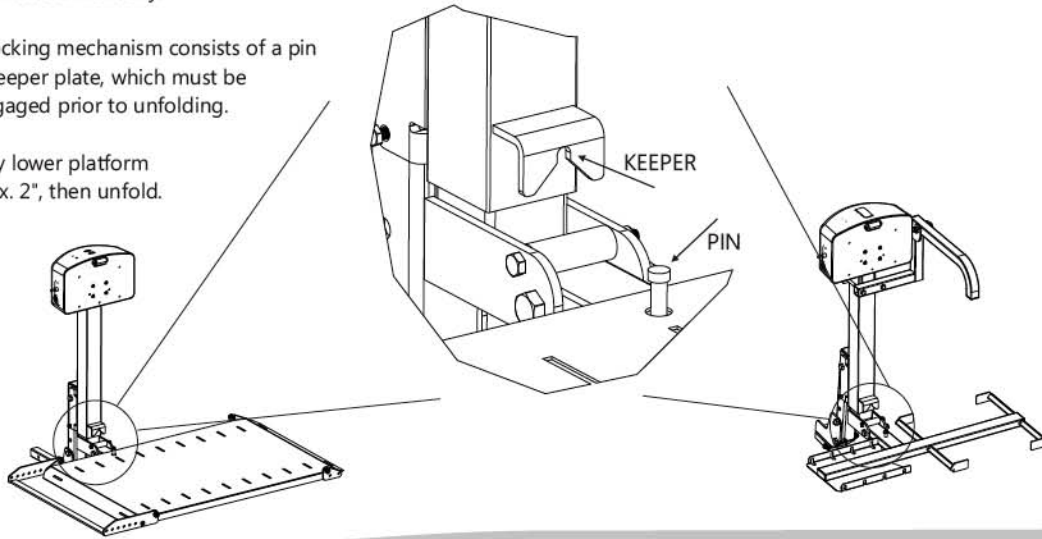


The **AL010/050** and **AL030** both require the platform to be folded and unfolded manually.

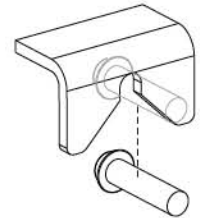
The locking mechanism consists of a pin and keeper plate, which must be disengaged prior to unfolding.

Simply lower platform approx. 2", then unfold.

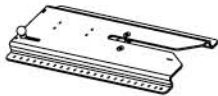
Micro-lifts



Be sure to lower the lift at least 2" before attempting to unfold the platform.

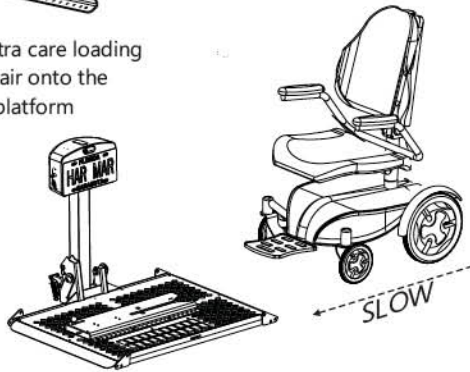


To lock in upright position, be sure to fold platform at least 2" before top of travel



AL550 Auto Lock

Take extra care loading your chair onto the AL550 platform



THREE WAYS TO VERIFY YOUR CHAIR IS SUCCESSFULLY LOCKED DOWN

1) AUDIBLE "CLICK or POP" SOUND

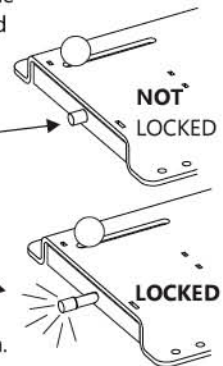
As the chair enters the locking device, it should be driven forward until an audible pop or clicking sound is heard. This sound is the locking device setting itself around the chair's docking device pin.

2) VISUAL INDICATOR

The yellow indicator will extend and stay extended when the chair is successfully locked in place.

3) REVERSE TEST

Attempt to back the chair off the platform. The chair will NOT move in any direction when successfully locked.



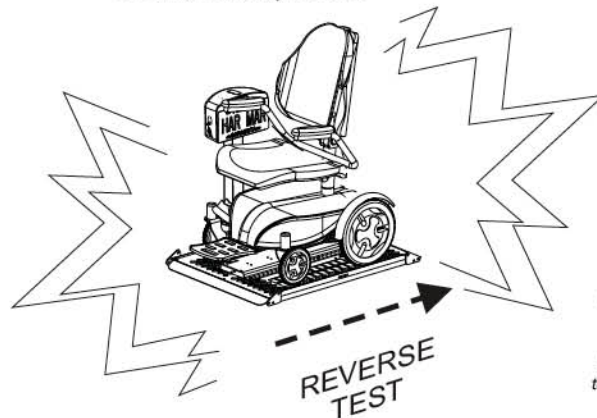
CAUTION

ALWAYS, ALWAYS, ALWAYS test the locking station on your AL550. Be sure your chair is secured with the three methods to the right.

To release chair simply push red release knob



If release knob is difficult to push This is most likely because of vibration during travel. Simply power the chair in reverse slightly to relieve pressure off locking device. Knob should easily be disengaged.



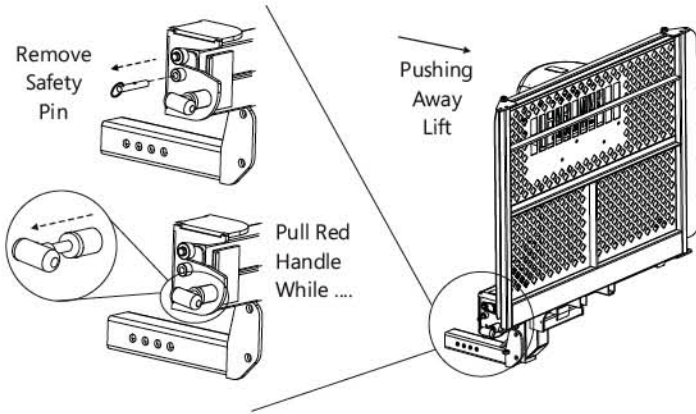
Harmar is NOT responsible for negligence when using auto locking device. It is the user's responsibility to verify the device has locked the chair for transport.

OPERATION - SWING AWAY

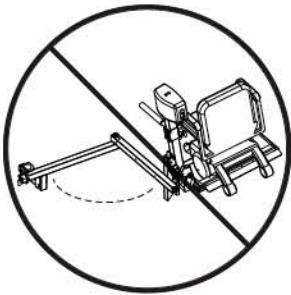
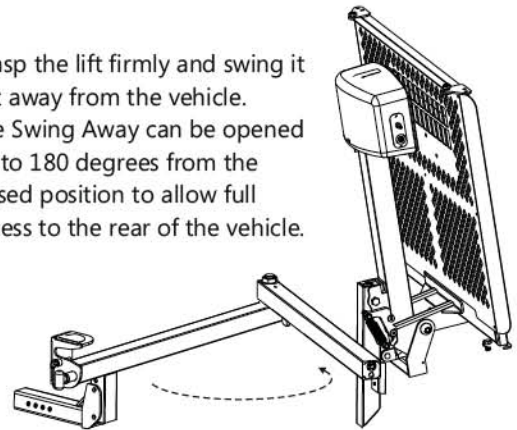


Many scooter and chair owners require access to the rear of a vehicle. To accomplish this, a Swing Away option is added to the lift installation. This allows the complete lift to be conveniently and easily swung away from the back of the vehicle and allow easy access to the trunk or lift gate. The Swing Away option can be purchased from any authorized dealer and added at any time.

OPENING THE SWING AWAY:



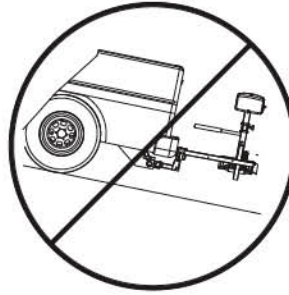
Grasp the lift firmly and swing it out away from the vehicle. The Swing Away can be opened up to 180 degrees from the closed position to allow full access to the rear of the vehicle.



⚠ WARNING

!! NEVER OPERATE THE SWING AWAY WITH THE CHAIR ON THE LIFT !!

This will cause damage to the Swing Away, lift, and potentially cause damage to the vehicle and the chair. This will VOID your warranty.



⚠ WARNING

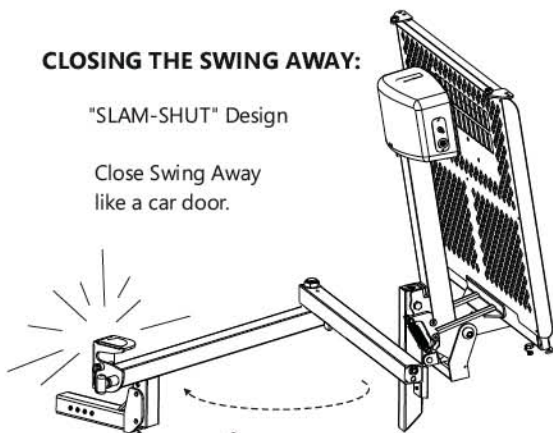
!! OPEN ONLY ON LEVEL GROUND !!

Failure to do so may result in the operator losing control of the lift causing damage to persons and property.

CLOSING THE SWING AWAY:

"SLAM-SHUT" Design

Close Swing Away like a car door.

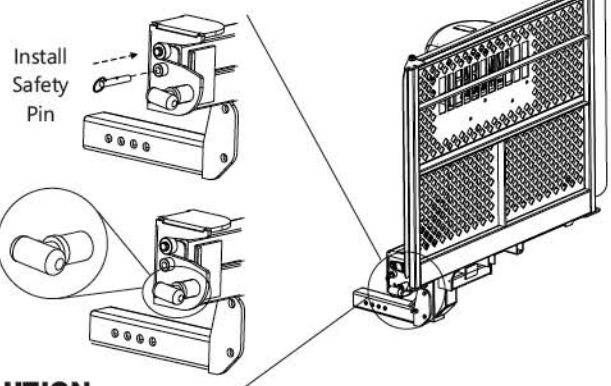


⚠ WARNING

KEEP CLEAR OF LATCHING MECHANISM.

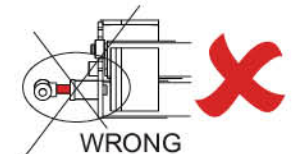


Always install the safety pin.



⚠ CAUTION

VERIFY RED KNOB HAS FULLY RETRACTED.





WARNING

**DISCONNECT POWER FROM LIFT
BEFORE
ATTEMPTING MANUAL OVERRIDE**

Ideally, the Manual Override system should never be needed.

However, in the event of power failure (ex. Dead Battery,) your lift is equipped with the ability to operate the platform for emergency purposes. The very first, and most important step is to unplug the 2 connector plug **BEFORE** attempting to use the override. Failure to do so can result in serious injury.

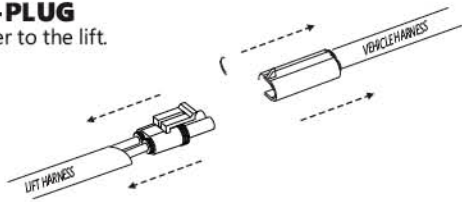
Please remember to disconnect power prior to any effort to operate the Manual Override.

REMOVE
**REMOVE STICKER TO
ACCESS MANUAL OVERRIDE
DISCONNECT POWER BEFORE
INSERTING WRENCH**



1

UN-PLUG
power to the lift.



2

Remove
Sticker.

3

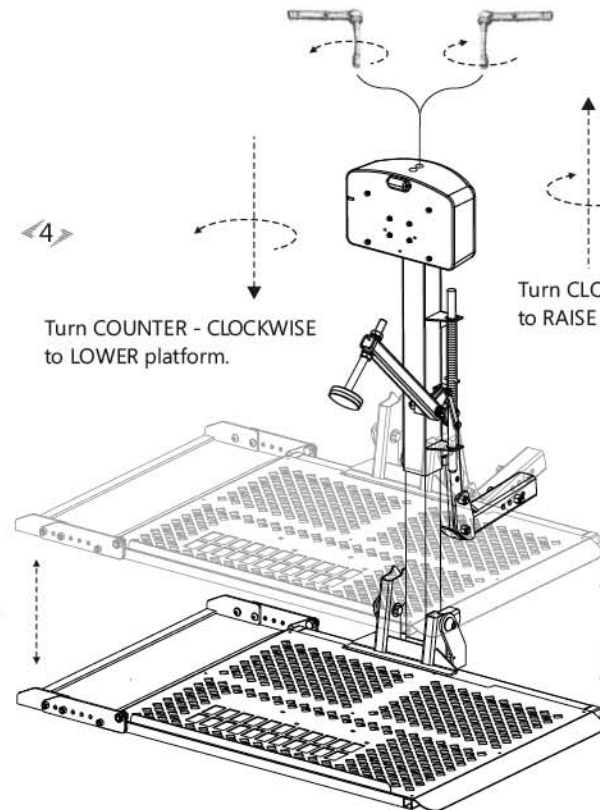
Use a 3/8" socket
and socket wrench
to rotate the Hex
Shaft on top of
the actuator.



4

Turn COUNTER - CLOCKWISE
to LOWER platform.

Turn CLOCKWISE
to RAISE platform.



MOTOR COVER IS NOT A SEALED UNIT AND IS ACCEPTABLE TO USE WITHOUT STICKER IN PLACE. CONTACT YOUR LOCAL DEALER FOR SERVICE.

SAFETY & MAINTENANCE

CAUTION

When driving with your chair on the lift, drive with **EXTREME CARE**. SLOW DOWN for pot holes, speed bumps, railroad tracks, etc. Your lift, vehicle, chair can be badly damaged by abuse if subject to excessive loads imposed by rough driving.



CAUTION

Before folding an un-loaded platform, be sure to return the Hold Down Arm to one of the side positions. Failure to do so, will damage your lift.

CAUTION

Keep hands and feet away from PINCH POINTS. As with most mechanical objects, the hinge point of a moving part creates a pinch point. Be sure not to stick fingers or extremities at or near these points.

CAUTION

Keep hands, feet, and any other objects out from under the platform as it lowers.

CAUTION

Keep your chair's tires properly inflated. Improper inflation will change how the chair fits and secures on the platform, therefore changing the amount of clamping pressure.

CAUTION

Before driving off with your chair on the lift, make sure that the chair is firmly held to the platform.

CAUTION

Inspect the condition of your lift often. If ANY parts are worn or damaged, DO NOT USE THE LIFT. Immediately contact the dealer you purchased the lift from for repairs.

CAUTION


Do not enter steep driveways straight on. Enter and leave at an angle to the street so that the lift does not drag on the ground.

CAUTION

Do not attempt to move the vehicle with the platform in the down position. If moved this way, the lift mechanism will be damaged.

MAINTENANCE

This outside lift has been designed to be as trouble free as possible for the owner. The maintenance schedule is no exception.

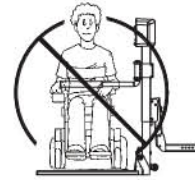
Every 30 days oil the pivot points on all moving parts. 



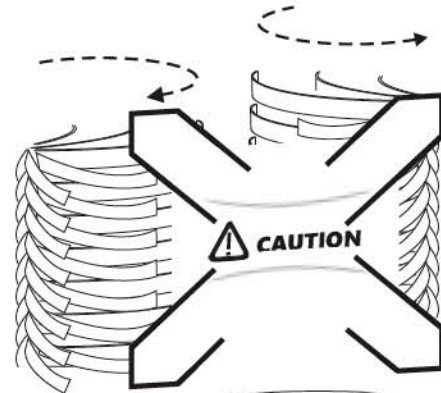
During winter, or under dirty and dusty conditions, re-grease the inside vertical square tube every 30 days. To accomplish this, lower the platform to the ground and clean with mineral spirits, WD-40, or a good solvent. Once clean, grease the square vertical tube shaft with high grade water resistant grease such as boat trailer wheel bearing grease.

Check for paint chips and touch up any bare metal with a good gloss black enamel or laquer to inhibit rust. This may be necessary more frequently when subject to salt air or road salt during winter months.

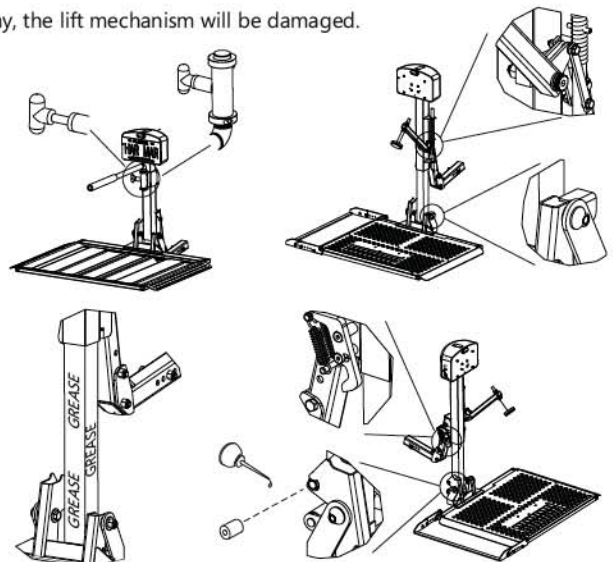
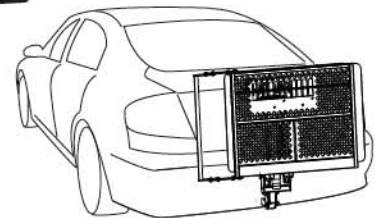
WARNING



This lift is NOT meant for human transport. Chair MUST be unoccupied before operating the lift. These lifts are designed for a specific chair transport only. DO NOT attempt to move any other power chairs, vehicles, objects, people, or materials other than for what the lift was designed.



YOU MUST HAND WASH OR USE TOUCHLESS AUTOMATIC CAR WASH TO PREVENT LIFT DAMAGE



PROBLEM: LIFT WILL NOT OPERATE, OPERATES SLOWLY, or OPERATES INTERMITTENTLY.

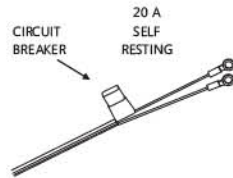
REASON: BAD ELECTRICAL CONNECTIONS / CIRCUIT BREAKER

PROCEDURE:

CHECK / CLEAN ALL CONNECTIONS THAT MIGHT BE LOOSE OR DIRTY THIS IS THE #1 CAUSE OF A POORLY PERFORMING LIFT. THE MOTOR ON THE LIFT REQUIRES QUALITY ELECTRICAL CONNECTIONS TO OPERATE AT FULL CAPACITY. ANY BREAK IN THE WIRING WILL SLOW DOWN THE MOTOR, OR CAUSE IT TO OPERATE INTERMITTENTLY WHICH IN TURN WILL PREMATURELY DETERIORATE THE MOTOR.

THE LIFT'S VEHICLE POWER HARNESS RUNNING THROUGH OR UNDER THE VEHICLE IS SUBJECT TO ROAD DEBRIS, AND RUBBING AGAINST THE VEHICLE'S FRAME, CAUSING A SHORT. INSPECT THE FULL LENGTH OF THE HARNESS TO BE SURE THE JACKET OF INSULATION IS NOT TORN.

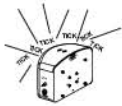
THE CIRCUIT BREAKER IS LOCATED ABOUT 6" FROM THE CONNECTIONS TO THE VEHICLE'S BATTERY. THE BREAKER WILL SELF RESET IF OVER-LOADED. HOWEVER, VERIFY (w/ OHM METER or TEST LIGHT) THE BREAKER IS FUNCTIONING, OR REPLACE IT WITH A NEW / KNOWN GOOD CIRCUIT BREAKER.



PROBLEM: THERE IS A RATCHETING SOUND WHEN THE LIFT IS ALL THE WAY UP OR DOWN.

REASON: ACTUATOR CLUTCH

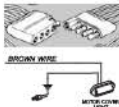
PROCEDURE: N/A --- THIS IS NORMAL OVERLOAD PROTECTION. THIS SOUND *MUST BE HEARD* IN THE UP DIRECTION TO INDICATE THE PLATFORM IS ALL THE WAY UP AND THAT THE CHAIR/PLATFORM IS SECURE. TAKE CARE **NOT** TO DO THIS ON THE WAY DOWN AS THIS WILL RAISE THE CAR AND IS BAD FOR THE LIFT. ONLY LOWER THE PLATFORM LEVEL TO THE GROUND. **DO NOT** START TO RAISE THE CAR WITH THIS LIFT.



PROBLEM: THE LICENSE PLATE LIGHT DOES NOT WORK.

REASON: 4 PRONG CONNECTOR NOT WIRED

PROCEDURE: THIS LIGHT RUNS FROM THE 4 PRONG TRAILER PLUG LOCATED ON THE VEHICLE HARNESS THAT POWERS THE LIFT. MOST HITCH INSTALLERS WILL INSTALL THIS TYPE OF WIRING WHEN THE HITCH IS INSTALLED. IF NO SUCH PLUG EXISTS IT MAY BE WIRED DIRECTLY TO A TAIL LIGHT OF LICENSE PLATE LIGHT (BROWN WIRE ONLY (+))



PROBLEM: WHAT DO I DO WITH THE EXTRA LENGTH OF WIRE LEADING TO THE MOTOR OF THE LIFT ?

REASON: FOR OPTIONAL SWING AWAY.

PROCEDURE: THIS WIRE IS THERE IN CASE A SWING AWAY OPTION IS USED WITH THE LIFT. IF A SWING AWAY IS NOT INSTALLED, COIL THE EXTRA WIRE AND ZIP TIE IT TO THE FRAME, OUT OF THE WAY OF ANY MOVING PARTS. WE RECOMMEND LEAVING THE EXTRA WIRE IN CASE A SWING AWAY IS ADDED TO THE LIFT AT A LATER TIME.



PROBLEM: THE LIFT DOES NOT REACH THE GROUND.

REASON: HITCH ADAPTER INSTALLATION.

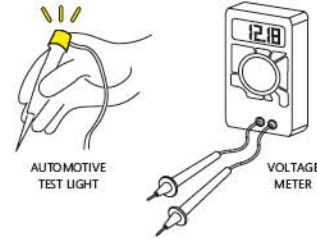
PROCEDURE: CHECK THE ATTACHMENT OF THE HITCH ADAPTER TO THE HITCH POST ON THE BACK OF THE LIFT (SEE INSTALLATION PAGE OF THIS MANUAL.) THE NORMAL RANGE OF OPERATION OF THE LIFT IS 5 TO 16 INCHES TO THE BOTTOM OF THE HITCH RECEIVER OF THE VEHICLE. ANY HIGHER VEHICLES WILL REQUIRE A DIFFERENT HITCH ADAPTER. (SEE HITCH ADAPTER SECTION OF THIS MANUAL).



CAUTION

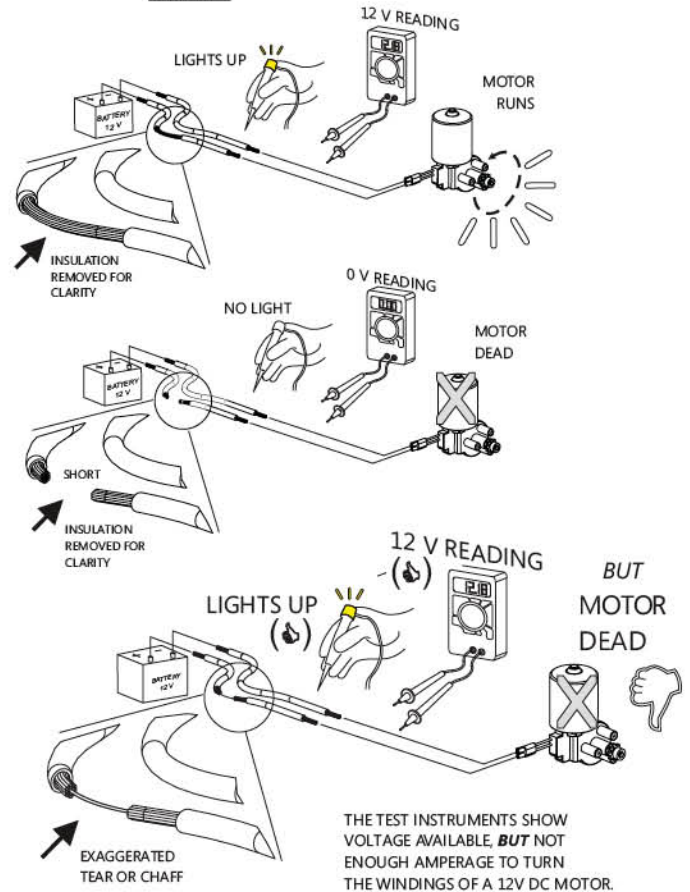
This section is reserved for the installer / dealer. Harmar does *not* recommend these procedures be attempted by anyone without proper knowledge of automotive electrical circuitry.

BE CAREFUL WHEN TROUBLESHOOTING WITH A TEST LIGHT, OR VOLTAGE METER. THEY MAY GIVE FALSE INDICATIONS.



THESE INSTRUMENTS WILL DETECT VOLTAGE, BUT MAY NOT INDICATE A TEAR OR POOR CONNECTION IN THE WIRING

EXAMPLE:



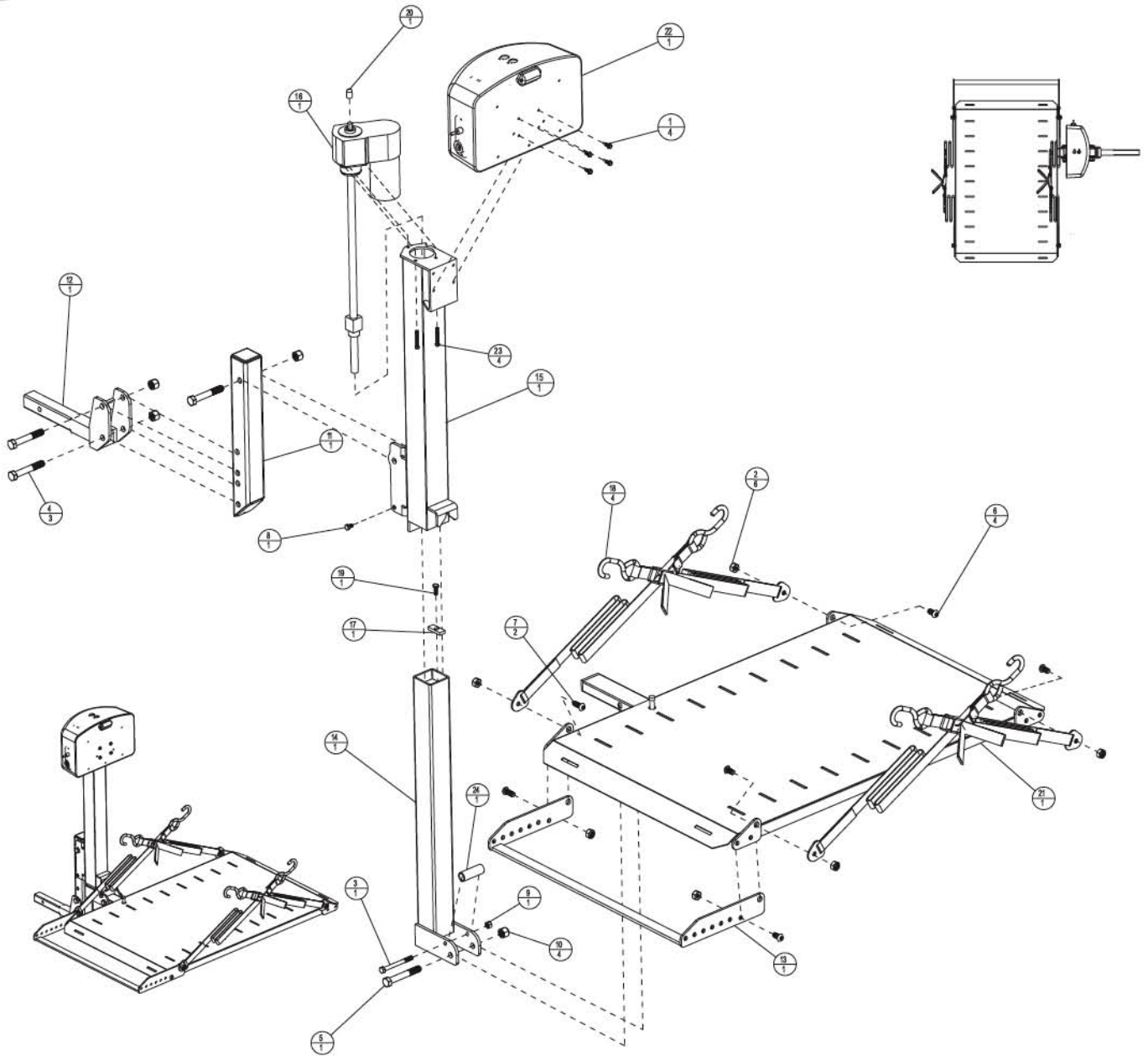
BE CAREFUL WHEN TROUBLESHOOTING WITH A TEST LIGHT, OR VOLTAGE METER. THEY MAY GIVE FALSE INDICATION AS SHOWN ABOVE. THEY WILL ONLY INDICATE THERE IS SOME WIRE CONNECTION--NOT NECESSARILY--ENOUGH.

HARMAR STRONGLY RECOMMENDS TROUBLESHOOTING ELECTRICAL PROBLEMS WITH KNOW GOOD / FULLY CHARGED 12 V AUTOMOTIVE BATTERY or KNOW GOOD / FULLY CHARGED POWER CHAIR/SCOOTER BATTERY



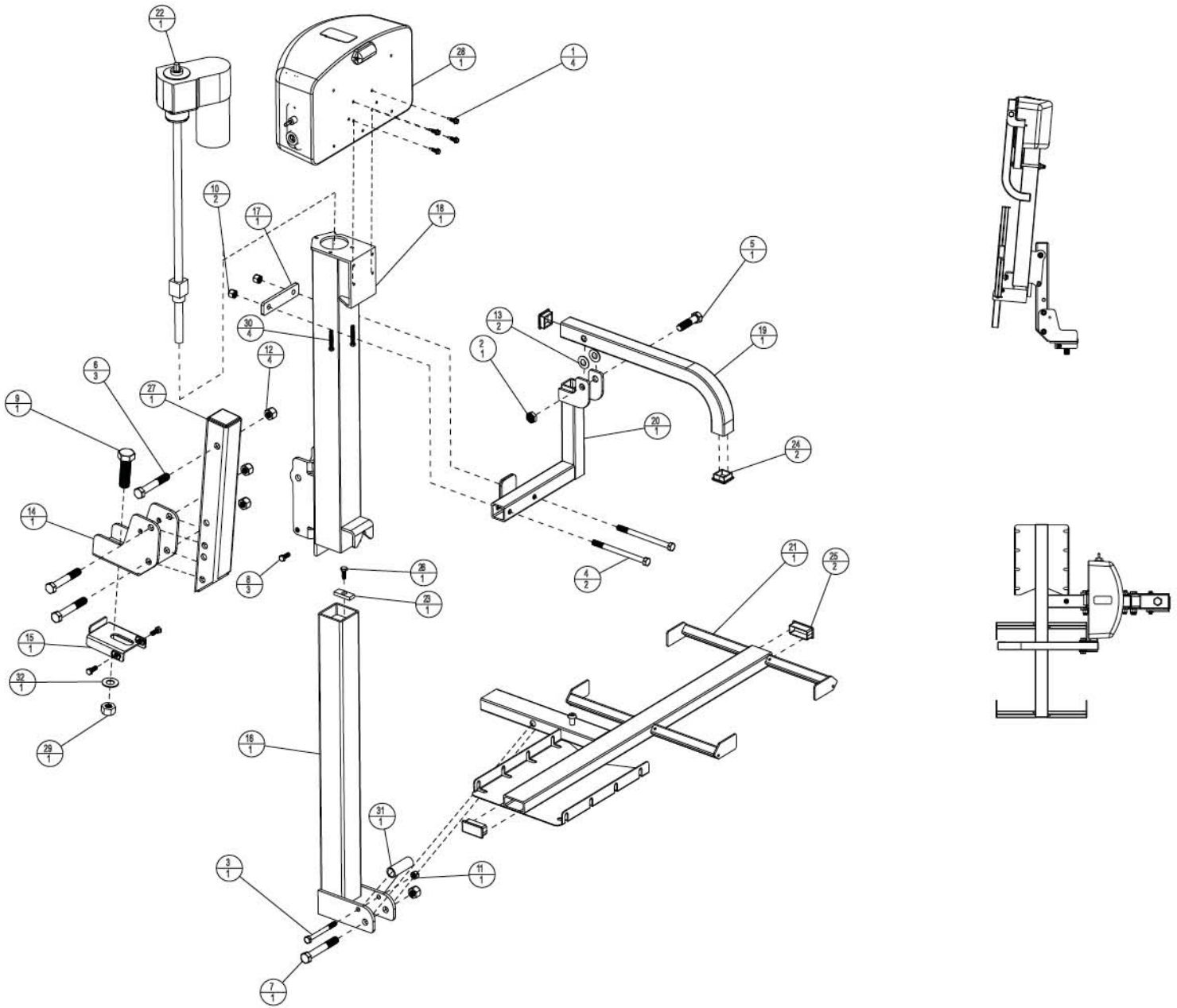


EXPLODED VIEW - AL010/050



ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	4	9006A580	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP	13	1	ALA0114	AL010 SPREADER BAR
2	6	90682A040	HEX NUT, NYLOC, 3/8-16, HALF HEIGHT, GRADE 5 ZP STEEL	14	1	ALA0300	INNER TUBE
3	1	91247A596	HHCS, 5/16-18 x 3-1/4", GRADE 5 ZP STEEL	15	1	ALA0303R4	OUTER TUBE R4
4	3	91247A725	HHCS, 1/2-13 x 3-1/4", ZP STEEL	16	1	ALA10010REV2	ACTUATOR
5	1	91247A726	HHCS, 1/2-13 x 3-1/4", GRADE 5 ZP STEEL	17	1	ALA10060	TAB, ACTUATOR
6	4	91308A416	SHCS, 3/8-16 x 3/4", GRADE 5 ZP STEEL	18	4	ALA68073	PIONEER STRAP ASSEMBLY
7	2	91308A419	SHCS, 3/8-16 x 1", GRADE 5 ZP STEEL	19	1	BOLT	HHCS, 1/4-20 x 3/4", ZP STEEL
8	1	92865A002	HHCS, 1/4-28 x 1/2", ZP STEEL GRADE 5	20	1	H01080	CAP, VINYL, 5/16-3/8" ID BLACK
9	1	95615A160	HEXNUT, NYLOC, 5/16-18, GRADE 5 ZP STEEL	21	1	H0109	AL010/050 PLATFORM R4
10	4	95615A210	NUT, NYLOC, 1/2-13, ZP STEEL	22	1	H12050	MOTOR COVER ASSY
11	1	AL107	HITCH POST ASSEMBLY	23	4	SCREW_ACT	(provided w/ actuator)
12	1	AL126	CLASS 2 HITCH ADAPTER	24	1	TU1-062-090-2_20	TUBING, 5/8" ODx 0.090wall - 2.20"L

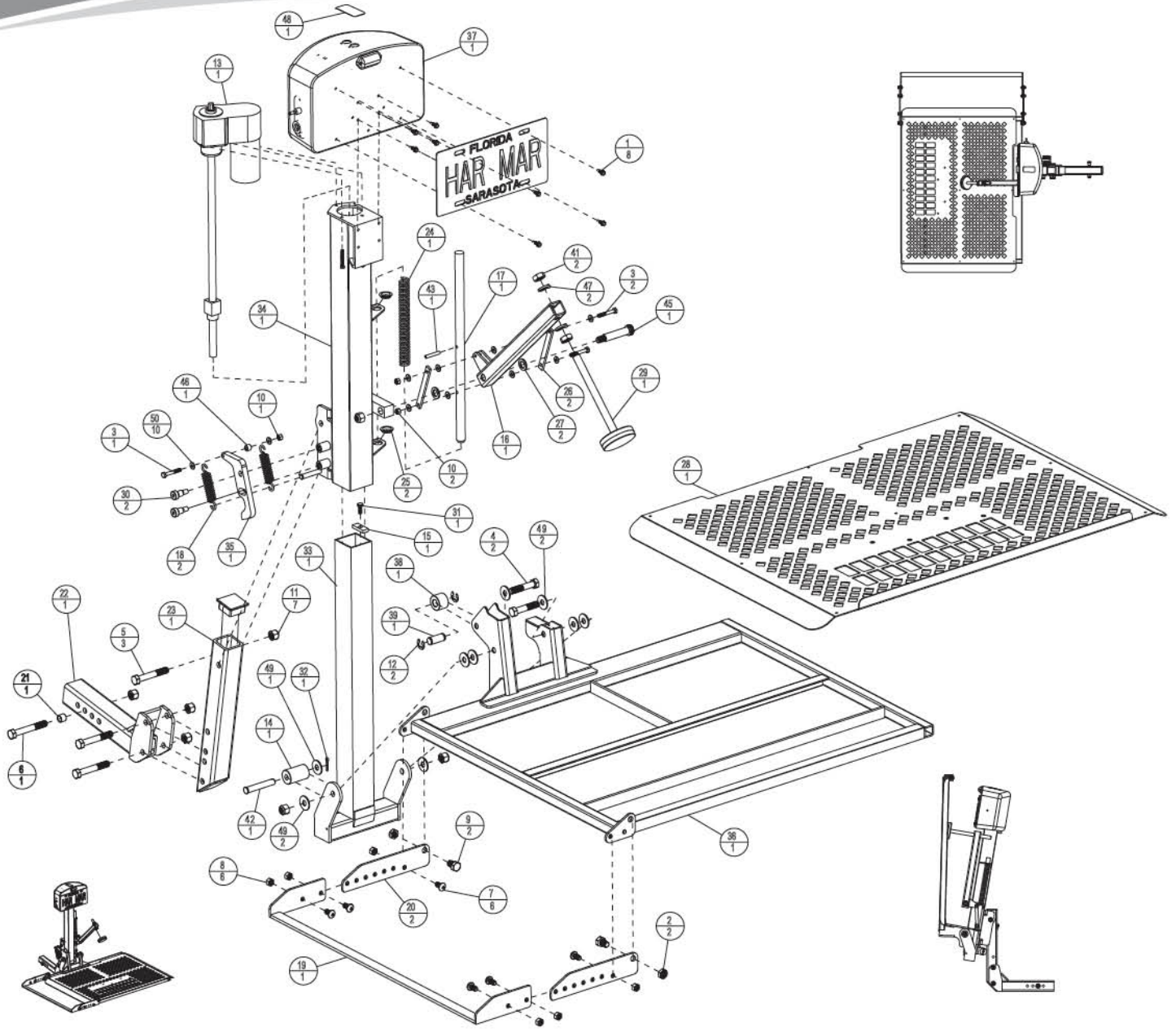
EXPLODED VIEW - AL030



ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	4	90064A580	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP	17	1	ALA03020	BACKING PLATE, H.D.A. , AL030
2	1	90566A033	HEX NUT, NYLOC, 1/2-13 HALF HEIGHT, ZP STEEL	18	1	ALA0303R4	OUTER TUBE R4
3	1	91247A596	HHCS, 5/16-18 x 3-1/4", GRADE 5 ZP STEEL	19	1	ALA0305	HOLD DOWN ARM, AL030
4	2	91247A644	HHCS, 3/8-16 x 5", GRADE 5 ZP STEEL	20	1	ALA0307	HDA MOUNT
5	1	91247A720	HHCS, 3/4-10 x 2-1/2", GRADE 5 ZP STEEL	21	1	ALA0312	PLATFORM, AL030
6	3	91247A725	HHCS, 1/2-13 x 3-1/4", ZP STEEL	22	1	ALA10010REV2	ACTUATOR
7	1	91247A726	HHCS, 1/2-13 x 3-1/4", GRADE 5 ZP STEEL	23	1	ALA10050	TAB, ACTUATOR
8	3	92865A006	HHCS, 1/4-28 x 3/4", GRADE 5 ZP STEEL	24	2	ALA125SPI	INSERTS, 1/4" BLACK PLASTIC
9	1	92865A845	HHCS, 3/4-10 x 2-1/2", GRADE 5 ZP STEEL	25	2	ALA60085	
10	2	96615A140	HHCS, 3/8-16 GRADE 5 ZP STEEL	26	1	BOLT	HHCS, 1/4-20 x 3/4", ZP STEEL
11	1	96615A160	HEXNUT, NYLOC, 5/16-18, GRADE 5 ZP STEEL	27	1	H107	HITCH POST ASSEMBLY
12	4	96615A210	NUT, NYLOC, 1/2-13, ZP STEEL	28	1	H12050	MOTOR COVER ASSY
13	2	9712K760	WASHER, SPLIT LOCK, 3/4", ZP STEEL	29	1	NUT_	3/4-10
14	1	ALA01090	CLASS 1 HA	30	4	SCREW_ACT	(provided w/ actuator)
15	1	ALA01097	STABILIZER	31	1	TU1-062-090-2_20	TUBING, 5/8" ODx0.090wall - 2.20'L
16	1	ALA0300	INNER TUBE	32	1	WASHER	1/4" SPLIT LOCK WASHER



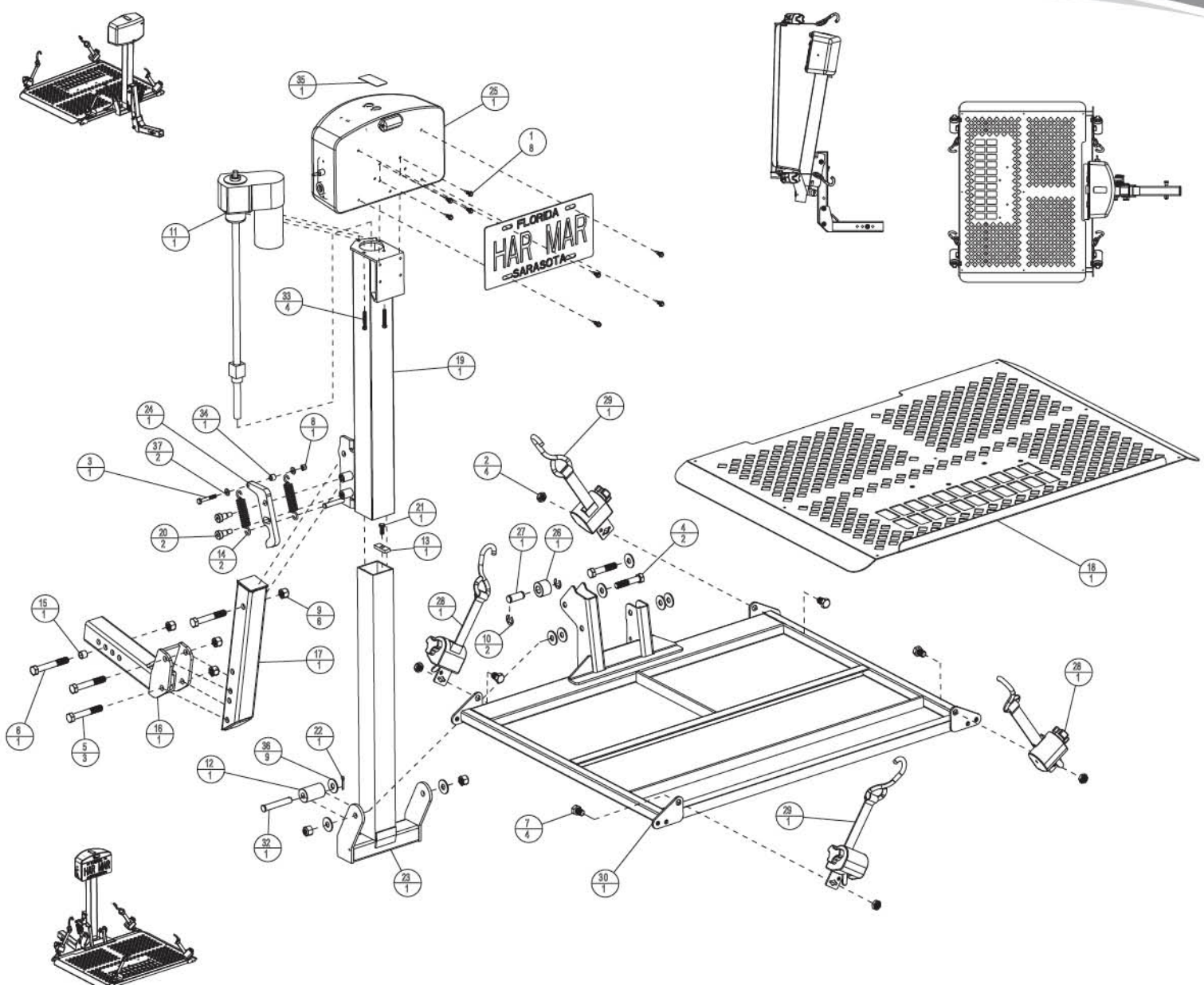
EXPLODED VIEW - AL100



ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
1	8	90064A580	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP
2	2	90566A033	HEX NUT, NYLOC, 1/2-13 HALF HEIGHT, ZP STEEL
3	3	91247A548	HHCS, 1/4-20 x 1-3/4" L, ZP STEEL
4	2	91247A722	HHCS, 1/2-13 x 2-1/2" L, ZP STEEL
5	3	91247A725	HHCS, 1/2-13 x 3-1/4" L, ZP STEEL
6	1	91247A726	HHCS, 1/2-13 x 3-1/2" L, ZP STEEL
7	6	91773A622	PhPhH4, 3/8-16 x 3/4" L, GRADE 5 ZPS STEEL
8	6	91837A031	HEX NUT, STOVER, 3/8-16 GRADE 5 ZP STEEL
9	2	92865A710	HHCS, 1/2-13 x 3/4" L, GRADE 5 ZP STEEL
10	3	95615A120	NUT, NYLOC, 1/4-20, ZP STEEL
11	7	95615A210	NUT, NYLOC, 1/2-13, ZP STEEL
12	2	98408A140	E-CLIP, for 5/8" SHAFT
13	1	ALA10010REV2	ACTUATOR
14	1	ALA10032	ROLLER 2" DIA UHMW
15	1	ALA10050	TAB, ACTUATOR
16	1	ALA100REV2	HOLD DOWN ARM AL100 WELDMENT
17	1	ALA108	HOLD DOWN ARM ROD
18	2	ALA11025	EXTENSION SPRING
19	1	ALA115	AL100 EXTENDED CRADLE BAR
20	2	ALA116REV3	SPREADER BAR BRACKET
21	1	ALA12350-PLT	PINCH BOLT TUBE
22	1	ALA123REV1	HITCH ADAPTER, CLASS 3
23	1	ALA129	HITCH POST ASSEMBLY
24	1	ALA13025	COMPRESSION SPRING - AL100
25	2	ALA13030	NYLINEAR BEARINGS - 3/4"

ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
26	2	ALA13040	BAR, LINK, 3/16"
27	2	ALA13050P	HOLD DOWN ARM WASHER
28	1	ALA14400	ALUMINUM PLATE
29	1	ALA18020	HOLD DOWN FOOT - AL100
30	2	ALASON50KSSSE	BIN-CAM BOLT 1/2" X 1 1/2" ZN, PELL
31	1		BOLT
32	1	COTTER_PIN	COTTER PIN
33	1	H100	NARROW INNER TUBE
34	1	H103	OUTER TUBE
35	1	H11010	J CAM
36	1	H112R5	AL100RS PLATFORM
37	1	H12050	MOTOR COVER ASSY
38	1	H14044	ROLLER
39	1	H14045	CLEVIS PIN
40	1	LISCENSE_PLATE	Not applicable
41	2	NUT-5_8	HEX NUT, THIN, 5/8-11, GRADE 5 ZP STEEL
42	1	PIN	CLEVIS PIN, 1/2" x 3" L, ZP STEEL
43	1	ROLL_PIN	ROLL PIN, 3/16" dia, SPLIT, ZP STEEL
44	4	SCREW_ACT	(provided w/ actuator)
45	1	SHLDR_BOLT_5-8	SHCS, 5/8 SHOULDER dia, x 2-1/2" L, ZP STEEL
46	1	SPACER	SPACER, 1/4", for CAM SPRINGS
47	2	SPLIT_LOC-5_8	WASHER, SPLIT-LOCK, 5/8, ZP STEEL
48	1	STICKER_MAN-OVER	STICKER-MANUAL OVERRIDE
49	9	WASHER_1-2	WASHER, FLAT, 1/2, ZP STEEL
50	10	WASHER_1-4	WASHER, FLAT, 1/4", SS

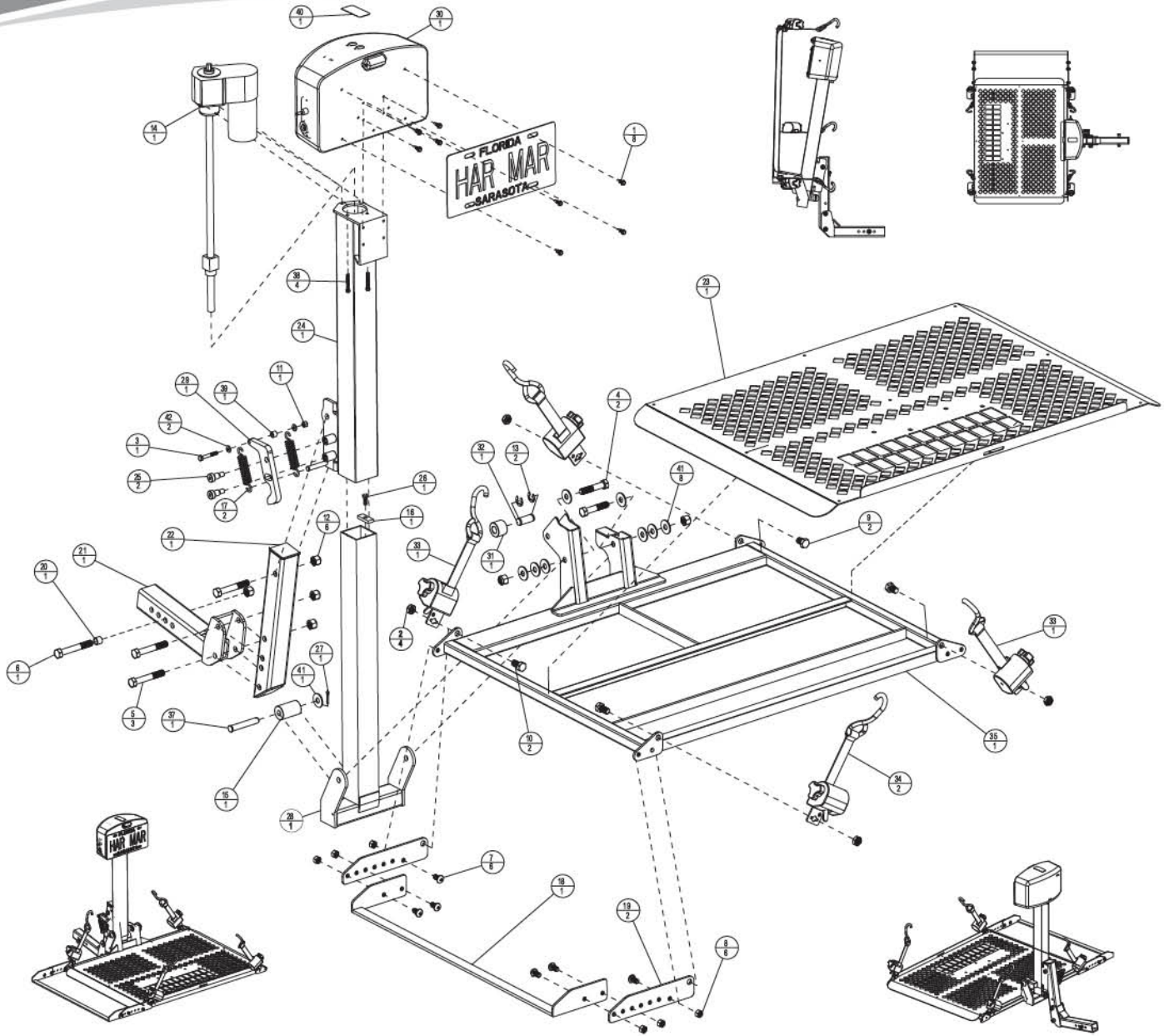
EXPLODED VIEW - AL500



ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	8	90064A580	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP	19	1	ALA503LR1	OUTER TUBE
2	4	90666A033	HEX NUT, NYLOC, 1/2-13 HALF HEIGHT, ZP STEEL	20	2	ALA60N5KSSSE	BIN-CAM BOLT 1/2" X 1 1/2" ZN, PELL.
3	1	91247A548	HHCS, 1/4-20 x 1-3/4" L, ZP STEEL	21	1		BOLT, HHCS, 1/4-20 x 3/4" L, ZP STEEL
4	2	91247A722	HHCS, 1/2-13 x 2-1/2" L, ZP STEEL	22	1	COTTER_PIN	COTTER PIN
5	3	91247A725	HHCS, 1/2-13 x 3-1/4" L, ZP STEEL	23	1	H100	NARROW INNER TUBE
6	1	91247A726	HHCS, 1/2-13 x 3-1/2" L, ZP STEEL	24	1	H11010	J CAM
7	4	92865A710	HHCS, 1/2-13 x 3/4" L, GRADE 5 ZPSTEEL	25	1	H12050	MOTOR COVER ASSY
8	1	95815A120	NUT, NYLOC, 1/4-20, ZP STEEL	26	1	H14044	ROLLER
9	6	95815A210	NUT, NYLOC, 1/2-13, ZP STEEL	27	1	H14045	CLEVIS PIN
10	2	98408A140	E-CLIP, for 5/8" SHAFT	28	2	H50010	Left HAND, Q-STRAINT
11	1	ALA10010REV2	ACUTATOR	29	2	H60011	Right HAND, Q-STRAINT
12	1	ALA10032	ROLLER 2" DIA UHMW	30	1	H512R5	AL500RS PLATFORM
13	1	ALA10050	TAB, ACTUATOR	31	1	LISCENSE_PLATE	Not applicable
14	2	ALA11025	EXTENSION SPRING	32	1	PIN	CLEVIS PIN, 1/2" x 3" L, ZP STEEL
15	1	ALA12350-PLT	PINCH BOLT TUBE	33	4	SCREW_ACT	(provided w/ actuator)
16	1	ALA123REV1	HITCH ADAPTER, CLASS 3	34	1	SPACER	SPACER, 1/4", for CAM SPRINGS
17	1	ALA129	HITCH POST ASSEMBLY	35	STICKER_MAN-OVER	STICKER- MANUAL OVERRIDE	
18	1	ALA14400	ALUMINUM PLATE	36	9	WASHER_1-2	WASHER, FLAT, 1/2", ZP STEEL
				37	2	WASHER_1-4	WASHER, FLAT, 1/4", SS

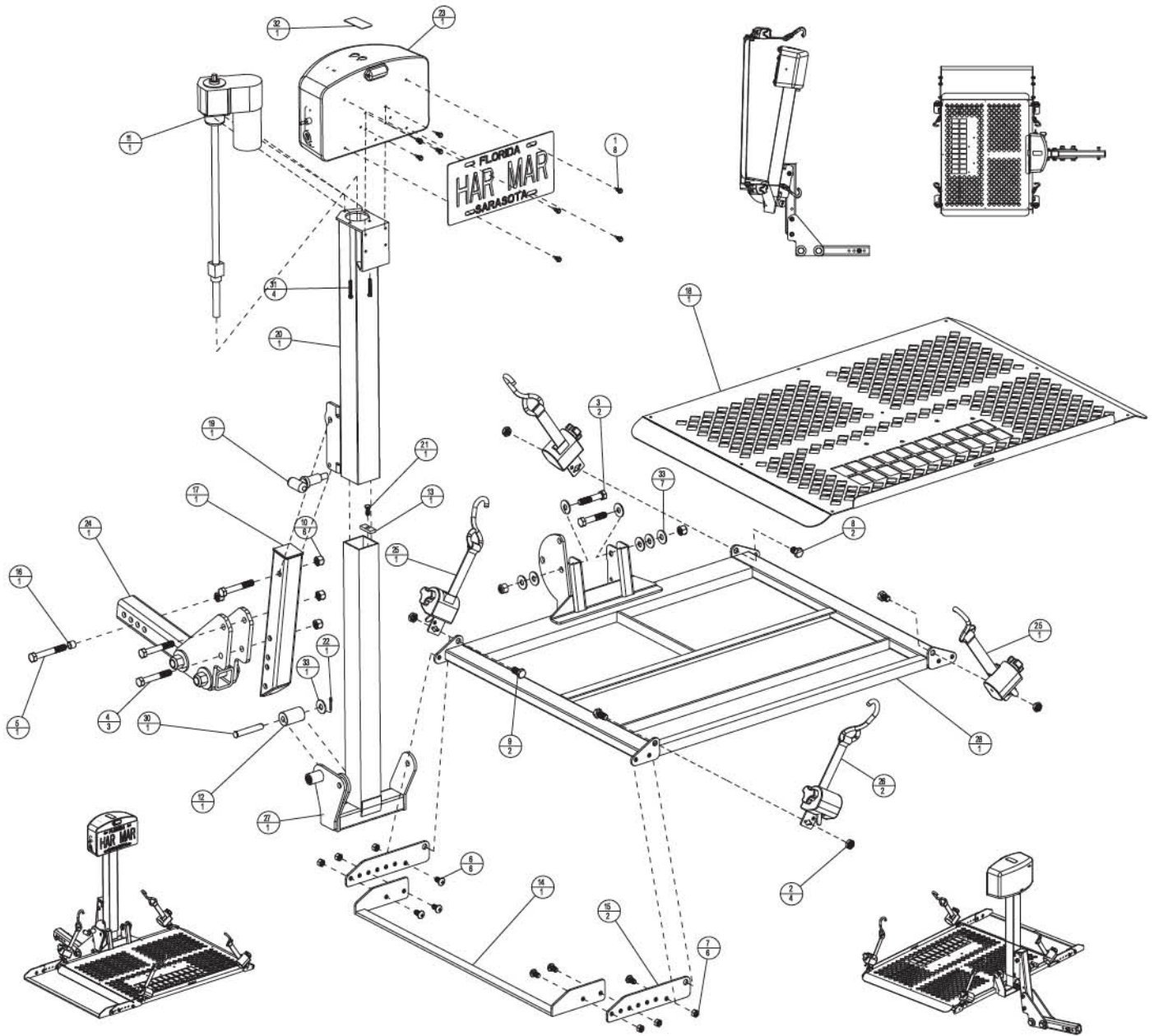


EXPLODED VIEW - AL300



ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	8	90064A580	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP	22	1	ALA129	HITCH POST ASSEMBLY
2	4	90568A033	HEX NUT, NYLOC, 1/2-13 HALF HEIGHT, ZP STEEL	23	1	ALA1440REV3	ALUMINUM SIGN, PLATFORM
3	1	91247A548	HHCS, 1/4-20 x 1-3/4", ZP STEEL	24	1	ALA503KLR1	OUTER TUBE
4	2	91247A722	HHCS, 1/2-13 x 2-1/2", ZP STEEL	25	2	ALA50NS0KSSE	BIN-CAM BOLT 1/2" X 1/2" ZN, PELL
5	3	91247A725	HHCS, 1/2-13 x 3-1/4", ZP STEEL	28	1	BOLT	HHCS, 1/4-20 x 3/4", ZP STEEL
6	1	91247A726	HHCS, 1/2-13 x 3-1/2", ZP STEEL	27	1	COTTER_PIN	COTTER PIN
7	6	91773A622	PhPhd, 3/8-16 x 3/4", GRADE 5 ZP STEEL	28	1	H1100	NARROW INNER TUBE
8	6	91837A031	HEX NUT, STDVER, 3/8-16 GRADE 5 ZP STEEL	29	1	H11010	J CAM
9	2	92865A710	HHCS, 1/2-13 x 3/4", GRADE 5 ZP STEEL	30	1	H12050	MOTOR COVER ASSY
10	2	92865A712	HHCS, 1/2-13 x 1", GRADE 5 ZP STEEL	31	1	H14044	ROLLER
11	1	95615A120	NUT, NYLOC, 1/4-20, ZP STEEL	32	1	H14045	CLEVIS PIN
12	6	95615A210	NUT, NYLOC, 1/2-13, ZP STEEL	33	2	H50010	Left HAND, Q-STRAINT
13	2	98408A140	E-CLIP, for 5/8" SHAFT	34	2	H50011	Right HAND, Q-STRAINT
14	1	ALA10010REV2	ACUATOR	35	1	H512R5	AL100R PLATFORM
15	1	ALA10032	ROLLER 2" DIA UHMW	36	1	LISCENSE_PLATE	Not applicable
16	1	ALA10050	TAB, ACTUATOR	37	1	PIN	CLEVIS PIN, 1/2 x 3/4 L, ZP STEEL
17	2	ALA11025	EXTENSION SPRING	38	4	SCREW_ACT	(provided w/ actuator)
18	1	ALA115	AL 100 EXTENDED CRADLE BAR	39	1	SPACER	SPACER, 1/4", for CAM SPRINGS
19	2	ALA116REV3	SPREADER BAR BRACKET	40	1	STICKER_MAN-OVER	STICKER-MANUAL OVERRIDE
20	1	ALA12350-PLT	PINCH BOLT TUBE	41	9	WASHER_1-2	WASHER, FLAT, 1/2", ZP STEEL
21	1	ALA123REV1	HITCH ADAPTER, CLASS 3	42	2	WASHER_1-4	WASHER, FLAT, 1/4", SS

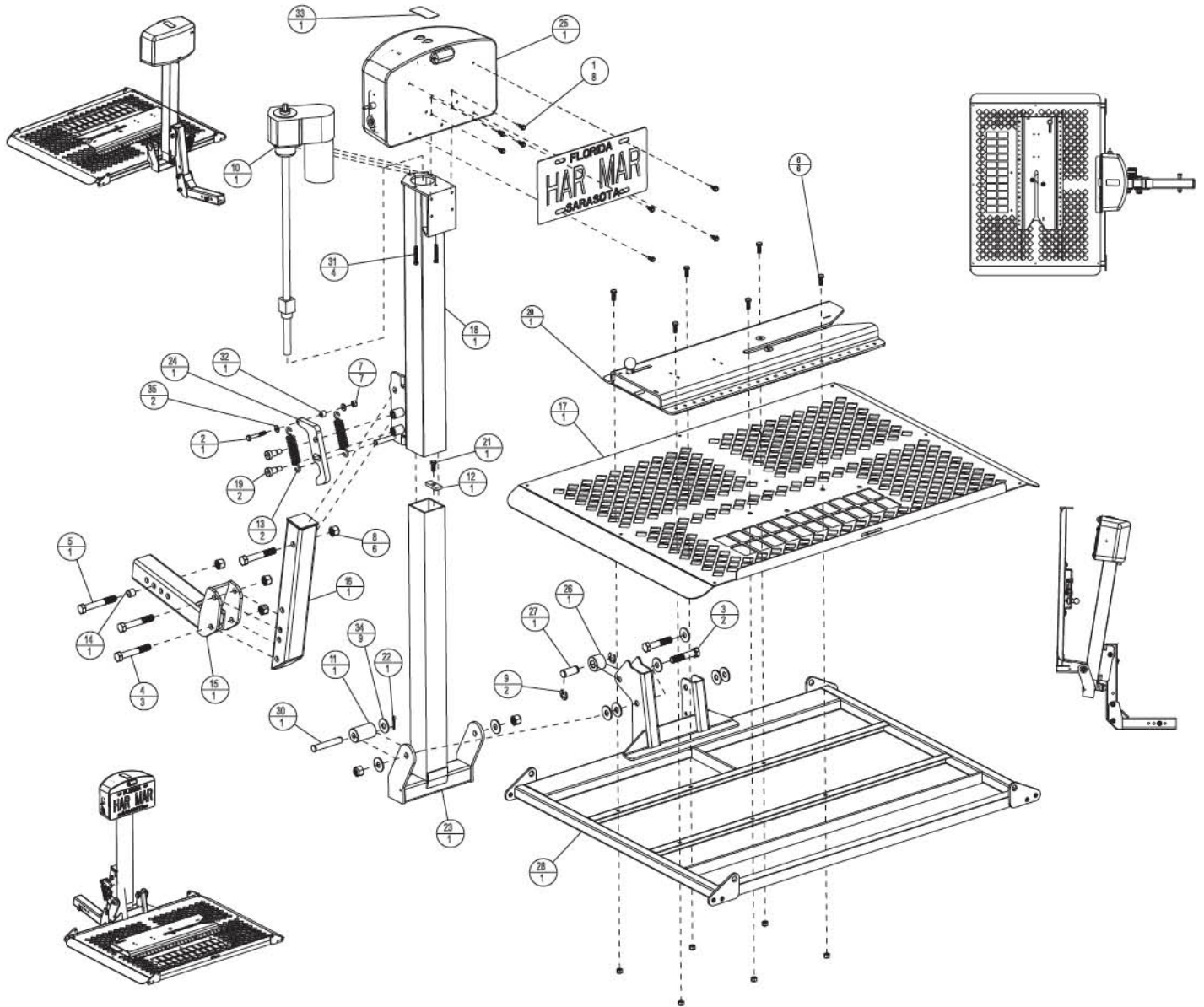
EXPLODED VIEW - AL300RV



ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	8	90064A580	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP	18	1	ALA1440REV3	ALUMINUM SKIN, PLATFORM
2	4	90566A033	HEX NUT, NYLOC, 1/2-13 HALF HEIGHT, ZP STEEL	19	1	ALA16152	T-HANDLE SPRING PIN ASSY
3	2	91247A722	HHCS, 1/2-13 x 2-1/2", ZP STEEL	20	1	ALA503XLR1	OUTER TUBE
4	3	91247A725	HHCS, 1/2-13 x 3-1/4", ZP STEEL	21	1	BOLT	HHCS, 1/4-20 x 3/4", ZP STEEL
5	1	91247A726	HHCS, 1/2-13 x 3-1/2", ZP STEEL	22	1	COTTER_PIN	COTTER PIN
6	6	91773A822	PHENIX, 3/8-16 x 3/4", GRADE 5 ZPS TEEL	23	1	H12050	MOTOR COVER ASSY
7	6	91837A031	HEX NUT, STOVER, 3/8-16 GRADE 5 ZP STEEL	24	1	H300102	RV HITCH ADPT ASSEMBLY
8	2	92865A710	HHCS, 1/2-13 x 3/4", GRADE 5 ZP STEEL	25	2	H50010	Left HAND, Q-STRIANT
9	2	92865A712	HHCS, 1/2-13 x 1", GRADE 5 ZP STEEL	26	2	H50011	Right HAND, Q-STRIANT
10	6	96615A210	NUT, NYLOC, 1/2-13, ZP STEEL	27	1	H568050-R5	NARROW RV INNER TUBE
11	1	ALA10010REV2	ACTUATOR	28	1	H568070-R5	AL300RV-R5 PLATFORM
12	1	ALA10032	ROLLER 2" DIA UHMW	29	1	LICENSE_PLATE	Not applicable
13	1	ALA10050	TAB, ACTUATOR	30	1	PIN	CLEVIS PIN, 1/2" x 3" L, ZP STEEL
14	1	ALA115	AL100 EXTENDED CRADLE BAR	31	4	SCREW_ACT	(provided w/ actuator)
15	2	ALA116REV3	SPREADER BAR BRACKET	32	1	STICKER_MAN-OVER	STICKER< MANUAL OVERRIDE
16	1	ALA12350-PLT	PINCH BOLT TUBE	33	8	WASHER_1-2	WASHER, FLAT, 1/2", ZP STEEL
17	1	ALA129	HITCH POST ASSEMBLY				



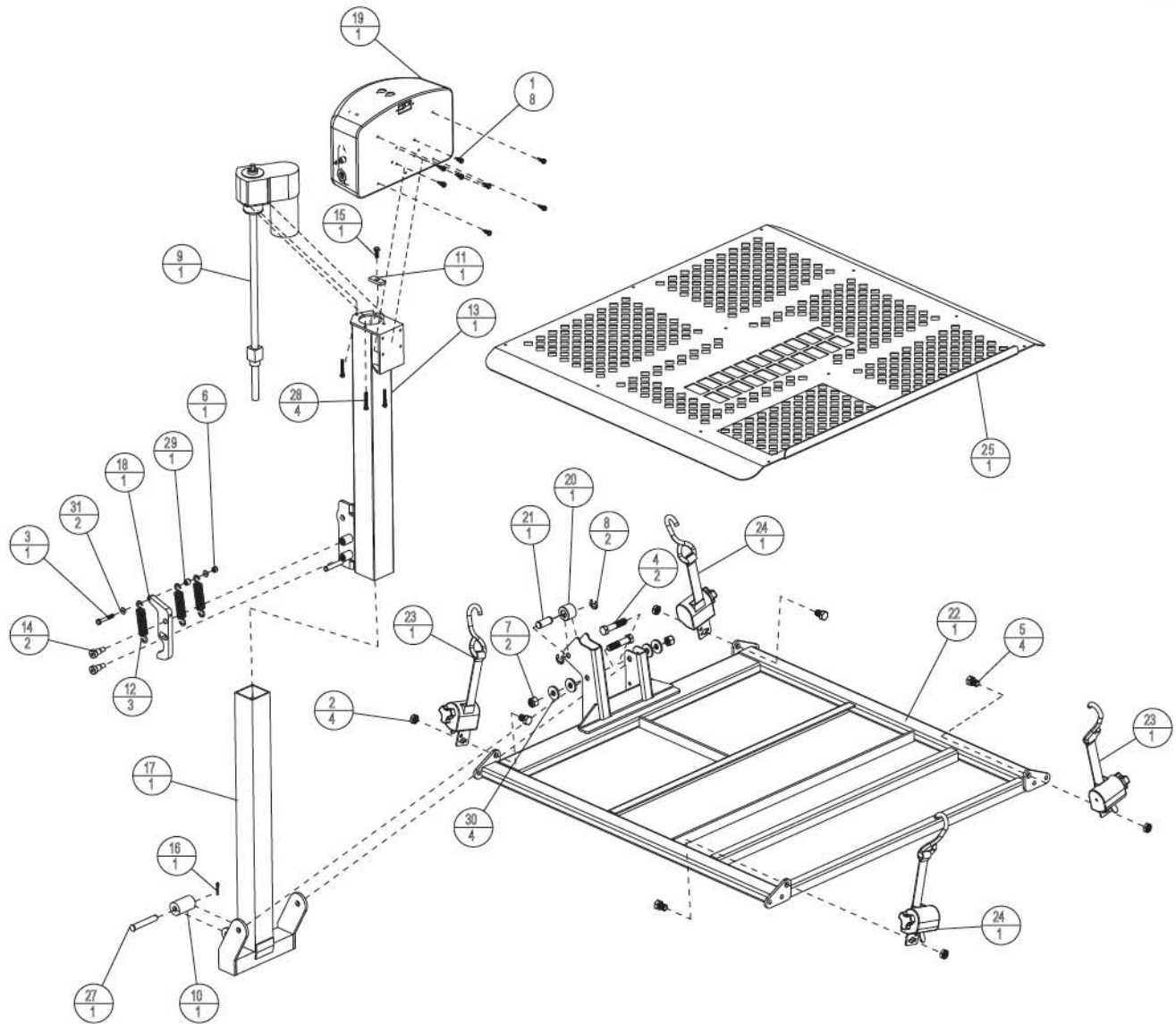
EXPLODED VIEW - AL550



ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
1	8	90064A980	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP
2	1	912K7A548	HHCS, 1/4-20 x 1-3/4" L, ZP STEEL
3	2	912K7A722	HHCS, 1/2-13 x 2-1/2" L, ZP STEEL
4	3	912K7A725	HHCS, 1/2-13 x 3-1/4" L, ZP STEEL
5	1	912K7A726	HHCS, 1/2-13 x 3-1/2" L, ZP STEEL
6	6	92865A540	HHCS, 1/4-20 x 3/4" L, GRADE 5 ZP STEEL
7	7	95615A120	NUT, NYLOC, 1/4-20, ZP STEEL
8	6	95615A210	NUT, NYLOC, 1/2-13, ZP STEEL
9	2	98408A140	E-CLIP, for 5/8" SHAFT
10	1	ALA10010REV2	ACTUATOR
11	1	ALA10032	ROLLER 2" DIA UHMW
12	1	ALA10050	TAB, ACTUATOR
13	2	ALA11025	EXTENSION SPRING
14	1	ALA12350-PLT	PINCH BOLT TUBE
15	1	ALA123REV1	HITCH ADAPTER, CLASS 3
16	1	ALA129	HITCH POST ASSEMBLY
17	1	ALA14400REV3	ALUMINUM SKIN, PLATFORM

ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
18	1	ALA503XLR1	OUTER TUBE
19	2	ALA50N50KSSSE	BIN-CAM BOLT 1/2" X 1/2" ZN, PELL
20	1	ALA650	AL550 DOCKING STATION ASSEMBLY
21	1	BOLT	HHCS, 1/4-20 x 3/4" L, ZP STEEL
22	1	COTTER_PIN	COTTER PIN
23	1	H100	NARROW INNER TUBE
24	1	H11010	J CAM
25	1	H12050	MOTOR COVER ASSY
26	1	H14044	ROLLER
27	1	H14045	CLEVIS PIN
28	1	H5515R5	AL550R5 PLATFORM
29	1	LICENSE_PLATE	Not applicable
30	1	PIN	CLEVIS PIN, 1/2" x 3" L, ZP STEEL
31	4	SCREW_ACT	(provided w/ actuator)
32	1	SPACER	SPACER, 1/4", for CAM SPRINGS
33	1	STICKGR_MAN-OVER	STICKGR < MANUAL OVERRIDE
34	9	WASHER_1-2	WASHER, FLAT, 1/2", ZP STEEL
35	2	WASHER_1-4	WASHER, FLAT, 1/4", SS

EXPLODED VIEW - AL301XL

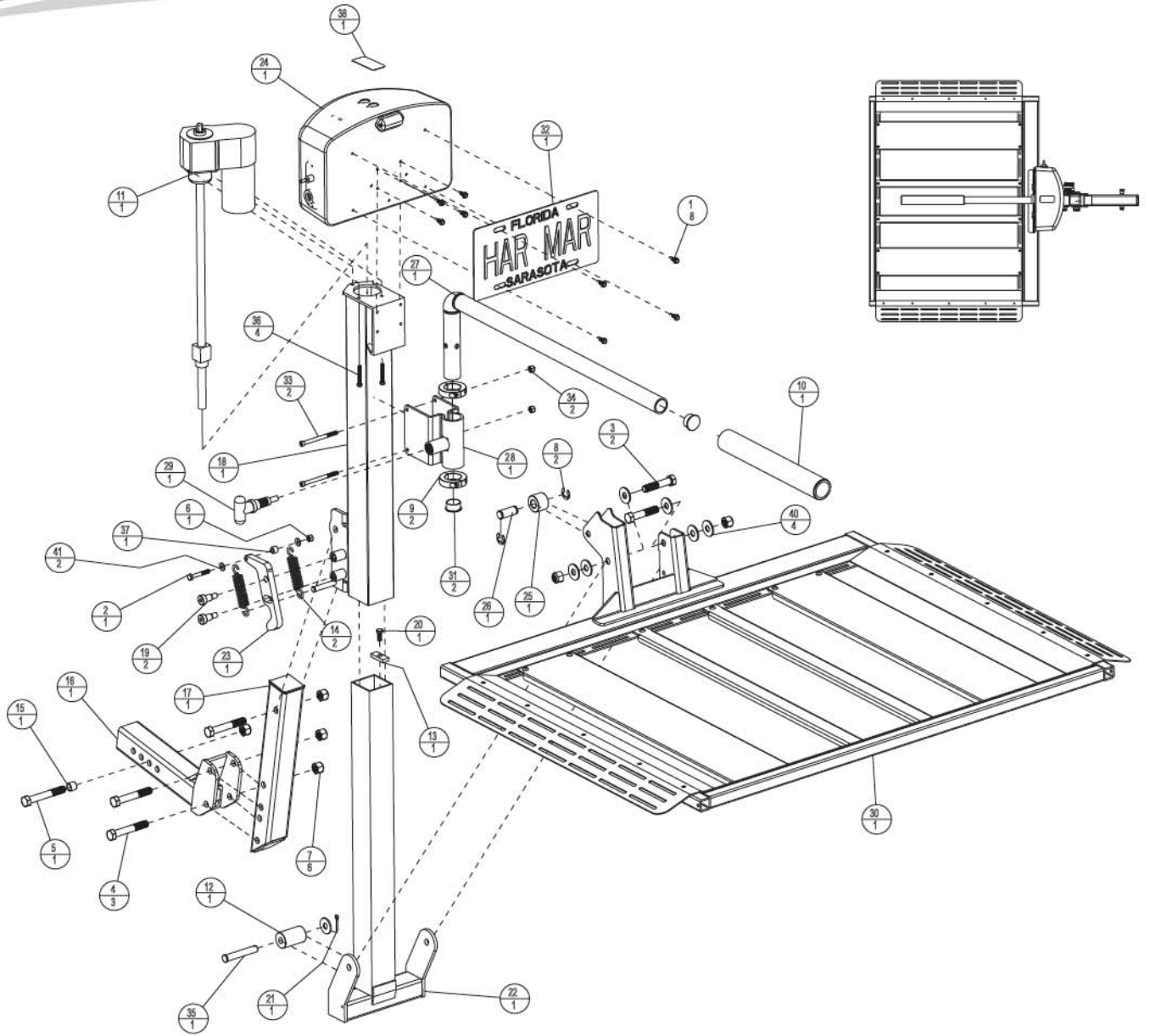


ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
1	8	90064A580	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP
2	4	90566A033	NUT, NYLOC, 1/2-13 x 5/16" H ZP STEEL
3	1	91247A548	HHCS, 1/4-20 x 1-3/4" L, ZP STEEL
4	2	91247A722	HHCS, 1/2-13 x 2-1/2" L, ZP STEEL
5	4	92865A350	HHCS 0.5-13 X 0.75 ZP STEEL
6	1	96515A120	NUT, NYLOC, 1/4-20, ZP STEEL
7	2	96515A210	NUT, NYLOC, 1/2-13, ZP STEEL
8	2	98408A140	E-CLIP, for 5/8" SHAFT
9	1	ALA10010REV2	ACTUATOR
10	1	ALA10082	ROLLER 2" DIA UHMW
11	1	ALA10050	TAB, ACTUATOR
12	3	ALA11025	EXTENSION SPRING
13	1	ALA503QLR1	OUTER TUBE
14	2	ALA50N6KSSE	BN-CAM BOLT 1/2" X 1/2" ZN, PEEL
15	1	BOLT	HHCS, 1/4-20 x 3/4" L, ZP STEEL

ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
16	1	COTTER_PIN	COTTER PIN
17	1	H100	NEW SLIM INNER TUBE
18	1	H11010	J CAM
19	1	H12050	MOTOR COVER ASSY
20	1	H14044	ROLLER
21	1	H14045	CLEVIS PIN
22	1	H30113	300XLR2 PLATFORM
23	2	H50010	Left HAND, Q-STRAINT
24	2	H50011	Right HAND, Q-STRAINT
25	1	H51301 REV5	EXTENDED PLATFORM SKIN (36")
26	1	USCENSE_PLATE	Not applicable
27	1	PIN	CLEVIS PIN, 1/2" x 3/4" L, ZP STEEL
28	4	SCREW_ACT	(provided w/ actuator)
29	1	SPACER	SPACER, 1/4", for CAM SPRINGS
30	4	WASHER_1-2	WASHER, FLAT, 1/2", ZP STEEL
31	2	WASHER_1-4	WASHER, FLAT, 1/4", SS



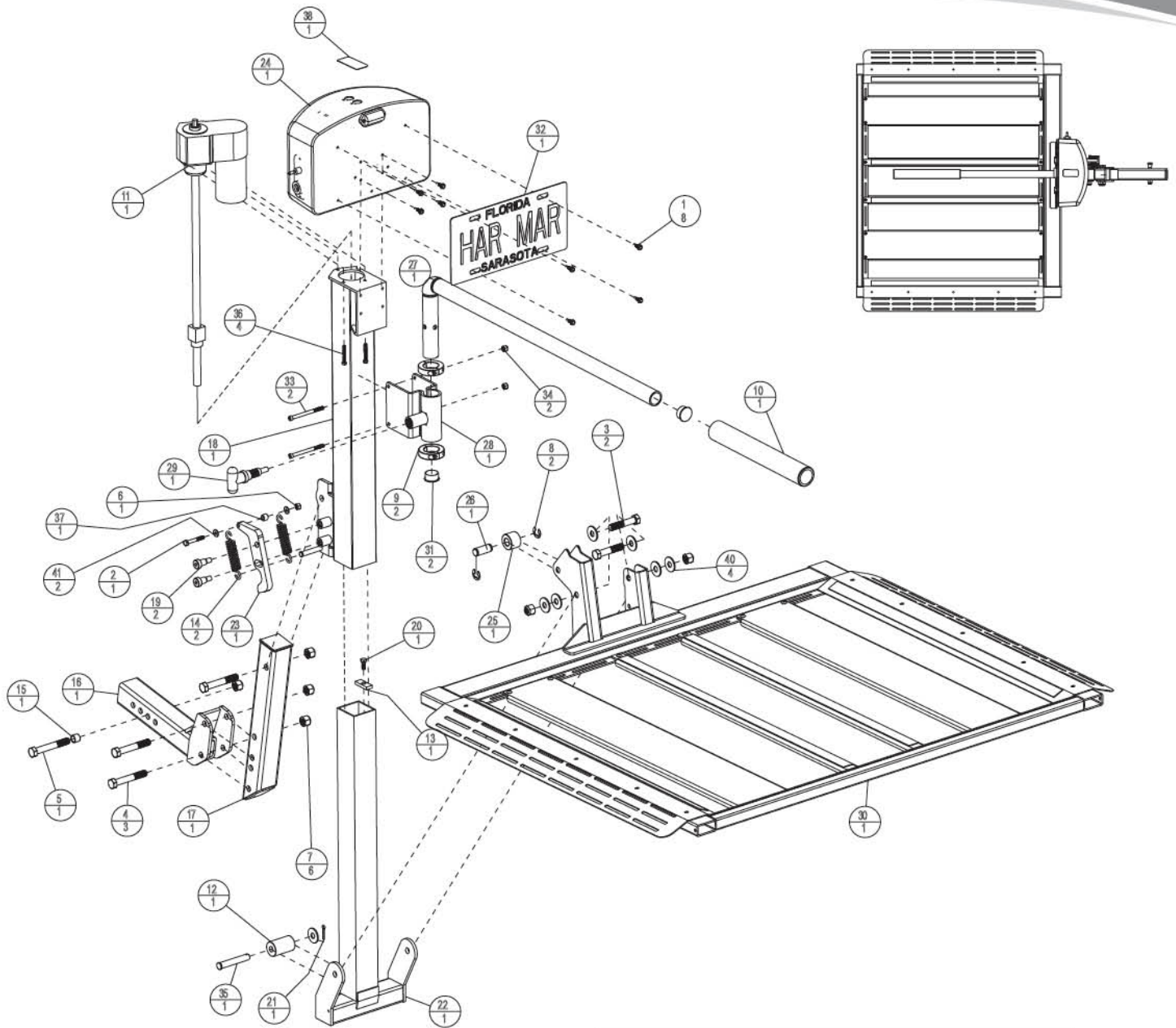
EXPLODED VIEW - AL560



ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
1	8	90064A580	HEX WASHER, #12-14 SELF DRILL, 3M"L, ZP
2	1	912A7A548	HHCS, 1/4-20 x 1-3/4"L, ZP STEEL
3	2	912A7A722	HHCS, 1/2-13 x 2-1/2"L, ZP STEEL
4	3	912A7A725	HHCS, 1/2-13 x 3-1/4"L, ZP STEEL
5	1	912A7A726	HHCS, 1/2-13 x 3-1/2"L, ZP STEEL
6	1	95615A120	NUT, NYLOC, 1/4-20, ZP STEEL
7	6	95615A210	NUT, NYLOC, 1/2-13, ZP STEEL
8	2	99408A140	E-CLIP, for 5/8" SHAFT
9	2	9961K310	SHAFT COLLAR, 1-1/4" BORE
10	1	ALA09059	FOAM RUBBER GRP 12in LONG
11	1	ALA10010REV2	ACTUATOR
12	1	ALA10032	ROLLER 2" DIA UHMW
13	1	ALA10050	TAB, ACTUATOR
14	2	ALA11025	EXTENSION SPRING
15	1	ALA12850-PLT	PINCH BOLT TUBE
16	1	ALA123REV1	HITCH ADAPTER, CLASS 3
17	1	ALA129	HITCH POST ASSEMBLY
18	1	ALAS09XR1	OUTER TUBE
19	2	ALA50N5K5SE	BIN-CAM BOLT 1/2" X 1/2" ZN, PELL
20	1	BOLT	HHCS, 1/4-20 x 3/4"L, ZP STEEL

ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
21	1	COTTER_PIN	COTTER PIN
22	1	H1100	NARROW INNER TUBE
23	1	H11010	J CAM
24	1	H12050	MOTOR COVER ASSY
25	1	H14044	ROLLER
26	1	H14045	CLEVIS PIN
27	1	H56024	HOLD DOWN ARM WELDMENT - AL560
28	1	H56046-2	
29	1	H56089	T-HANDLE SPRING PIN ASSY 3/8" PIN
30	1	H560901	PLATFORM ASSEMBLY - AL560RS
31	2	H752102	1.25 DIAMETER END CAP
32	1	LICENSE_PLATE	Not applicable
33	2	MMC_NO_90128A557	SHCS, 1/4-20 x 3-1/4", ZP
34	2	MMC_NO_90715A125	NUT, NYLOC, 1/4-20, ZP
35	1	PIN	CLEVIS PIN, 1/2" x 3" L, ZP STEEL
36	4	SCREW_ACT	(provided w/ actuator)
37	1	SPACER	SPACER, 1/4", for CAM SPRINGS
38	1	STICKER_MAN-OVER	STICKER< MANUAL OVERRIDE
39	4	WASHER_1-2	WASHER, FLAT, 1/2", ZP STEEL
40	4	WASHER_1-2_PLASTIC	WASHER, FLAT, 1/2", ZP PLASTIC
41	2	WASHER_1-4	WASHER, FLAT, 1/4", SS

EXPLODED VIEW - AL560XL

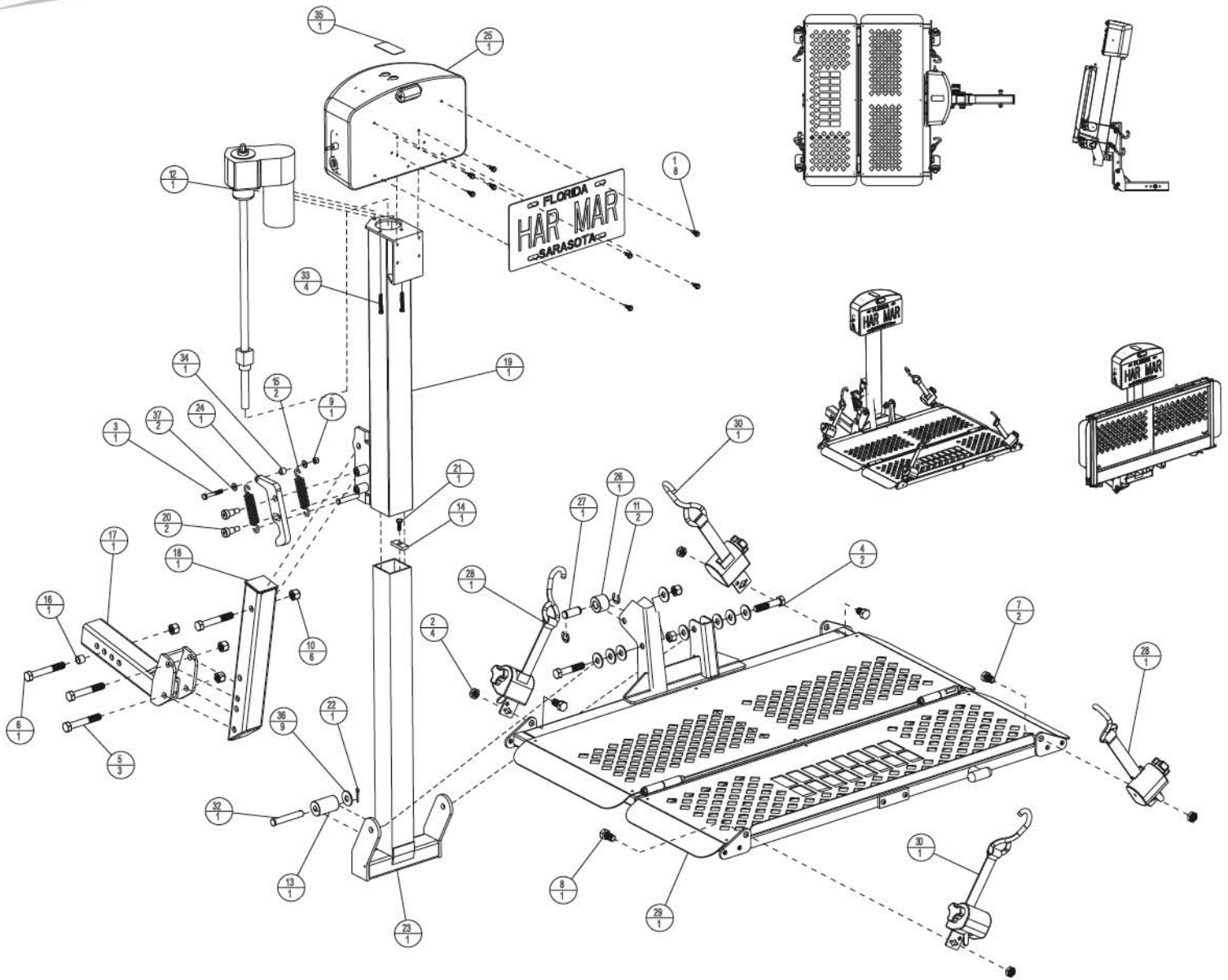


ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
1	8	9009A680	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP
2	1	91247A548	HHCS, 1/4-20 x 1-3/4", ZP STEEL
3	2	91247A722	HHCS, 1/2-13 x 2-1/2", ZP STEEL
4	3	91247A725	HHCS, 1/2-13 x 3-1/4", ZP STEEL
5	1	91247A726	HHCS, 1/2-13 x 3-1/2", ZP STEEL
6	1	95615A120	NUT, NYLOC, 1/4-20, ZP STEEL
7	6	95615A210	NUT, NYLOC, 1/2-13, ZP STEEL
8	2	98408A140	E-CLIP, for 5/8" SHAFT
9	2	9961K310	SHAFT COLLAR, 1-1/4" BORE
10	1	ALA03059	FOAM RUBBER GRIP 12h LONG
11	1	ALA10010REV2	ACTUATOR
12	1	ALA10032	ROLLER 2" DIA/HMW
13	1	ALA10050	TAB, ACTUATOR
14	2	ALA11025	EXTENSION SPRING
15	1	ALA12350-PLT	PINCH BOLT TUBE
16	1	ALA123REV1	HITCH ADAPTER, CLASS 3
17	1	ALA129	HITCH POST ASSEMBLY
18	1	ALA503KLR1	OUTER TUBE
19	2	ALA50N5K88E	BIN-CAM BOLT 1/2" X 1/2" ZN, PELL
20	1	BOLT	HHCS, 1/4-20 x 3/4", ZP STEEL

ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
21	1	COTTER_PIN	COTTER PIN
22	1	H100	NARROW INNER TUBE
23	1	H11010	J CAM
24	1	H12050	MOTOR COVER ASSY
25	1	H14044	ROLLER
26	1	H14045	CLEVIS PIN
27	1	H56029	HOLD DOWN ARM WELDMENT - AL560
28	1	H56046-2	HOLD DOWN ARM BRACKET ASSY
29	1	H56069	T-HANDLE SPRING PIN ASSY 3/8" PIN
30	1	H560911	PLATFORM ASSEMBLY - AL560XLR5
31	2	H752102	1.25 DIAMETER END CAP
32	1	LICENSE_PLATE	Not applicable
33	2	MMC_NO_30128A557	SHCS, 1/4-20 x 3-1/4", ZP
34	2	MMC_NO_90715A125	NUT, NYLOC, 1/4-20, ZP
35	1	PIN	CLEVIS PIN, 1/2" x 3" L, ZP STEEL
36	4	SCREW_ACT	(provided w/ actuator)
37	1	SPACER	SPACER, 1/4", for CAM SPRINGS
38	1	STICKER_MAN-OVER	STICKER<- MANUAL OVERRIDE
39	4	WASHER_1-2	WASHER, FLAT, 1/2", ZP STEEL
40	4	WASHER_1-2_PLASTIC	WASHER, FLAT, 1/2", ZP PLASTIC
41	2	WASHER_1-4	WASHER, FLAT, 1/4", SS

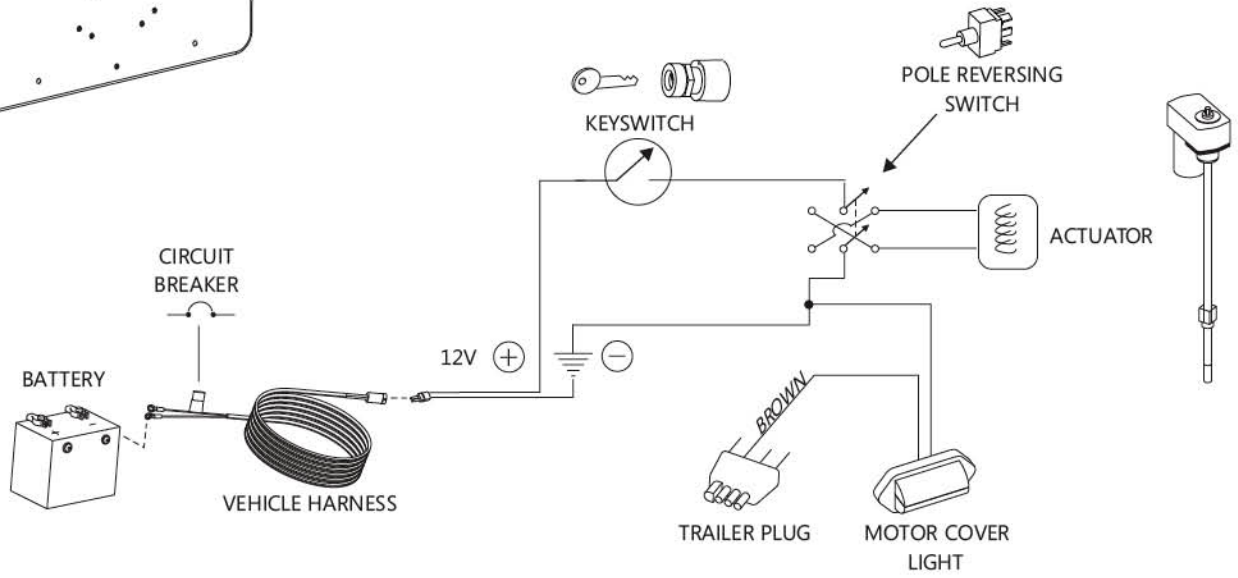
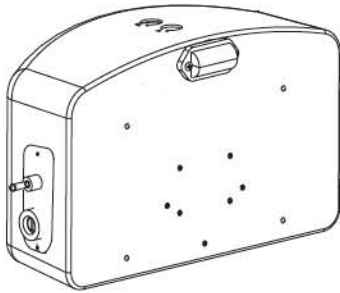


EXPLODED VIEW - AL500P



ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
1	8	90064A680	HEX WASHER, #12-14 SELF DRILL, 3/4" L, ZP
2	4	90966A033	HEX NUT, NYLOC, 1/2-13 HALF HEIGHT, ZP STEEL
3	1	912A7A548	HHCS, 1/4-20 x 1-3/4", ZP STEEL
4	2	912A7A722	HHCS, 1/2-13 x 2-1/2", ZP STEEL
5	3	912A7A725	HHCS, 1/2-13 x 3-1/4", ZP STEEL
6	1	912A7A726	HHCS, 1/2-13 x 3-1/2", ZP STEEL
7	2	91309A710	HHCS 1/2-13 X 0.75
8	2	92865A712	HHCS, 1/2-13 x 1", GRADE 5 ZP STEEL
9	1	95615A120	NUT, NYLOC, 1/4-20, ZP STEEL
10	6	95615A210	NUT, NYLOC, 1/2-13, ZP STEEL
11	2	98408A140	E-CLIP, for 5/8" SHAFT
12	1	ALA10010REV2	ACTUATOR
13	1	ALA100B2	ROLLER 2" DIA UHMW
14	1	ALA100S0	TAB ACTUATOR
15	2	ALA11025	EXTENSION SPRING
16	1	ALA12360-PLT	PINCH BOLT TUBE
17	1	ALA123REV1	HITCH ADAPTER, CLASS 3
18	1	ALA129	HITCH POST ASSEMBLY

ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
19	1	ALA603XR1	OUTER TUBE
20	2	ALA60NS0KSSE	BIN-CAM BOLT 1/2" X 1/2" ZN, PELL
21	1		BOLT
22	1		COTTER_PIN
23	1	H100	NARROW INNER TUBE
24	1	H11010	J CAM
25	1	H12050	MOTOR COVER ASSY
26	1	H14044	ROLLER
27	1	H14045	CLEVIS PIN
28	2	H50010	Left HAND, Q-STRAINT
29	1	H500100R5	FOLDING PLATFORM
30	2	H50011	Right HAND, Q-STRAINT
31	1	USCENSE_PLATE	Not applicable
32	1		PIN
33	4	SCREW_ACT	(provided w/ actuator)
34	1	SPACER	SPACER, 1/4", for CAM SPRINGS
35	1	STICKER_MAN-OVER	STICKER < MANUAL OVERRIDE
36	9	WASHER_1-2	WASHER, FLAT, 1/2", ZP STEEL
37	2	WASHER_1-4	WASHER, FLAT, 1/4", SS





Service Description:

Service Date:

Service Performed By:

Service Description:

Service Date:

Service Performed By:

Service Description:

Service Date:

Service Performed By:

Service Description:

Service Date:

Service Performed By:

SERVICE NOTES



Service Description:

Service Date:

Service Performed By:

Service Description:

Service Date:

Service Performed By:

Service Description:

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Service Performed By:

Service Description:

Service Date:

Service Performed By:



THANK YOU FOR MAKING HARMAR AMERICA'S LEADER IN LIFTS AND RAMPS