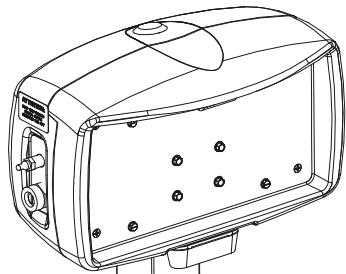
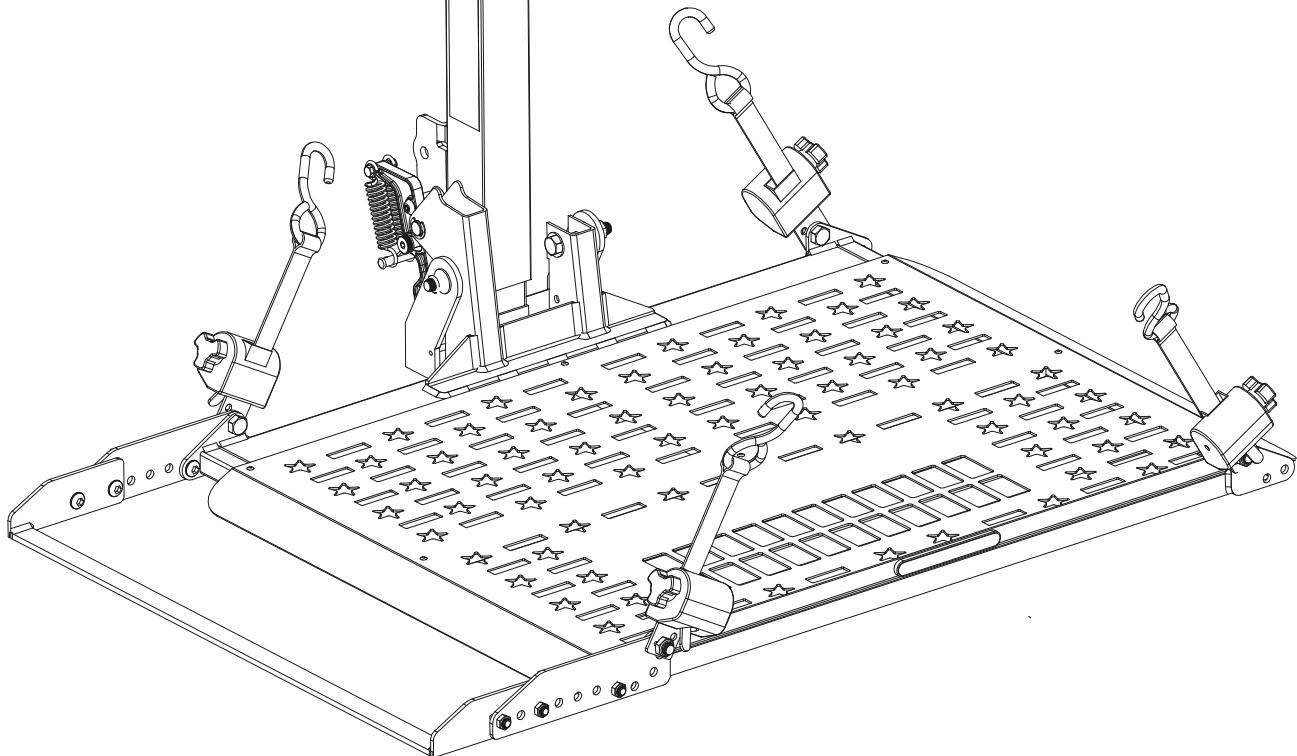


# Silver Spring®

## INSTALLATION & OWNER'S MANUAL



### DR300 UNIVERSAL SCOOTER POWER CHAIR LIFT





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**SECTION 1****SAFETY****SAFETY DEFINITIONS**

This safety alert symbol appears with safety statements. It means attention, become alert, your safety is involved! Please read and abide by the message that follows the safety alert symbol.

**⚠️ WARNING**

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

**⚠️ CAUTION**

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

**NOTICE**

Indicates a situation which can cause damage to the lift and/or the environment, or cause the lift to operate improperly.

**NOTE:** Indicates a condition that should be followed in order for the lift to function in the manner intended.

**REQUIRED PRACTICES**

*NOTE: Installation of this lift requires one person, as long as the one person follows installation instructions, has completed training, has obtained certification on installation, is able to instruct the user on the correct operation and has established a safety and maintenance schedule.*

**ENVIRONMENTAL CONDITIONS**

The technician shall assess the surrounding conditions and verify that the location is acceptable before performing installation and/or servicing tasks. Installation shall not proceed in inclement weather conditions that jeopardize the technician's safety or ability to complete the installation in a safe manner. Tents, canopies or other outdoor provisions that help protect the work area from weather or other safety concerns are recommended when conditions warrant.

Do not proceed IF, upon visual inspection, the vehicle or hitch has severe rust, structural damage, a possible suspension issue or the battery condition or age are in question.

*NOTE: If you choose to proceed, you do so knowing that the warranty may NOT apply.*

If you do not understand any portion of the installation or operation procedures, please consult our Technical Support or authorized mobility dealer. Do not attempt to install or use this lift if you have any hesitation or question. Serious injury or damage can result if proper procedures are not followed.

**SECTION 2**

# **INTRODUCTION**

## **DEVICE NAME: DR300 UNIVERSAL LIFT**

Indications of Use: The intended use of the DR300 Universal Lift is to lift, secure and transport an unoccupied mobility device for patients or mobility-impaired persons.

## **READ AND UNDERSTAND**

Read and understand this manual prior to installation or operation. Having an overall understanding of the lift and proper installation techniques will help you save time, energy and avoid possible injury.

This manual provides instructions for proper installation and operating instructions of the DR300 Universal Lift. Any alterations to the equipment without written authorization by the manufacturer may void the warranty.

**SECTION 3****PREPARATION**

Installations may vary to some degree, but below are the basic tools to have on hand for an DR300 Universal Lift installation.

If you have any questions, concerns or comments, please contact support at 888-651-3431.

**RECOMMENDED TOOLS**

- Stripper, Crimping Tool
- Work Lights (Wired or Wireless)
- Soldering Gun/Iron
- Labeler (for Wiring)
- First Aid Kit
- Box Cutter
- Torque Wrench

**REQUIRED TOOLS**

- Socket Set:
  - $\frac{3}{8}$ "
  - $\frac{7}{16}$ "
  - $\frac{1}{2}$ "
  - $\frac{9}{16}$ "
  - $\frac{3}{4}$ "
- Wrench Set:
  - $\frac{7}{16}$ "
  - $\frac{1}{2}$ "
  - $\frac{9}{16}$ "
  - $\frac{3}{4}$ "
  - $\frac{15}{16}$ "
- Allen Wrench:
  - $\frac{1}{8}$ "
  - $\frac{3}{16}$ "
  - $\frac{5}{16}$ "
  - $\frac{5}{32}$ "

- Wire Cutters
- Needle Nose Pliers
- No. 2 Flat Head Screwdriver
- No. 2 Phillips Head Screwdriver
- Marking Implement
- Tape Measure
- Multimeter

**UNPACKING THE LIFT**

Never attempt to pick up the lift from the box, ground or on/off a vehicle alone.

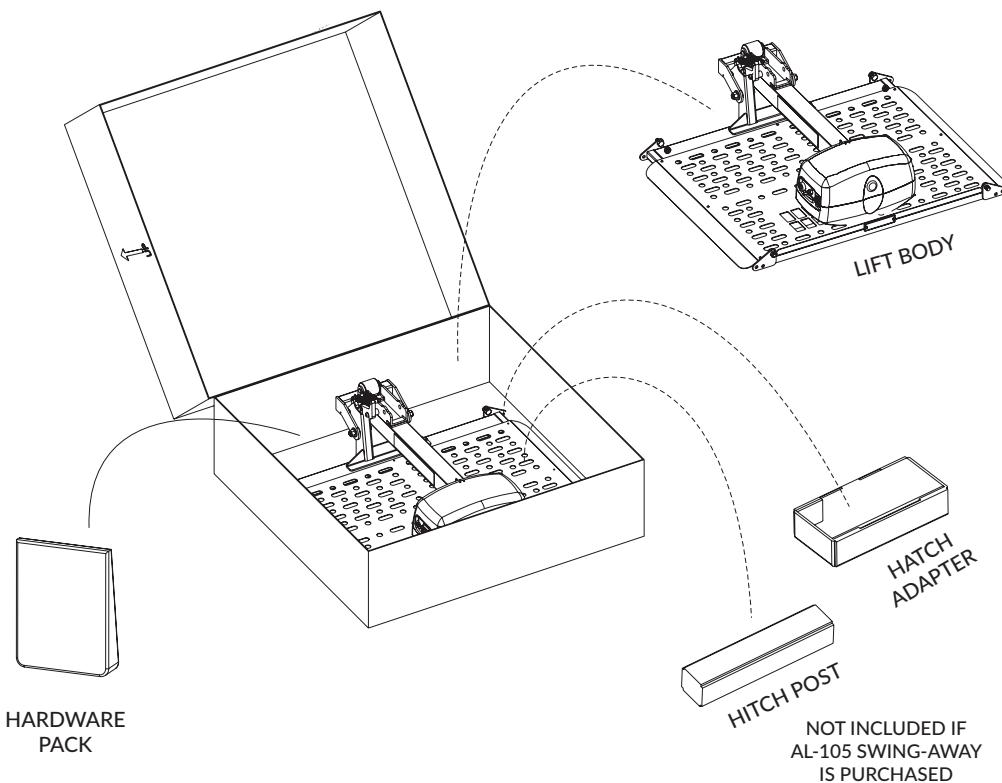
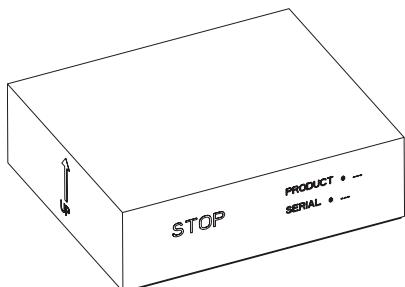
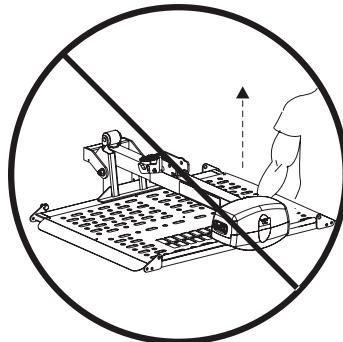
**RECOMMENDED TORQUE TABLE**

THREAD DIAMETER	TORQUE (FT-LB)		WRENCH SIZE
	Nylon Lock Nut	Hex Nut	
$\frac{1}{4}$	8	10	$\frac{7}{16}$
$\frac{5}{16}$	17	19	$\frac{1}{2}$
$\frac{3}{8}$	30	35	$\frac{9}{16}$
$\frac{1}{2}$	69	85	$\frac{3}{4}$
$\frac{5}{8}$	135	170	$\frac{15}{16}$

## CHECKING THE BOX CONTENTS

Before installing the lift, review each part against the packaging checklist to ensure that all parts have been included. If any parts are missing or damaged, immediately contact the dealer who sold the lift. **DO NOT** attempt to install or use a lift that has missing or damaged parts.

DO NOT  
LIFT  
FROM  
MOTOR  
COVER



## VEHICLE HITCH

1. The DR300 Universal Lift requires a vehicle that accepts a Class 2, 3 or 5 hitch. Check to ensure that the vehicle is wired using a standard four-connector trailer style of wiring.
2. If you are unsure of the vehicle and hitch capability, contact a local installer who is reputable, insured and competent. The installer's performance affects the customer's perception of your mobility lift installation.

*NOTE: Hitch installation is not possible on every vehicle.*

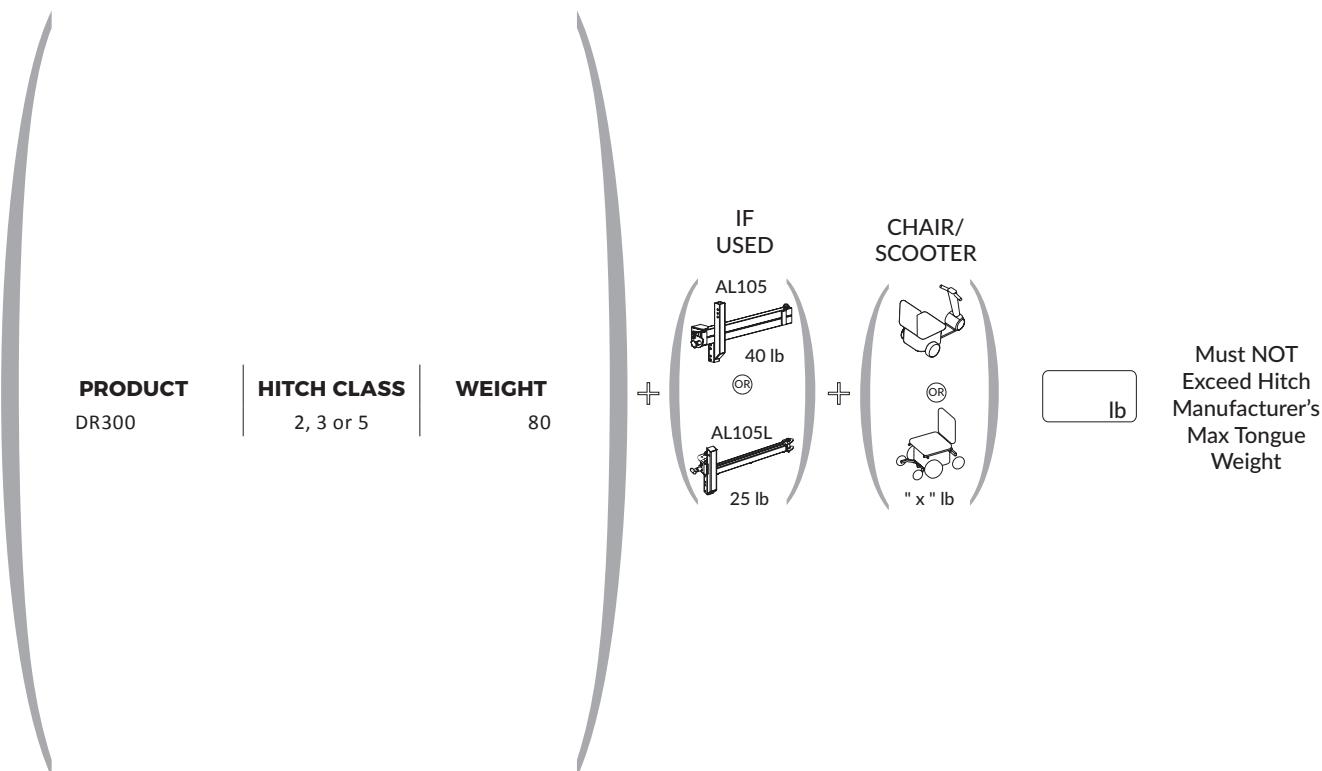
3. Add the combined weights of the lift, mobility device and, where applicable, the swing-away option. Ensure that the total weight does not exceed the hitch's recommended tongue weight. Many hitches are available on the market, and all are designed to bear a specific amount of weight. *See Figure 3-1.*

The installer must adhere to the vehicle's Gross Vehicle Weight Rating restrictions.

Understand that some states have strict license plate obstruction laws. Acquaint yourself with local and state laws.

4. The receiver tube of the hitch must be installed parallel to the ground. This is a requirement and not a recommendation, as an improperly installed hitch affects the operation of the lift.

Note that some vehicles require the rear suspension to be supplemented. If the vehicle has suspension requirements, the installer should contact a suspension specialist for additional technical support.



## HITCH ADAPTERS

The hitch adapter plugs into the vehicle's trailer hitch receiver and acts as the interface between the lift and vehicle. Hitch adapters are designed to serve the needs of different vehicles.

### PROPER MEASUREMENT AND SELECTING A HITCH ADAPTER

1. Measure the bumper distance and the hitch height. The bumper distance is the length from the bolt hole of the trailer hitch to the rearmost point on the vehicle. Hitch height is the distance from the bottom opening of the hitch receiver to the ground.

*Reference page 10 chart.*

*NOTE: The hitch class is usually imprinted directly on the trailer hitch. You can also determine the hitch class by measuring the inside of the receiver on the trailer hitch. See Figure 3-2.*

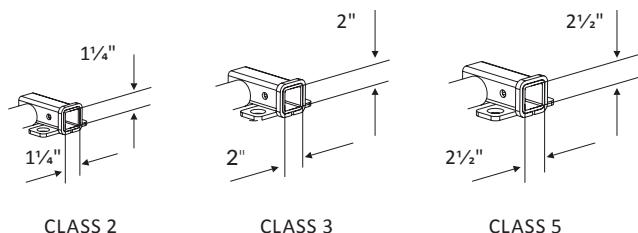


Figure 3-2

*NOTE: Some shallow hitches (for example, hitches blocked by spare tires) may call for a short hitch adapter.*

*See Figure 3-3.*

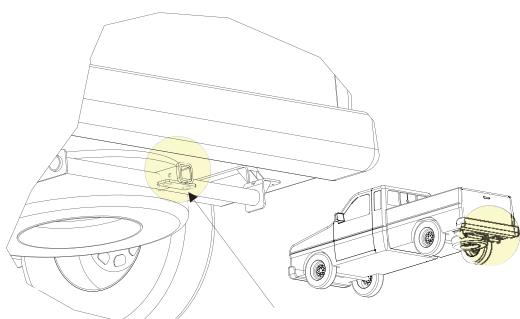


Figure 3-3

The effective range of the hitch adapter varies slightly if the lift is equipped with the standard AL107 hitch post. *See Figure 3-4.*



Figure 3-4

If the lift is equipped with a tail gate/hatch accessibility option (either the AL105 or AL105L swing-away). *See Figure 3-5.*

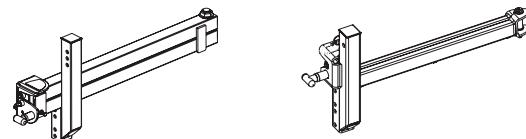


Figure 3-5

If the measurement falls between two numbers (for example, 18 1/2"), round up if the measurement exceeds or equals 1/2". Round down if the measurement falls between two numbers equals less than 1/2". To find the correct orientation with hitch post. *See Figure 3-6.*

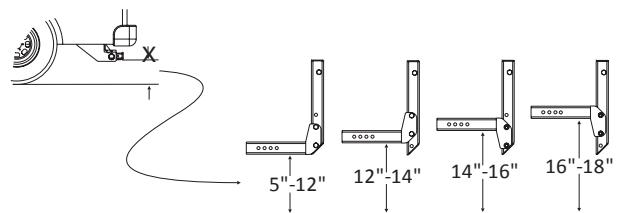


Figure 3-6

To find the correct orientation with a swing-away. *See Figure 3-7.*

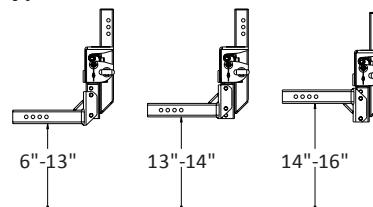


Figure 3-7

## HITCH ADAPTER SIZE CHART

To find a hitch adapter that will ensure proper lift functionality. *Reference Figure 3-8 and the chart below.*

- HV:** Distance from the ground to the bottom opening of hitch receiver
- D1:** Distance from the center of the pin hole to the furthest point toward the rear of the vehicle
- D2:** Distance from the center of the pin hole to the nearest point towards the front of the vehicle going through the hitch receiver. In some cases the spare tire is the nearest point.

### ⚠️ WARNING

Only use Discount Ramps-approved hitch adapters with Discount Ramps lifts. Hitch expanders and extenders are strictly prohibited—using them or any other aftermarket accessory may result in damage to the vehicle, lift and/or personal injury to the user.

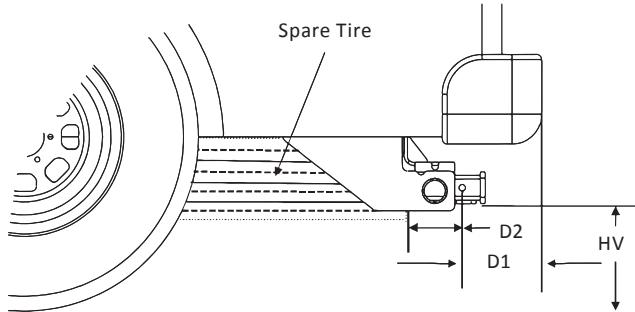


Figure 3-8

STANDARD APPLICATION						APPLICATION WITH SWING-AWAY		
Class	Part#	Description	HV	D1	D2	HV	D1	D2
Class 1	AL121	STANDARD	6"-18"	≤ 7.5"	≥ 1"	6"-16"	0"-7.5"	≥ 1"
	AL126	STANDARD	10"-18"	≤ 7.5"	≥ 2"	10"-16"	0"-7.5"	≥ 2"
	AL1262	STANDARD: 2" DROP INVERTED	8"-10"	≤ 7.5"	≥ 2"	6"-8"	0"-7.5"	≥ 2"
		STANDARD: 2" DROP	18"-20"	≤ 7.5"	≥ 2"	16"-18"	0"-7.5"	≥ 2"
	*AL1265	STANDARD 4.25" DROP INVERTED	6"-8"	≤ 7.5"	≥ 2"	—	—	—
		STANDARD 4.25" DROP	20"-22"	≤ 7.5"	≥ 2"	18"-20"	0"-7.5"	≥ 2"
	AL127	EXTRA LONG	10"-18"	7.5"-10.5"	≥ 2"	10"-16"	7.5"-10.5"	≥ 2"
	AL1272	EXTRA LONG: 2" DROP INVERTED	8"-10"	7.5"-10.5"	≥ 2"	6"-8"	7.5"-10.5"	≥ 2"
		EXTRA LONG: 2" DROP	18"-20"	7.5"-10.5"	≥ 2"	16"-18"	7.5"-10.5"	≥ 2"
	*AL1275	EXTRA LONG: 5" DROP INVERTED	6"-8"	7.5"-10.5"	≥ 2"	—	—	—
Class 2		EXTRA LONG: 5" DROP	20"-23"	7.5"-10.5"	≥ 2"	18"-21"	7.5"-10.5"	≥ 2"
	AL128	SHORT	10"-18"	≤ 5"	≥ 1.5"	8"-16"	0"-5"	≥ 1.5"
	*AL1285	SHORT: 4.25" DROP INVERTED	6"-10"	≤ 5"	≥ 1.5"	—	—	—
		SHORT: 4.25" DROP	20"-22"	≤ 5"	≥ 1.5"	16"-20"	0"-5"	≥ 1.5"
	AL111	STANDARD: (FOR AL001 ONLY)	6"-18"	≤ 5"	≥ 2"	—	—	—
Class 3	AL123	STANDARD	10"-18"	≤ 8"	≥ 5"	8"-16"	0"-8"	≥ 5"
	AL123HD	HEAVY DUTY: STANDARD	10"-18"	≤ 8"	≥ 5"	8"-16"	0"-8"	≥ 5"

STANDARD APPLICATION						APPLICATION WITH SWING-AWAY		
Class	Part#	Description	HV	D1	D2	HV	D1	D2
Class 3	AL1232HD	HEAVY DUTY: 2" DROP INVERTED	6"-10"	≤ 8"	≥ 5"	6"-8"	0"-8"	≥ 5"
		HEAVY DUTY: 2" DROP	18"-20"	≤ 8"	≥ 5"	16"-18"	0"-8"	≥ 5"
	*AL1235HD	HEAVY DUTY: 5" DROP	20"-23"	≤ 8"	≥ 5"	18"-21"	0"-8"	≥ 5"
	*AL1235U	UNIVERSAL: STD - 5" DROP	6"-23"	≤ 8"	≥ 5"	6"-21"	0"-8"	≥ 5"
	*AL1236	STANDARD: 6" DROP	20"-24"	≤ 8"	≥ 5"	18"-22"	0"-8"	≥ 5"
	*AL1236HD	HEAVY DUTY: 6" DROP	20"-24"	≤ 8"	≥ 5"	18"-22"	0"-8"	≥ 5"
	*AL1238	STANDARD: 8" DROP	24"-26"	≤ 8"	≥ 5"	22"-24"	0"-8"	≥ 5"
	*AL1238HD	HEAVY DUTY: 8" DROP	24"-26"	≤ 8"	≥ 5"	22"-24"	0"-8"	≥ 5"
	AL124	SHORT: STANDARD	10"-18"	≤ 4"	≥ 3.5"	8"-16"	0"-4"	≥ 3.5"
	AL124HD	HEAVY DUTY SHORT: STANDARD	10"-18"	≤ 4"	≥ 3.5"	8"-16"	0"-4"	≥ 3.5"
	AL1242	SHORT: 2" DROP	18"-20"	≤ 4"	≥ 3.5"	16"-18"	0"-4"	≥ 3.5"
	AL1242HD	HEAVY DUTY SHORT: 2" DROP INVERTED	6"-10"	≤ 4"	≥ 3.5"	6"-8"	0"-4"	≥ 3.5"
		HEAVY DUTY SHORT: 2" DROP	18"-20"	≤ 4"	≥ 3.5"	16"-18"	0"-4"	≥ 3.5"
	*AL1245	SHORT: 5" DROP	20"-23"	≤ 4"	≥ 3.5"	18"-21"	≤ 4"	≥ 3.5"
	*AL1246	SHORT: 6" DROP	20"-24"	≤ 4"	≥ 3.5"	18"-22"	0"-4"	≥ 3.5"
	*AL1246HD	HEAVY DUTY SHORT: 6" DROP	20"-24"	≤ 4"	≥ 3.5"	18"-22"	0"-4"	≥ 3.5"
	AL125HD	HEAVY DUTY EXTRA LONG: STANDARD	10"-18"	7.5"-13.5"	≥ 5"	8"-16"	7.5"-13.5"	≥ 5"
	AL1252	EXTRA LONG: 2" DROP	18"-20"	7.5"-13.5"	≥ 5"	16"-18"	7.5"-13.5"	≥ 5"
Class 5	AL1252HD	HEAVY DUTY EXTRA LONG: 2" DROP INVERTED	6"-10"	7.5"-13.5"	≥ 5"	6"-8"	7.5"-13.5"	≥ 5"
		HEAVY DUTY EXTRA LONG: 2" DROP	18"-20"	7.5"-13.5"	≥ 5"	16"-18"	7.5"-13.5"	≥ 5"
	*AL1255HD	HEAVY DUTY EXTRA LONG: 5" DROP	20"-23"	7.5"-13.5"	≥ 5"	18"-21"	7.5"-13.5"	≥ 5"
	*AL1256	EXTRA LONG: 6" DROP	20"-24"	7.5"-13.5"	≥ 5"	18"-22"	7.5"-13.5"	≥ 5"
	*AL1256HD	HEAVY DUTY EXTRA LONG: 6" DROP	20"-24"	7.5"-13.5"	≥ 5"	18"-22"	7.5"-13.5"	≥ 5"
	*AL1258HD	HEAVY DUTY EXTRA LONG: 8" DROP	24"-26"	7.5"-13.5"	≥ 5"	22"-24"	7.5"-13.5"	≥ 5"
	H300102	RV HITCH: STANDARD	6"-19"	≤ 6"	≥ 4"	6"-17"	0"-4.5"	≥ 4"
	*AL12332	RV HITCH: 12" DROP	21"-30"	≤ 6"	≥ 4"	19"-28"	0"-4"	≥ 4"
	AL123V	STANDARD	6"-18"	≤ 8"	≥ 5"	6"-16"	0"-8"	≥ 5"
	AL1232V	STANDARD: 2" DROP	18"-20"	≤ 8"	≥ 5"	16"-18"	0"-8"	≥ 5"

\*\* Not applicable with AL105L

Round measures up if greater than  $\frac{1}{2}$ " and down if less than  $\frac{1}{2}$ ".

## SECTION 4

## INSTALLATION

## WIRING THE VEHICLE

Improper wiring is the main cause of operation problems with a vehicle lift. Follow the wiring instructions with care. Installing a wiring harness first will ensure there is power to the lift during the installation process and allows the motor to do the lifting for you. If you do not use a wiring harness, you must use a battery pack. The vehicle's wiring harness is located inside the hardware pack. The harness is designed to comply with SAE J1128 requirements. It is approximately 23' long and will accommodate most vehicles.

1. Unwind the wiring harness and lay it flat. The lift end of the harness has a black connector. This black connector goes to the trailer hitch area where the lift will mount. *See Figure 4-1.*

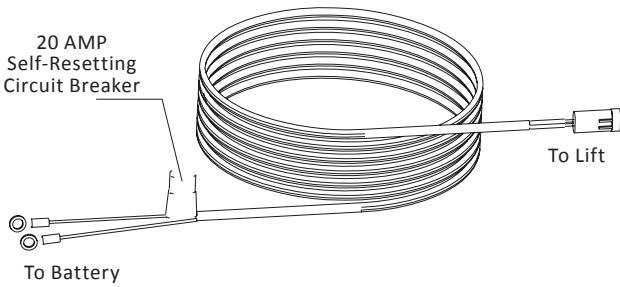


Figure 4-1

2. Start routing the wiring harness at the vehicle's battery. Join the black wire to the negative terminal on the battery. DO NOT attach the red wire until the very end of the installation process. *See Figure 4-2.*

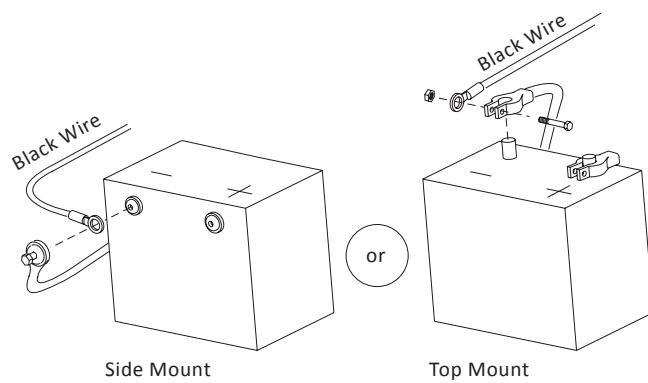


Figure 4-2

## NOTICE

*NEVER attempt to connect the harness to a secondary power source. Always connect both leads directly to the battery. If the vehicle has a 12-volt supply (for example, a pin connector or secondary 12-volt supply), it must be connected to the battery terminals. If you choose to use the battery pack, go to page 14.*

3. Route the vehicle harness under and back to the bumper/trailer hitch area. Whenever possible, route the vehicle harness through the vehicle, entering through the firewall.

## NOTICE

If the installation process requires the wiring harness to run on the underside of the vehicle, direct the harness away from the exhaust system, brake lines, fuel lines and gas tank. Avoid pinch points and sharp edges. Avoid positioning the harness where it can be snagged by debris from the road.

- If you wish to run the harness under the vehicle, use the supplied wire ties to secure the wire against the frame, taking care to avoid moving and/or hot parts such as the exhaust and axle.
- If the harness is too long, coil the extra wire and secure it to the vehicle's bumper using the wire ties provided. **See Figure 4-3.**
- **DO NOT cut or shorten the harness.**

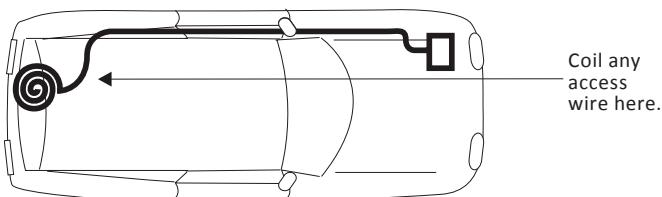


Figure 4-3

4. Once the harness has been routed through the vehicle, remove the protective cover from the pin. **See Figure 4-4.**

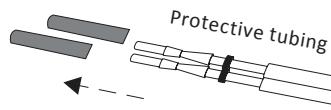


Figure 4-4

5. Examine the retaining flanges on the pin, as they may have become damaged during the process of routing the harness through the vehicle. These retaining flanges are crucial to securing the pins inside the connector. Adjust these flanges as needed. **See Figure 4-5.**

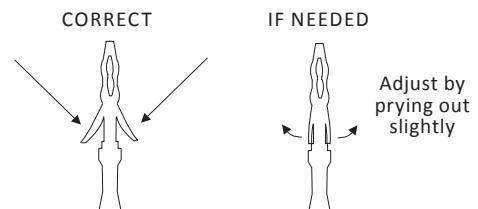


Figure 4-5

6. The connector is marked with an A and B. The A side is for the Red wire and the B side is for the Black wire. If wires are connected incorrectly, the lift will not operate correctly. **See Figure 4-6.**

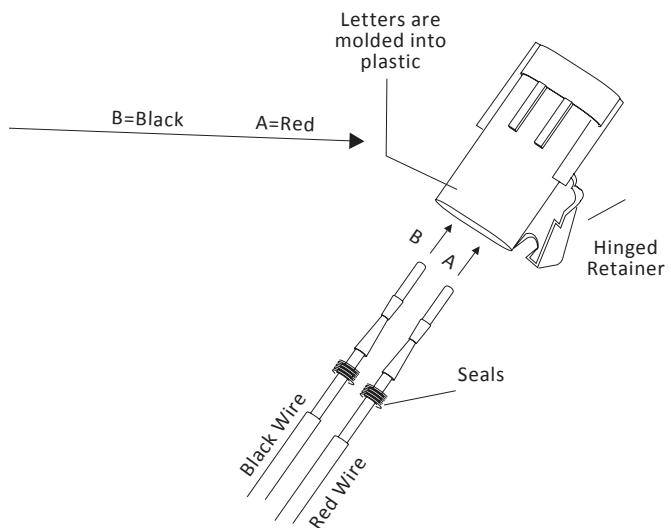


Figure 4-6

## INSTALLATION

7. Attach the black wire first to the negative terminal, if not already attached, and red wire last to the positive terminal on the battery.

*See Figure 4-7.*

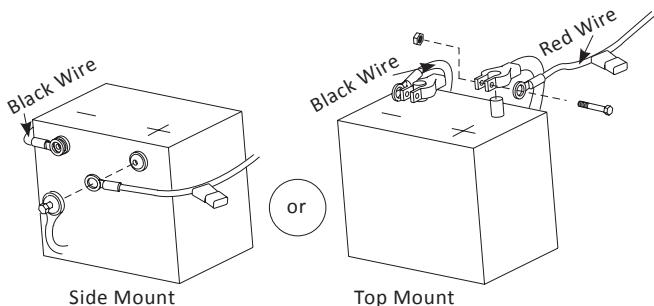


Figure 4-7

**NOTE:** The lift includes a standard two-contact trailer connector. Use this connector for the license plate lamp. If your vehicle is not equipped with the proper connector, use the brown wire to make a wire splice to the tail parking light to get the same result. *See Figure 4-8.*

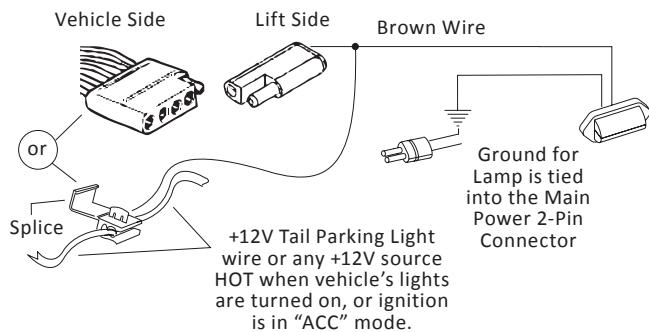


Figure 4-8

## BATTERY PACK

If a customer is not comfortable with connecting the vehicle power harness directly to the battery of the vehicle, Discount Ramps offers a stand-alone battery pack (BAT141386).

The battery pack can also be used when hybrid or electric vehicles do not have a 12-volt battery capable of supplying power to a mobility lift.

## TECH NOTE: MOTOR TESTING

*NOTE: Troubleshooting with a test light or voltage meter may lead to a false reading.*

When you probe for 12 volts, the reading may indicate a connection even though the connection may not necessarily be sufficient. The lift's motor can draw up to 20 amps at some points, requiring all of the available wire to flow proper current. Poor connections are the main problem associated with a slow, intermittent, warm, poorly performing motor and will likely deteriorate the motor prematurely.

If a single strand of a multi-strand wire is making contact, 12V will appear on a meter or test light but will not allow the motor to operate. When troubleshooting, it is always ideal to test both the current and the voltage or run the motor with a known good shop battery or power source.

## OPTIMIZING HITCH HEIGHT

You can change the height of the lift by adjusting the hitch adapter's orientation and location on a standard hitch adapter. Changing the height of the lift helps you optimize the vehicle's ground clearance to ensure that the platform lies flat when it reaches the end of its travel. To select the orientation needed for the vehicle based on the hitch height (the distance of the vehicle's hitch receiver to the ground). *Refer to Figure 3-6 on page 9 and chart on page 10.*

## HITCH ADAPTER INSTALLATION

1. Attach the hitch adapter to the hitch post, ensuring that the adapter is properly oriented with the post according to the application's hitch height. *See Figure 4-9.*

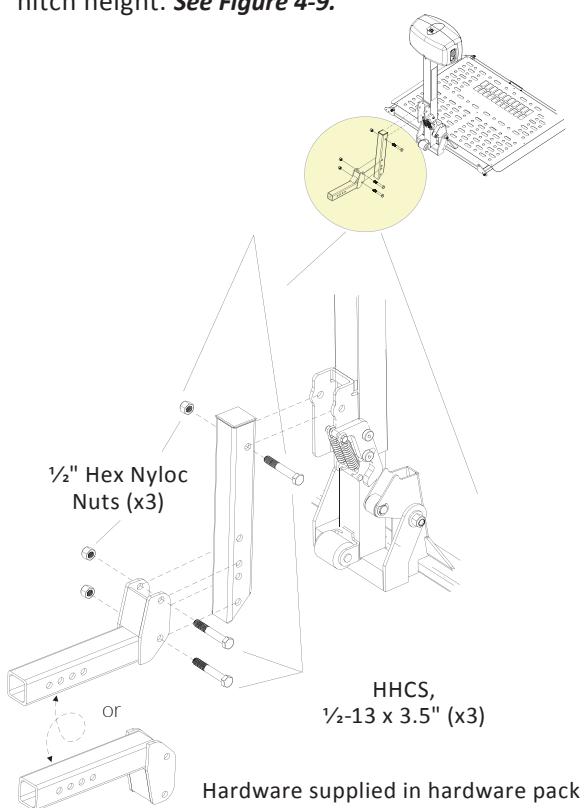


Figure 4-9

2. Attach the hitch post to the lift, but DO NOT overtighten it.
3. Insert the hitch adapter into the receiver on the vehicle's hitch. Secure the adapter according to the hitch class. *See Figure 4-10.*

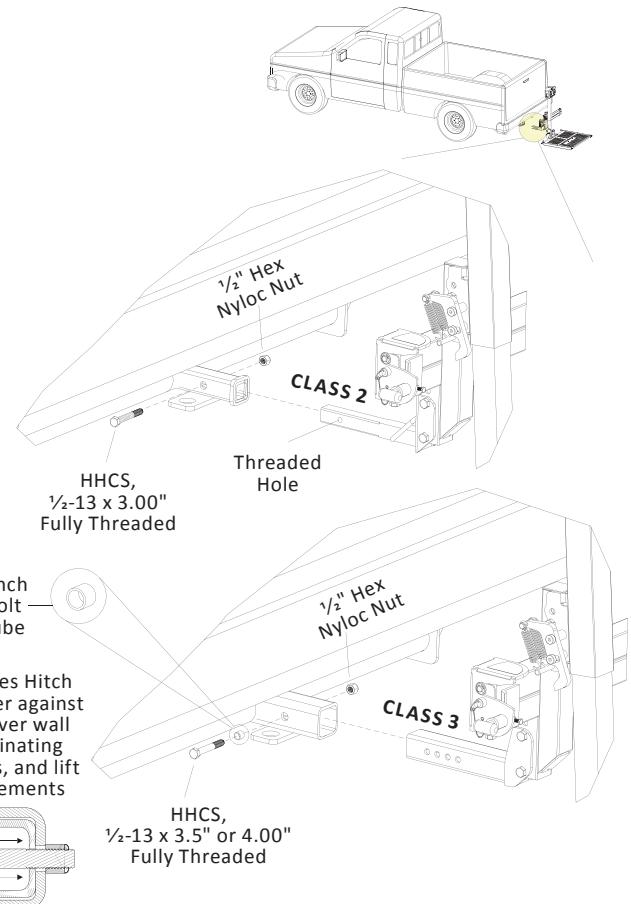


Figure 4-10

*NOTE: ONLY the standard hitch adapters, class 2 - 2" drop, class 2 - 5" drop, or class 3 - 2" drop can be safely inverted.*

## INSTALLATION

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### SWING-AWAY OR HITCH POST INSTALLATION

1. Fasten the hitch adapter to the vehicle hitch. *See Figure 4-11.*

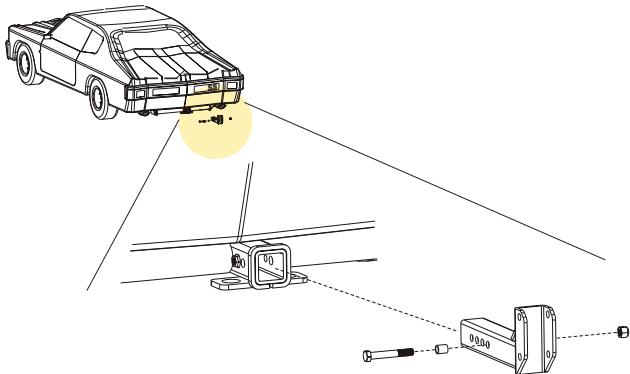


Figure 4-11

2. Fasten the swing away or hitch post to the hitch adapter. *See Figure 4-12.*

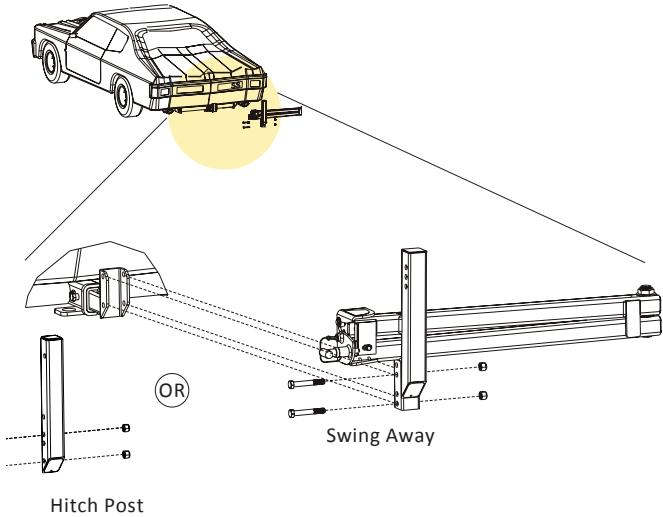


Figure 4-12

3. Position the open box behind the vehicle and connect the vehicle and lift harnesses together. *See Figure 4-13.*

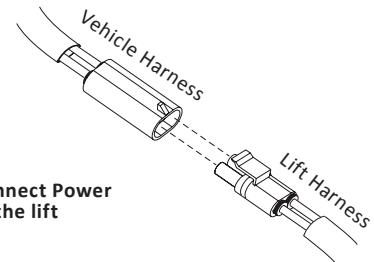


Figure 4-13

4. Stand the lift up, use the toggle switch to line up the hitch post or swing away with the lift and fasten in place. *See Figure 4-14.*

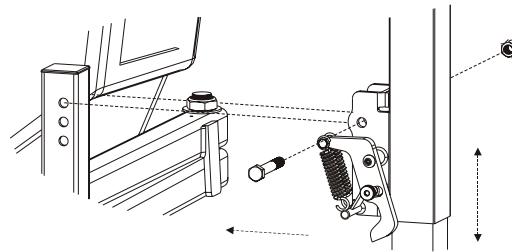
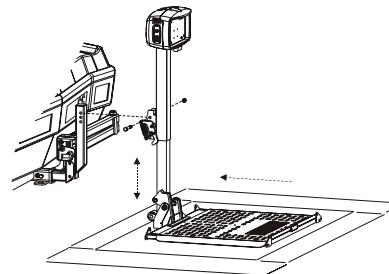
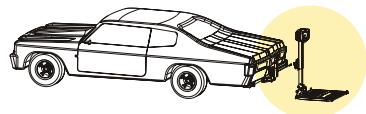


Figure 4-14

## SWING-AWAY ADJUSTMENT SCREW

If the lift was purchased with a swing-away option, read the following installation instructions. Not needed for AL105L.

1. With the swing-away closed, loosen the nut.
2. Tighten the bolt so the ramp touches the pin in the closed position.
3. Tighten the nut. Open and close the swing-away. *See Figure 4-15.*

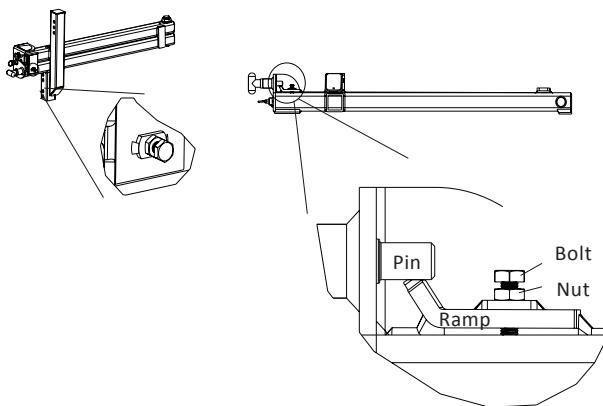


Figure 4-15

4. Verify the T-handle opens freely.  
*NOTE: There should be slight tension when pulling the T-handle.*
5. Verify the upper arm is locked and does not move. *See Figure 4-16.*

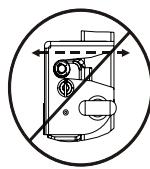
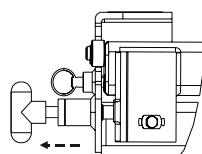


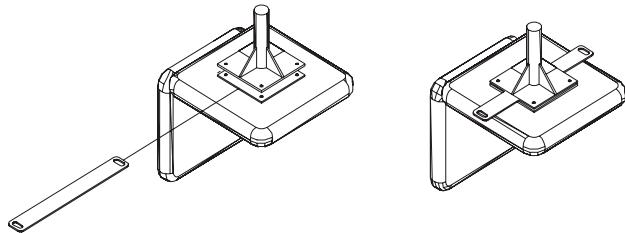
Figure 4-16

**SECTION 5****MOBILITY DEVICE PREPARATION**

A lift with securement straps offers two options for attaching strap hooks to the mobility device—the anchor plate or the U-bolt kit. The lift includes both sets of options.

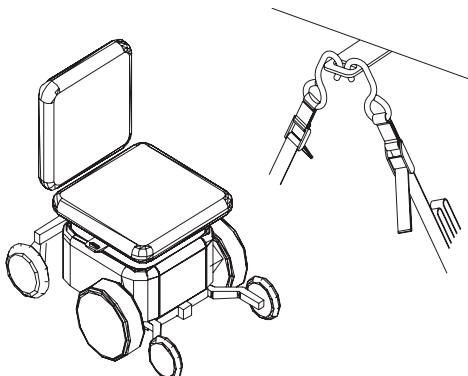
**ANCHOR PLATE**

The anchor plate is a flat plate and may vary in length depending on the mobility device used. The anchor plate attaches to the bottom of any mobility device that has a center seat post. *See Figure 5-1.*



*Figure 5-1*

The anchor plate should extend about 1 1/2" out from the side of the cushion. To secure the mobility device to the lift, attach the strap hooks into the anchor plate slots or holes. *See Figure 5-2.*



*Figure 5-2*

**ANCHOR PLATE  
INSTALLATION**

1. Remove the seat from the mobility device.
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 to the center of the seat plate with the slots or 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 mobility device.

## U-BOLT HARDWARE KIT

The U-bolts are used with mobility devices that do not have a center seat post. On this type of mobility device, the seat is normally attached to a tubular frame. Install the U-bolts, two on each side, to the frame as shown. *See Figure 5-3.*

Ensure that the loop extends to the outside of the mobility device so the user can attach the strap hooks.

Each mobility device is slightly different, so the U-bolt placement will differ among models and manufacturers. Place the U-bolts toward the center of the seat if possible. If the seat type requires the U-bolts to be installed more toward the front or rear of the seat, aim to install them as close as possible to the center of the seat.

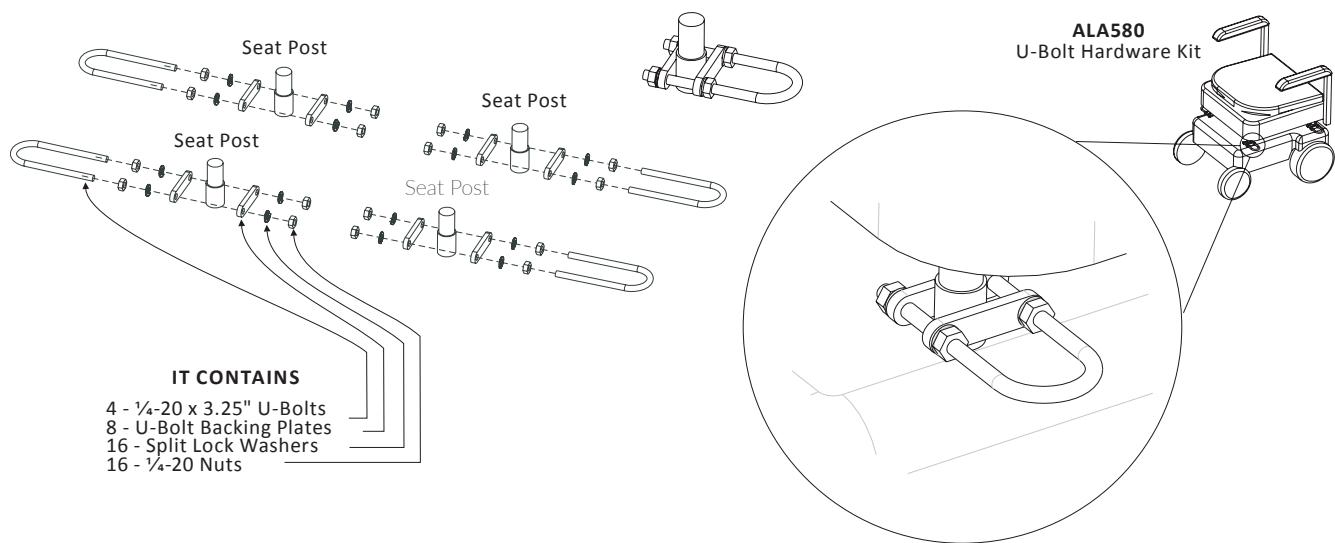


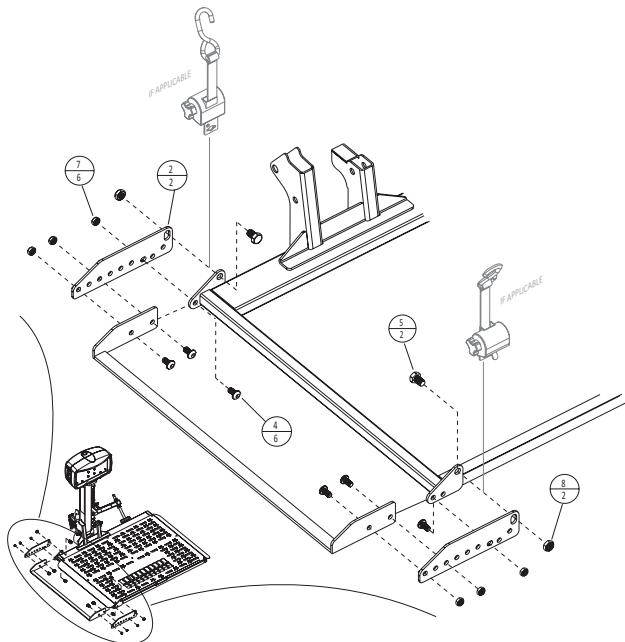
Figure 5-3

**SECTION 6****LIFT ADJUSTMENTS****WHEEL CRADLE  
ADJUSTMENTS**

Add or replace a rear wheel cradle on an DR300 Universal Lift. Always adjust for tire size.

Assemble components as indicated below.

*See Figure 6-6.*

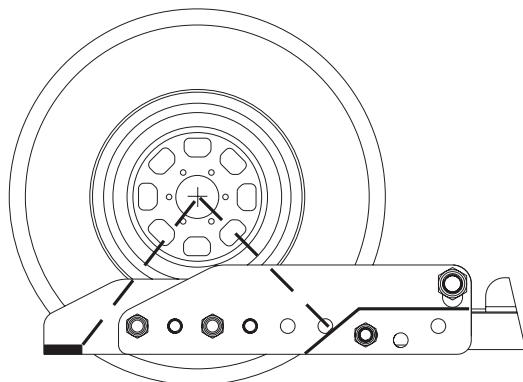
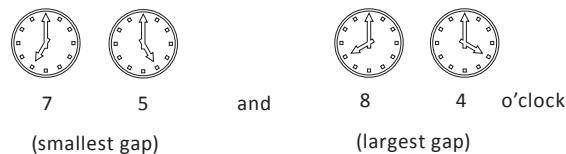


*Figure 6-6*

Test by positioning scooter onto platform.

The cradle's bar and platform ramp should contact the wheel between specific positions:

*See Figure 6-7.*



*Figure 6-7*

Test scooter securement with hold-down foot. Once satisfied with position of scooter's rear wheels, **be sure to tighten ALL fasteners to recommended torque. See table on page 6.**

## SECTION 7

## OPERATION



## WARNING

This lift is NOT meant for human transportation. Any use other than the intended use identified will VOID the warranty and could result in personal injury. The mobility device MUST be unoccupied before operating the lift. Each lift is designed to transport a specific mobility device only. DO NOT attempt to move any mobility devices, objects, people, animals or materials other than those for which the lift was designed.

Take EXTREME CARE while transporting the mobility device onto the lift to avoid damage and/or personal injury.

## NOTICE

DRIVE SLOWLY over rough terrain such as potholes, unpaved roads and railroad tracks. Excessive bumping creates stress on the lift and vehicle and can badly damage your lift, vehicle and mobility device.

## GENERAL GUIDELINES &amp; SAFETY



Pay attention to the following Special Cautions while operating the lift.

- **It is the user's responsibility** to read and follow all instructions.
- **Keep these instructions** with the product at all times and review before each use.
- **It is the responsibility of this product's owner** to furnish the instructions to any person that borrows or purchases.

- **Inspect the product before use** to ensure it is assembled properly and all parts are in safe working order and free of defects; do not use if any damage is noticed.
- **Never modify this product** in any way.
- **All circumstances cannot be addressed** in these instructions. Please use common sense and practice general safety measures when using this product.
- **Parts and/or instructions are subject to change** without notice.
- **Never attempt to pick up the lift** by yourself; proper installation does not require lifting as this may result in injury.
- **Do not cut or shorten the harness** wires in any way.
- **Familiarize yourself with your local and state license plate laws** to ensure legal visibility at all times.
- **Do not use hitch expanders**; this could lead to damage or injury.
- **Always verify** the chair or scooter is firmly secured prior to transport.
- **Always run the lift to the top of travel for transport**; the lift will make a distinct sound at the top to indicate it is fully raised.
- **Never move the vehicle without the lift in the stowed/fully upright position** as this may cause damage to the lift.
- **Reduce speed** for pot holes, rough roads, railroad tracks, etc. Rough driving increases the load amount and could damage your lift, which will not be covered under warranty.
- **Beware of pinch points.** These are areas of moving parts that can catch extremities or clothing. Do not place fingers, extremities, clothing or jewelry near pinch points.

## OPERATION

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- **Keep hands, feet and objects away** from the platform as it lowers.
- **This lift is only designed to transport unoccupied** scooters and power chairs only; do not use to transport people, pets or any other objects other than for what the lift was designed.
- **NOT recommended for use on tow-behind trailers**, including 5th wheel and camping trailers, motor-homes, or RVs.
- **Never exceed the maximum trailer hitch tongue weight rating** of your trailer hitch. Hauling weight may be limited by your vehicle's suspension.
- **Walk the mobility device onto the lifts platform.** Driving onto the lifts platform may present complications and/or hazards when stepping off of the mobility device.
- **Keep the chair tires properly inflated.** Improper inflation will change how the chair fits and secures on the platform and will change the securement pressure.
- **Secure the chair firmly before driving.** Double-check to confirm that the chair is secured properly before you transport it.
- **Inspect the lift condition often.** If ANY parts are worn or damaged, DO NOT USE THE LIFT. Immediately contact the dealer that you purchased the lift from to schedule repairs.
- **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.
- **Do not move the vehicle with the platform down.** If the vehicle is driven with the lift in the DOWN position, the lift and/or the vehicle will be damaged.
- **Check with a dealer to make sure a new mobility device is compatible** with the lift and vehicle before replacing a mobility device.

- **Hand-wash or only use a touch-less automatic car wash with the lift installed.** To prevent damage **DO NOT** use automatic car wash systems. *See Figure 7-1.*



Figure 7-1

## LOWER THE LIFT

1. Insert the key and turn the switch to the ON position.
2. Press DOWN on the toggle switch. The platform will unfold automatically, as the lift is lowered.
3. Continue to lower the platform until it reaches the ground and becomes level. *See Figure 7-2.*

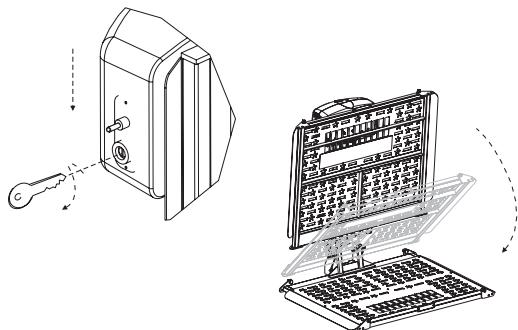


Figure 7-2

### NOTICE

*DO NOT over-lower the platform to the point where the vehicle begins to rise. This will damage the lift.*

### NOTICE

*Always walk mobility devices onto the platform manually.*

## POSITIONING THE MOBILITY DEVICE ONTO THE PLATFORM

1. Slowly walk the mobility device onto the platform.
2. Maneuver the mobility device until it is positioned at the center of the platform or the drive wheels are resting within the wheel cradles, depending on the lift and chair model. *See Figure 7-3.*

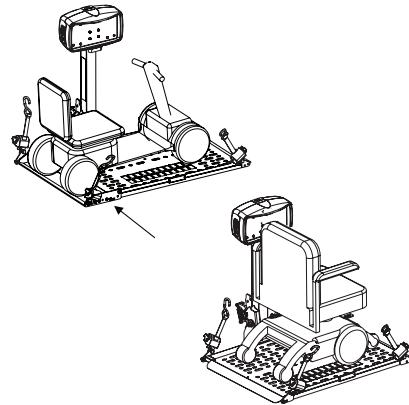


Figure 7-3

**IMPORTANT:** Positioning the mobility device properly onto the platform is critical to ensuring the mobility device is properly locked onto the lift. Always verify that the drive wheels are captured within the wheel cradles. Please consult your dealer on the specifics of your application.

## SECURING THE MOBILITY DEVICE

When securing the straps, raise the platform at least half way to raise the level at which the straps will be attached to avoid bending over. *See Figure 7-4.*

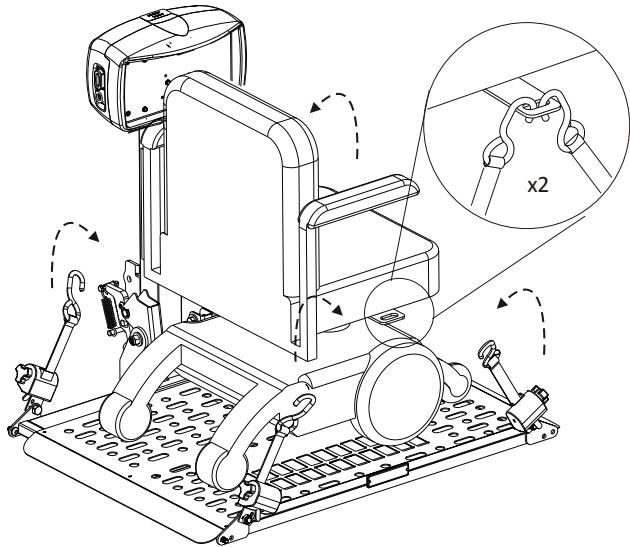


Figure 7-4

## RAISING THE LIFT

1. When the mobility device is secure, use the UP toggle switch to continue raising the lift.
2. Stop raising the lift when it reaches the top of travel and when you hear the clicking or ratcheting sound.
3. Remove the key. *See Figure 7-5.*

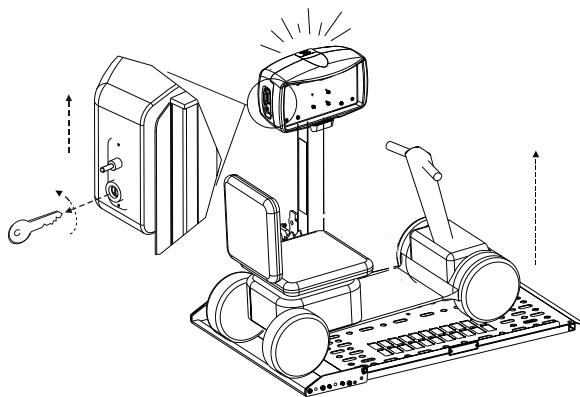


Figure 7-5

## UNLOADING THE MOBILITY DEVICE

1. Insert the key and turn the switch to the ON position.
2. Press DOWN on the toggle switch to lower the lift.
3. Release/move the hold-down devices that are not automatic.
4. Guide the chair off the platform carefully.

*NOTE: Always walk the mobility device off of the platform. When the mobility device is clear of the platform, press the UP toggle switch to raise the platform.*

## STOWING THE PLATFORM

When the mobility device is unloaded, press UP on the toggle switch and the platform will automatically fold. *See Figure 7-6.*

### NOTICE

*DO NOT leave the lift's platform on the ground. Keep the platform in the upright and stowed position when not in use or when leaving the vehicle.*

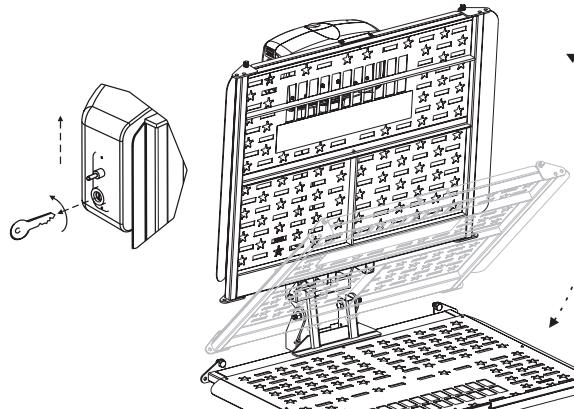


Figure 7-6

## SWING-AWAY

The Swing-Away allows the lift to be swung away from the back of the vehicle for convenient access to the trunk/cargo area. If the lift does not have a Swing-Away, the Swing-Away can be purchased from an authorized dealer and installed at any time.

### NOTICE

*NEVER open the Swing-Away with the mobility device on the lift. Opening the Swing-Away with the mobility device on the lift will damage the Swing-Away and the lift and will potentially damage the vehicle and the mobility device. Any of these actions will VOID the warranty. See Figure 7-7.*

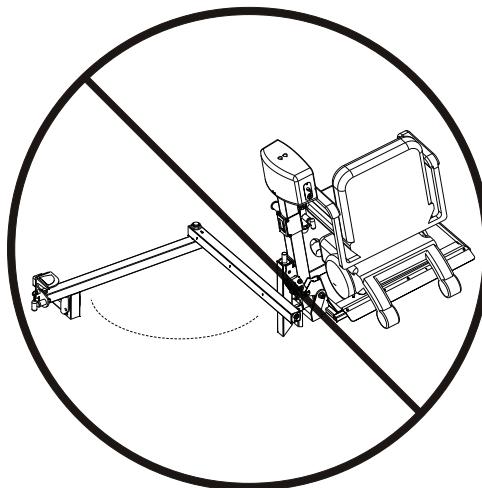


Figure 7-7

**OPERATION****WARNING**

ONLY open the Swing-Away on level ground. Failure to open the Swing-Away on level ground may result in losing control of the lift, resulting in personal injury or damage to property. *See Figure 7-8.*

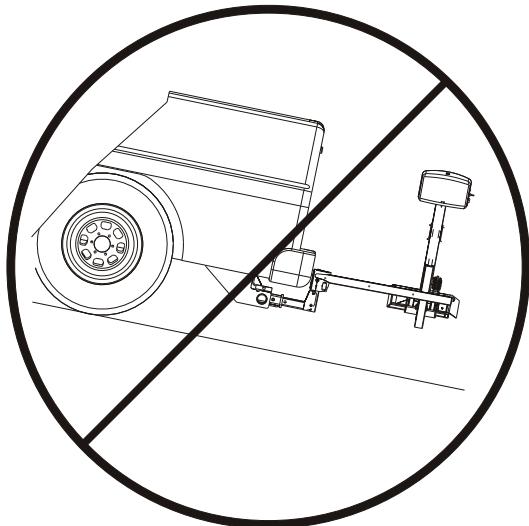


Figure 7-8

**OPENING THE SWING-AWAY**

1. Remove the safety pin. *See Figure 7-9.*

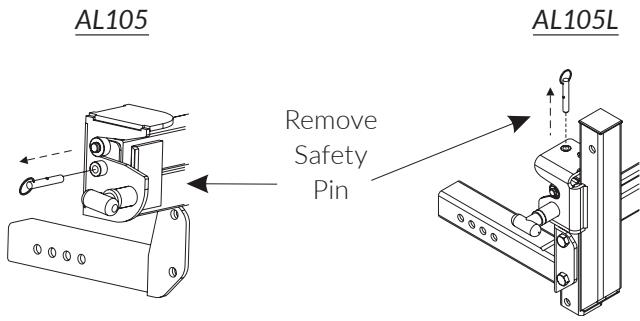


Figure 7-9

2. Pull the T-handle. Grasp the lift firmly and swing it out, away from the vehicle.

*See Figure 7-10*

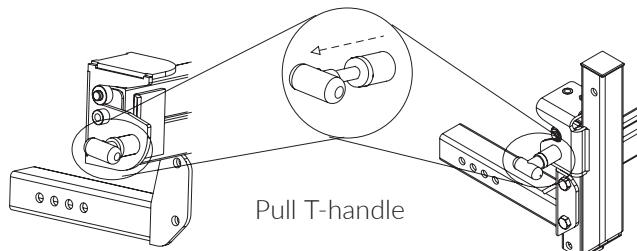


Figure 7-10

The Swing-Away opens up from the closed position to allow full access to the vehicle's cargo area.

*NOTE: On the AL105L model, the platform must be pushed down and away from the vehicle to release the latching mechanism. See Figure 7-11.*

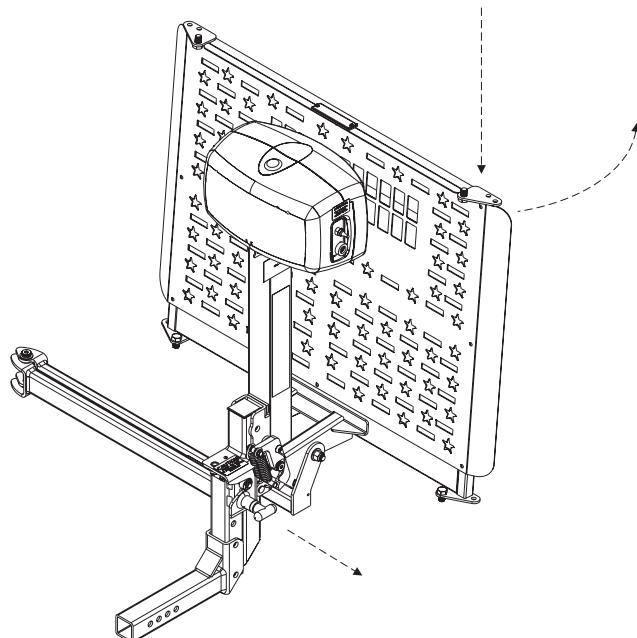


Figure 7-11

**CLOSING THE SWING-AWAY**

1. Close the Swing-Away by returning it to the stowed position. *See Figure 7-12.*

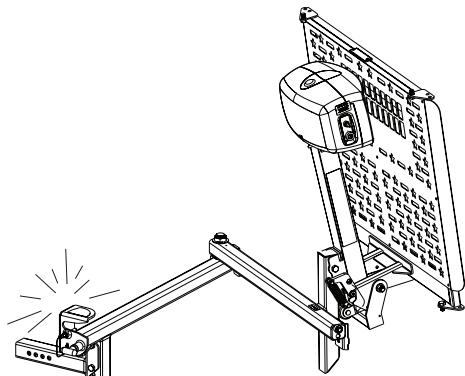


Figure 7-12

2. When the Swing-Away is fully closed, the T-handle will be fully retracted. *See Figure 7-13.*

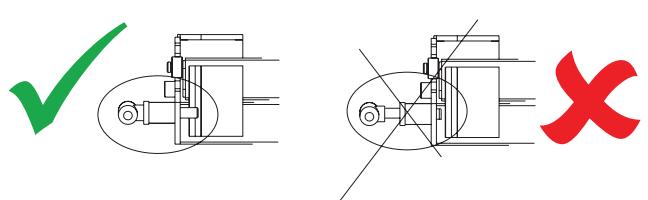


Figure 7-13

3. Install the safety pin. *See Figure 7-14.*

**⚠️ WARNING**

Be sure to stay clear of the latching mechanism to avoid personal injury. *See Figure 7-13.*

Safety Pin must be installed before transit to avoid damage and injury. *See Figure 7-14.*

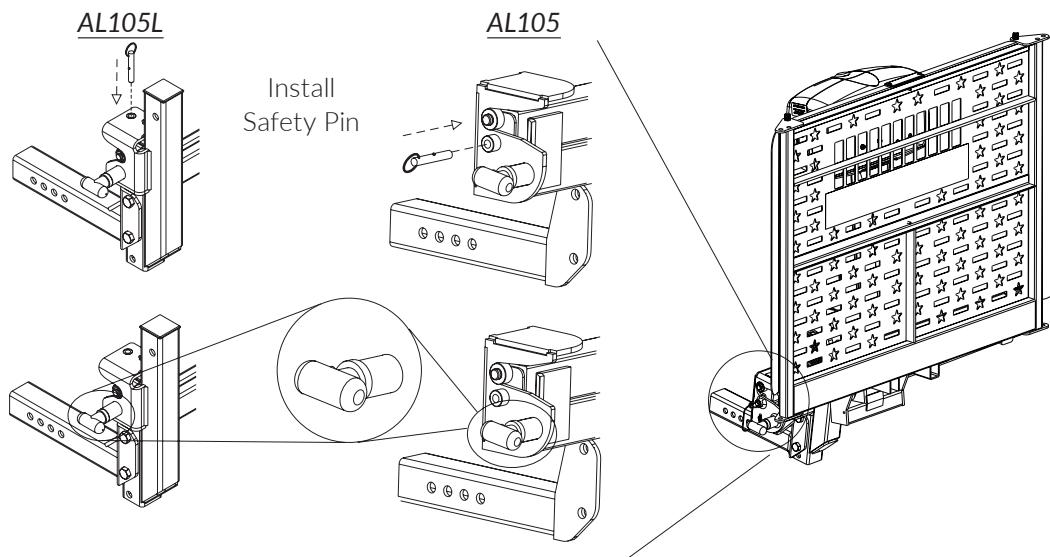


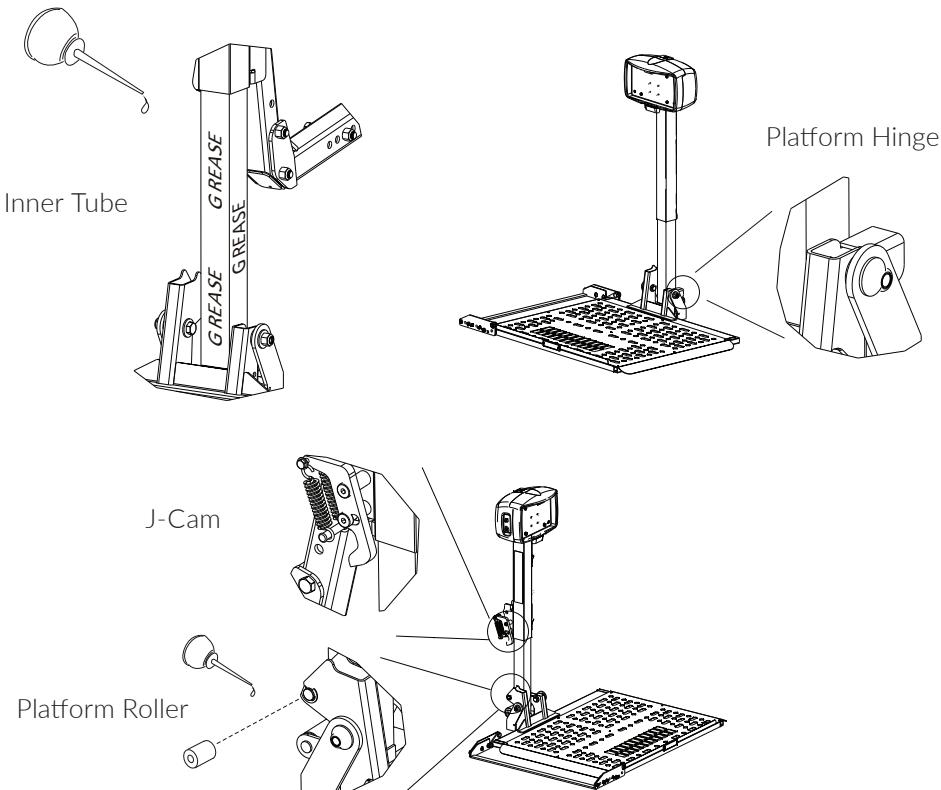
Figure 7-14

**SECTION 8****MAINTENANCE**

The DR300 is designed to be as trouble free as possible. However, some basic maintenance will ensure that it continues to offer reliable use for years to come.

- Oil pivot points on all moving parts every Six (6) months.
- Grease the inside vertical square tube once a year (every six [6] months under hard conditions or extreme weather). Lower the platform to the ground and clean the tube with mineral spirits, WD-40® or a good solvent. When clean, grease the square vertical tube shaft with high-grade water-resistant grease such as boat trailer wheel-bearing grease.

*See Figure 8-1.*



*Figure 8-1*

## MAINTENANCE/SERVICE RECORD

## SECTION 9

## TROUBLESHOOTING

The following procedures are reserved for an approved installer/dealer. Do not attempt these procedures without proper knowledge of the automotive electrical circuitry.

1. Be careful when troubleshooting with the voltage meter. The instruments will detect voltage but may not indicate a tear or poor connection in the wiring. An instrument may give a false reading since it will only indicate that there is some wire connection, but this wire connection may not necessarily be sufficient. *See Figure 9-1.*

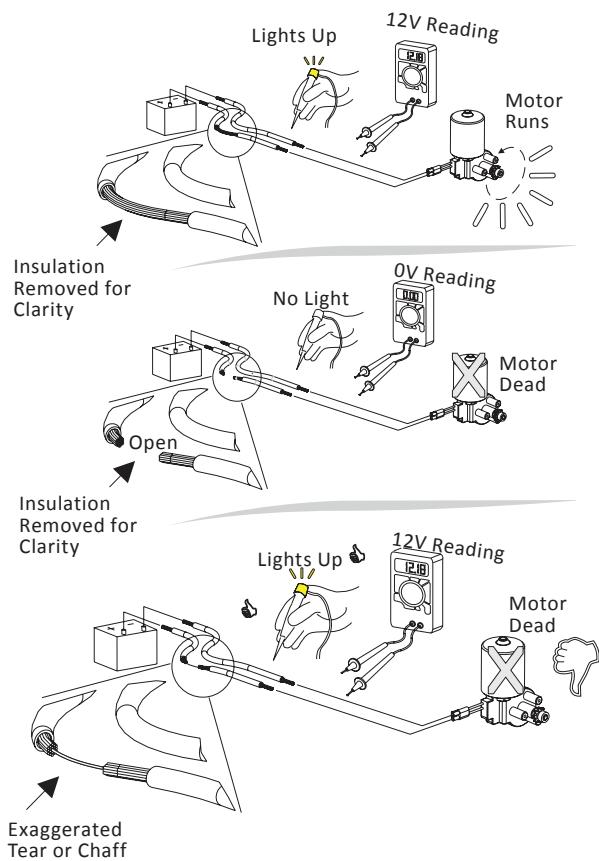


Figure 9-1

2. Examine both voltage and current. As an alternative, isolate sections of the lift wiring using the process of elimination with a known-good/fully charged 12V automotive battery or a known-good/fully charged power chair/scooter battery.
3. Inspect the full length of the wiring harness to ensure the insulation is not torn. The lift's vehicle harness running through or under the vehicle is subject to a possible short from road debris rubbing against the vehicle's frame.
4. Verify the functionality of the circuit breaker. The circuit breaker is located about 6" from the connections to the vehicle's battery. The breaker will self-reset if overloaded. However, use an ohmmeter or test light to verify that the breaker is functioning or replace the circuit breaker with a new or known-good circuit breaker and perform the following tests.

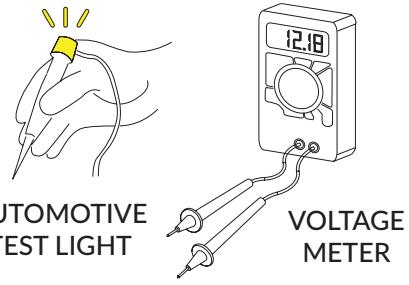
**If the lift does not have power when the key is turned on:**

- Make sure the lift harness and vehicle harness are connected.
- Make sure the self-resettable circuit breaker on the red wire by the battery is good.
- Try starting the car to see if the battery is weak.

**If the lift makes a ratcheting noise as it is being raised.**

- Unplug the lift, take the round black plug off the top of the motor cover and use a 3/8" socket to manually lower the lift. (See manual override instructions.)
- If the actuator just spins and doesn't move down or up, take the lift to a dealer.

## TROUBLESHOOTING TABLE

PROBLEM	CAUSE	SOLUTION
<ul style="list-style-type: none"> <li>The lift does not operate.</li> <li>The lift operates slowly or intermittently.</li> </ul>	Bad electrical connection(s)/Circuit breaker	<p>Check and clean all connections that might be loose or dirty. The lift motor requires quality electrical connections to operate at full capacity. Any break in the wiring will slow down the motor and will cause it to deteriorate prematurely.</p> <p><i>NOTE: Be careful when troubleshooting with a test light or voltmeter. These instruments may give false indications.</i></p>  <p><b>AUTOMOTIVE TEST LIGHT</b></p> <p><b>VOLTAGE METER</b></p>
The license plate light does not work.	The two-prong connector is not wired.	The license plate light runs from the two-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 or spliced directly to a tail light or the license plate light (brown wire only [+]).
A ratcheting sound occurs when the lift is all the way up or down.	Actuator clutch	<p>In the UP direction, the ratcheting sound indicates normal overload protection and MUST be heard since it indicates that the platform is all the way up and that the mobility device and platform are secure.</p> <p><b>NOTICE</b></p> <p><i>DO NOT allow the lift to ratchet as it goes DOWN. Only lower the platform level to the ground. DO NOT begin to raise the car with the lift; the lift and/or vehicle can be damaged.</i></p>

**TROUBLESHOOTING**

PROBLEM	CAUSE	SOLUTION
Extra length of wire to the lift.	Extra wire was provided for the optional swing-away.	The extra wire is provided 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. Leave the extra wire in case you need a swing-away installation in the future.
The lift does not reach the ground.	The incorrect hitch adapter was installed. Incorrect hitch adapter position	Check the attachment of the hitch adapter to the hitch post on the back of the lift. <b>See Hitch Adapter Installation on page 10.</b> The normal range of lift operation is 6" to 16" to the bottom of the hitch receiver of the vehicle. Any higher vehicles will require a different hitch adapter.

**MANUAL OVERRIDE**

In the event of a power failure (for example, if your car battery dies), you can still operate the lift using the manual override system.

**WARNING**

Always disconnect the power from the lift by unplugging the two connector plugs before attempting to use the manual override to avoid electrical shock.

1. Unplug power to the lift. **See Figure 7-2.**

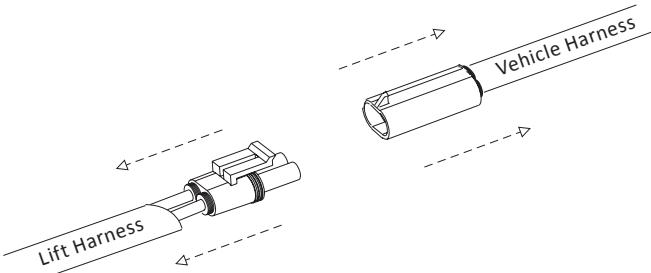


Figure 7-2

2. Using a coin or key, remove the cap on the top of the motor cover. **See Figure 7-3.**

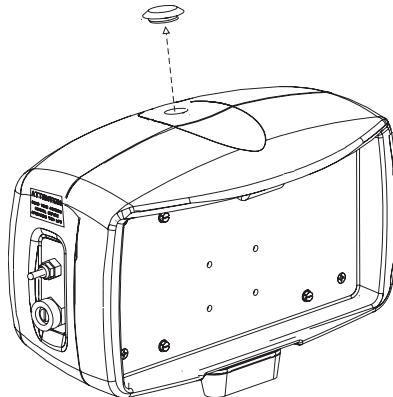


Figure 7-3

3. Insert a  $\frac{3}{8}$ " socket wrench into the actuator and rotate the hex shaft. **See Figure 7-4.**

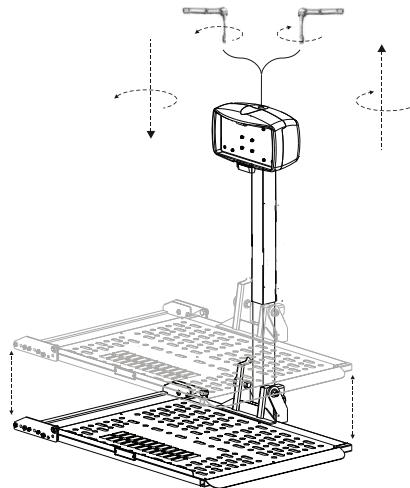
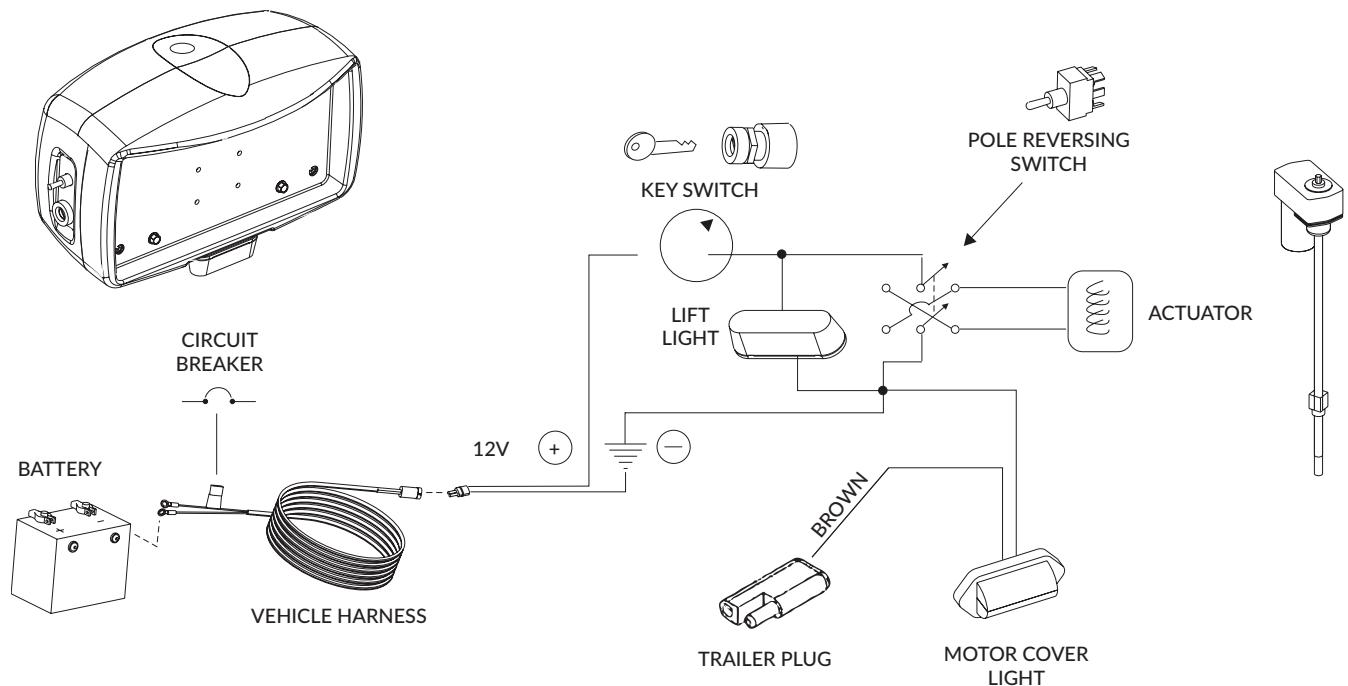


Figure 7-4

## SECTION 10

**MOTOR COVER WIRING SCHEMATIC**

**WARRANTY****SECTION 11****1-YEAR LIMITED WARRANTY**

The lift came with a separate warranty form on page 35. To register the lift, the warranty form must be returned within ten (10) days of installation. This warranty policy page must remain in the owner's manual for future reference. Do not tear out this page.

Dealer/Installer Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

E-Mail: \_\_\_\_\_

The installation date and serial # of the lift will be required for the dealer to receive factory information for service or warranty work.

Installation Date: \_\_\_\_\_

Serial # of the Lift: \_\_\_\_\_

**GENERAL PRODUCT WARRANTY:** Products purchased from the Authorized Dealer (original place of purchase) or Merchant ("Dealer") will be free of defects in material and workmanship at the time of receipt, and will meet the specifications stated at the place of purchase transaction or online at the Dealer's website, under normal use and service when correctly installed, operated and maintained. This product warranty is effective for the period of time stated below, unless otherwise stated in the product instructions or depicted in the product advertisement. All Authorized Dealer warranties are NON-TRANSFERABLE and cover only the original end purchaser. This limited warranty does not cover products purchased through non-authorized dealers. Non-authorized dealer receipts are not accepted for warranty verification.

**\*\*\*WARRANTY CLAIMS MUST BE MADE DIRECTLY TO THE ORIGINAL PLACE OF PURCHASE.\*\*\***

**WARRANTY PERIOD:** This warranty remains in force for one year from the date of the product's accepted delivery. The Authorized Dealer offers a one year manufacturer's warranty for most products unless otherwise specified on the product advertisement.

**WARRANTY SERVICE:** The Authorized Dealer will replace any defective or malfunctioning part at no charge, including payment of the shipping costs of parts or replacement product to and from the manufacturer. The purchaser is responsible for labor charges. If the product does not meet specifications as depicted in the advertisement, the Authorized Dealer will refund the full purchase price of the product.

Questions regarding the warranty on a specific product and warranty claims should be directed to the Authorized Dealer with whom the purchase transaction was made.

**WARRANTY LIMITATIONS:** The above warranty does not apply to products that are repaired, modified or altered by any party other than the Authorized Dealer; are subjected to unusual physical stress or conditions (such as overloaded ramps or corrosion), natural disaster, governmental actions, wars, strikes, labor disputes, riots, theft, vandalism, terrorism or any reason beyond reasonable control; are damaged due to improper installation, misuse, abuse, accident or negligence in use, storage, transportation or handling, or tampering; or to products that are considered consumable items or items requiring repair or replacement due to normal wear and tear. Product should be inspected prior to signing for delivery. Product damage incurred during shipping, unless noted on the Bill of Lading at the time of delivery, renders this warranty void.

**LIMITED LIABILITY:** In no event shall **THE AUTHORIZED DEALER** be liable to the purchaser or any third party for any indirect, incidental, consequential, special, exemplary or punitive damages arising out of the use of the product, including, without limitation, property damage, loss of value of the product or any third party products that are used in or with the product, or loss of use of the product or any third party products that are used in or with the product.

**PLEASE FILL OUT ALL FIELDS AND RETURN WITHIN TEN (10) DAYS OF PRODUCT INSTALLATION.**

Fax completed form to 1-866-234-5680 or mail to:

Discount Ramps, ATTN Warranty Department, 760 S. Indiana Ave., West Bend, WI 53095.  
Keep a copy of this form for your records.**PRODUCT INFORMATION**

Model: \_\_\_\_\_

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

Purchase Date: \_\_\_\_\_

Installation Date: \_\_\_\_\_

**PURCHASER INFORMATION**

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

**INSTALLER INFORMATION**

Company Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

**ADDITIONAL INFORMATION****How did you hear about Discount Ramps?**

- Discount Ramps Dealer
- Internet
- Magazine  
Which: \_\_\_\_\_
- Friend or Acquaintance
- Saw Discount Ramps product somewhere
- Other: \_\_\_\_\_

**I purchased my Discount Ramps lift because of:**

- Style/Appearance
- Discount Ramps Representative
- Previous Experience
- Ease of Use
- Recommendation
- Price/Value

## WARRANTY

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## NOTES

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7N102 W19400 Willow Creek Way  
Germantown, WI 53022  
866-489-1099  
[www.discountramps.com](http://www.discountramps.com)