

Outside Lifts

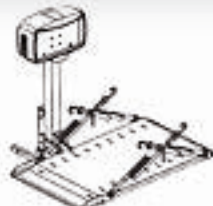
Installation & Owner's Manual

 **Harmar.**
America's Lift Leader™

www.harmar.com | 800-833-0478



AL030 Power Tote Folding Manual Wheelchair Lift
Capacity: 100 lbs



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



AL015 Micro Scooter Lift
Capacity: 100 lbs



AL100 Universal Lift
Capacity: 350 lbs



AL160 Low Profile Universal Scooter Lift
Capacity: 350 lbs



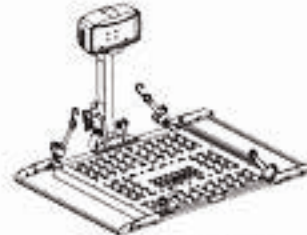
AL300 Universal Scooter/Power Chair Lift
Capacity: 350 lbs



AL300RV RV Lift Scooter/Power Chair Lift
Capacity: 350 lbs



AL500 Universal Power Chair Lift
Capacity: 350 lbs



AL301XL Extra Wide Universal Power Chair Lift
Capacity: 350 lbs



AL560 Auto Hold Down Power Chair Lift
Capacity: 350 lbs



AL560XL Automatic Extra Large Power Chair Lift
Capacity: 350 lbs



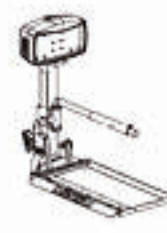
AL570 Auto Power Chair Lift
Capacity: 350 lbs



AL570 Extra Large Power Chair Lift
Capacity: 350 lbs



AL580 Power Chair Lift
Capacity: 350 lbs



AL580XL Extra Large Power Chair Lift
Capacity: 350 lbs



AL585-SEL Power Chair Lift
Capacity: 250 lbs



AL585-SS Power Chair Lift
Capacity: 250 lbs



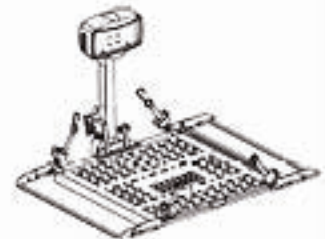
AL100HD Heavy Duty Scooter Lift
Capacity: 400 lbs



AL300HD Heavy Duty Scooter/Power Chair Lift
Capacity: 400 lbs



AL500HD Heavy Duty Power Chair Lift
Capacity: 400 lbs



AL301XLHD Extra Wide Heavy Duty Power Chair Lift
Capacity: 400 lbs

Read and understand this manual thoroughly before attempting to install or operate the lift. If you have any questions, please contact your Authorized Harmar Dealer or Harmar's Technical Service Department.

Dealer Name & Contact Information:

P 800-833-0478 | F 866-234-5680 | TECH@HARMAR.COM

Serial # of Your Lift:

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NOTE: The following symbols indicate areas where you should take special care to avoid danger to individuals or property.



WARNING

Hazardous situation. If not avoided, could result in serious injury to installer or user.



CAUTION!

Hazardous situation. If not avoided, could result in serious damage to property.

GENERAL OPERATION

1. LOWERING THE LIFT

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. [Figure 3-1]

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

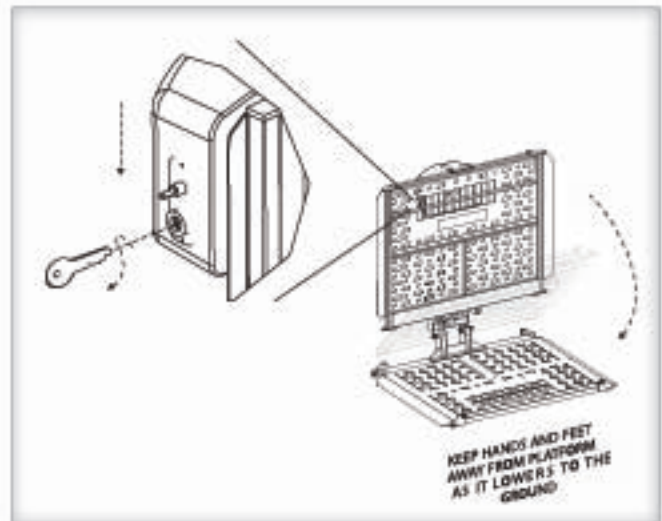


Figure 3-1

2. DRIVE CHAIR ONTO PLATFORM.

Drive slowly, stopping when the drive wheels fall between the platform bars on the side or center depending on the lift and chair model. [Figure 3-2]

IMPORTANT

Positioning the chair properly on the platform is critical to ensure it is properly locked onto the lift. Always verify wheels are captured by cradles or bars. Please consult your dealer on the specifics of your application.

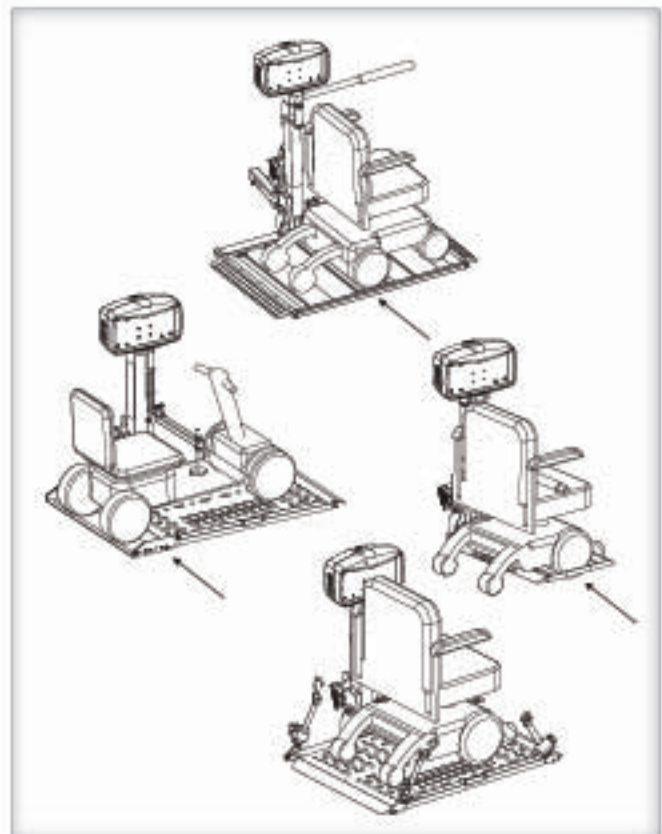


Figure 3-2

3. SECURING THE CHAIR

Depending on your lift model and the type of securement device it uses, you may wish to raise the platform halfway, using the 'UP' toggle switch, in order to avoid having to bend over while you attach straps or flip the chair's armrest out of the way of the hold-down arm. [Figure 4-1]

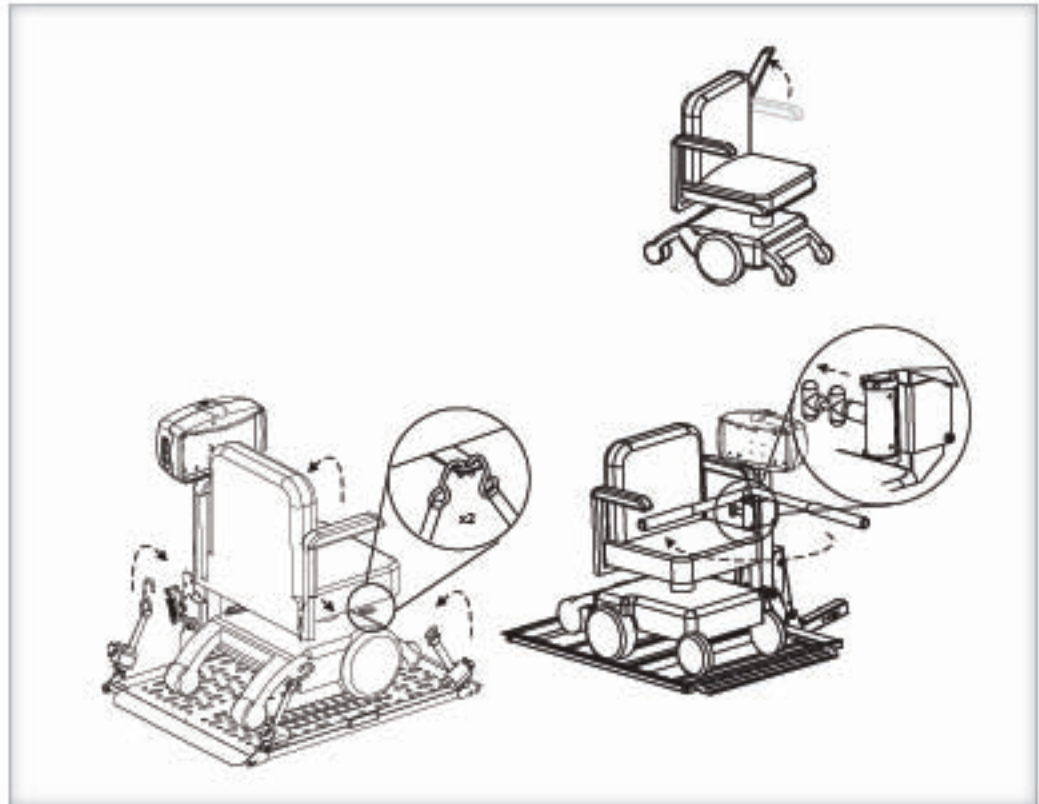


Figure 4-1

4. RAISING THE LIFT

When the chair is secure, use the 'UP' toggle switch to continue raising the lift. Stop when it reaches the top of travel when you hear the clutch sound. Twist the key to remove.

[Figure 4-2]

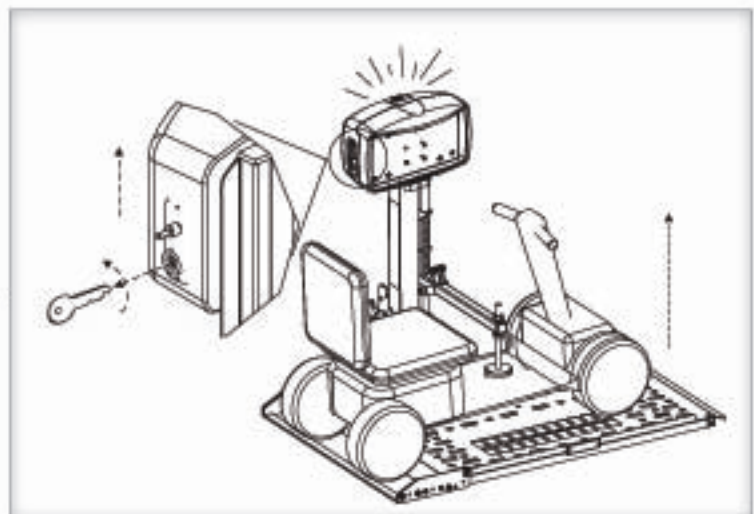


Figure 4-2

5. UNLOADING THE CHAIR

Insert the key and switch to 'ON' position. Press 'DOWN' to lower the lift. Do NOT continue travel to the point where the vehicle rises; that will damage the lift.

[Figure 5-1]

Drive the chair off the platform carefully. When the chair is unloaded, press 'UP' and the platform will automatically fold. (Except AL010/050 and AL030).

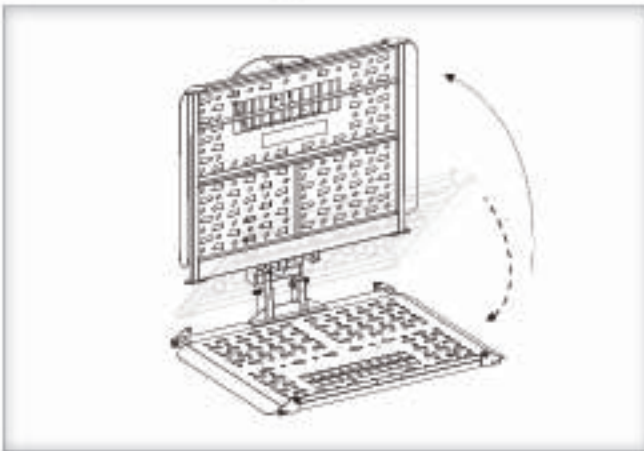


Figure 5-1



CAUTION

These are general instructions. Specifics may vary based on your chair model and lift combination. Please follow the specific instruction suggested by your dealer.



CAUTION

Always verify the chair or scooter is held firmly in place prior to transport.

- **Always** run the lift fully to the top for transport. The lift will make a ratcheting sound which indicates that all mechanisms are locked and prepared for travel.
- **Never** attempt to move the vehicle without the lift being in the full up or stowed position. This may damage the lift.
- **Drive slowly** over rough terrain such as pot holes, unpaved roads, railroad tracks. Excessive loads from rough driving will damage your lift and is not covered by the warranty.
- **If you notice any damage, 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.

AL010/050 AND AL030 MICRO LIFTS

MICRO LIFTS / FOLDING

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

The locking mechanism consists of a pin and keeper plate, which must be disengaged before unfolding. Simply hold the platform firmly and lower it approximately 2" to allow the platform to disengage and unfold. *[Figure 6-1]*



WARNING

Hold platform firmly while lowering the lift to its down position.

To lock in the upright position, lift platform up before the pin engages the keeper plate. *[Figure 6-2]*



WARNING

Hold platform firmly while raising the lift until the pin has engaged the keeper plate.

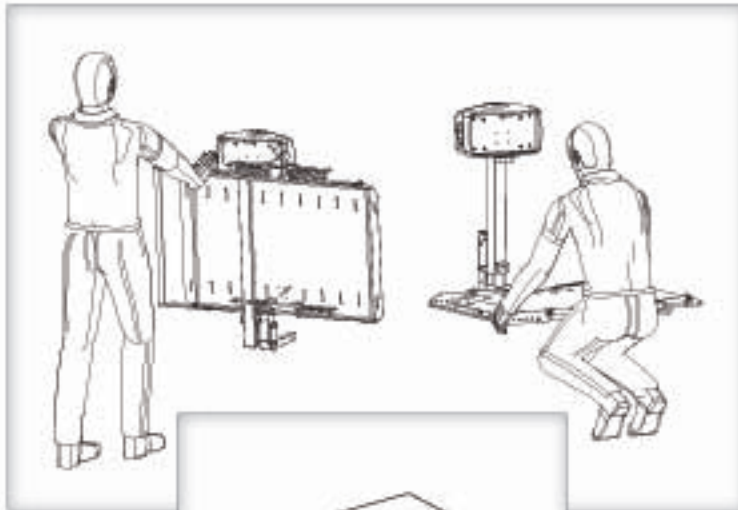


Figure 6-1

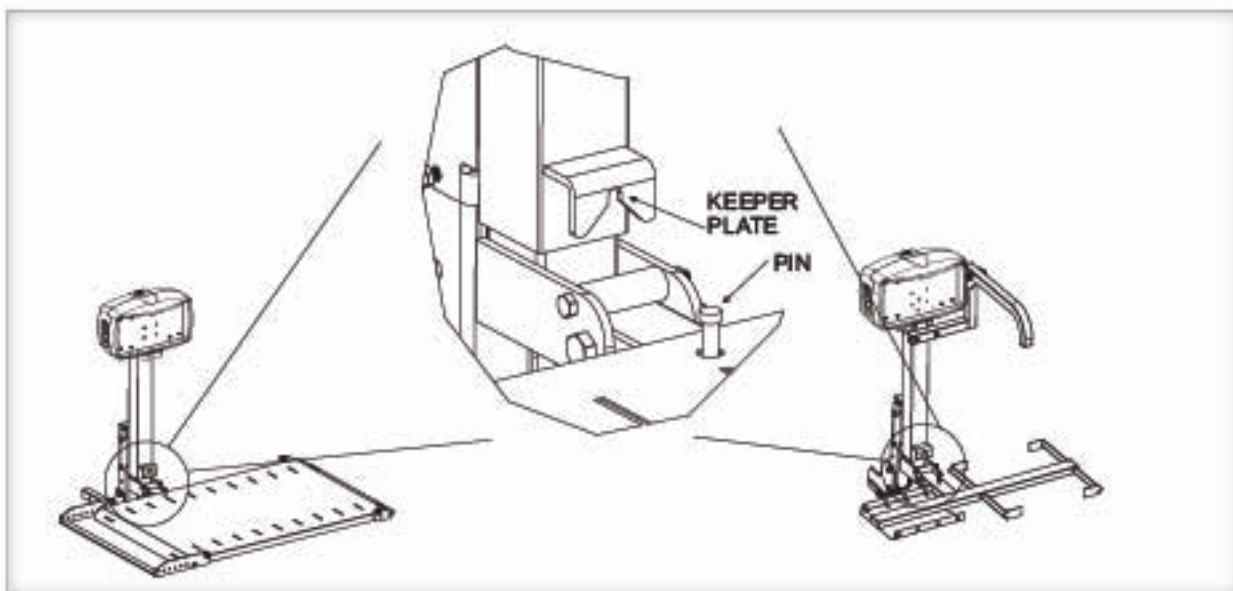
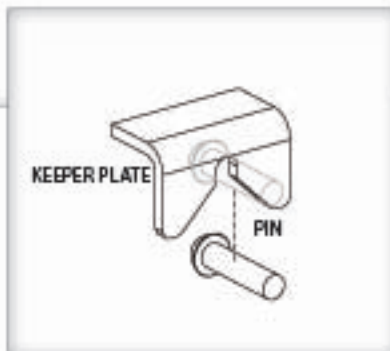


Figure 6-2

AL570 & AL570XL

LOADING THE CHAIR

Set chair speed to SLOW. Drive chair forward carefully until the chair plow engages with the Dock 'N' Lock [Figure 7-1]

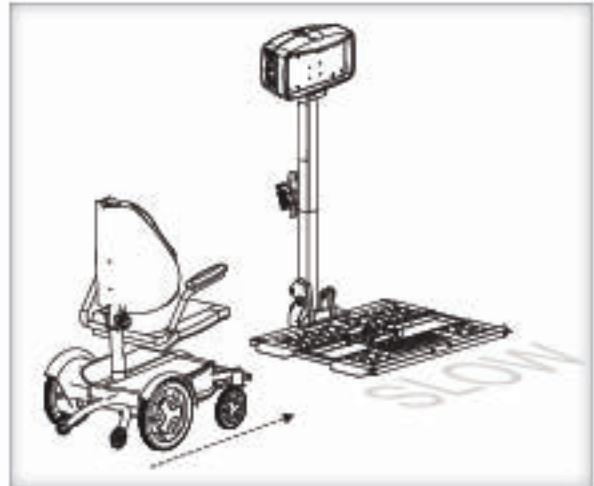


Figure 7-1



Set chair speed to SLOW and use extra caution while driving on and off the platform.

Raise lift 2"-3" to close the Dock 'N' Lock. [Figure 7-2]

TEST SECUREMENT

Raise the lift platform 3"-6" off the ground. Set the chair speed controller to slow and attempt to move the chair in reverse. If successfully locked, the chair will not move in reverse. [Figure 7-3]

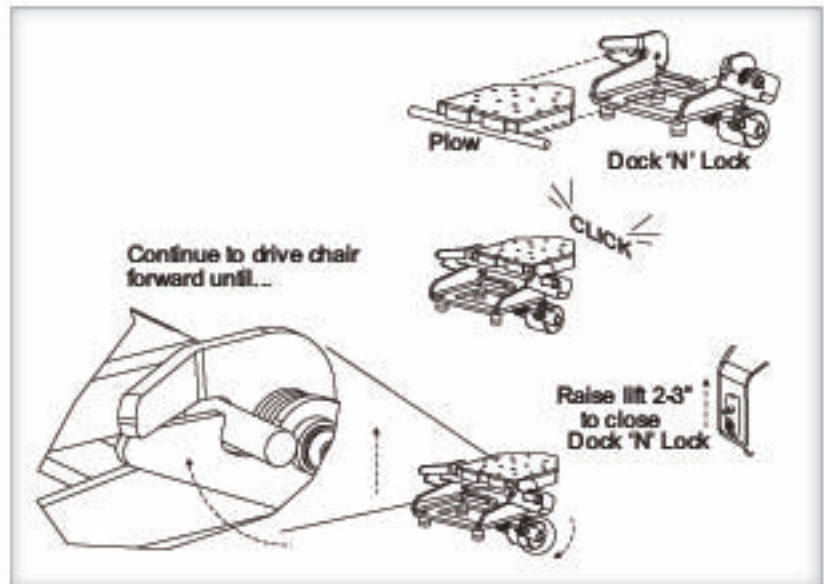


Figure 7-2

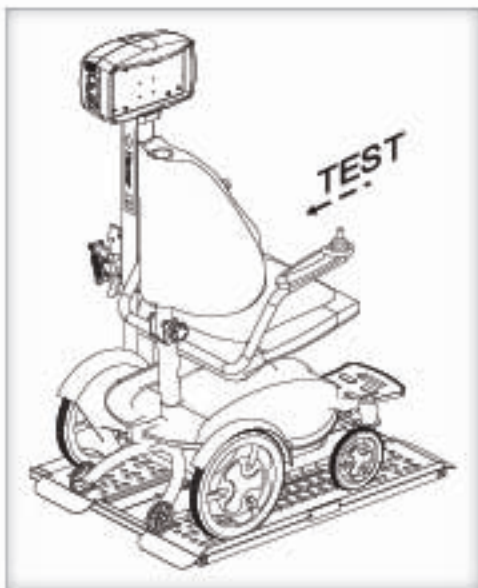


Figure 7-3



The Dock 'N' Lock **MUST** be tested **EVERY** time you load the chair for transport. **DO NOT** attempt to travel with the chair until you verify that the chair is fully engaged on the platform. Failure to do so could result in serious injury or property damage.

SWING-AWAY

The Swing-Away allows you to easily swing the installed auto lift away from the back of the vehicle for convenient access to the trunk or lift gate. The Swing-Away option can be purchased from an authorized dealer and added at any time.



WARNING

NEVER open the Swing-Away with the chair on the lift.

You will damage the Swing-Away and the lift. It will potentially damage the vehicle and the chair. Any of these actions will VOID your warranty.



Figure 8-1



WARNING

Open **ONLY** on Level Ground

Failure to open on level ground may result in losing control of the lift, resulting in personal injury or damage to property.



Figure 8-2

OPENING THE SWING-AWAY

1. Remove Safety Pin [Figure 8-3]

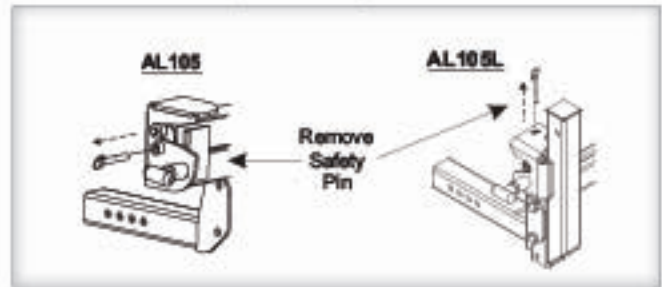


Figure 8-3

2. Pull T-Handle [Figure 8-4]

- 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 vehicle's cargo area. [Figure 8-5]

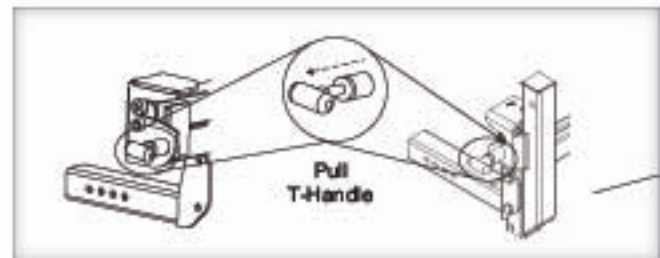


Figure 8-4

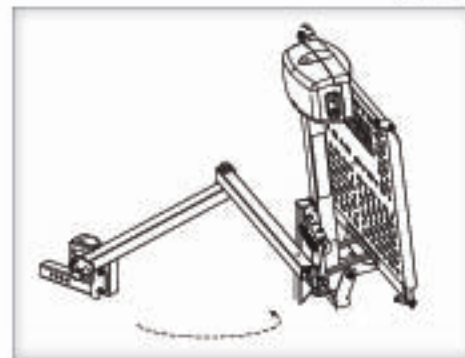


Figure 8-5

NOTE: Two Swing-Away models are available, a standard **AL105** and the lightweight **AL105L**. They work basically the same way but the parts differ slightly as noted in [Figure 8-3].

CLOSING THE SWING AWAY

Close the Swing-Away unit as you would a car door.

**WARNING**

Stay clear of the latching mechanism

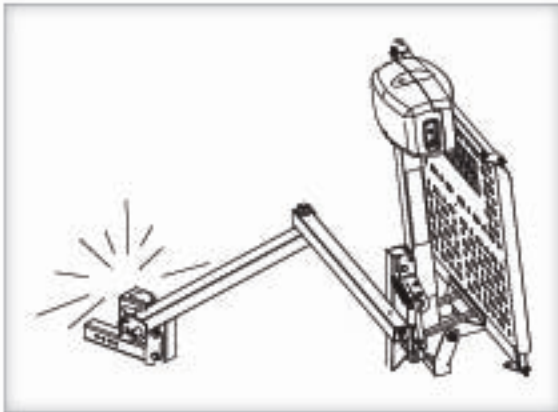


Figure 9-1

**CAUTION**

Verify that the T handle has fully retracted.

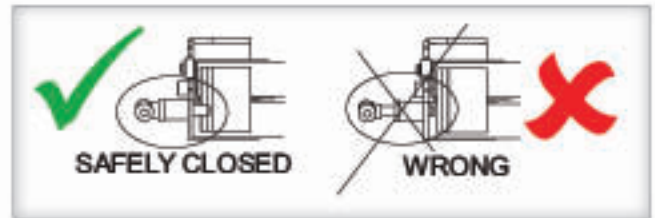


Figure 9-2

**WARNING**

Always install the safety pin.

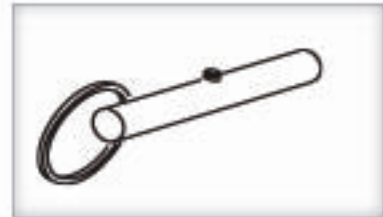


Figure 9-3

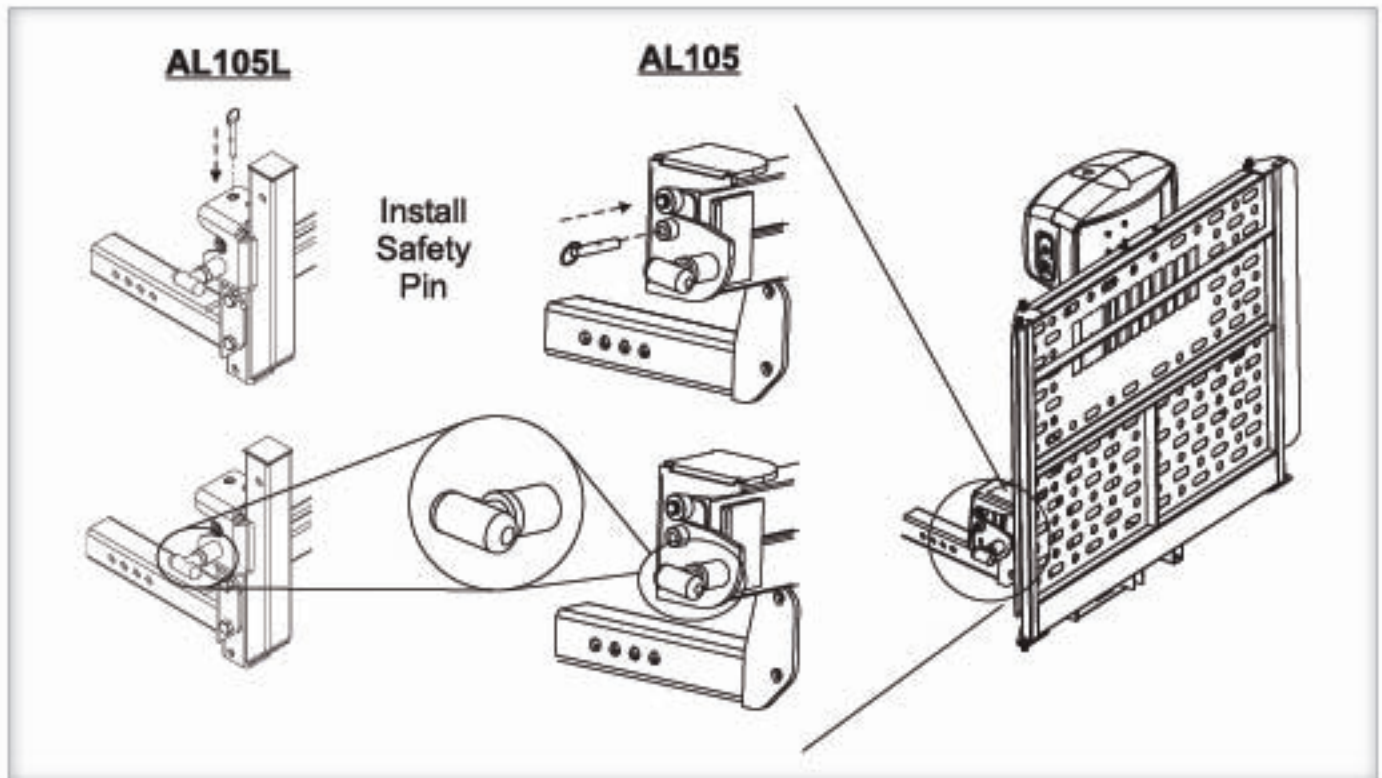


Figure 9-4

MANUAL OVERRIDE

In the event of a power failure, for example if your car battery dies, your lift can still operate using the Manual Override system.

1. Unplug Power to the Lift. [Figure 10-1]

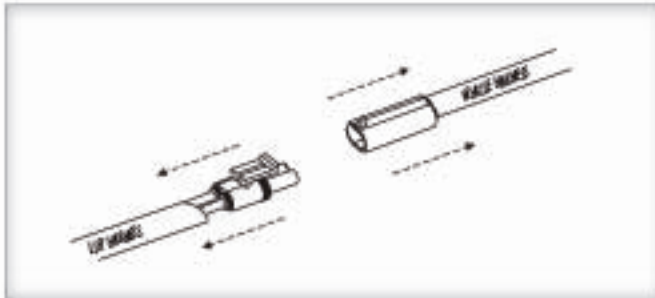


Figure 10-1

2. Remove the cap on top of the motor cover, using a coin or key. [Figure 10-2]



Figure 10-2

3. Insert a 3/8" socket wrench into the actuator and rotate the Hex Shaft. [Figure 10-3]



Figure 10-3

 **WARNING** Disconnect power from lift **BEFORE** attempting manual override.

IMPORTANT!

You **MUST** unplug the two-connector plug **BEFORE** any attempt to use the Manual Override. Failure to do so result in serious injury.

4. Turn **COUNTER-CLOCKWISE** to **LOWER** the platform. [Figure 10-4]

5. Turn **CLOCKWISE** to **RAISE** the platform. [Figure 10-4]

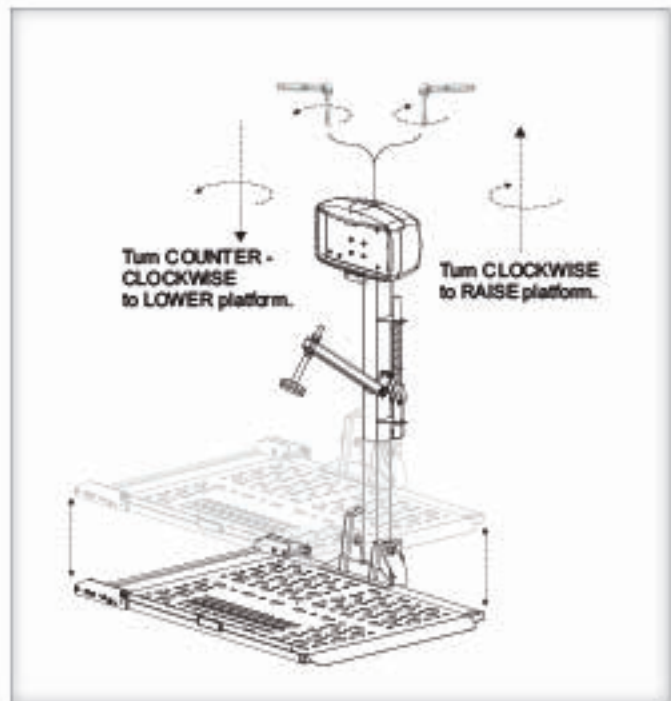


Figure 10-4

SAFETY & MAINTENANCE

**WARNING!**

This lift is **NOT** meant for human transport. The chair or scooter **MUST** be unoccupied before operating the lift. Each lift is designed to transport a specific chair only. **DO NOT** attempt to move any mobility devices, objects, people, or materials other than those for which the lift was designed.

**CAUTION!**

Drive with **EXTREME CARE** while transporting your chair or scooter on the lift. **DRIVE SLOWLY** over rough terrain such as pot holes, unpaved roads, railroad tracks. Excessive bumping creates stress on the lift and vehicle and can badly damage your lift, vehicle, and mobility device.

**SPECIAL CAUTIONS**

- **Return hold-down arm to a side position before folding platform.** Failure to do so will damage your lift.
- **Beware of pinch points.** These are areas of mechanical objects with moving parts that can catch extremities or clothing. Do not place fingers, extremities or allow clothing near such points.
- **Keep hands, feet and objects away from Platform as it Lowers.**
- **Keep chair tires properly inflated.** Improper inflation will change how the chair fits and secures on the platform, and changes the clamping pressure.
- **Secure chair firmly before driving.** Double-check that it is secured properly to the platform 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 you purchased the lift from for 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 Platform Down.** If you move with the platform in the down position, you will damage the lift mechanism.
- **Hand Wash or Use Touchless Automatic Car Wash only.** To prevent lift damage do NOT use automatic wash systems.

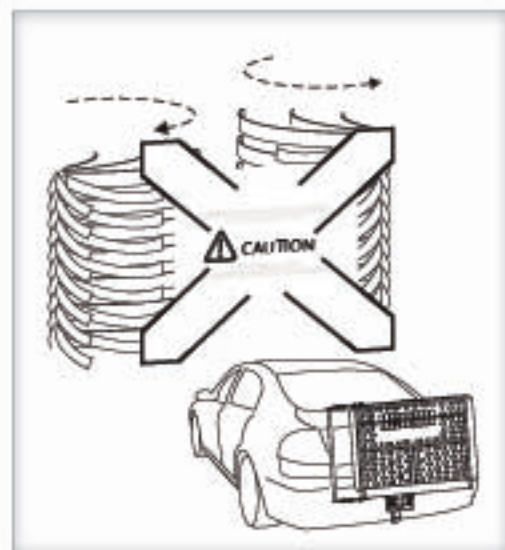


Figure 11-1

NOTES FOR AL015, AL100 AND AL160 MODELS



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 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.



CAUTION!

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

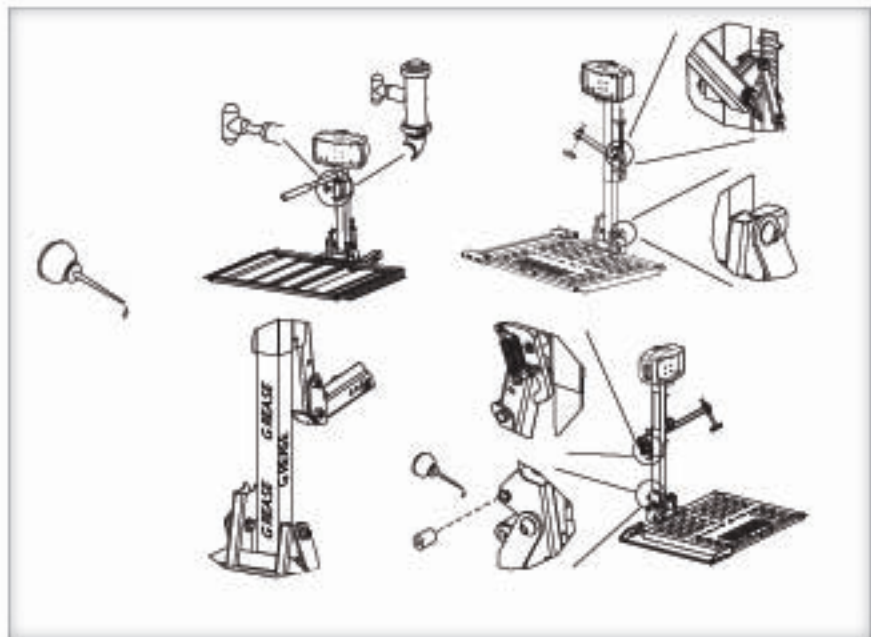


Figure 12-1

MAINTENANCE

This Outside Lift 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 30 days.

Re-grease the inside vertical square tube every 30 days in winter or in dirty or dusty conditions. Just 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. [Figure 12-1]

Check for paint chips and touch up bare metal. Use a good gloss black enamel or lacquer to inhibit rust. You may need to do this more frequently if your lift is subject to salt air or road salt in the winter.

PROFESSIONAL INSTALLATION RECOMMENDED

NOTE: The following section is designed for the professional installer. We strongly recommend that a certified dealer install the lift, configure the docking device, and instruct the user on correct operation as well as establish a Safety and Maintenance Schedule.

If you do not understand any portion of installation or operation, please consult our technical service department or authorized mobility dealer. Do not attempt to install or use this

lift with any hesitation or question. Serious injury or damage can result if proper procedures are not followed.

Read & 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.

TOOLS REQUIRED

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

If you have any questions, concerns or comments, please contact our Technical Service Department at 800-378-6648 or tech@harmar.com



SOCKET SET
Specifically

3/8"
7/16"
1/2"
9/16"
3/4"



WRENCH SET
Specifically

7/16"
1/2"
9/16"
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



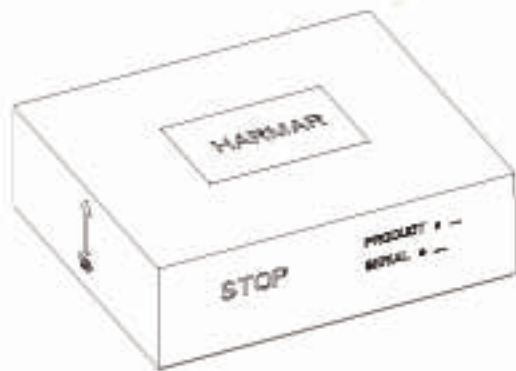
TAPE MEASURE



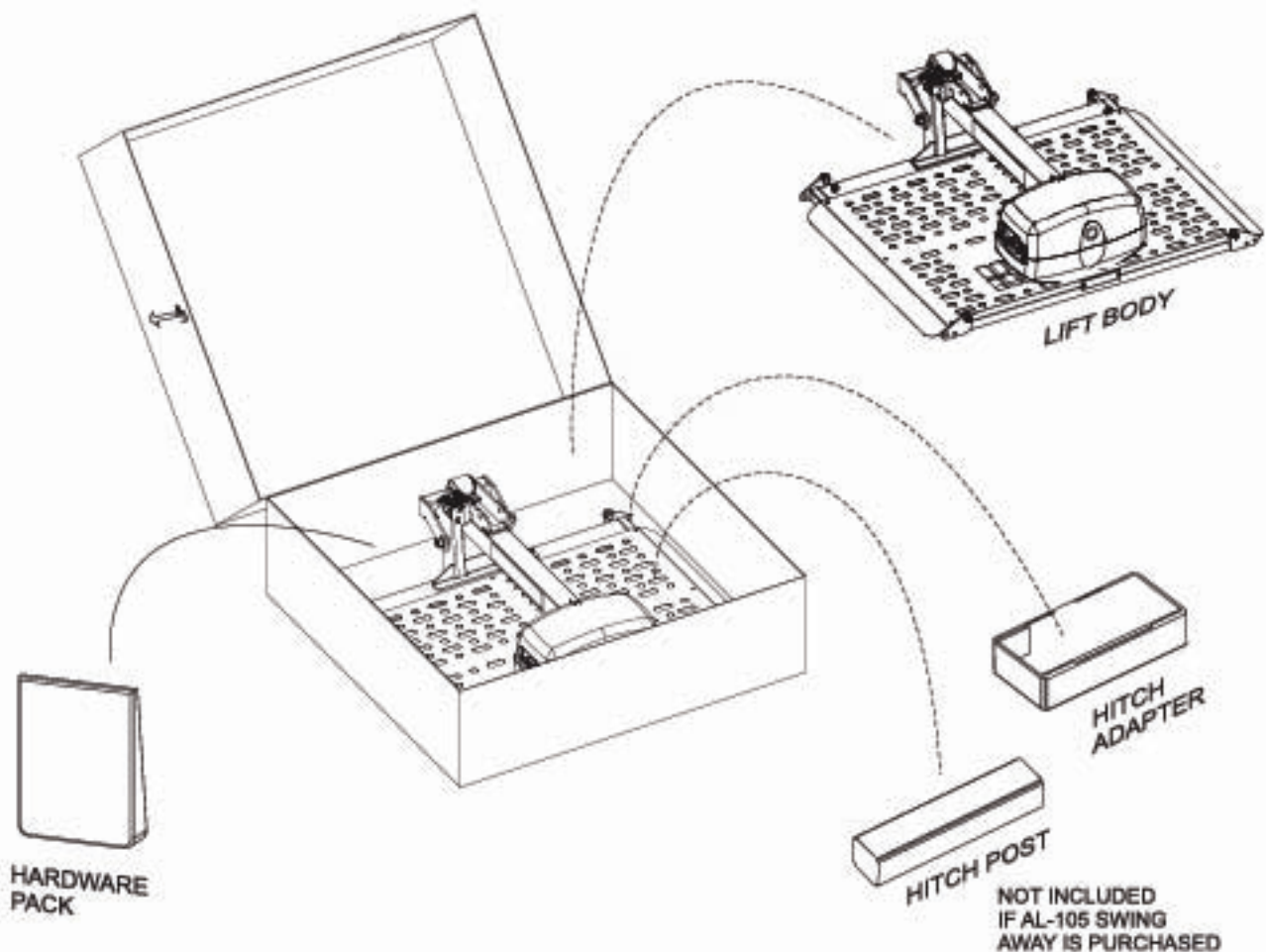
UNPACKING THE LIFT

Check the box contents. 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**



INSTALLATION OVERVIEW

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

If you follow the proper installation procedure, no heavy lifting will be needed, and the lift practically installs itself.

Read & understand this Manual prior to installation or operation.

Knowing the lift's adjustments and the tips on proper installation techniques will save time, energy and avoid possible injury. If you do not understand any portion of installation or operation, please consult our technical service department or authorized mobility dealer.



Quick Reference – Installation Procedure

1. Wire the Vehicle. See page 17.

Installing the wiring harness first will ensure you have power to the lift during installation. This allows the motor to do the lifting for you. (If you skip this step, use a shop battery.)

2. Position the open box behind the vehicle. Slice the corner seams. [Figure 15-1]

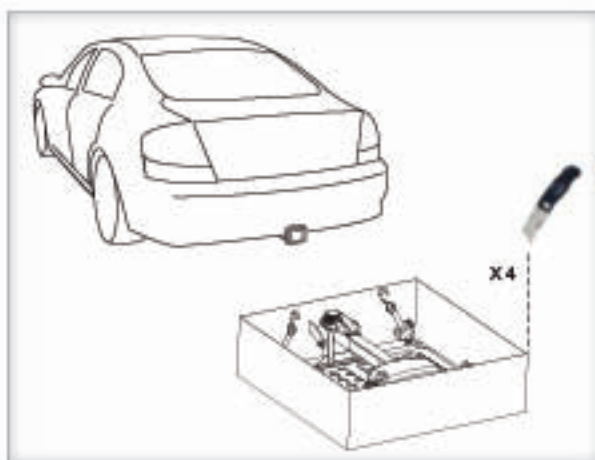


Figure 15-1

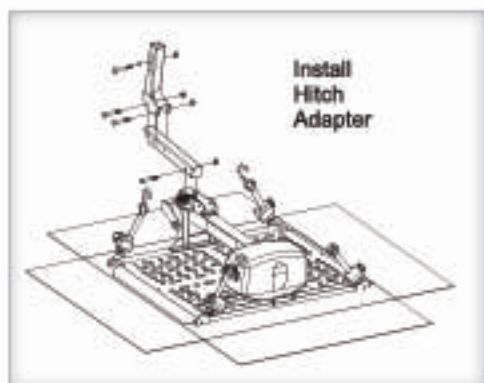


Figure 15-2

3. Determine / Install Hitch Height / Adapter. Measure the hitch to ground distance so you can save time by selecting components that fit between lift and vehicle so as to maintain proper ground clearance. [Figure 15-2] Install Hitch Adapter that fits the application. See pages 21 to 25.

4. Connect power to the lift. [Figure 16-1] Insert and turn key. Press 'DOWN' to extend the lift. [Figure 16-2]

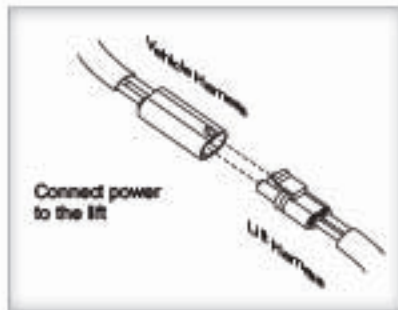


Figure 16-1

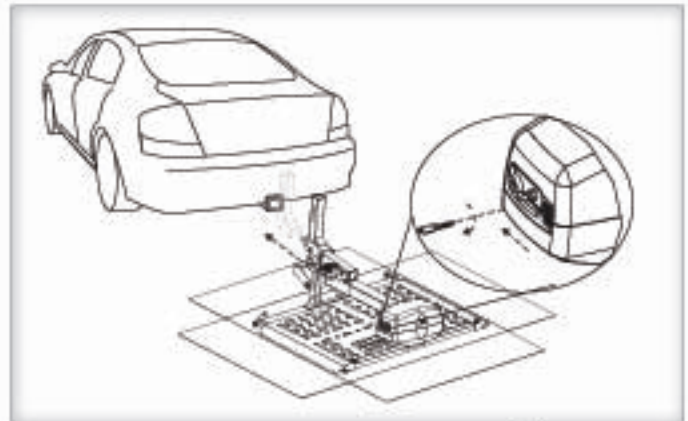


Figure 16-2

5. When extended 3" or more flip up to vertical. [Figure 16-3]

6. Align the hitch adapter, using the power of the lift. The lift will slide on the cardboard box. [Figure 16-4]

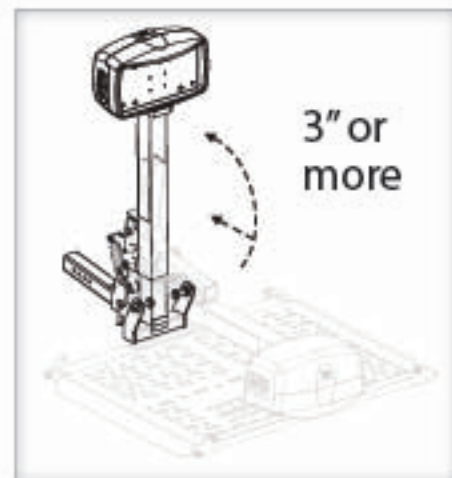


Figure 16-3

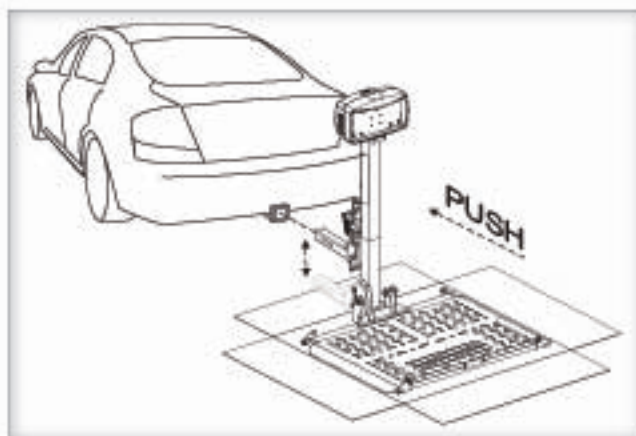


Figure 16-4

WIRING THE VEHICLE

Improper wiring is the #1 cause of problems in the operation of a vehicle lift. Follow the wiring instructions carefully

WARNING!  **DO NOT** connect the red wire until **LAST**.

The vehicle wiring harness is located in the hardware pack. The harness is manufactured to comply with SAE J1128 requirements. It is approximately 23 feet long and will accommodate most vehicles.

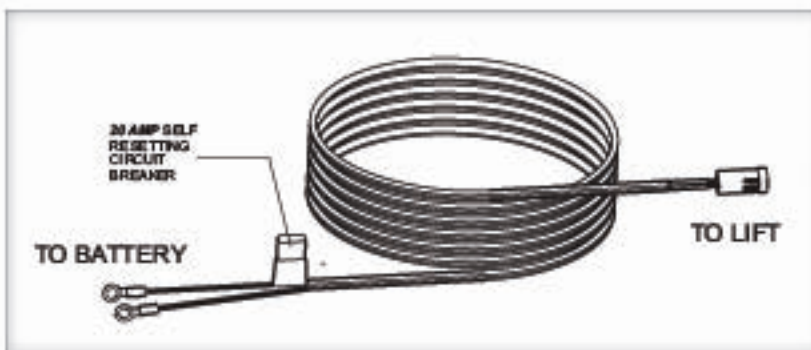


Figure 17-1

1. Unwind the wiring harness and lay it flat.

The harness end with the black connector is the lift end. It goes to the trailer hitch area where the lift will mount. [Figure 17-1]

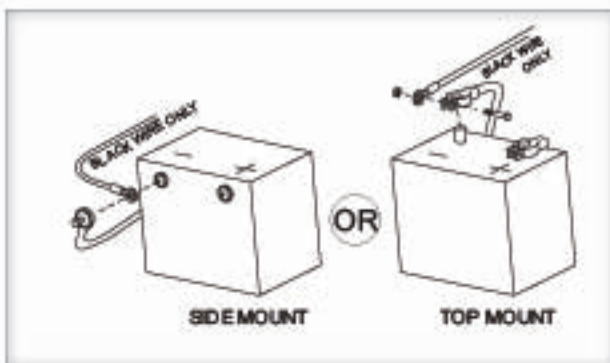


Figure 17-2

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 very end of installation. [Figure 17-2]



CAUTION!

NEVER attempt to connect the harness to a secondary power source. Always connect both leads directly to the battery.

3. Run the vehicle harness under and, when possible, through the vehicle back to the bumper/trailer hitch area.

- Run the wire under and through the vehicle whenever possible, gaining entry into the vehicle through the firewall
- **DO NOT** run wiring where it can be snagged by road debris.
- **DO NOT** run wiring near the gas tank.
- If you wish to run the harness under the vehicle, use the supplied wire ties to secure the wire against the frame, avoiding moving parts / hot parts such as exhaust.

continued

- If the harness is too long, coil the excess wire and secure it to the vehicle frame/bumper with the supplied wire ties. [Figure 18-1]



DO NOT cut or shorten the harness.

CAUTION!

4. Once harness is run into the vehicle, remove the pin's protective tubing.

5. Inspect the pin's retaining flanges. They may have become deformed while run through the vehicle. These are critical to secure the pins inside the connector. Adjust as needed.

6. Flip open end connector's hinged retainer, insert pins as shown. [Figure 18-2]

Verify the wires can not be pulled out by moderately pulling on the wires.

Be sure rubber seals are inside back of connector and close the hinged retainer.

7. Plug connector into the lift.

8. LAST...attach red wire to the positive terminal on the battery. [Figure 18-3]

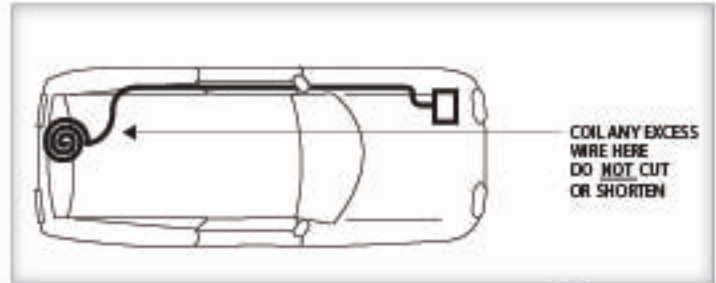


Figure 18-1

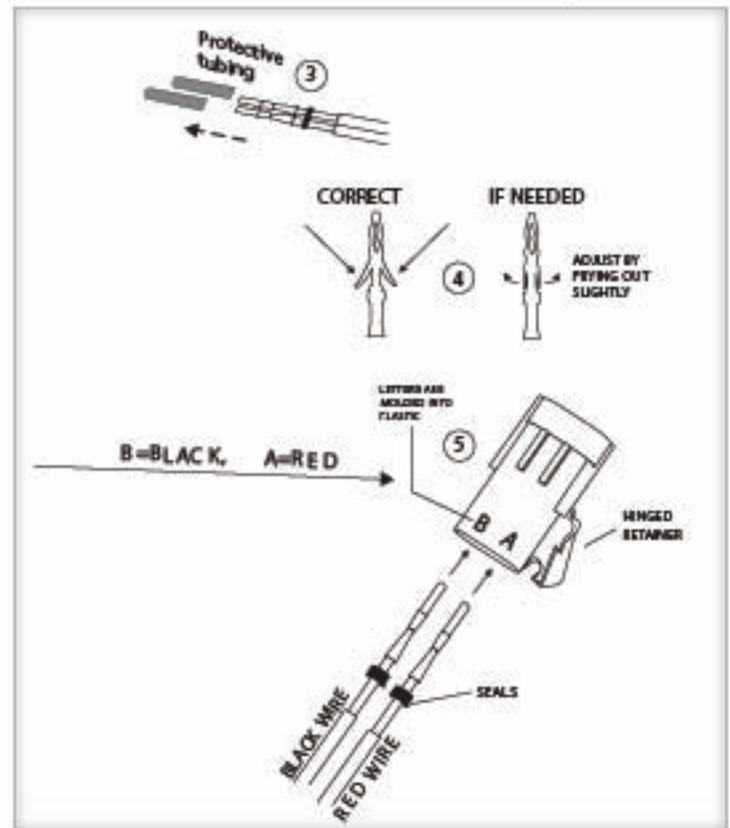


Figure 18-2

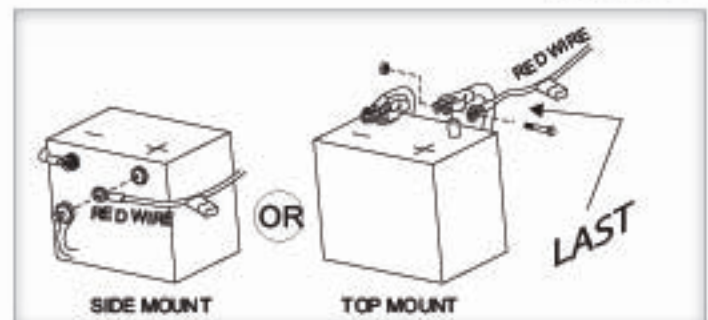


Figure 18-3

IMPORTANT!

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

NOTE: A standard two-contact trailer connector is included with the lift. This is for the license plate lamp. If your vehicle is not equipped with the proper connector, you can use the **BROWN WIRE** to make a wire splice and achieve the same result. [Figure 19-3]

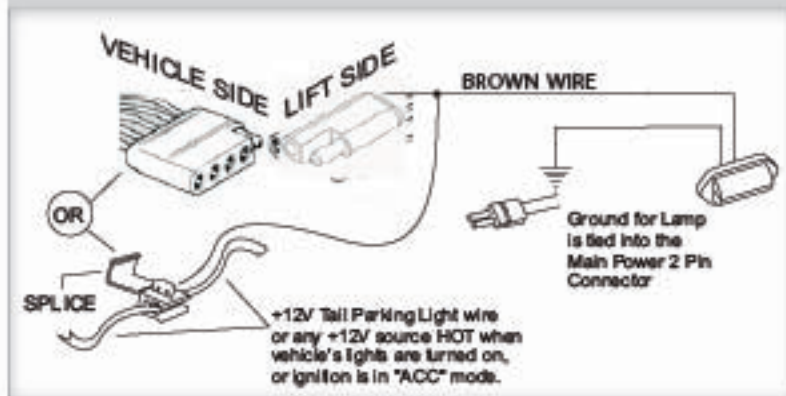


Figure 19-3

TECH NOTE: MOTOR TESTING

Troubleshooting with a test light or voltage meter may give a false indication.

When you probe for 12 volts, the reading may indicate a connection, even if the connection is not necessarily 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 #1 problem associated with a slow, intermittent, warm, poorly performing motor which will also deteriorate prematurely.

If a single strand of a multi-strand wire is making contact, 12V will appear on a meter or test light, but it 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.

VEHICLE HITCH

Outside Lifts require a vehicle that can accept a Class 1, 2 or 3 hitch. The vehicle should be wired with a standard 4 connector trailer wiring.

If you are not sure about the vehicle and hitch capability, contact a local hitch installer or you can visit web sites of a hitch company. For example: www.hitch-web.com; www.reeseprod.com; www.draw-tite.com

Be sure to use a hitch installer that is reputable, insured, and capable. Their work reflects directly on the customer's perception of your mobility lift installation.

NOTE: Not every vehicle is capable of having a hitch installed.

1. Calculate the weights of the lift, mobility device, and, where applicable, the Swing-Away option. Be certain that the total weight does not exceed the hitch's recommended tongue weight. A range of hitches are available, capable of bearing different amounts of weight.

The lift manufacturer suggests the installer observe the vehicle's Gross Vehicle Weight Rating restrictions.

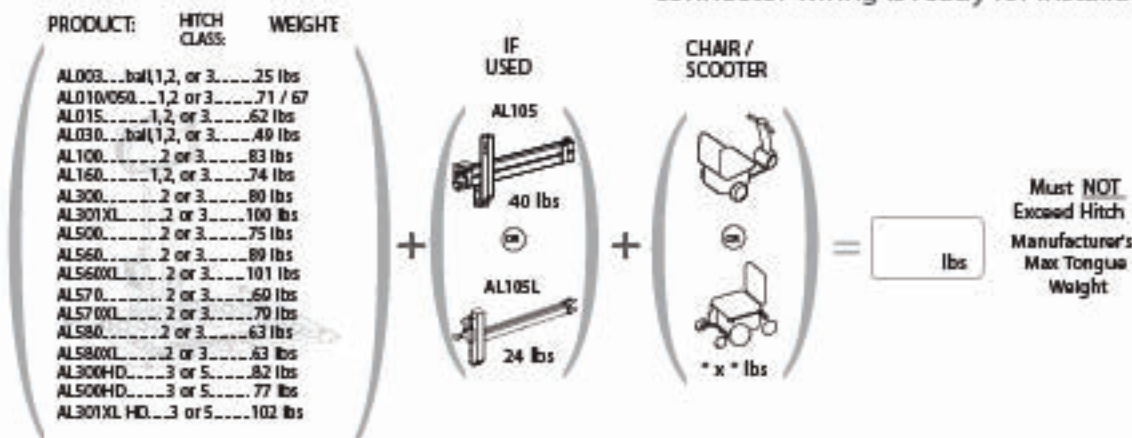
Some states have strict license plate obstruction laws. Familiarize yourself with local and state laws.

2. Ensure the receiver tube of the hitch is installed parallel to the ground. This is a requirement, not merely a recommendation. If the hitch is not installed properly it affects the lift's functionality.

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 2 hitch requires optional accessories.

A vehicle with a Class 3 hitch and standard 4 connector wiring is ready for installation.



HITCH ADAPTERS

The Hitch Adapter plugs into the vehicle's trailer hitch and serves as the interface between the lift and vehicle. Hitch adapters are designed for the needs of different vehicles. Some are shown in. [Figure 21-1]

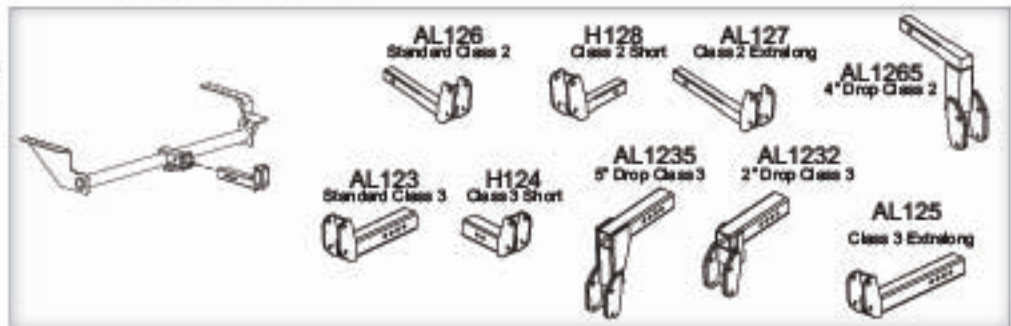


Figure 21-1

Selecting a Hitch Adapter

To determine the Hitch Adapter that will ensure proper lift operation, first determine the Hitch Class. Measure the Bumper Distance and the Hitch Height. [Figure 21-2]



WARNING! Harmar lifts require Harmar-approved hitch adapters. 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.

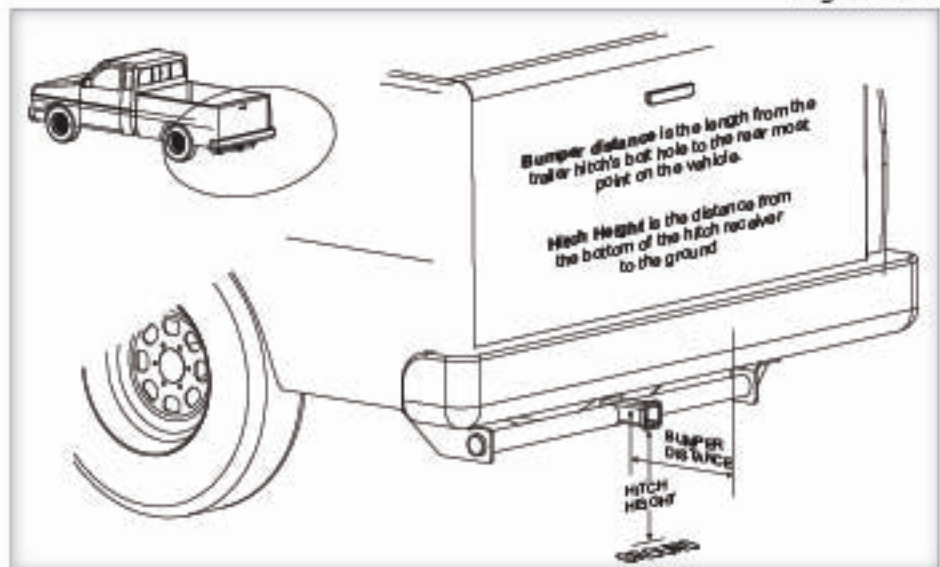


Figure 21-2

Hitch Class is usually printed on the trailer hitch. You can also determine it by measuring the inside of the receiver on the trailer hitch as shown. [Figure 21-3]

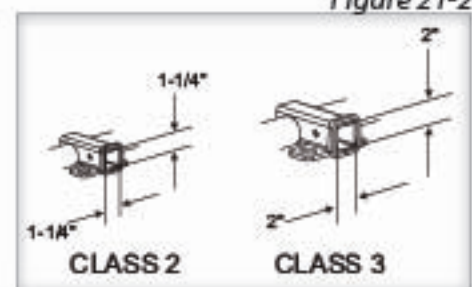


Figure 21-3

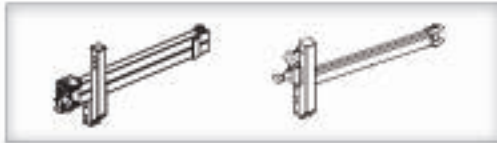
NOTE: Some shallow hitches, ex. Spare tire blocked hitches, may require a short Hitch Adapter. [Figure 21-4]

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.

Figure 21-4

Figure 22-1






HITCH ADAPTERS (Con't)






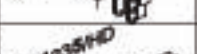



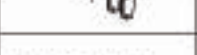

The effective range of the Hitch Adapter changes slightly if the lift is equipped with the standard **AL107** Hitch Post [Figure 21-1] or if it's equipped with a tail gate/hatch accessibility option, either the **AL105** or **AL105L** Swing-Away. [Figure 22-2]





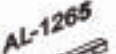
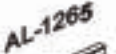

Figure 22-2



 CLASS 3 HITCH 

 CLASS 2 HITCH 

if X =	STANDARD MOUNT AL107 HITCH POST (NO SWING-AWAY)	SWING-AWAY (OPTIONAL)	if X =
6"			6"
7"			7"
8"			8"
9"			9"
10"	AL-123/HD	AL-123/HD	10"
11"			11"
12"	STANDARD	STANDARD	12"
13"			13"
14"			14"
15"			15"
16"			16"
17"			17"
18"			18"
19"			19"
20"	AL-123/HD	AL-123/HD	20"
21"			21"
22"	AL-123/HD		22"
23"		PLEASE CONTACT TECHNICAL SERVICE DEPARTMENT FOR AVAILABILITY OF LARGER DROP ADAPTERS	23"
24"	PLEASE CONTACT TECHNICAL SERVICE DEPARTMENT FOR AVAILABILITY OF LARGER DROP ADAPTERS		24"
25"			25"
26"			26"

if X =	STANDARD MOUNT AL107 HITCH POST (NO SWING-AWAY)	SWING-AWAY (OPTIONAL)	if X =
6"			6"
7"			7"
8"			8"
9"			9"
10"	AL-126	AL-126	10"
11"			11"
12"	STANDARD	STANDARD	12"
13"			13"
14"			14"
15"			15"
16"			16"
17"			17"
18"			18"
19"			19"
20"			20"
21"	AL-1265		21"
22"		PLEASE CONTACT TECHNICAL SERVICE DEPARTMENT FOR AVAILABILITY OF LARGER DROP ADAPTERS	22"
23"			23"
24"	PLEASE CONTACT TECHNICAL SERVICE DEPARTMENT FOR AVAILABILITY OF LARGER DROP ADAPTERS		24"
25"			25"
26"			26"

If the measurement falls in between, ex. 18 - 1/8", round up if greater than or equal to 1/8", round down if less than 1/8". Combination Hitch Adapters are available (ex. 5" Short Class 3, 5" Drop or Long Class 2, 2" Drop)

If you have any questions / concerns about selecting the appropriate Hitch Adapter for your application, please contact Hammar's Technical Service Department, and a trained representative will be glad to help.

INSTALLATION WITH HITCH POST

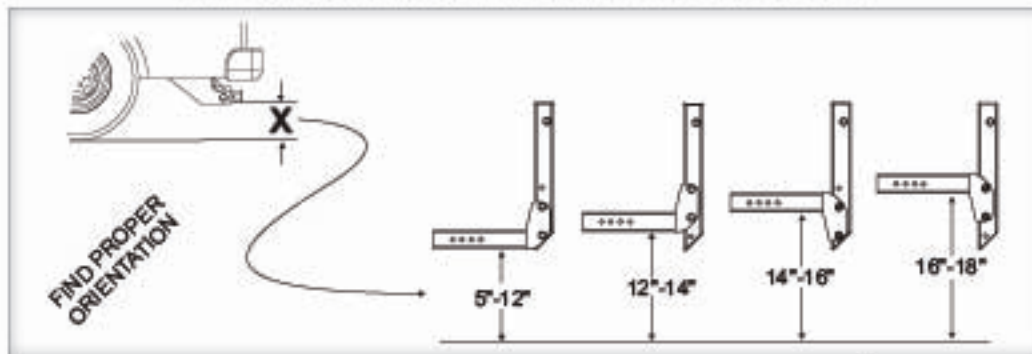


Figure 23-1

OPTIMIZING HITCH HEIGHT

You can vary the lift height by changing the Hitch Adapter's orientation and location. This helps you optimize the vehicle's ground clearance to ensure that the platform lays flat when it reaches the end of its travel.

Consult *Figure 23-1* to select the orientation needed for the vehicle based on the Hitch Height, the vehicle's hitch receiver distance to the ground.

Refer to pages 15 & 16 for an overview of the procedure.

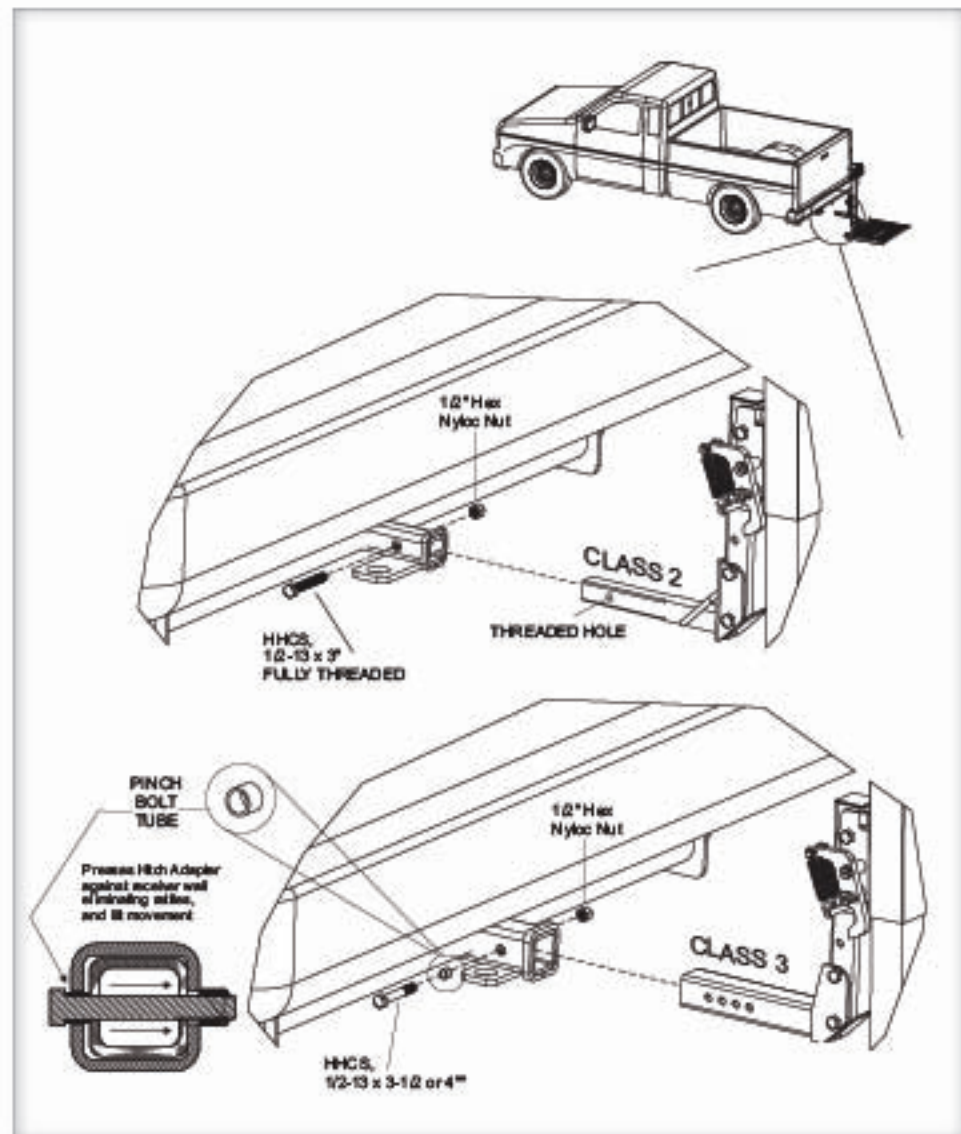


Figure 23-2

INSTALLING THE HITCH ADAPTER

- 1. Attach hitch adapter to hitch post** orientated properly according to the application's Hitch Height. [Figure 24-1]
- 2. Attach Hitch Post to lift.** Do NOT over tighten.
- 3. Slide Hitch Adapter into vehicle's hitch receiver.** Fasten Adapter according to hitch class. [Figure 23-2]

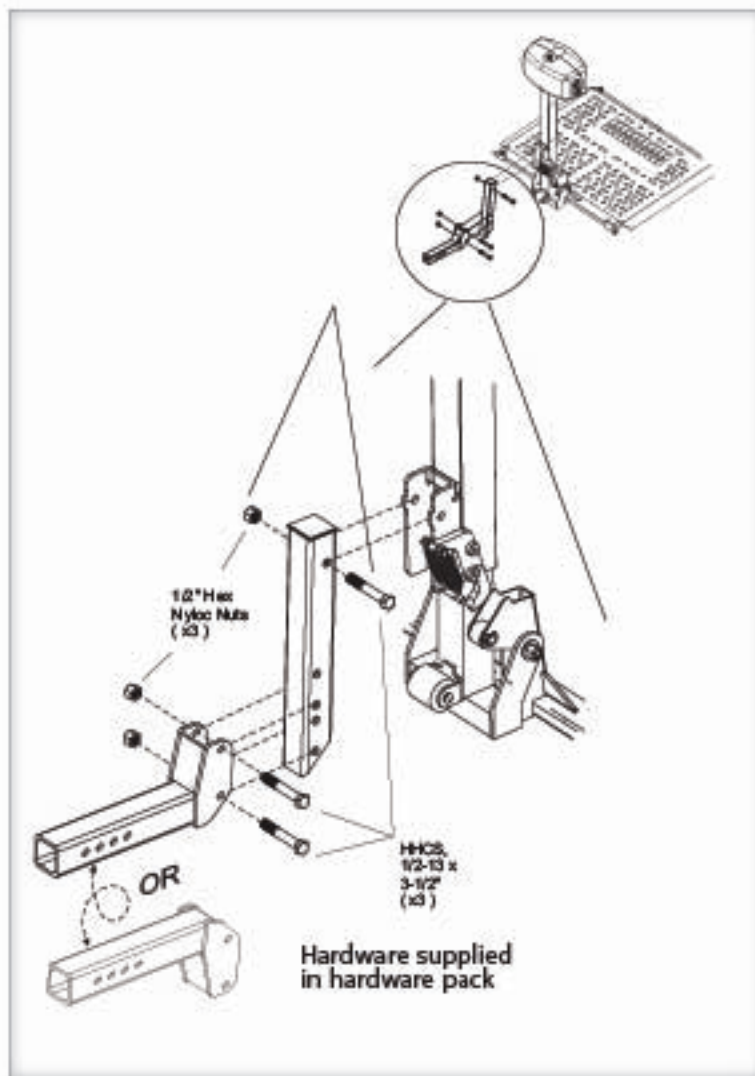


Figure 24-1

INSTALLATION WITH SWING-AWAY

OPTIMIZING HITCH HEIGHT

You can vary the lift height by changing the Hitch Adapter's orientation and location. This helps you optimize the vehicle's ground clearance to ensure that the platform lays flat on the ground when it reaches the end of its travel.

Consult *Figure 25-1* to select the orientation needed for the vehicle based on the Hitch Height, that is, the vehicle's hitch receiver distance to the ground.

Figure 25-1

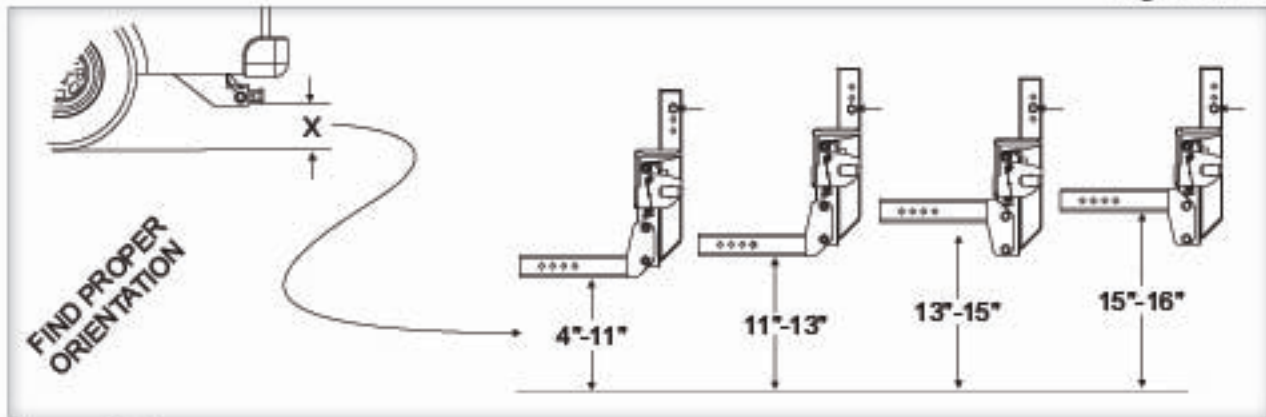
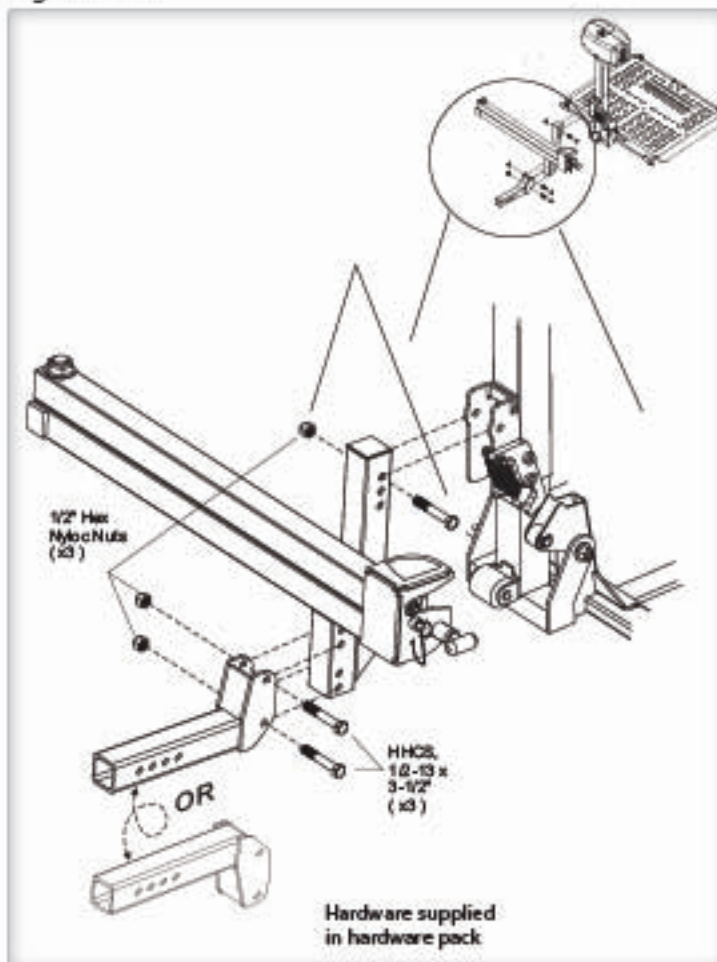


Figure 25-2



1. Attach Hitch Adapter to Swing-Away positioned properly according to the application's Hitch Height. [*Figure 25-2*]

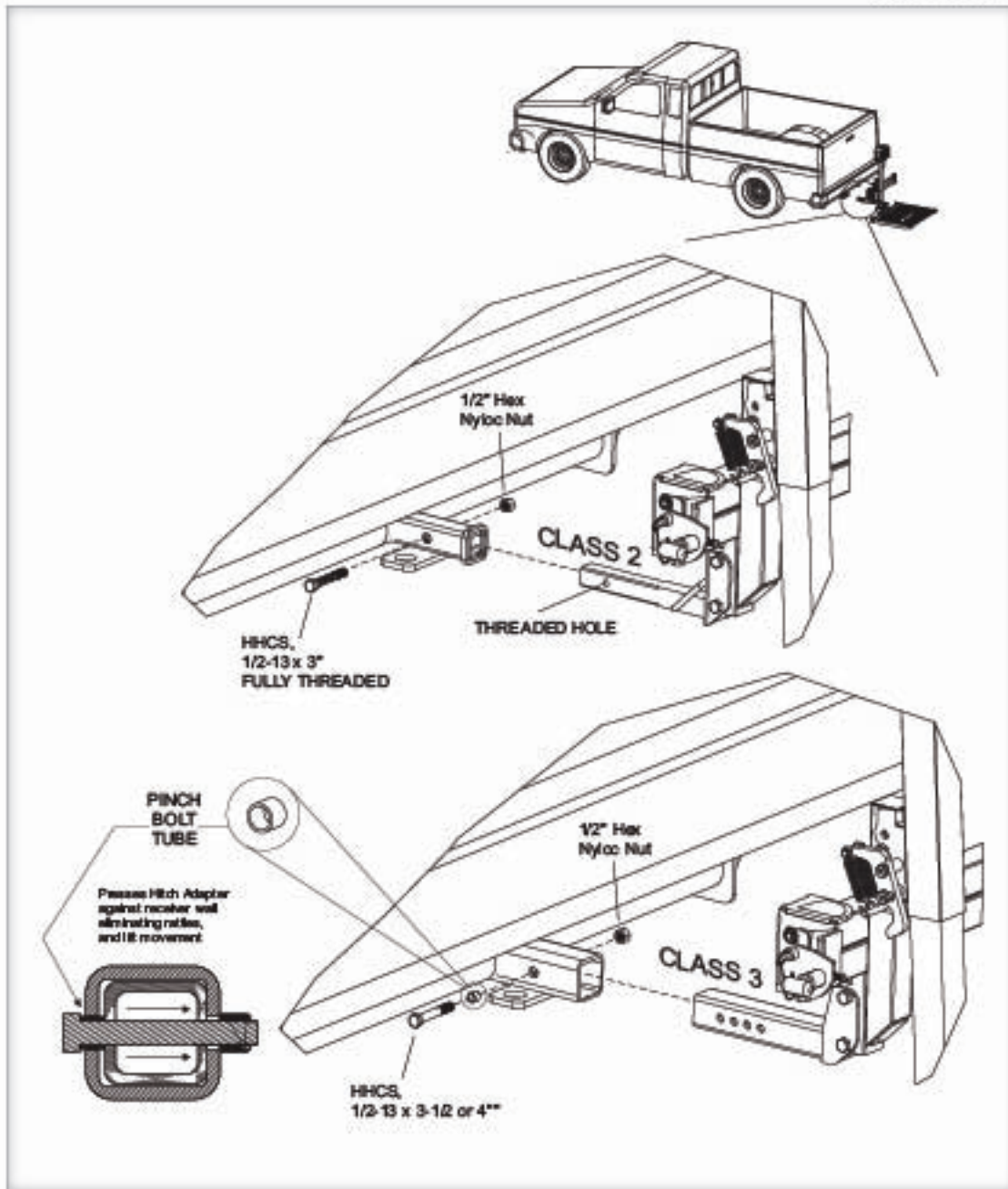
Attach Swing-Away to lift. Do NOT over-tighten.

NOTE: The Swing-Away replaces the hitch post.

2. Slide Hitch Adapter into vehicle's hitch receiver.

[Figure 26-1] Fasten Adapter according to hitch class.

Figure 26-1



AL030 POWER TOTE INSTALLATION WITH BALL MOUNT HITCH ADAPTER

1. Install bumper mount or flat bar.

[Figure 27-1]

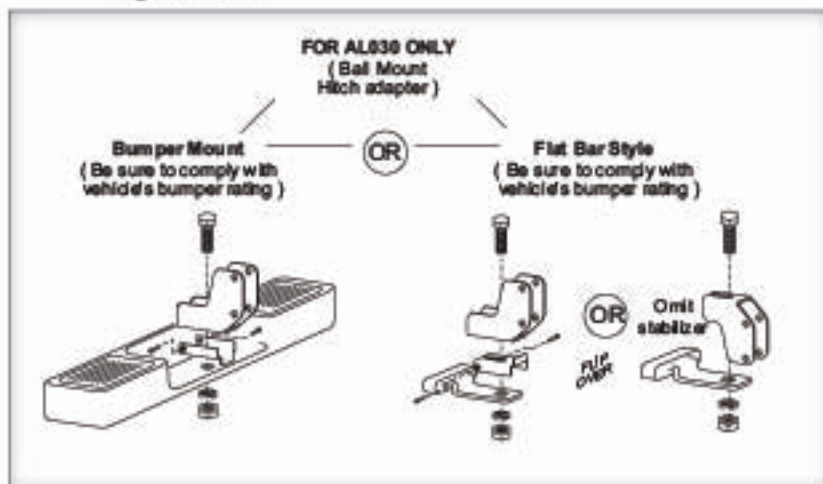


Figure 27-1

2. Install hitch post assembly [Figure 27-2]

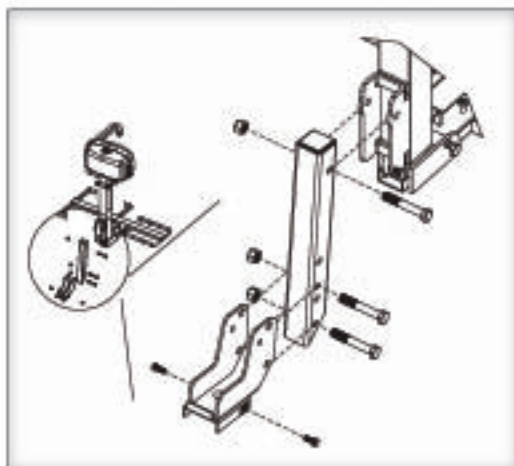


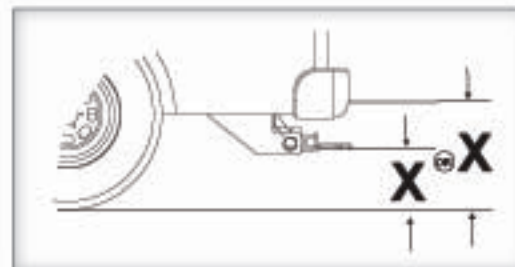
Figure 27-2



WARNING!

Do not attempt to mount up from under Flat Bar

3. Adjust for bumper height. [Figure 27-3 & 27-4]



Only class 2 or 3 adapters can be used with Swing-Away. Refer to installation with Swing-Away for mounting orientation, page 23.



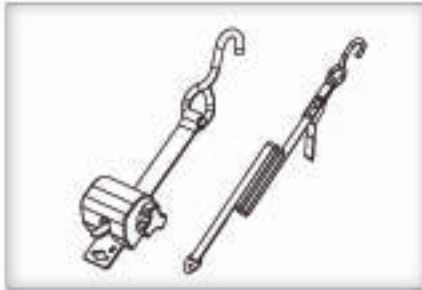


Figure 28-1

CHAIR PREPARATION

A lift with four securement straps offers two options for attaching strap hooks to the chair, Anchor Plate or U-Bolt Kit. The lift includes both sets of options. [Figure 28-1]

ANCHOR PLATE

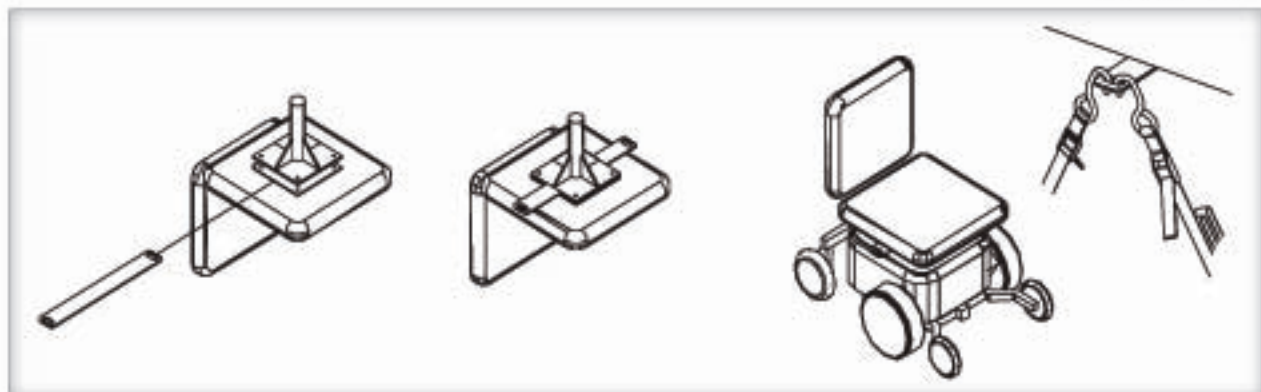
The Anchor Plate is a 20" long flat plate with a slot in each end. It attaches to the bottom of any chair or scooter that has a center seat post. [Figure 28-2]

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

INSTALLING THE ANCHOR PLATE

1. **Remove the seat from the chair.**
 2. **Loosen the screws that attach the plate of 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.**
- [Figure 28-2]

Figure 28-2



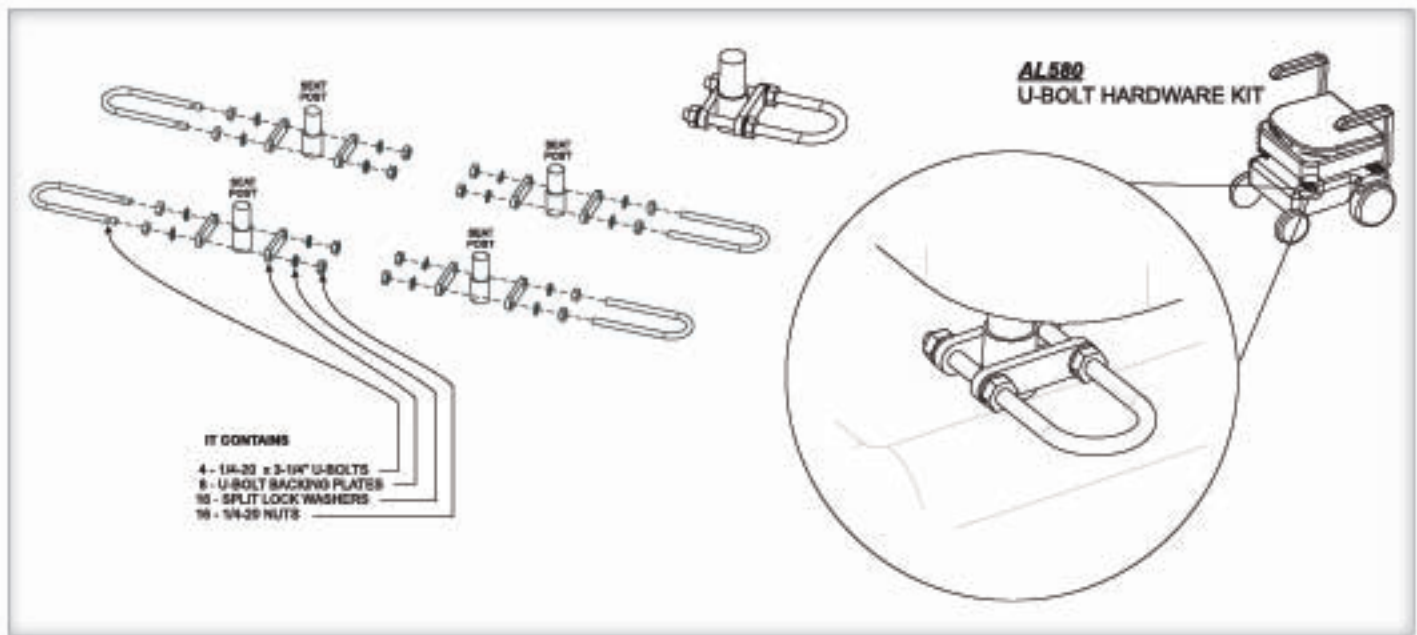
Installing U-Bolt Hardware Kit

The U-bolts are used with power chairs or scooters that do not have a center seat post. On this type chair, the seat is normally attached to a tubular frame. Install the U-bolts, two on each side, to the frame as shown. [Figure 29-1]

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

Each chair is slightly different so the U-bolt placement will differ among models and manufacturers. Place the U-bolts towards the center of the seat if possible. Due to different seat types, you may be forced to install 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.

Figure 29-1



AL015, AL100, AL100HD, AL160 LIFT ADJUSTMENTS

SETTING HOLD-DOWN FOOT HEIGHT

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

2. Raise the platform until you hear the motor clutch, which indicates the top of travel.

3. Loosen both nuts on the hold-down arm and raise or lower the foot to contact the scooter's deck. *[Figure 30-1]*

4. Lower the platform about 1 to 2 inches.

5. Lower the foot once again to the scooter's deck.

6. Raise the platform. Verify the hold-down foot places adequate pressure on the scooter.

continued



WARNING! In some cases, you may need to cut the threaded stud of the hold-down foot to avoid contact with the motor cover. Only cut as much stud as necessary to avoid contact with the motor cover, leaving enough stud protruding through the washer and nut to hold securely. File rough edges and add rubber cap to avoid stud corrosion.

- 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.

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

- Be sure to instruct the end user to avoid entering 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 of the platform, raise the platform by pushing up on the UP/DOWN switch.

AL015, AL100, AL100HD, AL160 LIFT ADJUSTMENTS (Con't)

NOTE: When adjusting the leg down, ensure that the top of the threaded rod still protrudes from the top of the pivot tube. [Figure 31-1]

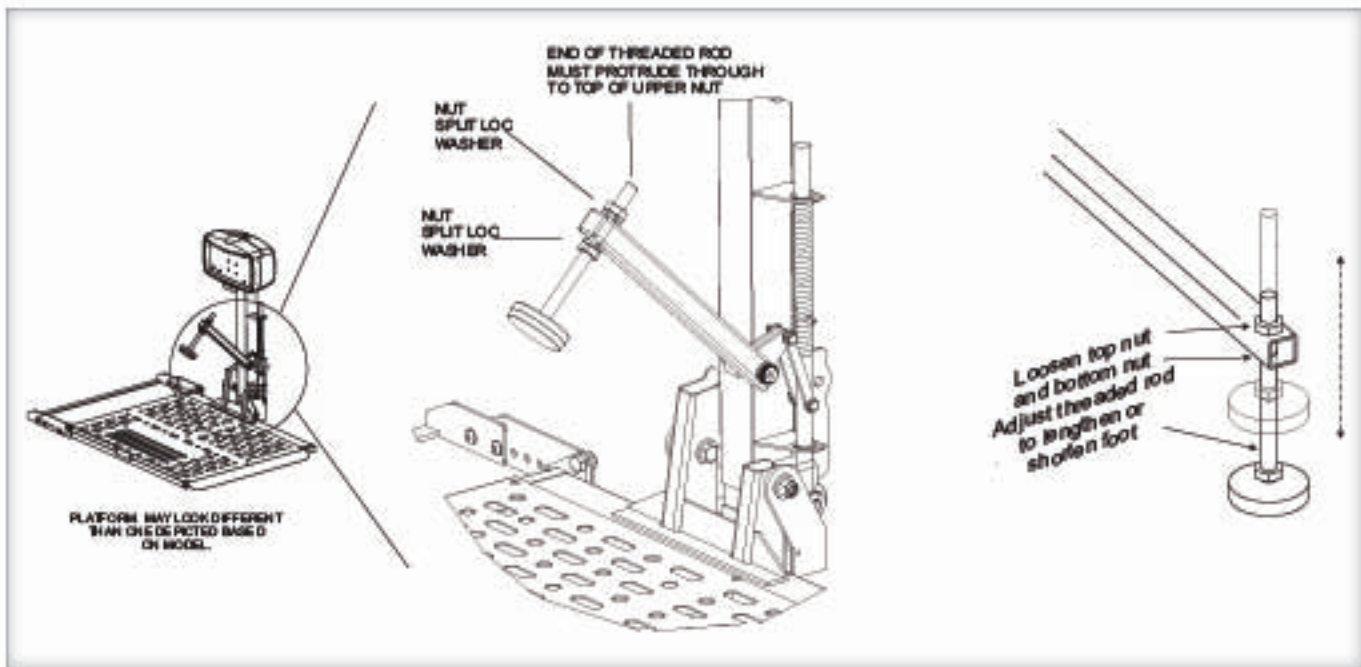


Figure 31-1

7. Tighten the jam nut to lock it in place, when the foot is positioned properly.

When the lift is properly adjusted, lower the platform to the ground and raise it back to the transporting position. Repeat this several times to ensure all parts operate properly and that the scooter is well 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 good working order and the lift folds when it is empty.

AL010/050 & AL030 MICRO LIFT ADJUSTMENT

TENSIONING WASHERS

The **AL010/050** and **AL030** micro lifts contain tensioning washers on their manual folding hinge points. The force required to move these parts depends on 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, tighten or loosen the bolt and nut located at the pivot point. [Figure 32-1]

Adjusting the **AL030** Hold-Down Arm

The **AL30's** hold-down arm height requires adjustment to properly clamp a specific wheelchair to the platform.

1. Position the folded wheelchair on the platform, being certain the large rear wheels fall into the cradles of the platform.
2. Loosen the two bolts and nuts located in [Figure 32-2]. Allow the hold-down arm to rest on the padded armrests.
3. Remove chair, and allow the arm bracket to fall approximately 1 inch.
4. Tighten bolts and nuts.
5. Replace chair on platform and test the hold-down arm. Chair should be secure and not moveable in any direction. Adjust as needed.

Figure 32-1

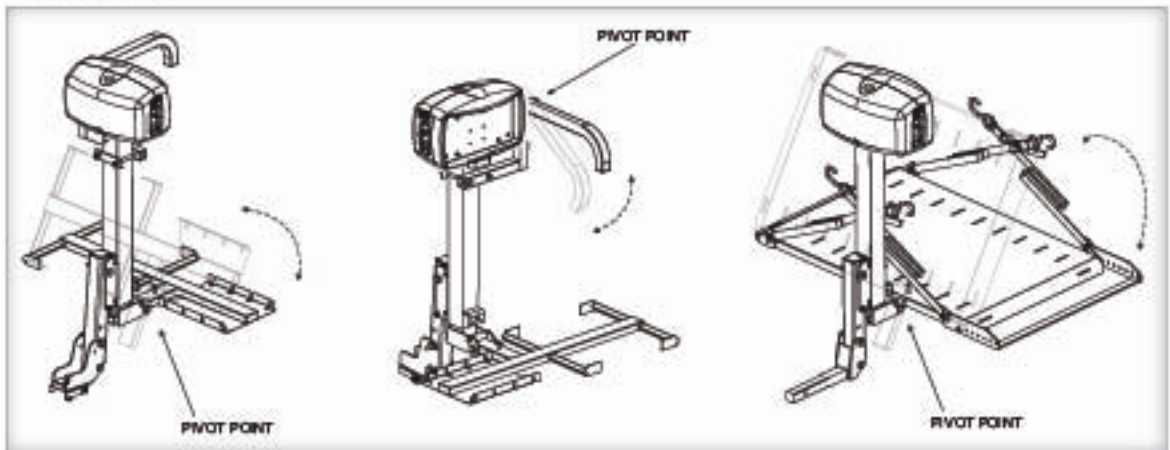
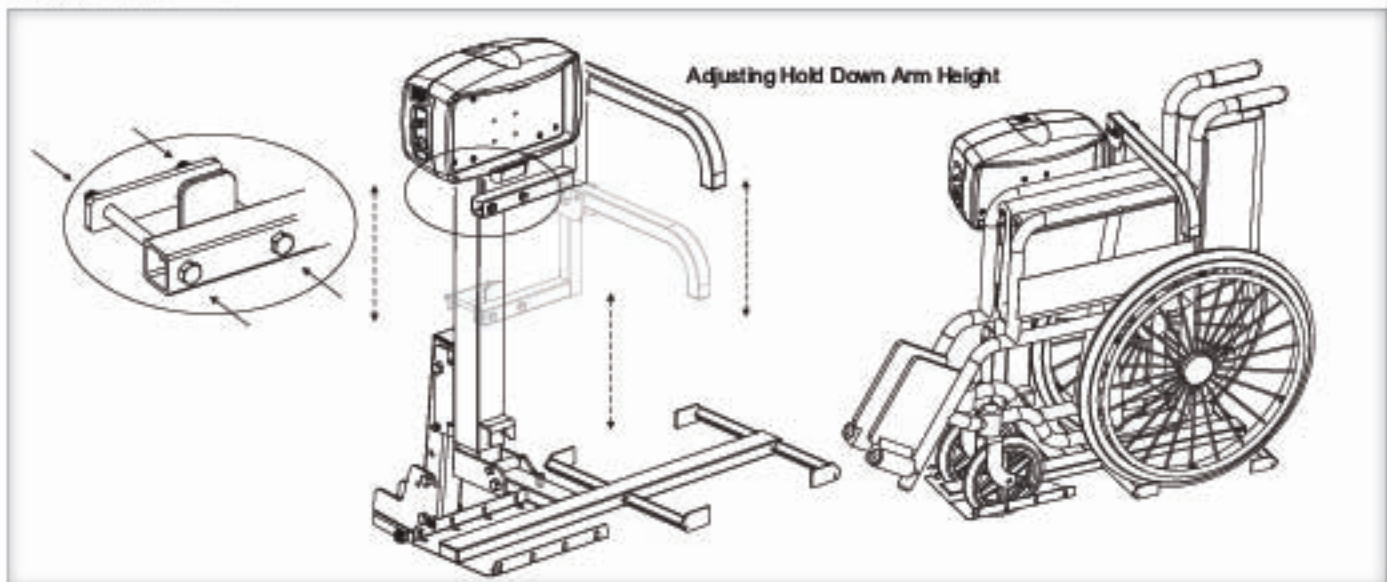


Figure 32-2



AL560 & AL560XL PLATFORM ADJUSTMENTS

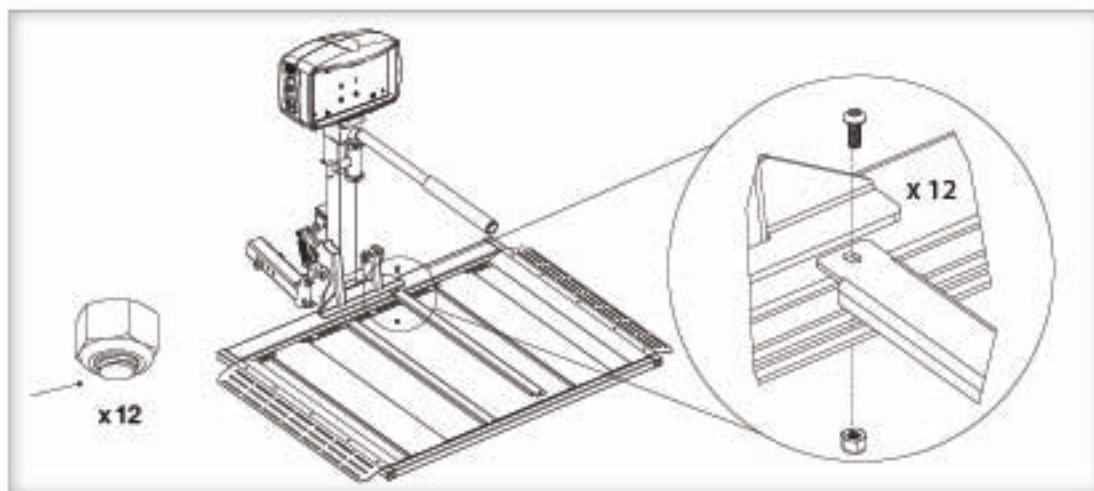


Figure 33-1

Thread must protrude out of top of nylon portion of all nuts.



CAUTION!

For adjustment, **ALL AL560** platform components are loose. You **MUST** tighten these screws and nuts before use. [Figure 33-1]

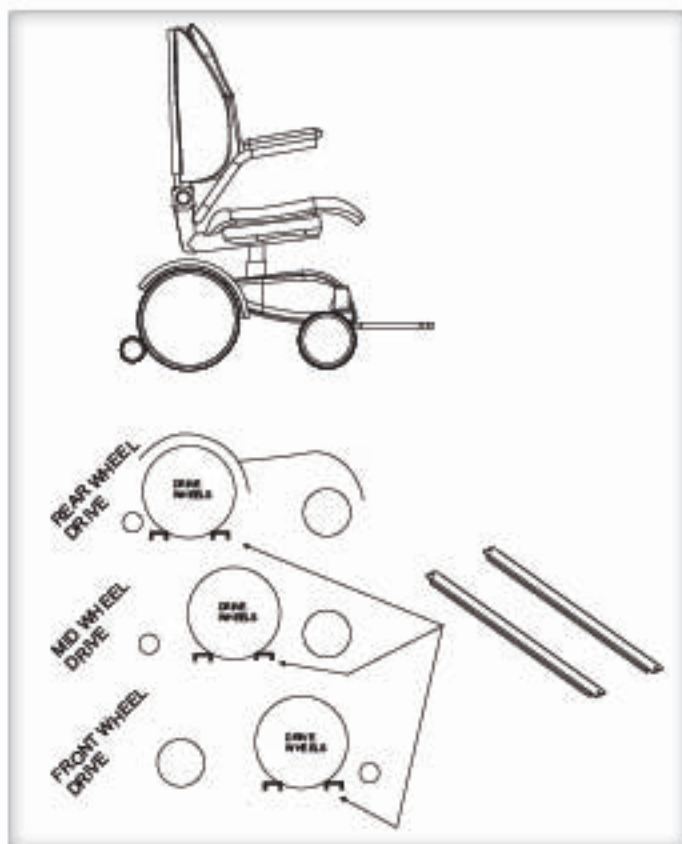


Figure 33-2

1. Estimate the chair's center position depending on driver's side or passenger's side entry preference. Locate the drive wheel's position. [Figure 33-2] Adjust the two main cradle positions to match. Capture smaller wheels on the two larger skins.

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

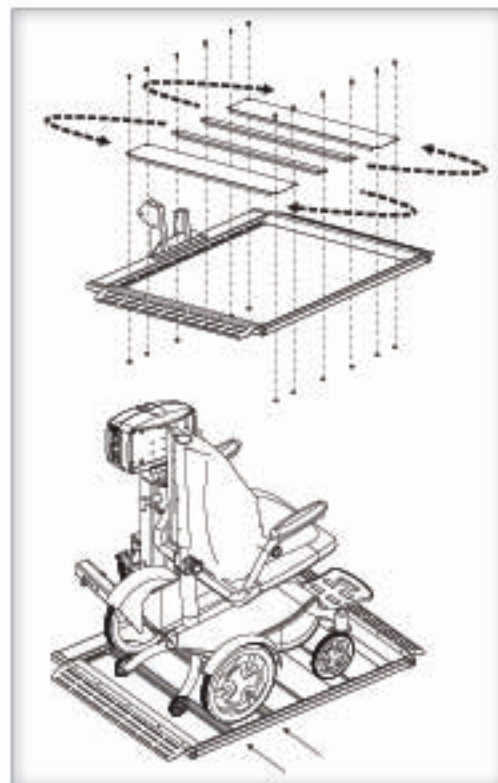


Figure 33-3



CAUTION!

Rearrange platform skins and cradle as needed to capture the drive wheels. [Figure 33-3]

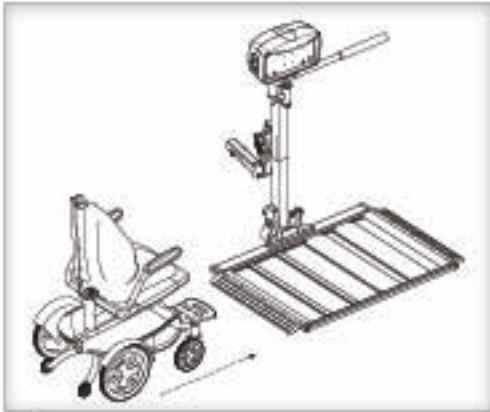


Figure 34-1

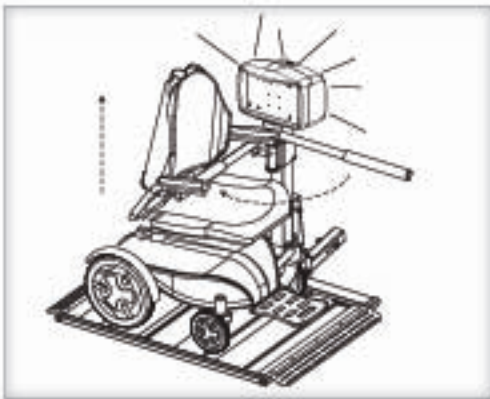


Figure 34-2



Figure 34-3



Figure 34-4

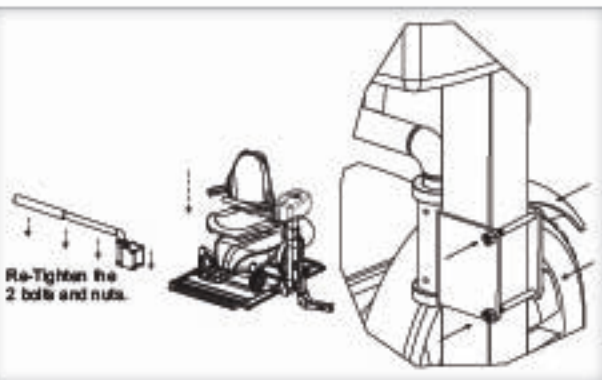


Figure 34-5

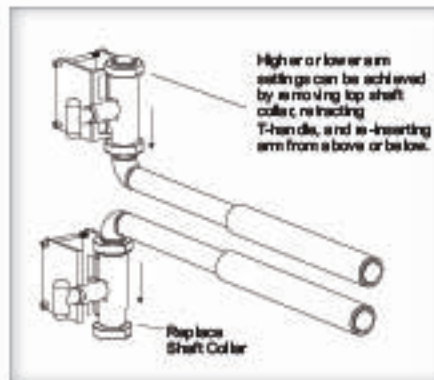


Figure 34-6

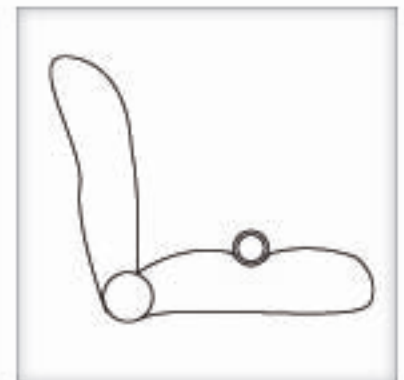


Figure 34-7

AL560 & AL580 SERIES HOLD-DOWN ARM ADJUSTMENT

1. Drive chair onto platform after cradles have been adjusted. (See prior page.) [Figure 34-1]
2. Raise platform to top of travel until you hear the clutch. [Figure 34-2]
3. Loosen the two bolts and nuts in back of the vertical tube. [Figure 34-3 and 34-4] Allow arm assembly to lower until the arm contacts the seat.
4. Lower the platform approximately 2" to 3." Allow arm to drop with seat. Re-tighten the two bolts and nuts. [Figure 34-5]
5. Run lift up until top of travel, when you hear the clutch.

NOTE: Higher or lower arm settings can be achieved by removing top shaft collar, retracting T-handle, and re-inserting arm from above or below. [Figure 34-6]

This method allows the 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.



CAUTION!

Verify that the hold-down arm produces enough pressure on the seat to hold the power chair firmly to the platform. The seat should be somewhat indented by the arm. [Figure 34-7]

AL570 & AL570XL CHAIR PLOW INSTALLATION



CAUTION!

Use extreme care in drilling to avoid electronics or wires!



The plow attaches to the underside of the power chair, enabling automatic locking and unlocking of the chair to the platform of the lift.

Due to the many different makes and models of power chairs, a variety of plow arrangements exist [Figure 35-1] to ensure the chair will be compatible with the Dock 'N' Lock system.

Read, understand, and follow the instructions provided with your specific plow.

We highly recommend installing the Plow under the chair prior to adjusting the heights of the Dock 'N' Lock on the platform [Figure 35-2]. This ensures the guidelines on the next page are accurate.

If you need additional holes to install the plow, be sure to remove the power chair's batteries and inspect the back side of the tray. Avoid drilling electronics or wires, damaging the chair.

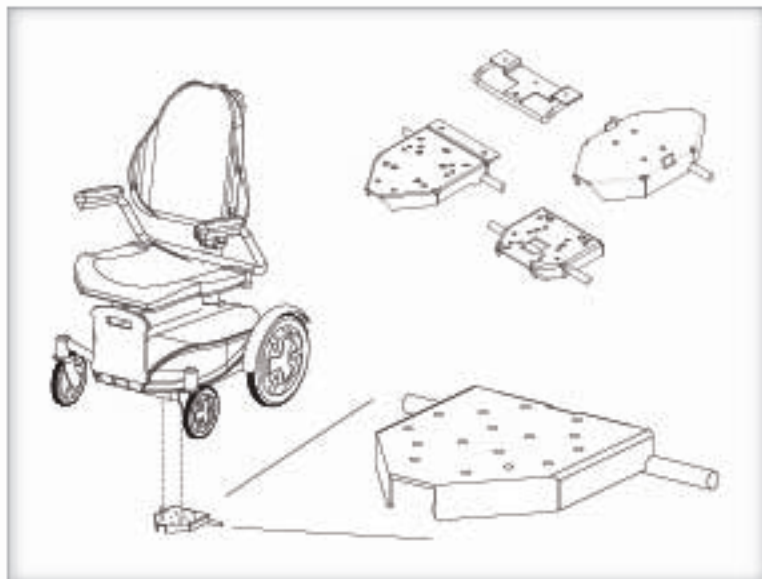


Figure 35-1

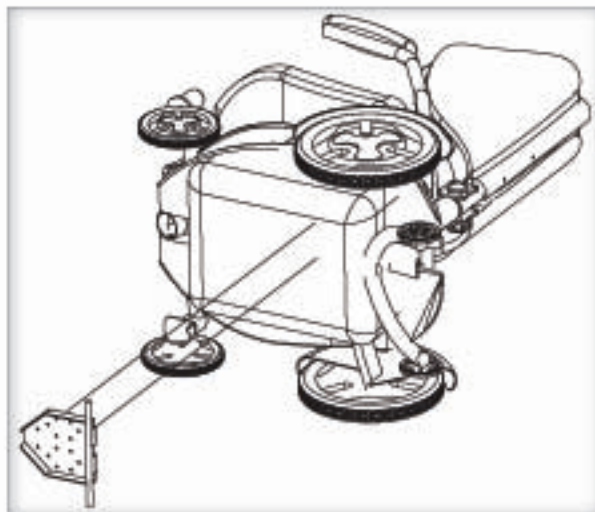


Figure 35-2

AL570 & AL570XL DOCK AND LOCK INSTALLATION

1. Measure Distance.

When the plow is attached to the chair (based on instructions provided with the plow), measure the distance from the ground to the approximate center of the 1/2" pin of the plow.

[Figure 36-2]

Be sure the chair is on a hard, level surface when obtaining this measurement.

The **AL570** and **AL570XL** are shipped from the factory with the Dock 'N' Lock system attached directly to the platform. Subtract 1-1/4" from the measurement taken to the right, and use the appropriate number and combinations of spacers to raise to Dock and Lock to match the chair. [Figure 36-1]

Example: For AL570, if the chair's pin-to-ground measurement is 2.00" then subtract 1-1/4".

To prepare the need for a total of 3/4" of spacers, use a 1/4" spacer and a 1/2" with each bolt under the system.

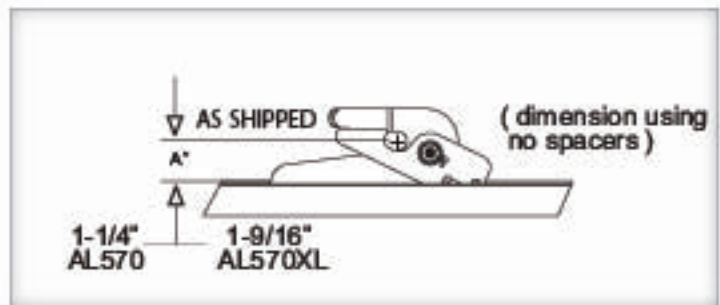


Figure 36-1

X" minus A' = sum of spacers to use [Figure 32-2]

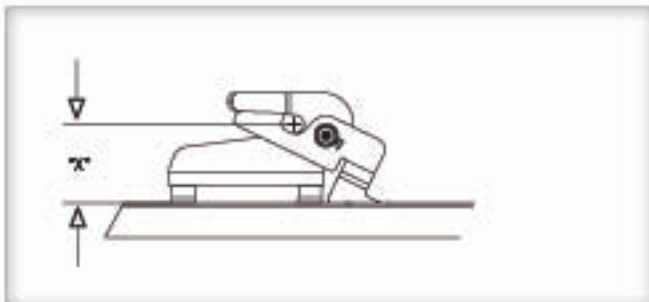


Figure 36-2

2. Remove Dock 'N' Lock Bolts.

Using a 9/16" socket and wrench, remove bolts from Dock and Lock. Retain nylock nuts for reassembly. [Figure 36-3]

continued

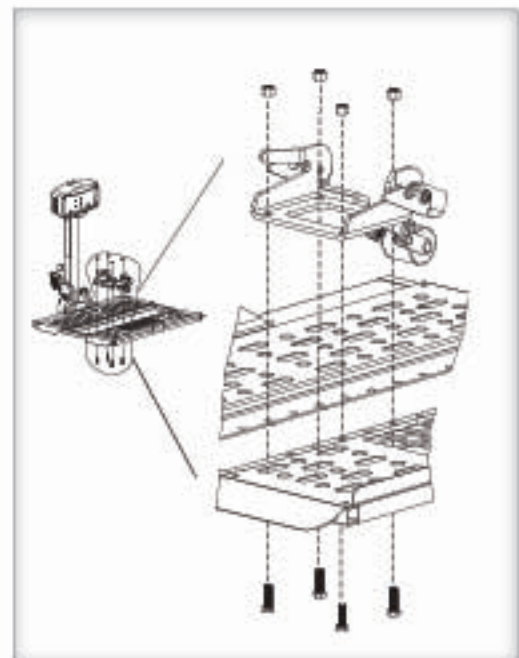


Figure 36-3

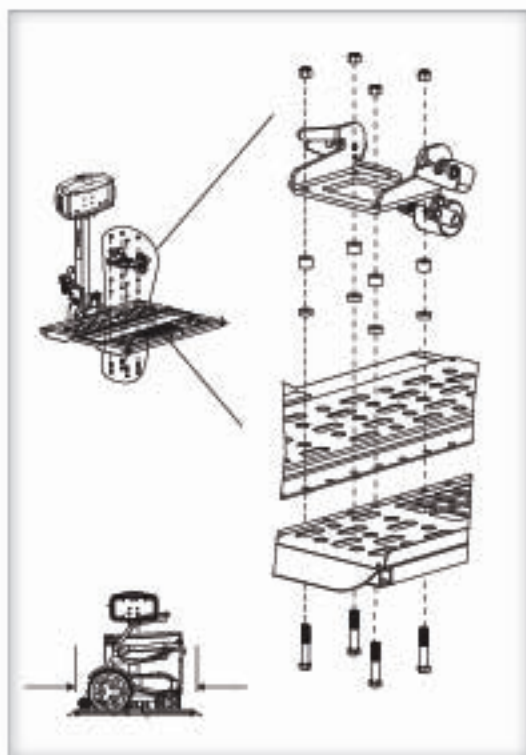


Figure 37-1

3. Reassemble Dock 'N' Lock. Select the holes that will center the chair width-wise onto the platform. Use spacers as required to match the height of the plow on the chair. [Figure 37-1]

Be sure to use bolts that are long enough for the bolt's end to protrude through the upper nylon portion of nut – but not so long that the bolts interfere with the plow. [Figure 37-2]

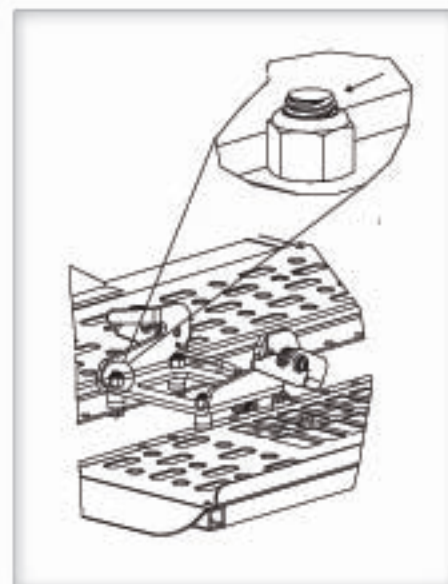


Figure 37-2

4. Test Chair Locking.

Drive chair onto the platform. Test its locking on the platform. Verify that the plow's pin engages the Dock and Lock system. Adjust as needed. [Figure 37-3]

Raise platform to engage lock and test the chair to ensure that it is secure in all directions.

If Dock and Lock station does not fully retract with platform on the ground, change to longer linkage as shown. [Figure 37-4]

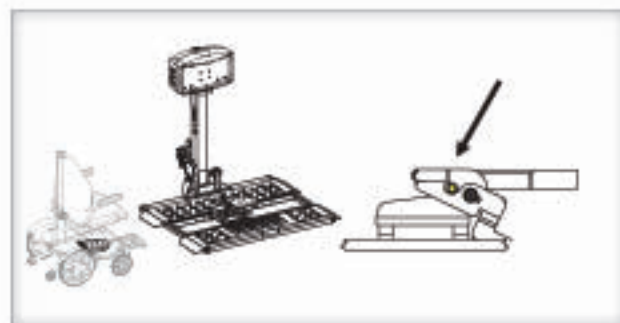


Figure 37-3

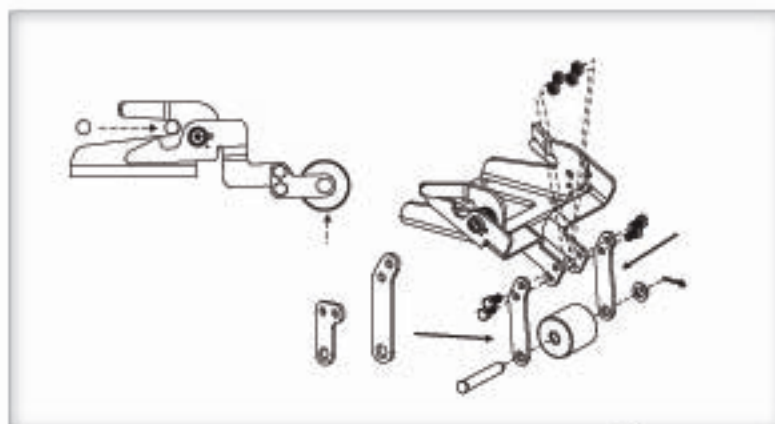


Figure 37-4

TROUBLESHOOTING

DEALER ONLY SECTION

The following procedures are reserved for the approved installer/dealer. They should not be attempted by anyone without proper knowledge of automotive electrical circuitry.

Be careful when troubleshooting with voltage meter. The instruments will detect voltage but may not indicate a tear or poor connection in the wiring.

It may give a false indication since it will only indicate that there is some wire connection –not necessarily enough. [Figure 38-2]

It is strongly recommended that you examine both voltage and current, or isolate sections of the lift wiring using process of elimination with a known good/fully charged 12V automotive battery or known good/fully charged power chair/scooter battery.

PROBLEM

- Lift does not operate.
- Lift operates slowly or intermittently

CAUSE

Bad electrical connection(s) / Circuit breaker

SOLUTION

Check / 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 it will deteriorate prematurely.

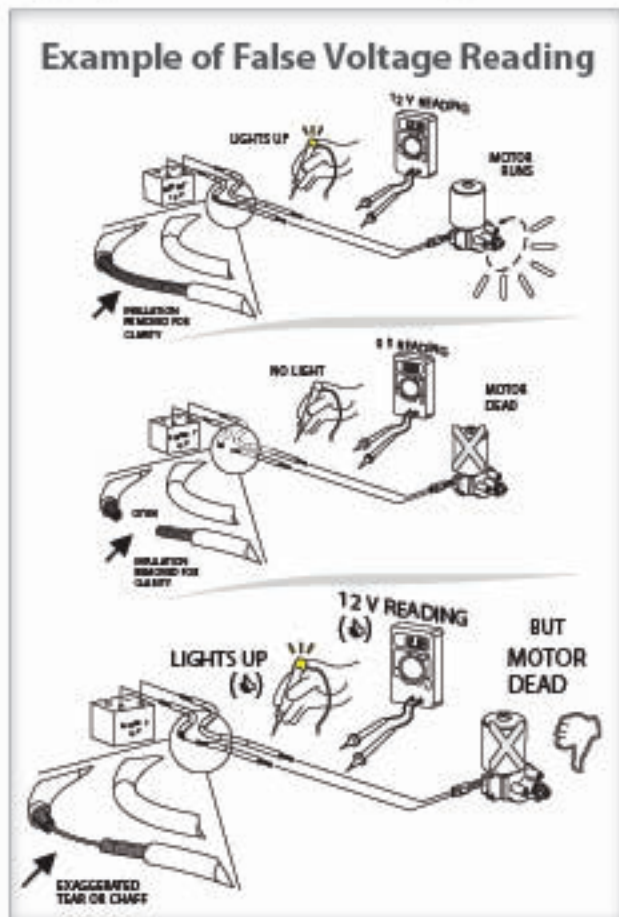



Figure 38-2


Inspect the full length of the wiring harness to ensure the insulation is not torn. The lift's vehicle power harness running through or under the vehicle is subject to road debris and rubbing against the vehicle's frame which can cause a short.

Verify 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, verify (with Ohm meter or test light) that the breaker is functioning. Or replace it with a new/known-good circuit breaker and perform the following tests.

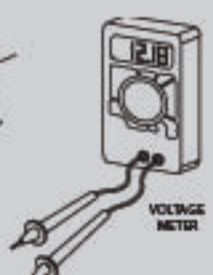


CAUTION!

Be careful when troubleshooting with a test light or voltage meter. They may give false indications.



AUTOMOTIVE TEST LIGHT



VOLTAGE METER

PROBLEM

License plate light does not work.

CAUSE

Four-prong connector is not wired.

SOLUTION

The license plate light runs from the four-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

A ratcheting sound occurs when the lift is all the way up or down.

CAUSE

Actuator clutch

SOLUTION

In the UP direction, the ratcheting sound indicates normal overload protection and **MUST** be heard since it indicates platform is all the way up and that the chair/platform is secure.

**CAUTION!**

Do NOT allow the ratcheting as the lift goes **DOWN**. Only lower the platform level to the ground level. **Do NOT** begin to raise the car with the lift; it can damage the lift.

PROBLEM

Extra length of wire leads to the lift motor

CAUSE

Wire was provided for optional Swing-Away

SOLUTION

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. We recommend leaving the extra wire in case a Swing-Away is added at a later time.

PROBLEM

Lift does not reach the ground

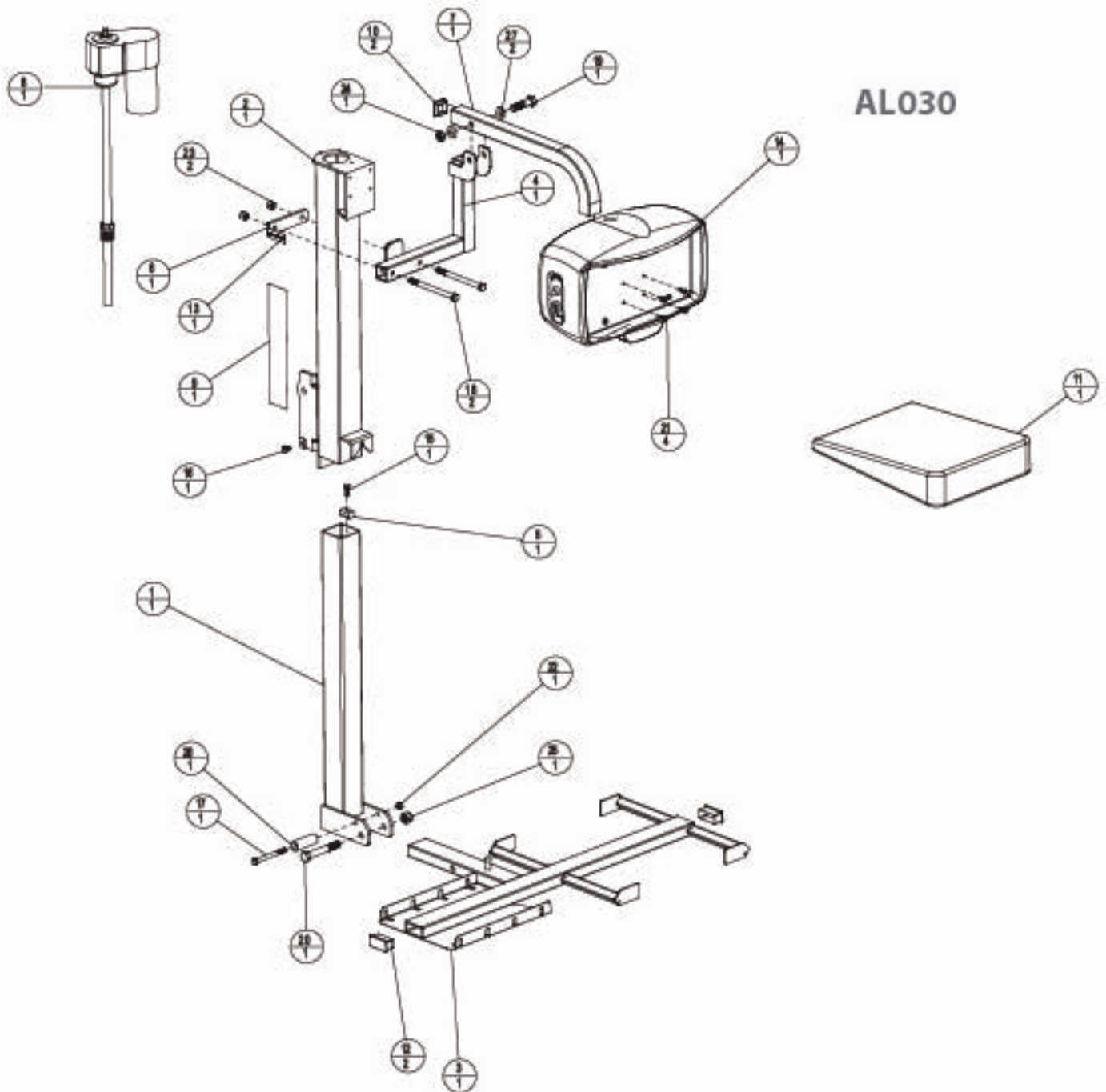
CAUSE

Hitch adapter installation.

SOLUTION

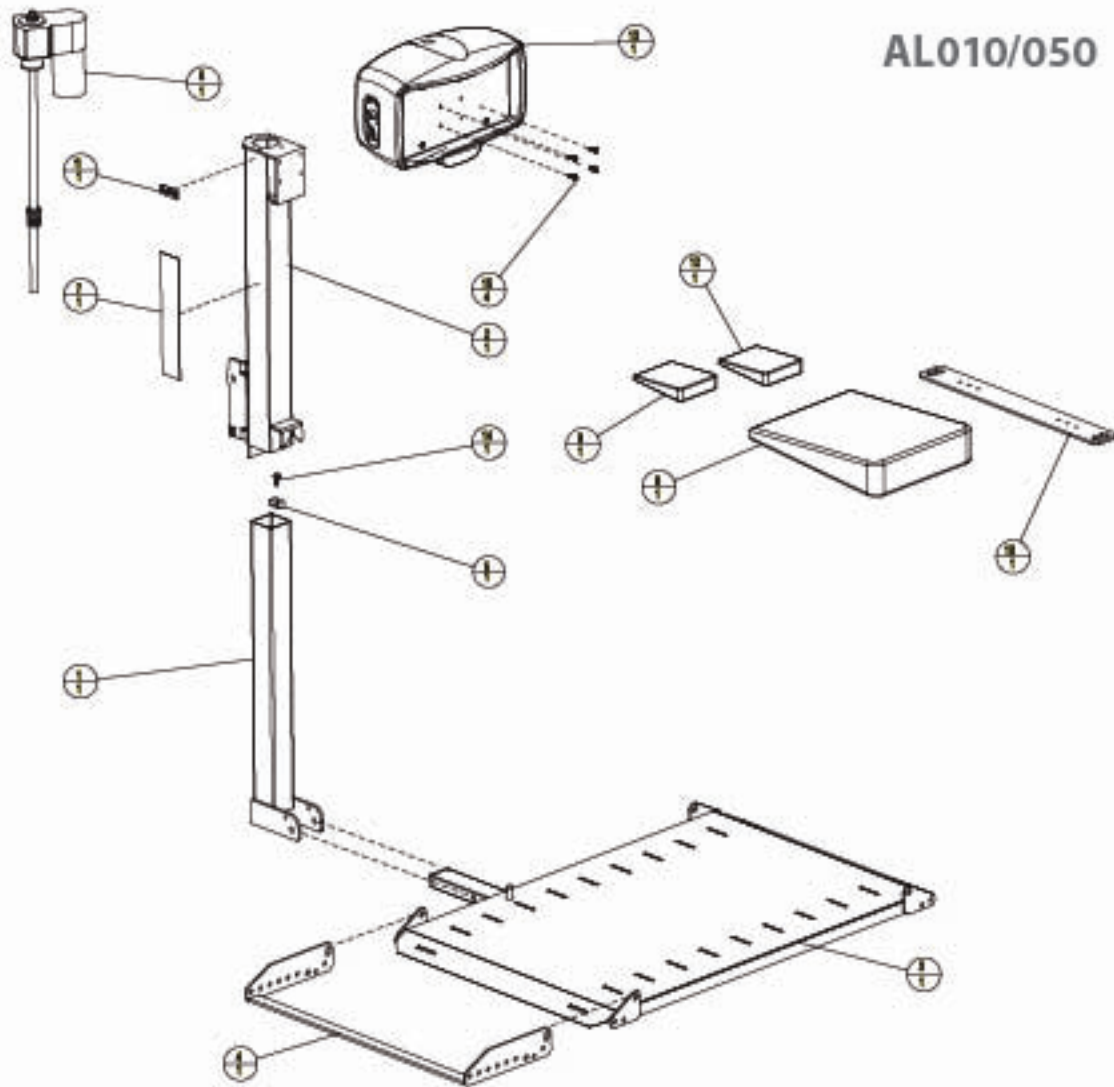
Check the attachment of the hitch adapter to the hitch post on the back of the lift. (See installation page 21 to 25.) The normal range of lift operation is 5" to 16" to the bottom of the hitch receiver of the vehicle. Any higher vehicles will require a different hitch adapter. (See Hitch Adapter section of this manual.)

Exploded Views SECTION 2 : INSTALLER



AL030

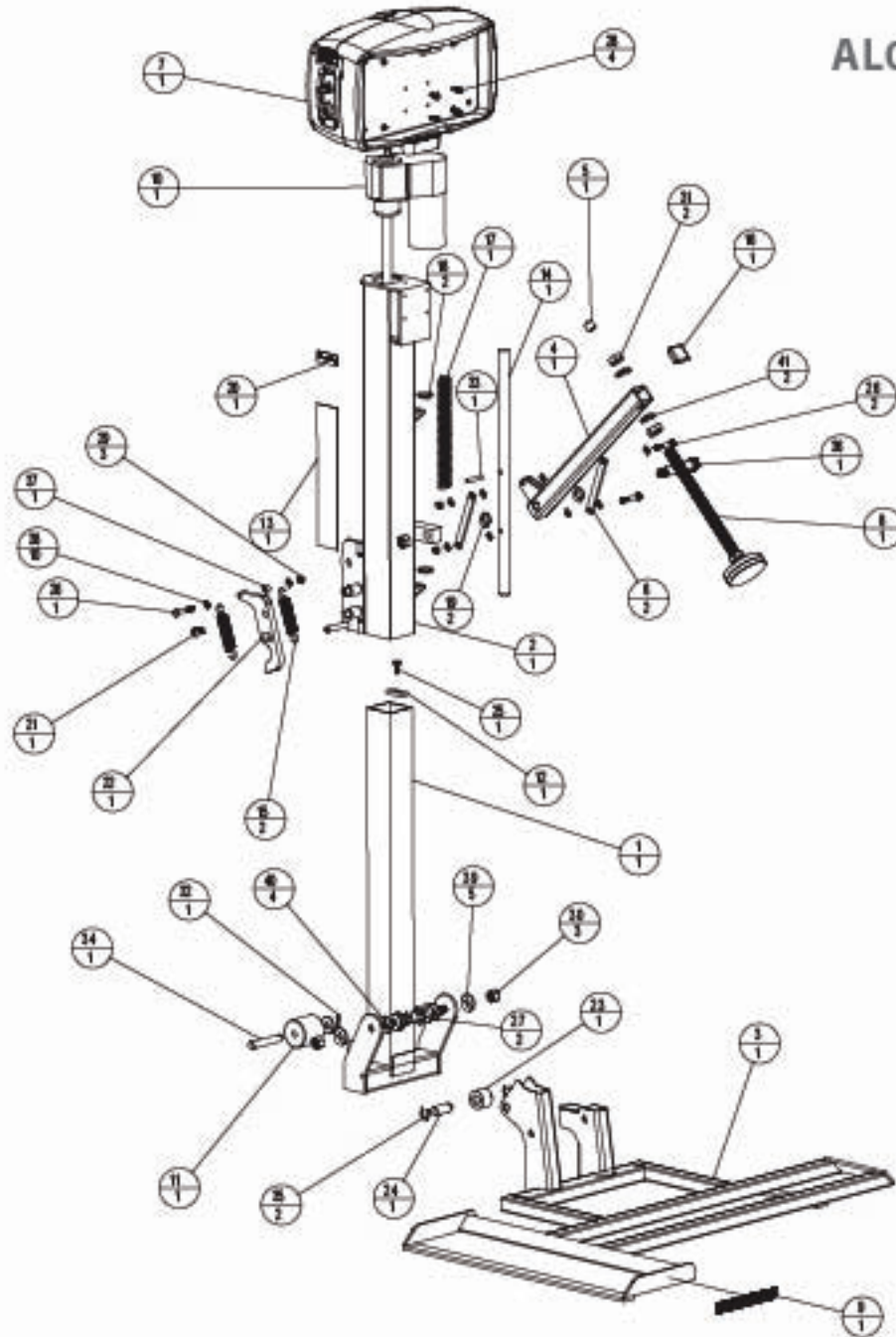
ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	1	20-200-C	INNER TUBE	8	1	WCSA_20-20-A_MP2	WCSA_20-20-A_S.S., 2P
2	1	20-200-C	OUTER TUBE	9	1	WCSA_20-20-A_S2	WCSA_20-20-A_S.S., 2P
3	1	20-200-C	PLATFORM	10	1	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
4	1	20-200-C	WORM GEAR	11	2	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
5	1	20-200-A	LOCKING TUB. L.C.A.D.S. ACTUATOR	12	1	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
6	1	20-200-C	BRUSHED MOTOR	13	1	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
7	1	20-200-C	SOLENOID VALVE	14	4	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
8	1	20-200-A	L.C.A.D.S. ACTUATOR	15	1	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
9	1	AL030	STOCKING COVER LEFT	16	2	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
10	2	AL030-F	RED WEL. 1 IN BLACK PLASTIC	17	1	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
11	1	AL030	WORM GEAR PLATE	18	1	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
12	2	AL030	DIFFER. 10 270°	19	1	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
13	1	AL030	LABEL SERIAL NUMBER	20	1	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P
14	1	20-200-A	MOTOR COVER AND WELT	21	2	WCSA_20-10-A_S2	WCSA_20-10-A_S.S., 2P



AL010/050

ASSEMBLY PARTS				
ITEM	QTY	PART NO.	DESCRIPTION	
1	1	201-2A02-C	INNER TUBE	
2	1	202-2A02-C	OUTER TUBE	
3	1	203-2A02-C	PLATFORM	
4	1	204-2A02-C	SPREADER BAR	
5	1	500-2A02-A	LOCKING TAB - L.C. ACME ACTUATOR	
6	1	600-2A02-A	L.C. ACME ACTUATOR	
7	1	ALA10095	STICKER, OUTSIDE LIFT	
8	1	ALA180	HARDWARE RACK	
9	1	ALA260	U-BOLT HARDWARE KIT	
10	1	ALA68040C	ANCHOR PLATE	
11	1	ALA99995	LABEL, SERIAL NUMBER	
12	1	H00-1A03-A	HARDWARE RACK	
13	1	200-2A01-A	MOTOR COVER ASSEMBLY	
14	1	HHCS0_25-30-0_25-NP-Z	HEX HEAD, 1/4-20 x 0.75, ZP	
15	4	HWS14-0_25-Z	HEX WASHER, #14 SELF DRILL, 0.75, ZP	

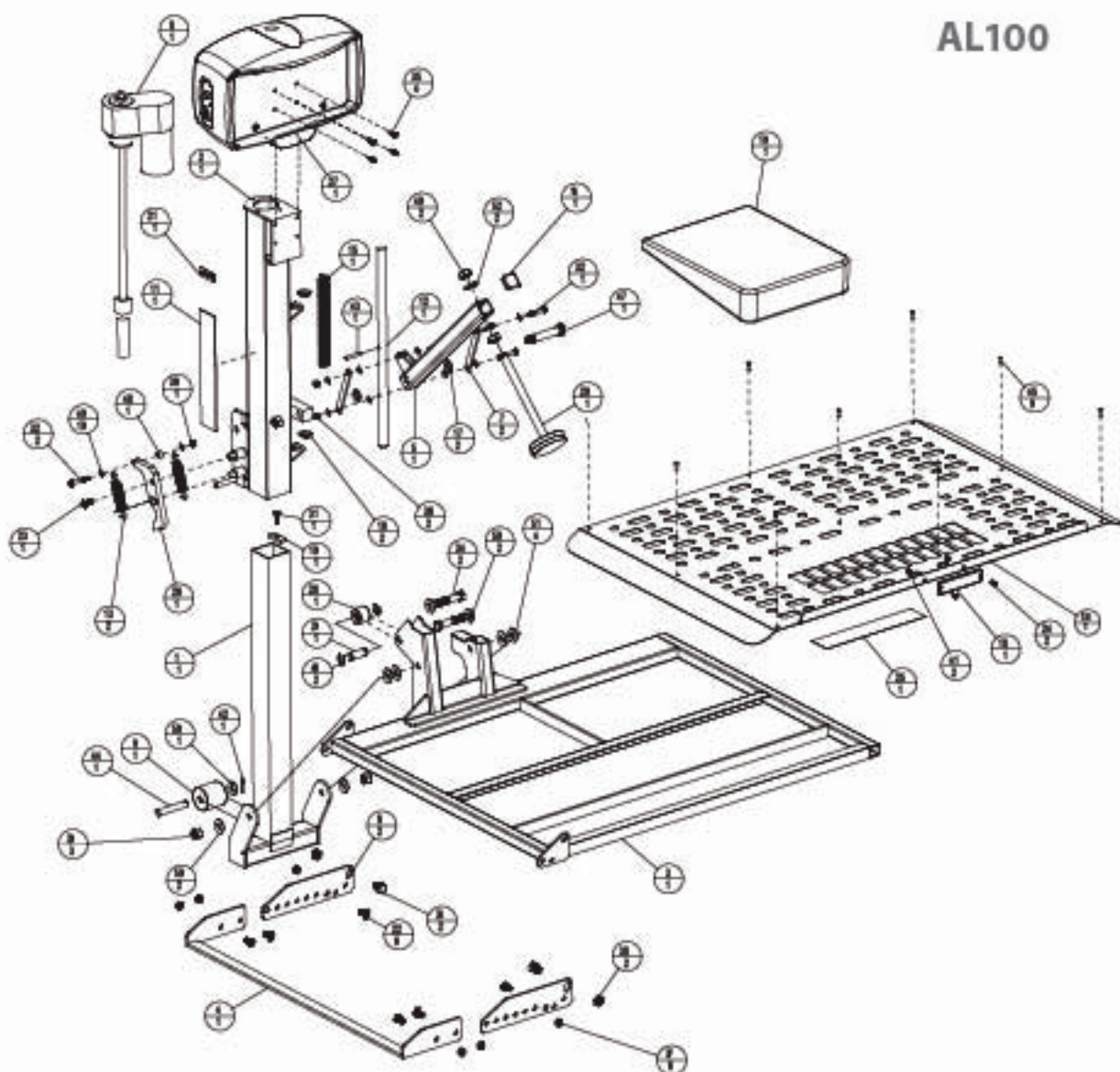
AL015



ITEM	QTY	PART NO.	ASSEMBLY PARTS	DESCRIPTION
1	1	3012-060-C		INNER TUBE
2	1	3012-060-C		OUTER TUBE
3	1	3012-060-C		GOODS PLATFORM
4	1	3012-060-C		HOLD DOWN ARM
5	1	4012-060-A		WHEEL CAP FOR 10 OD STD
6	2	3012-060-C		WHL, LMR, 30"
7	1	3012-061-A		MOTOR COVER, ASSEMBLY OUT SIDE LEFT
8	1	3012-061-A		LONG HOLD DOWN FOOT
9	1	3012-061-A		2 1/2" AMPROD REFLECTIVE STRIP
10	1	ALA1000SD		LOAD ENCL LOCK
11	1	ALA1000		ROLLER PENULTIM
12	1	ALA1000		WR. ACT LOCK
13	1	ALA1000		STOPPER, OUT SIDE LEFT
14	1	ALA1000-RT		HOLD DOWN ARM ROD
15	2	ALA1000-S		EXTENDING SPRING
16	1	ALA1000-SF1		WHEELS 1 1/4 BLACK PLASTIC
17	1	ALA1000-S		COMPRESSING SPRING
18	2	ALA1000		WHEELER BEARING - 30"
19	2	ALA1000-SF		HOLD DOWN ARM WHEELER
20	1	ALA1000		WHL, SERVO NUMBER

ITEM	QTY	PART NO.	ASSEMBLY PARTS	DESCRIPTION
21	1	W004-01-01-01-01-01-01		BUTTON HEAD 30-28 x 1.88 SS
22	1	W004		J-CAM
23	1	W004		ROLLER
24	1	W004		CARTRIDGE
25	1	W004-01-01-01-01-01-01		HEX HEAD 10-28 x 1.75, 3P
26	2	W004-01-01-01-01-01-01		HEX HEAD 10-28 x 1.75, 3P
27	2	W004-01-01-01-01-01-01		HEX HEAD 10-28 x 1.75, 3P
28	4	W004-01-01-01-01-01-01		HEX HEAD 8-18 SELF DRILL, 8/18, 2P
29	2	W004-01-01-01-01-01-01		NUT W/ LOCK, 10-28, 3P
30	2	W004-01-01-01-01-01-01		NUT W/ LOCK, 10-28, 3P
31	2	W004-01-01-01-01-01-01		NUT W/ LOCK, 10-28, 3P
32	1	W004-01-01-01-01-01-01		COIL SPRING
33	1	W004-01-01-01-01-01-01		ROLL PIN, 10 x 1.88, 5/16, 2P
34	1	W004-01-01-01-01-01-01		CLAMP PIN 1/2" x 1/4", 3P
35	2	W004-01-01-01-01-01-01		ROLLER W/ SHIRT
36	1	W004-01-01-01-01-01-01		SHOULDER BOLT, 10 DIA x 1.88, 2P
37	1	W004-01-01-01-01-01-01		SPACER, 1/4" W/ OAM SPRING
38	10	W004-01-01-01-01-01-01		WHEELER PLAT, 1/4", 3P
39	1	W004-01-01-01-01-01-01		WHEELER PLAT, 1/4", 3P
40	1	W004-01-01-01-01-01-01		WHEELER PLAT, 1/4", 3P
41	2	W004-01-01-01-01-01-01		W004-01-01-01-01-01-01

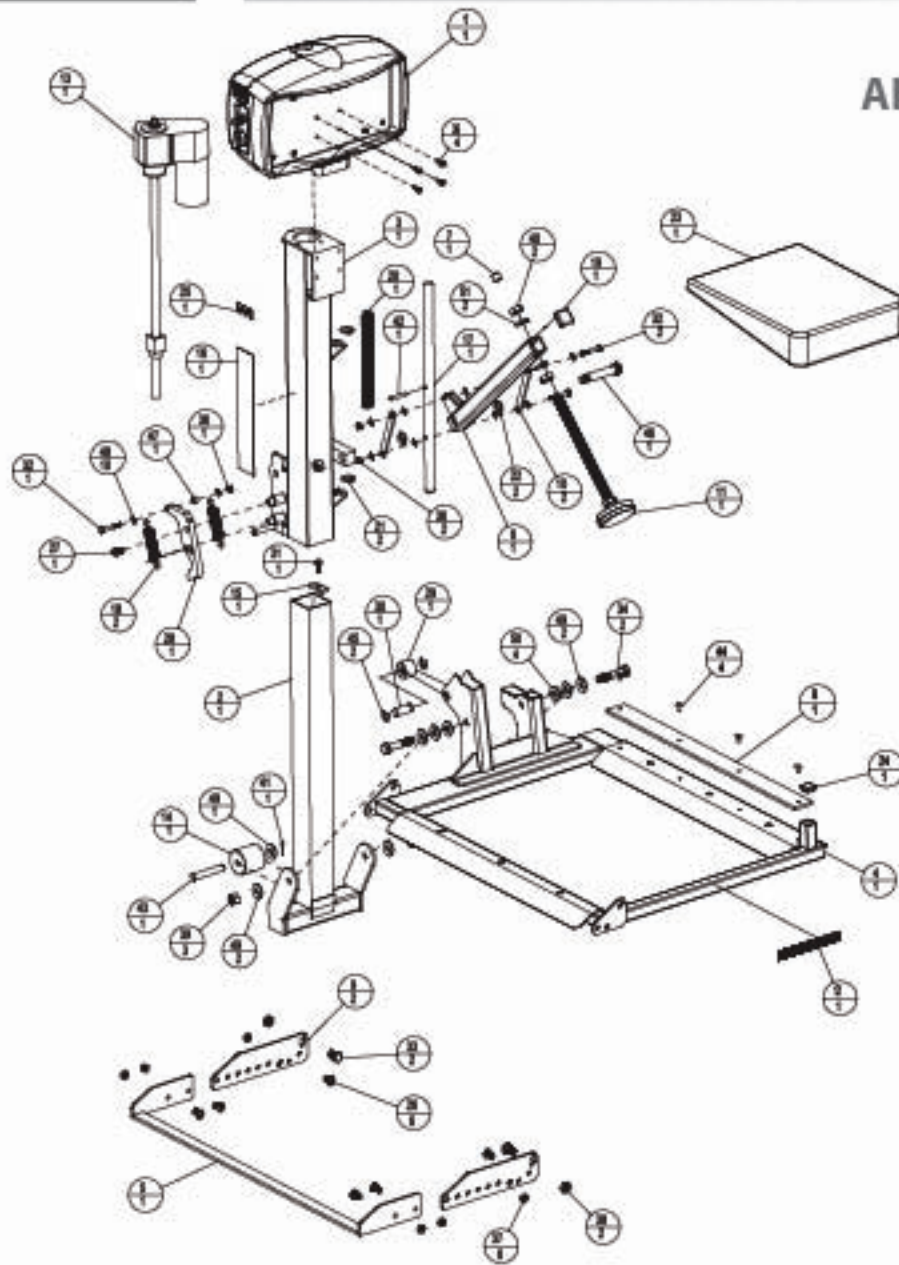
AL100



ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	1	3612-AM-C	INNER TUBE	37	1	363AM-A	MOTOR COVER ASSEMBLY
2	1	3622-AM-C	OUTER TUBE	38	1	HMM4	ROLLER
3	1	3632-AM-C	PLATFORM	39	1	HMM3	CLAMP RM
4	1	3642-AM-C	EXTENDED CRANKLE BAR	40	1	HMM7	ALUMINUM PLATE
5	1	3652-AM-C	HOLD DOWN ARM	41	1	HACS4_3636-4_76-AP2	HEX HEAD 1/4" x 1.75, 2P
6	2	3612-AM-C	SPREADER BAR BRACKET	42	2	HACS4_3613-1_762	HEX HEAD 1/4" x 1.75, 2P
7	2	3622-AM-C	MAX. LINK SWP	43	2	HACS4_3613-2_762	HEX HEAD 1/4" x 1.75, 2P
8	1	ALA1-BSBVS	ACTUATOR	44	2	HACS4_3613-2_862	HEX HEAD 1/4" x 1.75, 2P
9	1	ALA1-BSL	ROLLER PDM URMV	45	4	HMS-16-2_762	HEX NUT, 1/4" x 1.75, 2P
10	1	ALA1-BSR	WE. ACTUATOR	46	2	MUT4_36-36-11-LOCK-2	NUT, NYLOCK 1/4" x 1.75, 2P
11	1	ALA1-BSM	STOPPER, OUTSIDE LEFT	47	2	MUT4_36-36-11-LOCK-4-2	3/8" NUT, NYLOCK 3/8" x 1.75, 2P
12	1	ALA1-BSPLT	HOLD DOWN ARM ROD	48	2	MUT4_36-36-11-LOCK-4-2	3/8" NUT, NYLOCK 3/8" x 1.75, 2P
13	2	ALA1-BSB	EXTENSION SPRING	49	2	MUT4_36-36-11-LOCK-2	NUT, NYLOCK 1/4" x 1.75, 2P
14	1	ALA1-BSPI	INSERTS 1" IN BLACK PLASTIC	50	2	MUT4_36-36-11-3MM2	MAX. MAX. 3/8" x 1.75, 2P
15	1	ALA1-BSB	COMPRESSION SPRING	51	2	MUT4_36-36-11-LOCK-2	NUT, NYLOCK 1/4" x 1.75, 2P
16	2	ALA1-BSB	MYLAR RUBBER BAGS - 3/4"	52	1	PM4_13-1_36-CO-SS	CUTTER RM
17	2	A-ASB-SP	HOLD DOWN ARM WASHER	53	1	PM4_36-1_36-AP2	ROLL PM, 3/8" SPLIT, 2P
18	1	ALA1-BSR	RED REFLECTOR	54	1	PM4_36-1_36-CL-2	CLEANSER, 1/2" x 1.75, 2P
19	1	ALA1-BS	WASHER/PACK	55	2	PSW-BS-SS	PSWT
20	1	ALA1-BSR	HOLD DOWN FOOT	56	2	PSW-BS-SS-2	E-CLIP W/ SHAFT
21	1	ALA1-BSL	LABEL, SERIAL NUMBER	57	1	SHB-4_36-36-1_862	SHOULDER BOLT, 3/8" DIA x 1.75, 2P
22	6	BACS4_37-16-4_76-SS	BUTTON HEAD 3/8" x 1.75, SS	58	1	SPCR4_36-36-4_3-1M	SPACER, 1/2" x 1/2" x 1" SPRING
23	1	BACS4_37-16-1_36-SS-HP	BUTTON HEAD 3/8" x 1.75, SS	59	6	WSH4_36-1_36-4_36-RH-SS	WASHER FLAT, 1/4" x 1.75, SS
24	2	BACS4_36-4_36-SS	BUTTON HEAD, #6-34 x 3/8, SS	60	2	WSH4_36-1_36-4_36-RH-SS	WASHER FLAT, 1/4" x 1.75, SS
25	1	HMM-BS	STOPPER, PLATFORM	61	4	WSH4_36-1_36-4_36-1-SS	WASHER, FLAT, 1/2" x 1.75, SS
26	1	HMM-BS	JOIN	62	2	WSH4_36-1_36-4_36-2	WASHER, SPLIT LOCK, 1/8" x 1.75, 2P

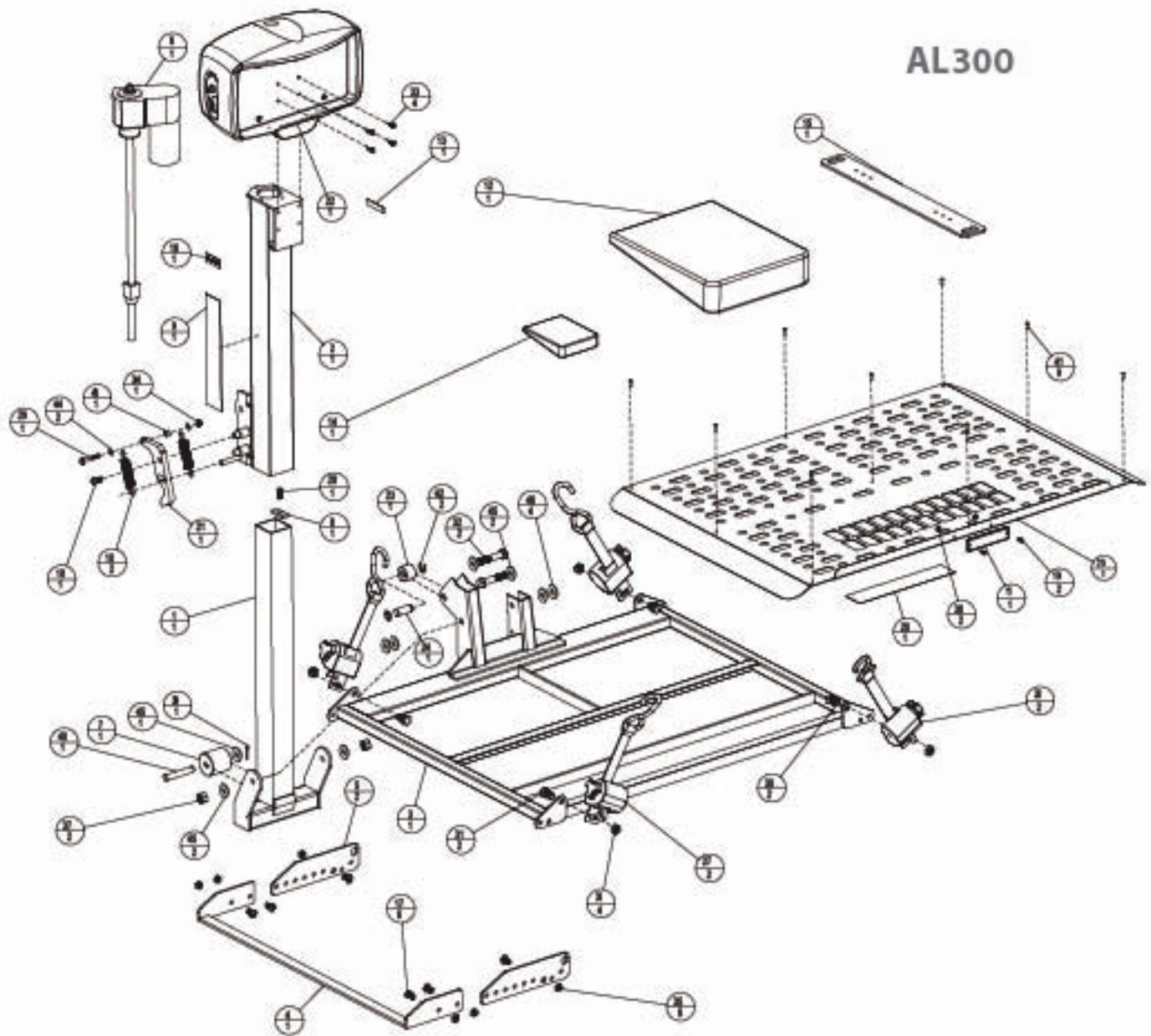
Exploded Views SECTION 2 : INSTALLER

AL160



ITEM	QTY	PART NO.	DESCRIPTION
1	1	3064M1-A	MOTOR COVER ASSEMBLY, OUTSIDE LEFT
2	1	301-308-C	INNER TUBE
3	1	302-308-C	OUTER TUBE
4	1	303-308-C	A. W/ PLATE FORM
5	1	304-308-C	EXTENDED CRADLE BAR
6	1	305-308-C	HOLD DOWN ARM
7	1	4064M8-A	MWYL CAP FOR 1/2 OD STEEL
8	1	4064M9-A	RUBBER STRIP FOR AL160
9	3	301-308-C	SPREADER BAR BRACKET
10	3	302-308-C	BAR LINK, 3/8"
11	1	303-308-A	LONG HOLD DOWN FOOT
12	1	303-308-A	25" X 66" PRED REFLECTIVE STRIP COVER
13	1	ALA160-SPREM	ACTUATOR
14	1	ALA160-001	ROLLER 2" DIA/3MM
15	1	ALA160-002	TRN. ACTUATOR
16	1	ALA160-003	STRIP, OUTSIDE LEFT
17	1	ALA160-SPFLT	HOLD DOWN ARM FOOT
18	3	ALA160-004	EXTENSION SPRING
19	1	ALA160-005	INSERTS, 1 1/8" BLACK PLASTIC
20	1	ALA160-006	COMPRESSION SPRING
21	3	ALA160-007	NYLON ROLLER SPACERS - 3/8"
22	3	ALA160-008	HOLD DOWN ARM WASHER
23	1	ALA160-009	HARDWARE PACK
24	1	ALA160-010	(CALL US @ 774-1113 FOR #6)
25	1	ALA160-011	LABEL, SERIAL NUMBER

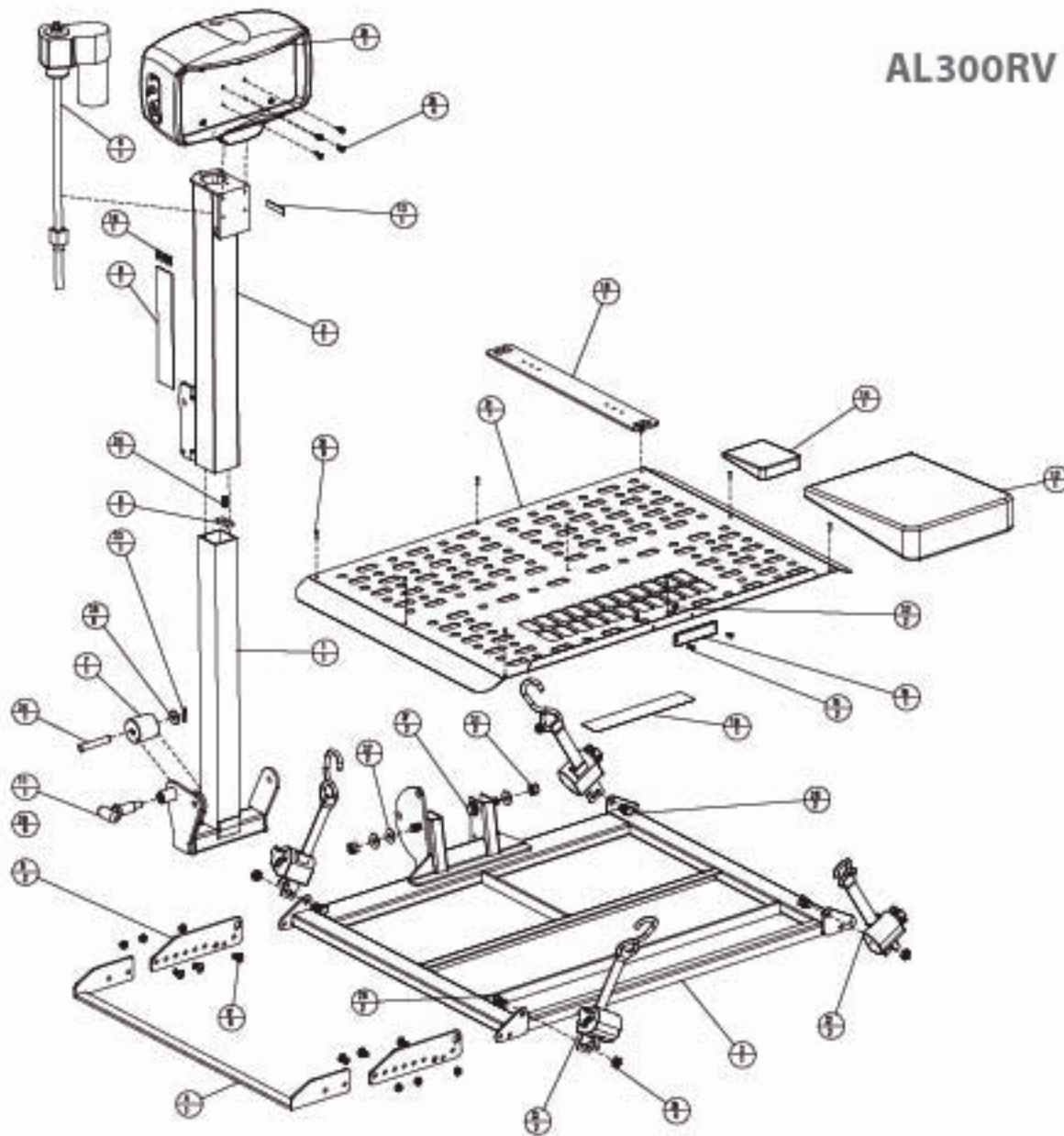
ITEM	QTY	PART NO.	DESCRIPTION
26	1	HNCS-2-27-16-4-25-SS	BUTTON HEAD, 26-16 x 1.75, SS
27	1	HNCS-2-27-16-1.75-SSMP	BUTTON HEAD, 26-16 x 1.75, SS
28	1	HNCS-2-27-16-1.75-2	ACORN
29	1	HNCS-2-27-16-1.75-2	ROLLER
30	1	HNCS-2-27-16-1.75-2	CLEM SPIN
31	1	HNCS-2-27-16-1.75-2	HEAD, 26-16 x 1.75, 2P
32	1	HNCS-2-27-16-1.75-2	HEAD, 26-16 x 1.75, 2P
33	2	HNCS-2-27-16-1.75-2	HEAD, 26-16 x 1.75, 2P
34	2	HNCS-2-27-16-1.75-2	HEAD, 26-16 x 1.75, 2P
35	1	HNCS-2-27-16-1.75-2	HEX WASHER, 26-16 SELF DRILL, 1.75, 2P
36	3	NUTS-26-16-1.75-2	NUT, MYLOCK, 26-16, 2P
37	6	NUTS-26-16-1.75-2	MYLOCK NUT, 26-16, 2P
38	2	NUTS-26-16-1.75-2	TRIM NUT, MYLOCK, 1.75, 2P
39	2	NUTS-26-16-1.75-2	NUT, MYLOCK, 26-16, 2P
40	2	NUTS-26-16-1.75-2	NUT, 26-16, 2P
41	1	PNH-2-1-26-00-SS	COTTON PIN
42	1	PNH-2-1-26-00-SS	ROLL PIN, 26-16, SELF DRILL, 2P
43	1	PNH-2-1-26-00-SS	CLEM PIN, 1.75, 2P, 2P
44	1	PNH-2-1-26-00-SS	3/16" PIN, 26-16, 2P, 2P
45	2	SR-1-16-60Z	E-CAP, 26-16, 2P
46	1	SRB-1-16-2-2-2P	ROCK DRILL BIT, 26-16, 2P
47	1	SRB-1-16-2-2-2-2P	SPACER, 1/4", 26-16, 2P
48	6	WASH-26-16-1.75-SS	WASHER, 26-16, 1.75, SS
49	3	WASH-26-16-1.75-SS	WASHER, 26-16, 1.75, SS
50	4	WASH-26-16-1.75-SS	WASHER, 26-16, 1.75, SS
51	2	WASH-26-16-1.75-SS	WASHER, 26-16, 1.75, SS



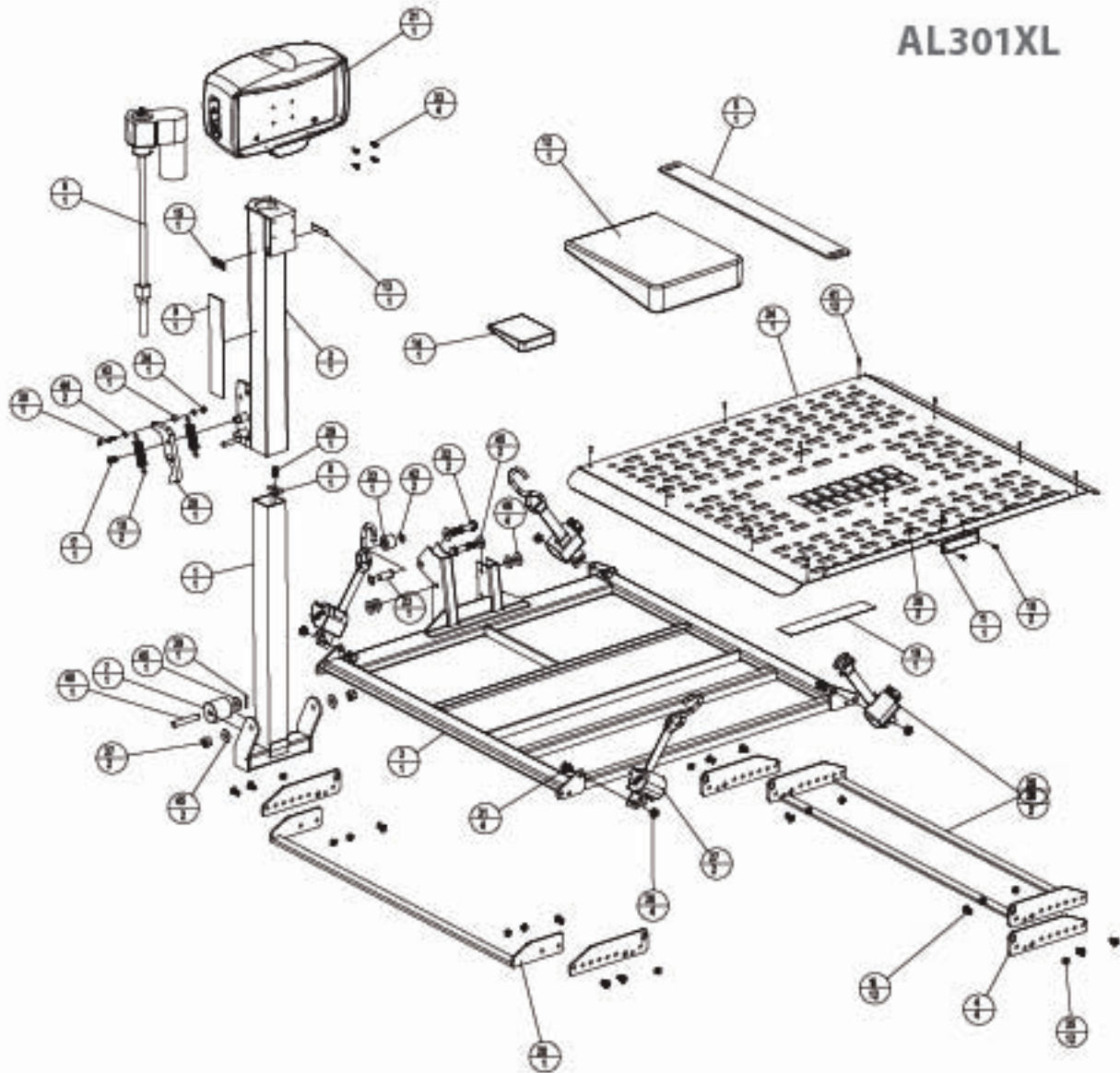
AL300

ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	1	361-2A-B-C	INNER TUBE	34	1	H486	CLEVIS PIN
2	1	362-2A-B-C	OUTER TUBE	35	1	H487	ALUMINUM FLANGE
3	1	363-2A-B-C	PLATFORM	36	2	H488	LEFT HAND, Q-STRUT - BLUE
4	1	364-2A-B-C	DETENDED CRANK BAR	37	2	H489	RIGHT HAND, Q-STRUT - BLUE
5	2	365-2A-B-C	SPREADER BAR BRACKET	38	1	H4204_25-25-4_75-MP-2	HEX HEAD, 25-25 x 17.5, 2P
6	1	ALA-880	ADJUSTOR	39	1	H4204_25-25-1_75-2	HEX HEAD, 25-25 x 17.5, 2P
7	1	ALA-880	ROLLER FOR LIMB	40	2	H4204_25-25-4_75-2	HEX HEAD, 25-25 x 17.5, 2P
8	1	ALA-888	WE ACTUATOR	41	2	H4204_25-25-4_87-2	HEX HEAD, 25-25 x 22.5, 2P
9	1	ALA-888	STICKER, OUTSIDE LEFT	42	2	H4204_25-25-1_86-2	HEX HEAD, 25-25 x 22.5, 2P
10	2	ALA-182	EXTENSION SPRING	43	4	H4215-14-4_75-2	HEX NUTTER, 14 SELF DRILL, 1/2, 2P
11	1	ALA-888	RED REFLECTOR	44	1	NUT-4_25-24NYLOCK-2	NUT NYLOCK, 24-2, 2P
12	1	ALA-88	HARDWARE RACK	45	4	NUT4_25-25-24NYLOCK-2	24MM HEX, W/LOCK, 25-25, 2P
13	1	ALA-888	VIEW STICKER	46	4	NUT4_25-25-24NYLOCK-2	24MM HEX, W/LOCK, 25-25, 2P
14	1	ALA-88	LIGHT HARDWARE HT	47	2	NUT-4_25-24NYLOCK-2	NUT NYLOCK, 24-2, 2P
15	1	ALA-880	ANCHOR PLATE	48	2	NUT-4_25-24NYLOCK-2	NUT NYLOCK, 24-2, 2P
16	1	ALA-888	L.H.D. SERIAL NUMBER	49	1	PM4_25-1_24-24-24	COTTER PIN
17	2	H4204_25-25-4_75-2	BUTTON HEAD, 25-25 x 17.5, SS	50	1	PM4_25-2_24-24-24	CLEVIS PIN, 10 x 2 1/2, 2P
18	1	H4204_25-25-1_86-2	BUTTON HEAD, 25-25 x 22.5, SS	51	2	RV-88-25	RIVET
19	2	H4204_25-25-4_75-2	BUTTON HEAD, 25-25 x 17.5, SS	52	2	RV-88-25	RIVET
20	1	H488	STICKER PLATFORM	53	1	SPCR4_25-4_25-4_25-1H	SPACER, 1/2, 1/2 O.D. 1/2
21	1	H488	J-OIM	54	2	W48-4_25-4_25-4_25-1H-FH-SS	WASHER, FLAT, 1/2", SS
22	1	366-2A-B-C	MOTOR ASSEMBLY	55	2	W48-4_25-1_25-4_25-1H-FH-SS	WASHER, FLAT, 1/2", SS
23	1	H488	ROLLER	56	4	W48H4_25-1_25-4_25-1H	WASHER, FLAT, 1/2", INCH

AL300RV



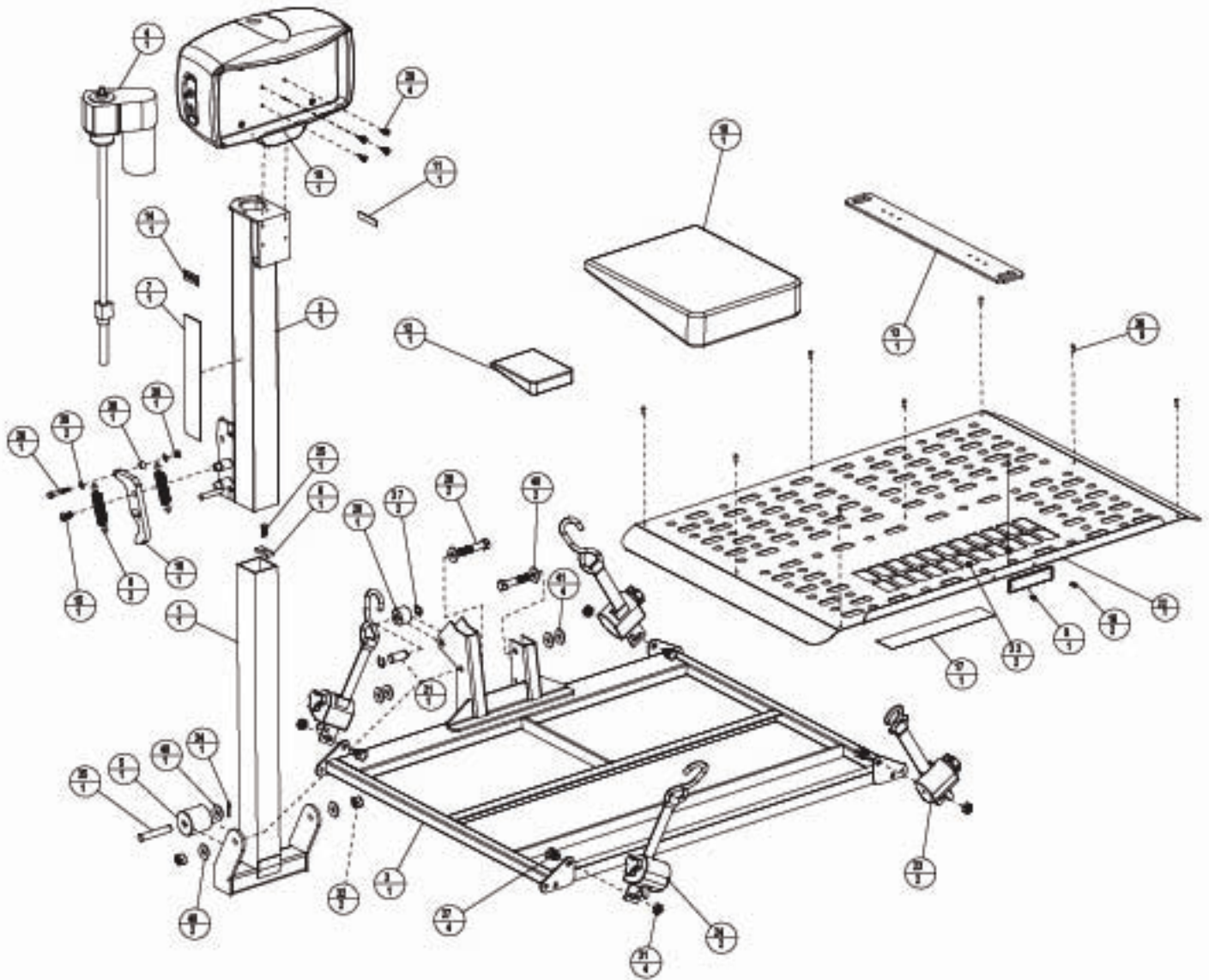
ITEM	QTY	PARTNO.	DESCRIPTION	ITEM	QTY	PARTNO.	DESCRIPTION
1	1	301-201-60	INNER TUBE	28	1	300-201-1A	MOTOR COIL ASSEMBLY
2	1	302-201-60	OUTER TUBE	29	1	HW-807	ALUMINUM PLATE
3	1	303-201-60	PLATFORM	30	2	HWB180	LEFT HANQ. Q-STRAPT - BLUE
4	1	304-201-60	EXTENDED COIL SPRING	31	2	HWB190	RIGHT HANQ. Q-STRAPT - BLUE
5	2	301-201-60	SPEAKER BAR BRACKET	34	1	HWCS4_20-13-1_75-2	HEX HEAD, 10-13 x 1.75, 2P
6	1	ALA1900	ACTUATOR	35	2	HWCS4_20-13-1_85-2	HEX HEAD, 10-13 x 1.85, 2P
7	1	ALA1901	ROLLER FROM LHM W	36	2	HWCS4_20-13-1_85-2	HEX HEAD, 10-13 x 1.85, 2P
8	1	ALA1902	TRG. ACTUATOR	37	2	HWCS4_20-13-1_85-2	HEX HEAD, 10-13 x 1.85, 2P
9	1	ALA1903	STICKER, OUTSIDE LEFT	38	4	HWCS14-4_75-2	HEX WASHER 10-M SELF DRLL, 3/4" L, 3P
10	1	ALA1904	RED REFLECTOR	39	8	MUT-1_21-WHYLOCK-15-2	MUT, MYLOCK, 10-13, 2P
11	1	ALA1910R1	THIMBLE 1/2" SPRING PIN ASSY	40	4	MUT-1_20-10-WHYLOCK-15-2	MUT, MYLOCK, 10-13, 2P
12	1	ALA1911	WRENCH SPRICK	41	2	MUT-1_20-10-WHYLOCK-15-2	MUT, MYLOCK, 10-13, 2P
13	1	ALA1912	WRENCH SPRICK	42	2	MUT-1_20-10-WHYLOCK-15-2	MUT, MYLOCK, 10-13, 2P
14	1	ALA1913	WRENCH SPRICK	43	2	MUT-1_20-10-WHYLOCK-15-2	MUT, MYLOCK, 10-13, 2P
15	1	ALA1914	WRENCH SPRICK	44	1	FW4_10-1_10-10-10	COTTER PIN
16	1	ALA1915	WRENCH SPRICK	45	1	FW4_10-1_10-10-10	CLEVER PIN, 1/2" x 7/8", 2P
17	8	HWCS4_20-13-1_75-2	BUTTON HEAD, 10-13 x 1.75, 2P	46	8	FW-8005	FRONT
18	2	HWCS4_20-13-1_85-2	BUTTON HEAD, 10-13 x 1.85, 2P	47	2	WWSH4_10-13-1_10-13-10	WASHER FLAT, 10T, 10
19	1	HW-800	STICKER, R. FORM	48	2	WWSH4_10-13-1_10-13-10	WASHER FLAT, 10T, 10



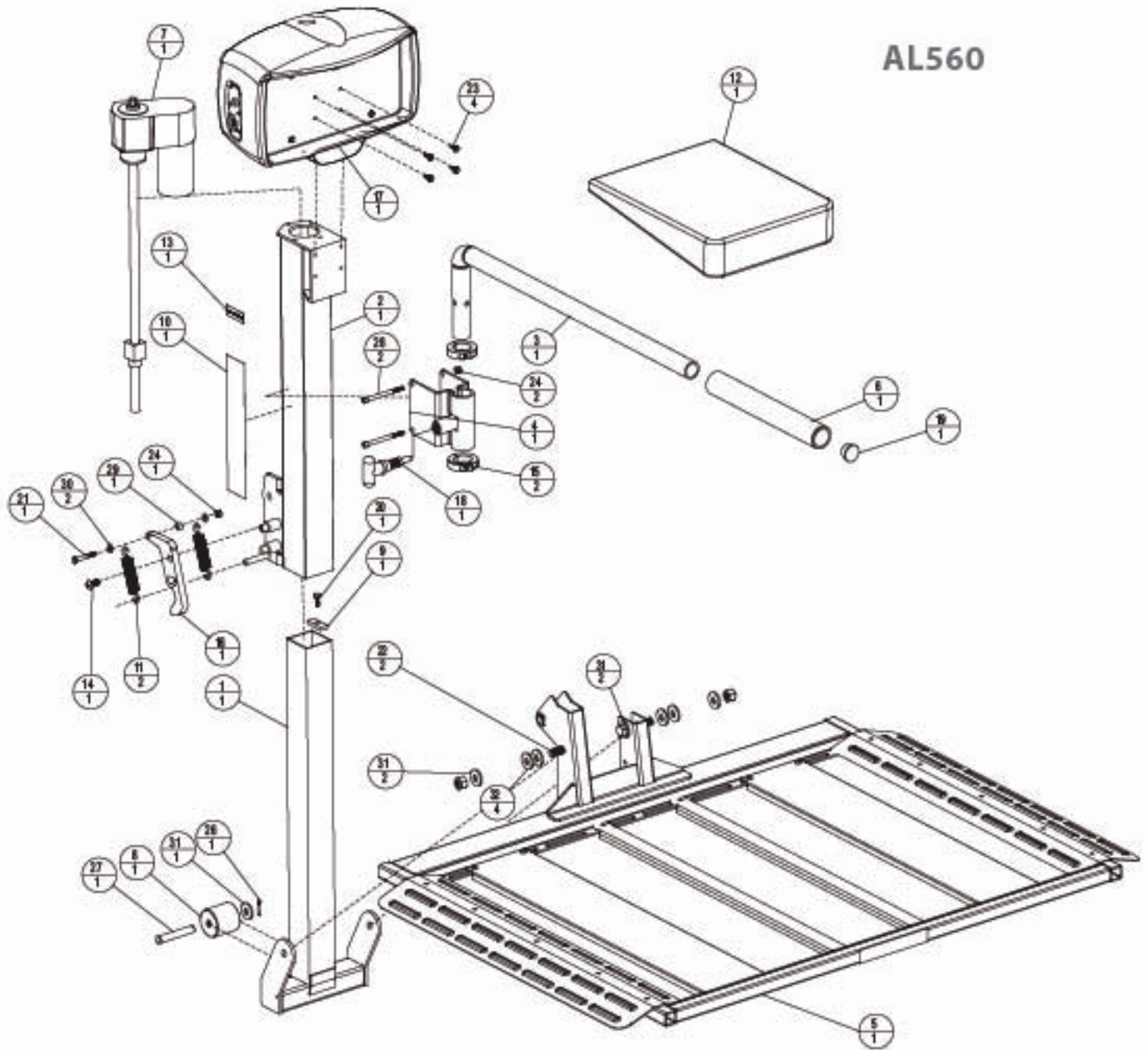
AL301XL

ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PARTNO.	DESCRIPTION	ITEM	QTY	PARTNO.	DESCRIPTION
1	1	3113A-B-C	INERT LIE	34	1	H819	ALUMINUM SHIM W/OL
2	1	3133A-B-C	CLIMB TUBE	35	1	H8101	ALUMINUM FRONT WHEEL CRADLE
3	1	3133A-B-C	PLATFORM	36	2	H8198	LEFT HAND, O-D BRAMM-BELLE
4	4	3113A-B-C	SPREADER BAR BRACKET	37	2	H8195	RIGHT HAND, O-D BRAMM-BELLE
5	1	ALM1	ANCHOR PLATE, 37MM	38	1	H8103	ALUMINUM EXTENDED CRADLE BRM
6	1	ALM10	ACTUATOR	39	1	H8104-35-30-4_75HP-2	HEX HEAD, 3/8" x 1.75, 2P
7	1	ALM11	ROLLER 2" O ALUMINUM	40	1	H8104-35-30-4_1.75-2	HEX HEAD, 3/8" x 1.75, 2P
8	1	ALM12	TUB ACTUATOR	41	4	H8104-35-30-4_1.75-2	HEX HEAD, 3/8" x 1.75, 2P
9	1	ALM13	STICKER OUTSIDE UP	42	2	H8104-35-30-4_2.50-2	HEX HEAD, 3/8" x 2.50, 2P
10	2	ALM14	EXTENSION SPRING	43	4	H8104-35-30-4_2.50-2	HEX HEAD, 3/8" x 2.50, 2P
11	1	ALM15	RED REFLECTOR	44	1	H8104-35-30-4_2.50-2	HEX HEAD, 3/8" x 2.50, 2P
12	1	ALM16	HARDWARE PACK	45	10	MUT4_37-8MMFLXLOCKW/SH	3MM MUT W/LOCK, 3/8" x 2P
13	1	ALM17	RIGHT STICKER	46	4	MUT4_35-8MMFLXLOCKW/SH	3MM MUT W/LOCK, 1/8" x 2P
14	1	ALM18	LOCKTIGHTENING KIT	47	2	MUT4_35-8MMFLXLOCKW/SH	MUT W/LOCK, 1/8" x 2P
15	1	ALM19	LED, SERIAL NUMBER	48	2	MUT4_35-8MMFLXLOCKW/SH	MUT W/LOCK, 1/8" x 2P
16	10	BHCS-4_37-16-1_7505	BUTTON HEAD, 3/8" x 1.75, 50	49	1	PM4_10-1_35-03-05	COTTER PIN
17	1	BHCS-4_37-16-1_1005HP	BUTTON HEAD, 3/8" x 1.75, 50	50	1	PM4_30-3_30-03-02	CLIP PIN, 1/2" x 1/2", 2P
18	2	BHCS-6_34-1_30-05	BUTTON HEAD, 3/8" x 1.75, 50	51	10	RV-8805	WASHER
19	1	H8100	STICKER, PLATFORM	52	2	RV-8802	SCREW W/SHIM
20	1	H8102	JCAM	53	1	SPCR4_35-8_30-4_7MM	SPACER, 1/2", 3/8" O.D. SPRING
21	1	280A1-A	MOTOR COVER ASSEMBLY	54	2	WASH4_35-8_10-4_8MMH85	WASHER, FLAT, 1/8", 50
22	1	H8108	ROLLER	55	2	WASH4_35-8_10-4_8MMH85	WASHER, FLAT, 1/8", 50
23	1	H8109	CLEVER PIN	56	4	WASH4_35-8_10-4_10-M	WASHER, FLAT, 1/8", 50

AL500



ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PARTNO.	DESCRIPTION	ITEM	QTY	PARTNO.	DESCRIPTION
1	1	3812AB-C	INNER TUBE	32	1	HM107	ALUMINUM PLATE
2	1	3812AB-C	OUTER TUBE	33	2	HSB118B	LEFT HAND, O-STRAIN-BLUE
3	1	3812AB-C	PLATFORM	34	2	HSB118B	RIGHT HAND, O-STRAIN-BLUE
4	1	AA1818BC14	ACU-FLOOR	35	1	HKCS-4-25-21-4-75MP-Z	HEXHEAD, 1/4-28 x 1.75, 3P
5	1	A, N 880	ROLLER FROM LHMW	36	1	HKCS-4-25-21-1.75-Z	HEXHEAD, 1/4-28 x 1.75, 3P
6	1	A, N 880	TRK, ACTUATOR	37	4	HKCS-4-25-21-4.75-Z	HEXHEAD, 1/4-28 x 4.75, 3P
7	1	A, N 880	STROKER, OUTSIDE LEFT	38	2	HKCS-4-25-21-3.25-Z	HEXHEAD, 1/4-28 x 3.25, 3P
8	2	ALAH108	EXTENSION SPRING	39	4	HW15-W-4.75Z	HEX W/SHR, 1/4" DIA. FORM, 1/2", 3P
9	1	A, N 880	RED REFLECTOR	40	1	NUT-4-25-28-1/2LOCK-Z	NUT, MYLOCK, 1/4-28, 2P
10	1	ALA108	HARDWAREPKCK	41	4	NUT-4-25-28-1/2LOCK-WB-Z	1/2" NUT, MYLOCK, 1/4-28, 2P
11	1	A, N 880	RIGHT STROKER	42	2	NUT-4-25-28-1/2LOCK-Z	NUT, MYLOCK, 1/4-28, 2P
12	1	ALA108	UNLOTHARDWARE KIT	43	2	MUT-16-3MMLOCK-Z	MIX. MYLOCK, 1/4 DIA, 3P
13	1	ALASH102	ANCHOR PLATE	44	1	PM4-13-1.56-CO-SS	COTTER PIN
14	1	A, N 880	LEAD, 02PM NUMBER	45	1	PM4-13-1.56-CO-Z	CLEMS PIN, 1/2" x 1", 2P
15	1	HKCS-4-25-21-1.75-MS-P	BUTTON HEAD 3/8-18 x 1.75 SS	46	2	RM1840	RNCT
16	2	HKCS-4-25-21-4.75-SS	BUTTON HEAD 3/8-24 x 4.75, SS	47	2	RR4-1340-Z	E-CLIP SPRING
17	1	HM118	STROKER PLATFORM	48	1	IFCR4-134-25-4-21-M	SPACER, 1/4", 20 CAM SPRING
18	1	HM118	JOIM	49	2	NSH-4-25-4-10-4-28-PM-SS	WASHER FLAT, 1/4", SS
19	1	3812AB1-A	MOTOR COVER ASSEMBLY	50	2	NSH-4-25-1.56-4-28-PM-SS	WASHER FLAT, 1/4", SS
20	1	HM114	ROLLER	51	4	NSH4-25-1.56-4.13M	WASHER, FLAT, 1/4", 1/4 DIA
21	1	HM116	CLIPS PM				

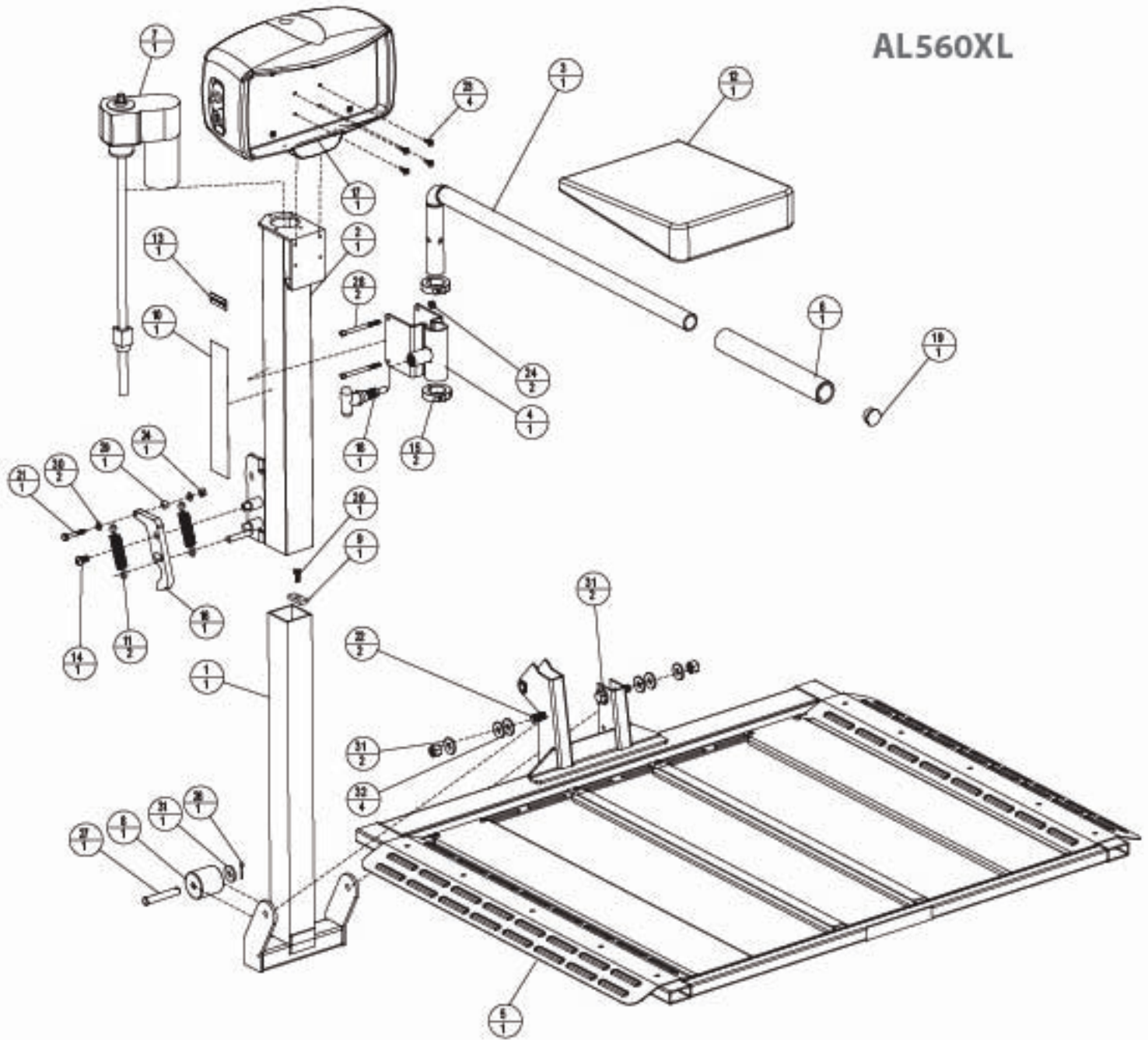


AL560

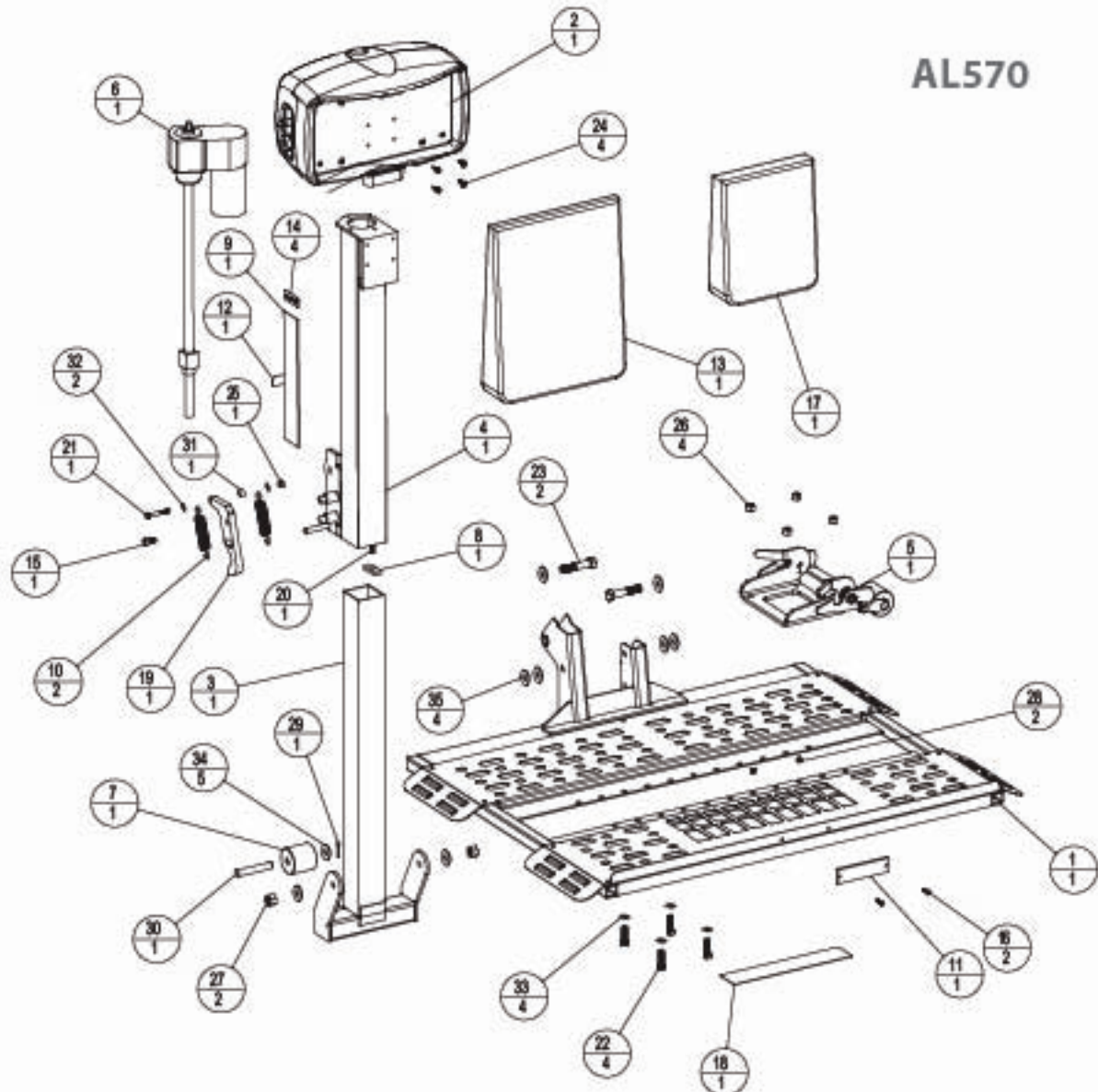
ASSEMBLY PARTS				ASSEMBLY PARTS			
P/N	QTY	P/N	DESCRIPTION	P/N	QTY	P/N	DESCRIPTION
1	1	2012-000	MAIN TUBE	17	1	2012-001	MOTOR/COVER ASSEMBLY
2	1	2012-001	OUTER TUBE	18	1	2012-002	SHOCK/SPRING/STOP SPRING, BLUE
3	1	2012-002	HOLD DOWN PIN	19	1	2012-003	1.5" DIAMETER END CAP
4	1	2012-003	FORMER/HOLDER/ARM BRACKET	20	1	2012-004-1 75P-2	ROLLER, 1/2" X 1.75", SP
5	1	2012-004	PLATFORM ASSEMBLY	21	1	2012-005-1 75L-2	ROLLER, 1/2" X 1.75", SP
6	1	2012-005	FOAM RUBBER STOP ON LOW	22	2	2012-006-1 50L-2	ROLLER, 1/2" X 1.50", SP
7	1	2012-006	ROLLER	23	4	2012-007-1 75-2	SEC NUTS, PH SELF DRILL, 1/2", SP
8	1	2012-007	ROLLER	24	2	2012-008-1 50L-2	NUT, NUTLOCK, 1/2", SP
9	1	2012-008	ROLLER	25	2	2012-009-1 50L-2	NUT, NUTLOCK, 1/2", SP
10	1	2012-009	ROLLER	26	1	2012-010-1 50L-2	COTTER PIN
11	2	2012-010	SPRING SPRING	27	1	2012-011-1 50L-2	CLAMP, 1/2" X 1/2", SP
12	1	2012-011	PLATFORM RAIL	28	2	2012-012-1 50L-2	SHOCK, 1/2" X 1.50", SP
13	1	2012-012	LABEL, SERIAL NUMBER	29	1	2012-013-1 50L-2	SPACER, 1/2", M CM SPRING
14	1	2012-013-1 50L-2	BUTTON HEAD 3/8" X 1.50"	30	2	2012-014-1 50L-2	WASHER, FLAT, 1/2", SS
15	2	2012-014-1 50L-2	SWIFT COLLAR, 1/2" SCREW	31	2	2012-015-1 50L-2	WASHER, FLAT, 1/2", SS
16	1	2012-015	JOINT	32	4	2012-016-1 50L-2	WASHER, FLAT, 1/2", NICKEL

Exploded Views SECTION 2 : INSTALLER

AL560XL



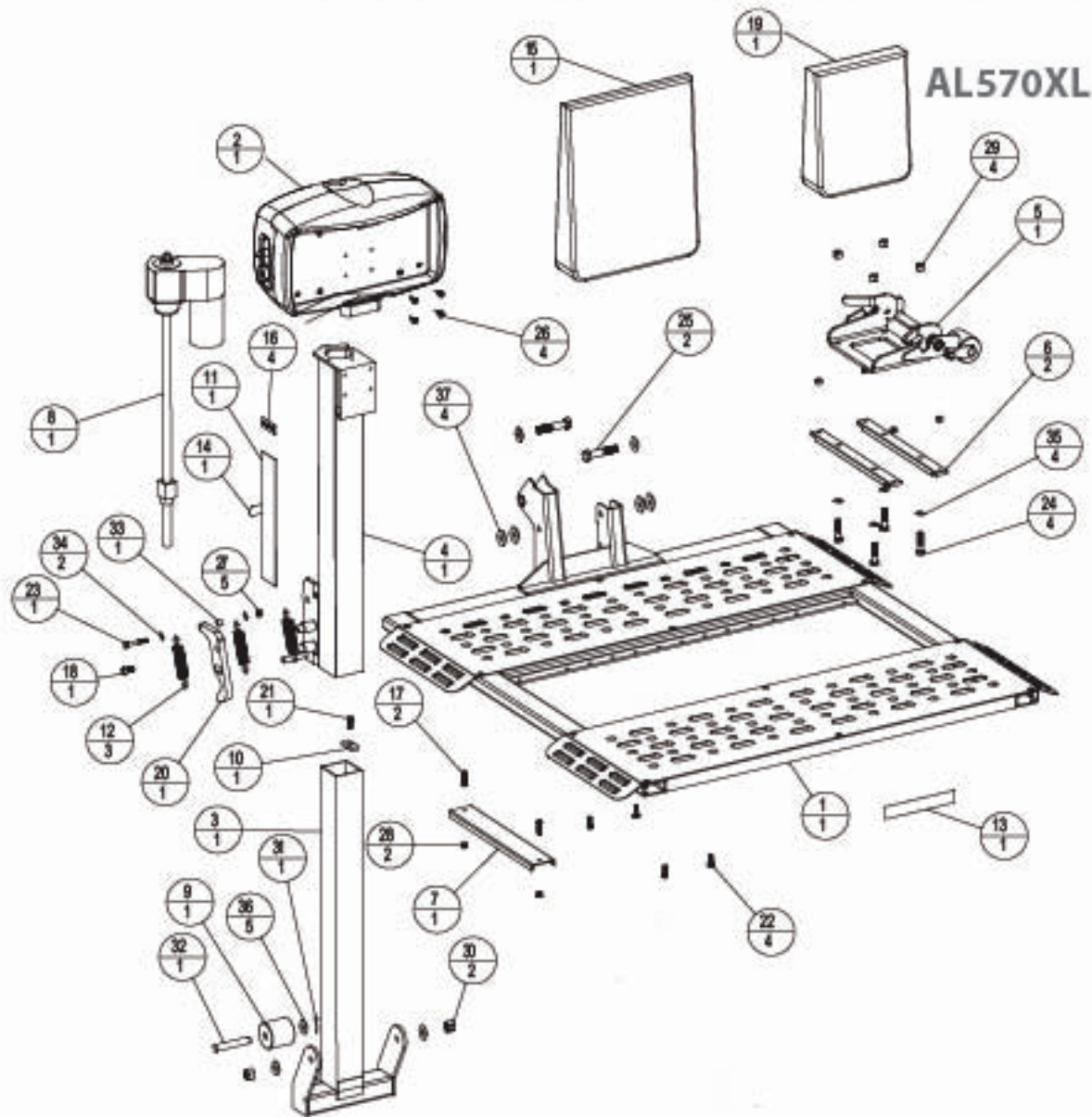
ASSEMBLY PARTS				ASSEMBLY PARTS			
P/N	QTY	P/N	DESCRIPTION	P/N	QTY	P/N	DESCRIPTION
1	1	20-280-C	BASE TUBE	17	1	20-281-A	MOTOR COVER ASSEMBLY
2	1	20-283-C	OUTER TUBE	18	1	4000001	THUMB SPRING PIN ASSY W/ PIN BLUE
3	1	20-284-C	HOLD DOWN ARM	19	1	40000	1/2 DASH TURNER CUP
4	1	20-283-C	FORMED HOLDDOWN ARM BRACKET	20	1	HC3-1 20-1 754P2	HEX HEAD, 1/4X1 X 1/2, 2P
5	1	21 520 44	PLATE FORM ASSEMBY	21	1	HC3-1 20-1 752	HEX HEAD, 1/4X1 X 1/2, 2P
6	1	AL4000	FOAM RUBBER GIP OR LINO	22	2	HC3-1 20-1 862	HEX HEAD, 1/4X1 X 1/2, 2P
7	1	AL4000A2	ACU LOCK	23	4	HW3-1/4 75-2	HEX NUTS, 1/4 SELF LOCK L, 1/2, 2P
8	1	AL4000	ROLLER P/S ASSEMBY	24	2	MS4 20-1 862LOCK 2	NUT, W/ LOCK, 1/4X1, 2P
9	1	AL4000	ISA ACTUATOR	25	2	MS4 20-1 862LOCK 2	NUT, W/ LOCK, 1/4X1, 2P
10	1	AL4000	STICKER, OUTSIDE LEFT	26	1	PN 1 13-1 81-0458	COTTER PIN
11	2	AL4100	COIL SPRING	27	1	PN 1 20-1 862-L	CLEVIS PIN, 1/2 X 1/2, 2P
12	1	AL400	WASHER/FLAT	28	2	HC3-1 20-1 262	SCREW 1/4X1 X 1/2, 2P
13	1	AL4000	LABEL, SERIAL NUMBER	29	1	SPCN 1 20-1 81-1 214	SPRING, 1/2" X 1/2" X 1/2"
14	1	HC3-1 20-1 81-0458P	BUTTONHEAD 3/8 X 1/2"	30	2	WASH 20-1 81-1 81-0458	WASHER FLAT, 1/2, 2P
15	2	COLLAR 20-1 81-0458	SHAFT COLLAR, 1/4" BORE	31	2	WASH 20-1 81-1 81-0458	WASHER FLAT, 1/2, 2P
16	1	HW 30	JCM	32	4	WASH 20-1 81-1 104	WASHER, FLAT, 1/2, W/ LOCK



AL570

ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	1	20-1415A	PLATFORM ASSEMBLY	18	1	H1006	STICKER, TARMAT
2	1	20-3014	MOTOR COVER, ASSEMBLY, OUTSIDE LEFT	19	1	H1010	JOAM
3	1	20-3060	NARROW INNER TUBE	20	1	HC20 20-20-0 75H PZ	HEX HEAD, 10-20 X 0.75, ZP
4	1	20-30100	OUTER TUBE	21	1	HC20 20-20-1 35-Z	HEX HEAD, 10-20 X 1.35, ZP
5	1	20-1415A	DOCK AND LOCK ASSEMBLY	22	4	HC20 20-15-1 25-Z	HEX HEAD, 28-16X 1.25, ZP
6	1	AA100002	ACTUATOR	23	2	HC20 20-15-0 25-Z	HEX HEAD, 10-10 X 0.50, ZP
7	1	AA1000	ROLLER 2" DIA LAMIN	24	4	HRT0-14-0 35-Z	HEX WASHER, 24 SELF DRILL, 3/4" L, 3P
8	1	AA100	TIRE, ACTUATOR	25	1	NUT-0 20-20H V.LOCK-Z	NUT - NYLOCK, 10-20, ZP
9	1	AA10000	OUTSIDE STICKER	26	4	NUT-0 20-16H V.LOCK-Z	NUT - NYLOCK, 28X-16 ZP
10	2	AA1000	EXTENSION SPRING	27	2	NUT-0 20-13H V.LOCK-Z	NUT - NYLOCK, 10-10, ZP
11	1	AA1000	RED REFLECTOR	28	2	NUT1024 NYLOCK-Z	NUT NYLOCK, 1004, 3P
12	1	AA1000	LABEL, PATENT PENDING	29	1	RHS 15-1 20-00-00	COTTER PIN, 20
13	1	AA100	HARDWARE PACK	30	1	PH0 10-3 20-CL-Z	CLINCH PIN, 10"X 3.00, ZP
14	4	AA1000	LABEL, SERIAL NUMBER	31	1	SPCR0 20-0 20-0 21 H	SPACER, 167, FOR CAM SPRINGS
15	1	HC20-0 20-15-1 25-00HP	BUTTON HEAD 28-16X 0.75 00	32	2	WASH-0 20-0 20-0 24 PH00	WASHER, FLAT, 24, 2P, 00
16	2	HC20-0 20-0 75-00	BUTTON HEAD, 10-24 X 0.75, 00	33	4	WASH-0 20-0 20-0 26 PH00	WASHER, FLAT, 26, 2P, 00
17	1	HS-1415-A	ON/HARDWARE PACK	34	2	WASH-0 20-1 20-0 28 PH-Z	WASHER, FLAT, 10", Z
				35	4	WASH-0 20-1 20-0 13H	WASHER, FLAT, 10", H V.LOCK

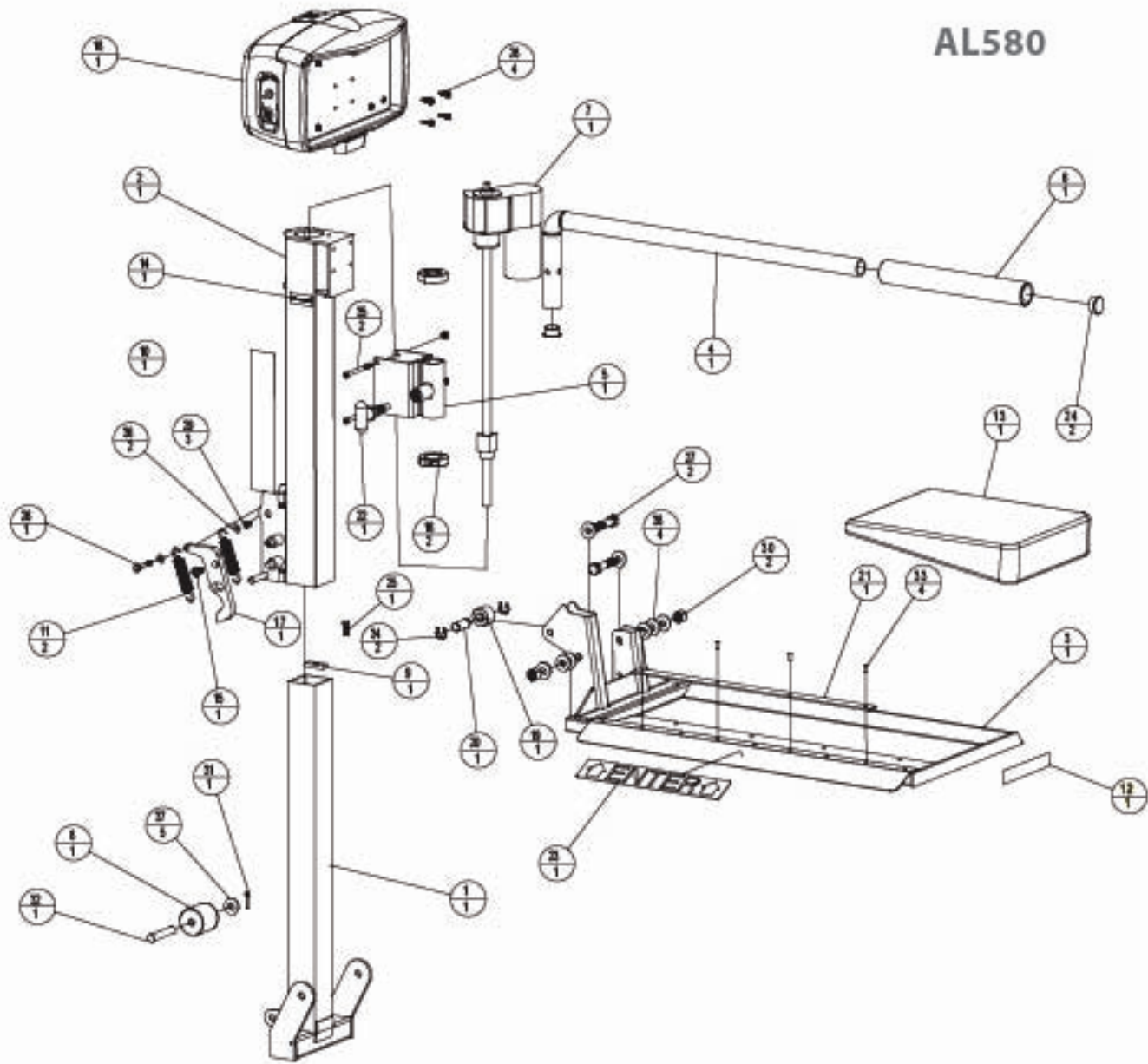
Exploded Views SECTION 2 : INSTALLER



AL570XL

ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
1	1	360-5A1-A	PLATFORM ASSEMBLY
2	1	360-5A1-A	MOTION COVER ASSEMBLY, OUTSIDE LIP IS
3	1	361-2A1-C	NARROW BEER TUBE
4	1	362-2A1-C	OUTER TUBE
5	1	363-5A1-A	DOCK AND LOCK ASSEMBLY
6	2	363A1-A-C	DR. BEAM
7	1	363A1-A-C	CARRIER BRACKET
8	1	AL4500-PRV2	ACTUATOR
9	1	AL4500-2	ROLLER 2" DIA LAMIN
10	1	AL4500-3	TAB ACTUATOR
11	1	AL4500-4	STICKER, OUTSIDE
12	2	AL4500-5	SCREWS (H SPIND)
13	1	AL4500-6	RED FL. RESISTIVE STRIP
14	1	AL4500-7	LABEL, FRONT PANEL
15	1	AL4500-8	HARDWARE PACK
16	4	AL4500-9	LABEL, OVER AL4500-8
17	2	HWCS-2300-1 00-00	BUTTON HEAD, 16.00X1.00, SS
18	1	HWCS-23-1 00-00 HP	BUTTON HEAD 26.00 X 20.75 SS

ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
19	1	HWCS-5A1-A	DR. HARDWARE PACK
20	1	HTB-5	J CAM
21	1	HWCS-26-00-0 76-HP-C	HEX HEAD, 16.00X1.00, 2P
22	4	HWCS-26-00-0 75-Z	HEX HEAD, 16.00 X 0.75, 2P
23	1	HWCS-26-00-1 75-Z	HEX HEAD, 16.00 X 1.00, 2P
24	4	HWCS-27-00-1 80-Z	HEX HEAD, 20.00 X 1.00, 2P
25	2	HWCS-28-00-2 80-Z	HEX HEAD, 10.00 X 2.00, 2P
26	4	HWCS-34-0 75-Z	HEX WASHER, 8" H SELF DRILL, 34" L, 2P
27	2	HUTS-23-00-HYLOCK-Z	HUT, HYLOCK, 16.00, 2P
28	2	HUTS-23-00-HYLOCK-Z	HUT, HYLOCK, 16.00, 2P
29	4	HUTS-23-00-HYLOCK-Z	HUT, HYLOCK, 20.00 2P 0.00 0.00
30	2	HUTS-23-00-HYLOCK-Z	HUT, HYLOCK, 10.00, 2P STEEL
31	1	PH-0 10-1 000-000	CUTTER PH. SS
32	1	PH-0 10-1 000-000	CUTTER PH. 10" X 3.00, 2P
33	1	SPCR-0 20-0 00-0 21-H	SPACER, 16", 16" DIA SPIND
34	2	WASH-26-0 00-0 00-PH-SS	WASHER, FLAT, 16", SS
35	4	WASH-27-0 00-0 00-PH-SS	WASHER, FLAT, 20", SS
36	2	WASH-28-1 00-0 00-0-HP-C	WASHER, FLAT, 10", Z
37	4	WASH-28-1 00-0 00-0-HP-C	WASHER, FLAT, 10", PLASTIC

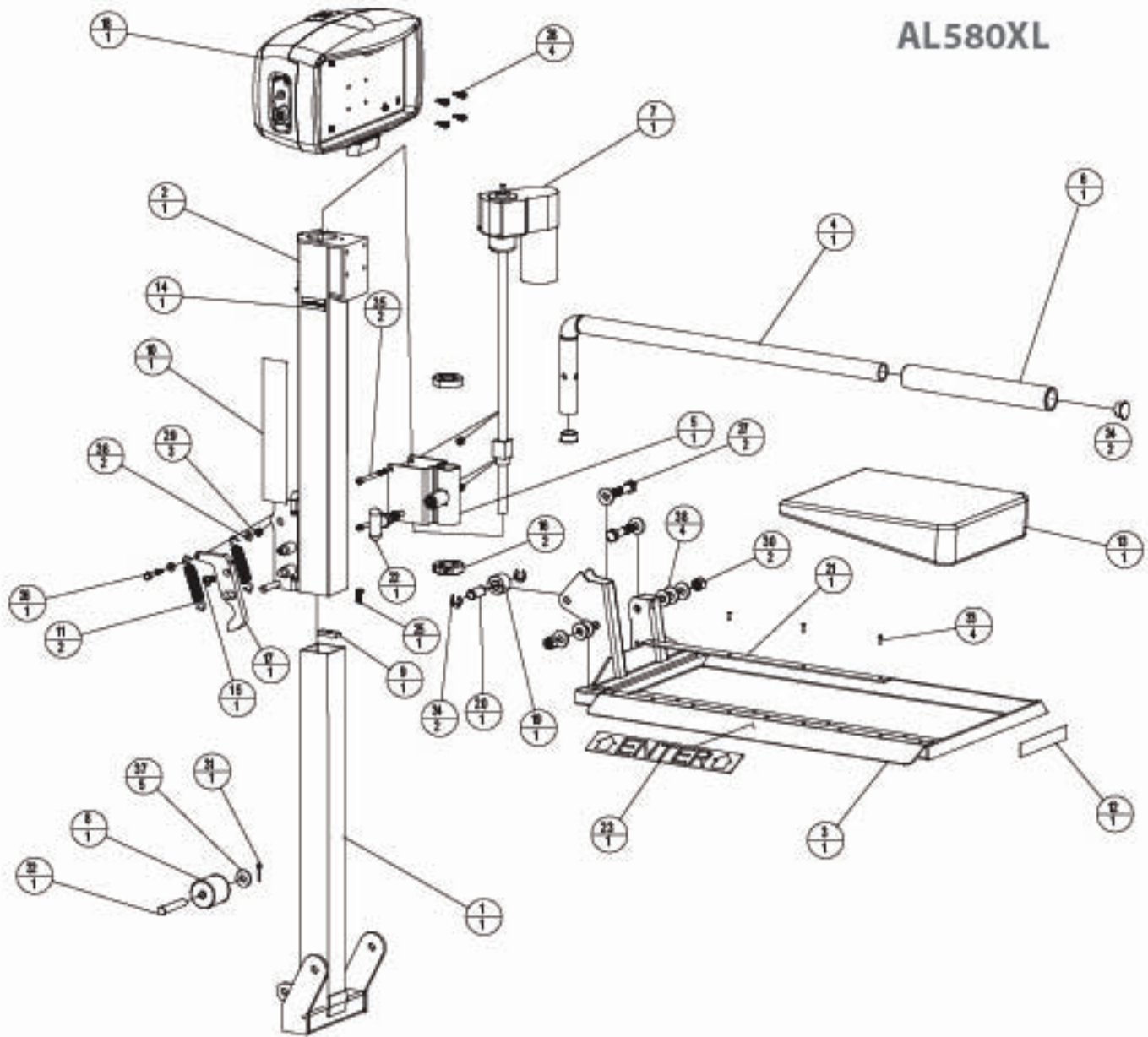


AL580

ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	1	38-ZA8-C	INNER TUBE	35	1	H14M5	CLEVIS PIN
2	1	38-ZA9-C	OUTER TUBE	31	1	H83H18	RAMP PAD
3	1	38-Z38-C	PLATFORM	32	1	H86BR1	T-HANDLE SPRING PIN ASSY 38" R/L, BLUE
4	1	38-ZA9-C	HOLD DOWN ARM	33	1	H87H18	'ENTER' STICKER
5	1	38-ZA9-C	FORMED HOLD DOWN ARM BRACKET	34	2	H8218	1.38 DIAMETER END CAP
6	1	ALA888	FOAM RUBBER GRIP 13x LONG	35	1	H8C54 28-25-0 75-Z	HEX HEAD, 1/4-20X 5/8, ZP
7	1	ALA888REV2	ACTUATOR	36	1	H8C54 28-25-1 75-Z	HEX HEAD, 1/4-20X 1/2, ZP
8	1	ALA888	ROLLER 2" DIA 18MM	37	2	H8C54 28-13-2 35-Z	HEX HEAD, 1/2-13X 25/32, ZP
9	1	ALA888	TAB, ACTUATOR	38	4	H875-M-0 75-Z	HEX WASHER, #8 SELF PNL, 6.75, ZP
10	1	ALA888	STOPPER, OUTSIDE LEFT	39	3	NUT-6 28-13HYLOCK-Z	NUT, HYLOCK, 1/4-13, ZP
11	2	ALA1825	EXTENSION SPRING	30	2	NUT-6 28-13HYLOCK-Z	NUT, HYLOCK, 1/4-13, ZP
12	1	ALA888	RED REFLECTIVE STICKER	31	1	PN40 13-1 35-00-55	COTTER PIN
13	1	ALA888	HARDWARE PACK	32	1	PN40 28-3 35-CL-Z	CLEVIS PIN, 1/2" X 1" L, ZP
14	1	ALA888	LABEL, SERIAL NUMBER	33	4	RV-W855	RIVET
15	1	H8C54 27-25-1 55-55-HP	BUTTON HEAD 28-15-1 55-55	34	2	RV-6 35-5C-Z	COLLAR, 3/8" SHAFT
16	2	COLLAR-1 25H-CP-Z	SHAFT COLLAR, 1-1/4" BORE	35	2	H8C54 28-25-3 25-Z	SHCS, 1/4-20 X 3-1/4", ZP
17	1	H1100	J-CAM	36	2	WASH-6 25-6 25-6 27-PH-55	WASHER, FLAT, 1/4", 55
18	1	38-ZA1-A	MOTOR COVER ASSEMBLY	37	5	WASH-6 25-1 27-6 27-PH-55	WASHER, FLAT, 1/2", 55
19	1	HMM4	ROLLER	38	4	WASH-6 25-1 25-6 12-PH-P	WASHER, FLAT, 1/2", PLASTIC

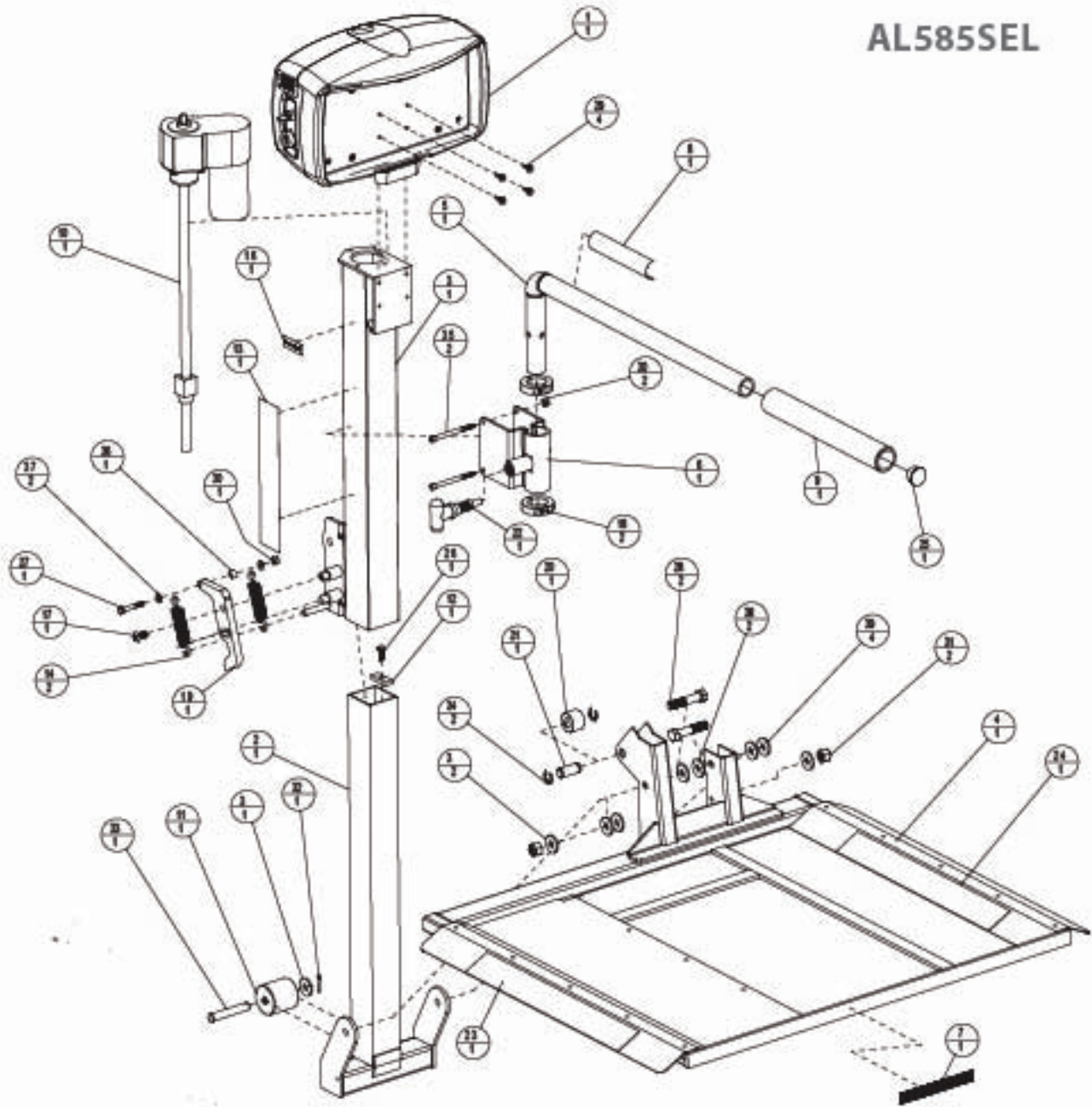
Exploded Views SECTION 2 : INSTALLER

AL580XL



ASSEMBLY PARTS				ASSEMBLY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	1	38-ZA8-C	INNER TUBE	20	1	H1484-S	CLEVIS PIN
2	1	38-ZA9-C	OUTER TUBE	21	1	H32010	RAMP ROD
3	1	38-ZA7-C	PLATE PIN	22	1	H3200R1	T-HANDLE SPRING PIN ASSY 3/8" PIN, BLUE
4	1	38-ZA5-C	HOLD DOWN ARM	23	1	H27010	ENTER/STICKER
5	1	38-ZA3-C	FORMED HOLD DOWN ARM BRACKET	24	2	H25102	1.25 DIAMETER END CAP
6	1	AA10059	FOAM RUBBER GRIP 13x LONG	25	1	18K250 2520-0 25-Z	HEX HEAD, 1/420X 5/16, 3P
7	1	AA10058	ACTUATOR	26	1	18K250 2520-1 25-Z	HEX HEAD, 1/420X 1/8, 3P
8	1	AA10052	ROLLER 2" DIA UNFIN	27	2	18K250 2513-2 25-Z	HEX HEAD, 1/413X 250, 3P
9	1	AA10055	2" DIA ACTUATOR	28	4	HMTS-M-0 25-Z	HEX WASHER, 8" SELF DRILL, 0.75, 2P
10	1	AA10055	SWITCH, OUTSIDE LIFT	29	3	NUT-0 25-25H Y LOCK-Z	NUT, NYLOCK, 1/4-20, 2P
11	2	AA11025	EXTENSION SPRING	30	2	NUT-0 25-13H Y LOCK-Z	NUT, NYLOCK, 1/4-13, 2P
12	1	AA11025	RED REFLECTIVE STICKER	31	1	PN40 13-1 25-00-00	COASTER PIN
13	1	AA1005	HARDWARE PACK	32	1	PN40 20-3 25-01-Z	CLEVIS PIN, 1/2" X 3/4, 3P
14	1	AA10055	LABEL, SERIAL NUMBER	33	4	RV1-00-00	RVET
15	1	SHCS-0 27-26-1 25-05HP	BUTTON HEAD 26-16-10000	34	2	RV1-0 25-00-Z	E-CLIP 26" SHAFT
16	2	COLLAR-1 25-0H-0P-Z	SHAFT COLLAR, 1-1/4" BORE	35	2	SHCS-0 25-20-3 25-Z	SHCS, 1/4-20 X 1-1/4, 2P
17	1	H1010	J-CAM	36	2	WASH-0 25-0 25-0 27-PH-00	WASHER, FLAT, 1/8", 00
18	1	38-ZA6-A	MOTOR COVER ASSEMBLY	37	5	WASH-0 25-1 27-0 27-PH-00	WASHER, FLAT, 1/8", 00
19	1	H1010	ROLLER	38	4	WASH-0 25-1 25-0 27-PH-P	WASHER, FLAT, 3/8", PLASTIC

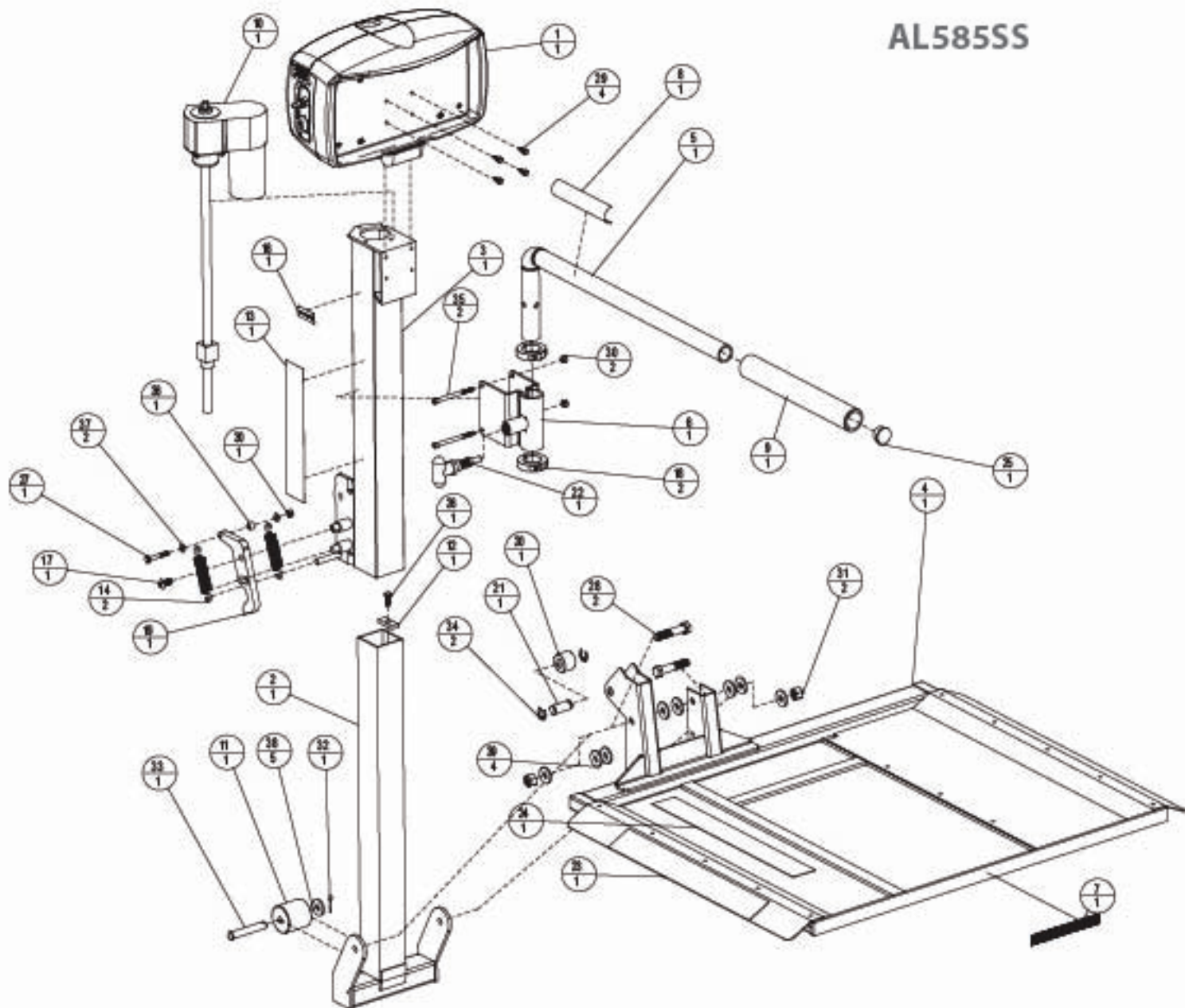
AL585SEL



ITEM	QTY	PART NO.	DESCRIPTION
1	1	200-090-A	MOTOR CASE, 4000 WAT, OUTSIDE LIFT
2	1	201-090-C	BRACKET
3	1	202-090-C	COUPLER
4	1	203-090-C	PLATFORM
5	1	204-090-C	WELDED ON ARM - TOP
6	1	205-090-C	FOAM SHEATH ON RUM BRACKET
7	1	206-090-A	3/8" DIA. ROLLER PLATE ON COIL
8	1	207-090-A	FOR SPRING OFF 2" DIA. R
9	1	AL585B	FOAM RUBBER ROLLER END
10	1	AL585C	ACTUATOR
11	1	AL585D	ROLLER 2" DIA. RUM
12	1	AL585E	THE ACTUATOR
13	1	AL585F	2" DIA. R. OUTSIDE LIFT
14	2	AL585G	EXTENSION SPRING
15	1	AL585H	WINDUP SPRING
16	1	AL585I	LEVEL, SERIAL NUMBER R
17	1	AL585J	BOTTOM HANGING LIFT BR
18	2	COLLAR_20-20-CP2	SHOULDER COLLAR 1/2" DIA
19	1	W100	1/2" DIA
20	1	W100R	ROLLER

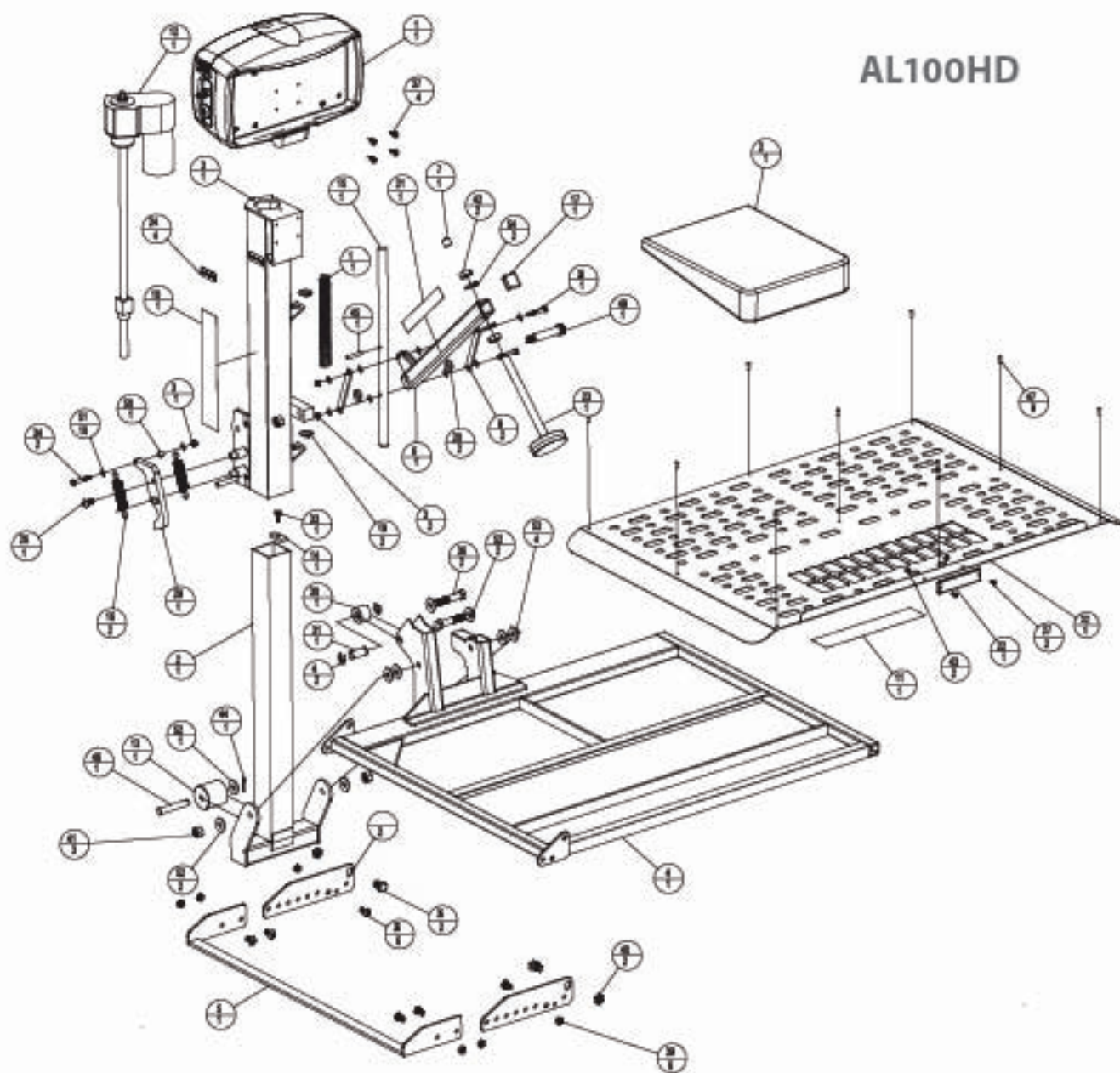
ITEM	QTY	PART NO.	DESCRIPTION
21	1	W100L	CLIMBER
22	1	W100M	THUMBLE SPRING PINS 21" DIA. R DIA
23	1	W100N	2" DIA. R DIA
24	1	W100O	2" DIA. R DIA
25	1	W100P	1/2" DIA. R DIA
26	1	W100Q	1/2" DIA. R DIA
27	1	W100R	1/2" DIA. R DIA
28	2	W100S	1/2" DIA. R DIA
29	4	W100T	1/2" DIA. R DIA
30	2	W100U	1/2" DIA. R DIA
31	2	W100V	1/2" DIA. R DIA
32	1	W100W	1/2" DIA. R DIA
33	1	W100X	1/2" DIA. R DIA
34	2	W100Y	1/2" DIA. R DIA
35	2	W100Z	1/2" DIA. R DIA
36	1	W100A	1/2" DIA. R DIA
37	2	W100B	1/2" DIA. R DIA
38	1	W100C	1/2" DIA. R DIA
39	4	W100D	1/2" DIA. R DIA

AL585SS



FUSE AND PART 2 AL585SS			
P/N	QTY	PART NO.	DESCRIPTION
1	1	200-24-01-A	MOTOR COVER, ASSEMBLY, OUTSIDE LEFT
2	1	201-24-08-C	ONE ROLLER
3	1	200-24-18-C	OUTER TUBE
4	1	200-20-05-C	PLATFORM
5	1	200-20-04-C	HOLD DOWN PIN - TOP
6	1	200-24-13-C	F FRAMEHOLD DOWN PIN BRACKET
7	1	MS-24-03-A	28 2.5MM HE DR REFLECTIVE STRIP R
8	1	MS-14-13-A	POWER ON/OFF STRIP R
9	1	AL4000	FORWARDER (R/F) ON LEAD
10	1	AL4000-02	ACT LEVER
11	1	AL4000	ROLLER/SLIDER
12	1	AL4000	TRAILER SLIDER
13	1	AL4000	STRUCKER, OUTSIDE LEFT
14	2	AL4100	SPRINGER SPRING
15	1	AL4000	WHEELS PIECE
16	1	AL4000	LABEL SPRING/ARMOR
17	1	MS-2-27-18-1-20-02-01-F	BUTTONHEAD 20 X 18 (1/8) SS
18	2	COLLAR 1/25 X 1/8-2	SHOFT COLLAR, 1/16" BORE
19	1	MS-20	JOINT

ASSEMBLY PARTS AL585SS			
P/N	QTY	PART NO.	DESCRIPTION
20	1	MS004	ROLLER
21	1	MS005	CLAMP PIN
22	1	MS00001	1 HANDLE SPRING PIN/SHOFT PIN, BLUE
23	1	MS1001	TRAILER SLIDER
24	1	MS1002	TRAILER SLIDER
25	1	MS1003	1/25 DIAMS TRAILER SHIP
26	1	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
27	1	MS-25-25-1-25-2	MS-25-25-0-2-01-F
28	2	MS-25-25-2-25-2	MS-25-25-0-2-01-F
29	4	MS-25-25-2-25-2	MS-25-25-0-2-01-F
30	3	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
31	2	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
32	1	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
33	1	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
34	2	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
35	2	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
36	1	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
37	2	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
38	3	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F
39	4	MS-25-25-0-2-01-F	MS-25-25-0-2-01-F

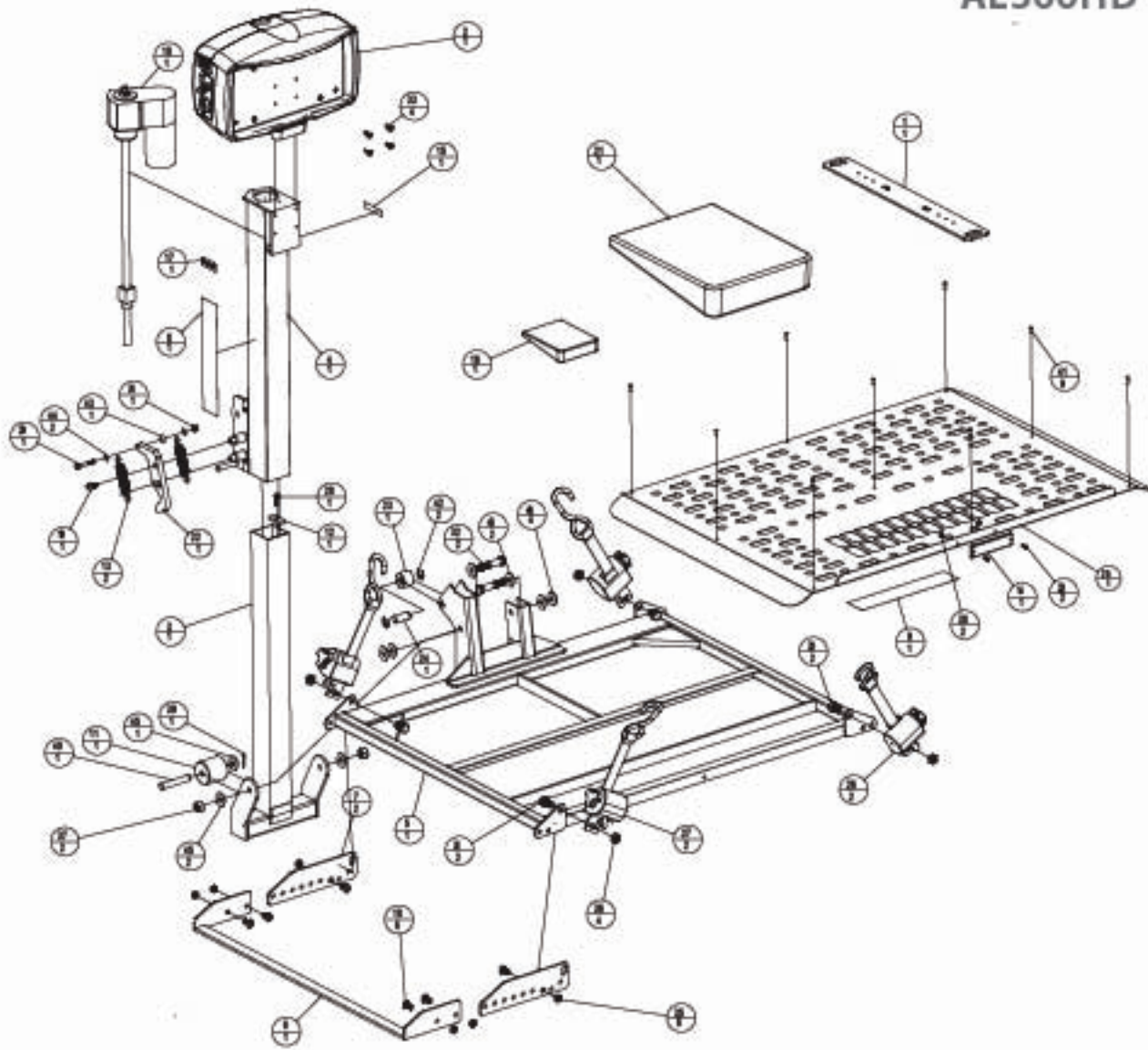


AL100HD

ITEM	QTY	PART NO.	ASSEMBLY PARTS	DESCRIPTION
1	1	230401-A		MOTOR COVER ASSEMBLY OUTSIDE LIFT
2	1	312006-C		INNER TUBE
3	1	312006-C		OUTER TUBE
4	1	312006-C		ALUMINUM PLATFORM
5	1	312006-C		EXTENDED CRADLE BAR
6	1	312006-C		HOLD DOWN ARM
7	1	410006-A		WHL. CAP FOR 100 D5110
8	2	312006-C		SPEAKER BAR BRACKET
9	2	312006-C		BAR, LMR, SWP
10	1	110001-A		NO OUTSIDE PROXIMITY
11	1	110006-A		STICKER, PLASFORM
12	1	AA100002		ACCURATOR
13	1	AA1000		ROLLER PDM LMRW
14	1	AA1000		TIRE, ACTUATOR
15	1	A.A00011		HOLD DOWN ARM ROD
16	2	A.A0002		EXTENSION SPRING
17	1	A.A0001		INSIDE, 1/4" BLACK PLATE
18	1	AA1000		COMPRESSOR SPRING
19	2	AA1000		HYLUMAR BEARING-3/4"
20	2	AA1000P		HOLD DOWN ARM WASHER
21	1	AA1000		STICKER, CAUTION HOLD DOWN ARM
22	1	AA1000		RED LABEL, MOTOR
23	1	AA1000		HOLD DOWN FOOT
24	4	AA1000		LABEL, SERIAL NUMBER
25	1	BKCS4 21-25-1 75-30		BUTTON HEAD 364X 67X 55
26	1	BKCS4 21-25-1 840-24P		BUTTON HEAD 364X 138 55
27	2	BKCS4 21-25-1 90-30		BUTTON HEAD, 36-34 X 58, 30

ITEM	QTY	PART NO.	ASSEMBLY PARTS	DESCRIPTION
28	1	H03001A		HEXAGON NUT/SCREW
29	1	H0000		ACAM
30	1	H0000		ROLLER
31	1	H0000		CLEVERPIN
32	1	H0000		ALUMINUM PLATE
33	1	H0000 2024-75HP-2		HEXHEAD, 5/16X 1 7/8, 2P
34	2	H0000 2024-1 75-2		HEXHEAD, 5/16X 1 7/8, 2P
35	2	H0000 2024-1 75-2		HEXHEAD, 5/16X 1 7/8, 2P
36	2	H0000 2024-1 75-2		HEXHEAD, 5/16X 1 7/8, 2P
37	4	H0000 2 75-2		HEX WASHER, 5/16 SELF DRILL, 5/16, 2P
38	2	NUTS 20-4000-2		NUT, LOCK, 20-40, 2P
39	5	NUTS 20-4000-2		NUT, LOCK, 20-40, 2P
40	2	NUTS 20-4000-2		NUT, LOCK, 20-40, 2P
41	2	NUTS 20-4000-2		NUT, LOCK, 20-40, 2P
42	2	NUTS 20-4000-2		NUT, LOCK, 20-40, 2P
43	2	NUTS 20-4000-2		NUT, LOCK, 20-40, 2P
44	1	PN4 20-1 20-CO-00		COTTER PIN
45	1	PN4 25-1 20P-2		ROLLER, 5/16 X 1 3/8, 2P
46	1	PN4 20-1 20-CO-2		CLAYTON 107X 7/16, 2P
47	8	RL0000		RIVET
48	2	RR4 1000-2		6-0, 1/8" DIA
49	1	SR000 20-2 20-2		SHOULDER BOLT, 3/8 DIA, 2 1/2, 2P
50	1	SR000 20-2 20-2		SHOULDER BOLT, 3/8 DIA, 2 1/2, 2P
51	30	W000 250 250 000000		WASHER, FLAT, 3/16 X 5/8
52	5	W000 250 250 000000		WASHER, FLAT, 3/16 X 5/8
53	4	W000 20-1 20-1 13M		WASHER, FLAT, 3/16 X 1 3/8
54	2	W000 250 250 000000		WASHER, SPLOT LOCK, 1/8, 2P

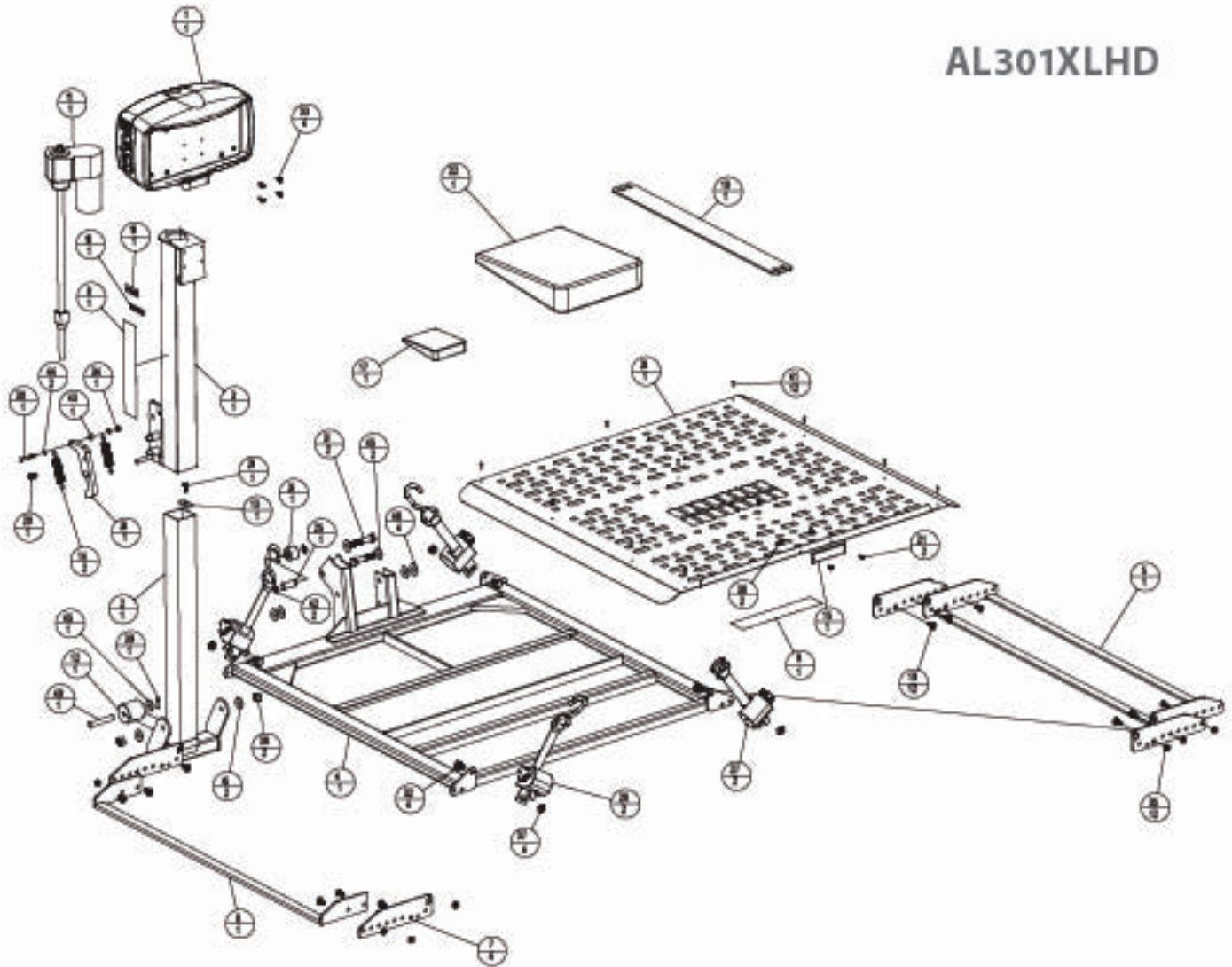
AL300HD



ITEM	QTY	PART NO.	ASSEMBLY PARTS	DESCRIPTION
1	1	99-3P9C		3" ANCHOR PLATE
2	1	26-2A1-A		WORD R CORNER ASSEMBLY, OUTSIDE LEFT
3	1	26-2A2-C		INSERT TUBE
4	1	26-2A1-C		OUTER TUBE
5	1	26-2A1C		HD FLAP OPEN
6	1	26-2A2-C		OUTER TUBE
7	2	26-2A2-C		SPREADER BAR BRACKET
8	1	99-2A1-A		HD OUTSIDE LIFT STRIKER
9	1	99-2A1-A		STRIKER PLATFORM
10	1	ALA100RFD2		ACTUATOR
11	1	ALA1002		ROLLER 2" DIA/3MM
12	1	ALA1005		TIE, ACTUATOR
13	2	ALA1100		EXTENSION SPRING
14	1	ALA1004		RED REFLECTOR
15	1	ALA1006		PARENT STRIKER
16	1	ALA100		LEVEL HARDWARE KIT
17	1	ALA1005		LEVEL, SERIAL NUMBER
18	8	HC24 25-16-1 75-00		BUTTON HEAD, 25-16-1 075, 00
19	1	HC24 25-16-1 040-0P		BUTTON HEAD 25-16-1 100-00
20	2	HC24 25-16-1 25-00		BUTTON HEAD, 25-16-1 25, 00
21	1	H25M1-A		HD HARDWARE PACK
22	1	H15 00		JOIM
23	1	H16M		ROLLER

ITEM	QTY	PART NO.	ASSEMBLY PARTS	DESCRIPTION
24	1	H16M5		CLUBS PIN
25	1	H16M7		ALUMINUM PLATE
26	2	H16M8		LEFT HAND, O-RING KIT - BLUE
27	2	H16M9		RIGHT HAND, O-RING KIT - BLUE
28	1	HC24 25-16-1 75-02		HD: HEAD, 1/4" X 1/2" X 1/2", 2P
29	1	HC24 25-16-1 75-2		HD: HEAD, 1/4" X 1/2" X 1/2", 2P
30	2	HC24 25-16-1 75-2		HD: HEAD, 1/4" X 1/2" X 1/2", 2P
31	2	HC24 25-16-1 75-2		HD: HEAD, 1/4" X 1/2" X 1/2", 2P
32	2	HC24 25-16-1 75-2		HD: HEAD, 1/4" X 1/2" X 1/2", 2P
33	4	HMTS-14-1 75-2		HEX NUTS, 1/4" X 1/2" X 1/2", 2P
34	1	M16 25-2A1YLOCK-2		NUT, NYLOCK, 1/4" X 1/2", 2P
35	2	M16 25-2A1YLOCK-2		NYLOCK NUT, 25-16-1 75-2, 2P
36	4	M16 25-2A1YLOCK-2		NYLOCK NUT, 25-16-1 75-2, 2P
37	2	M16 25-2A1YLOCK-2		NUT, NYLOCK, 1/4" X 1/2", 2P
38	2	M16 25-2A1YLOCK-2		NUT, NYLOCK, 1/4" X 1/2", 2P
39	1	FR-1 0-1 000-00		COTTER PIN
40	1	FR-1 0-1 000-00		CLUBS PIN, 1/4" X 1/2", 2P
41	2	FR-1 0-1 000-00		R-NUT
42	2	FR-1 0-1 000-00		G.O.P.R. KIT
43	1	SPC-1 25-16-1 25-11		SPACER, 1/4" X 1/2" X 1/2", 2P
44	2	W16H 25-16-1 00-00		WASHER, FLAT, 1/4", 00
45	2	W16H 25-16-1 00-00		WASHER, FLAT, 1/4", 00
46	4	W16H 25-16-1 12H		WASHER, FLAT, 1/4", 12H

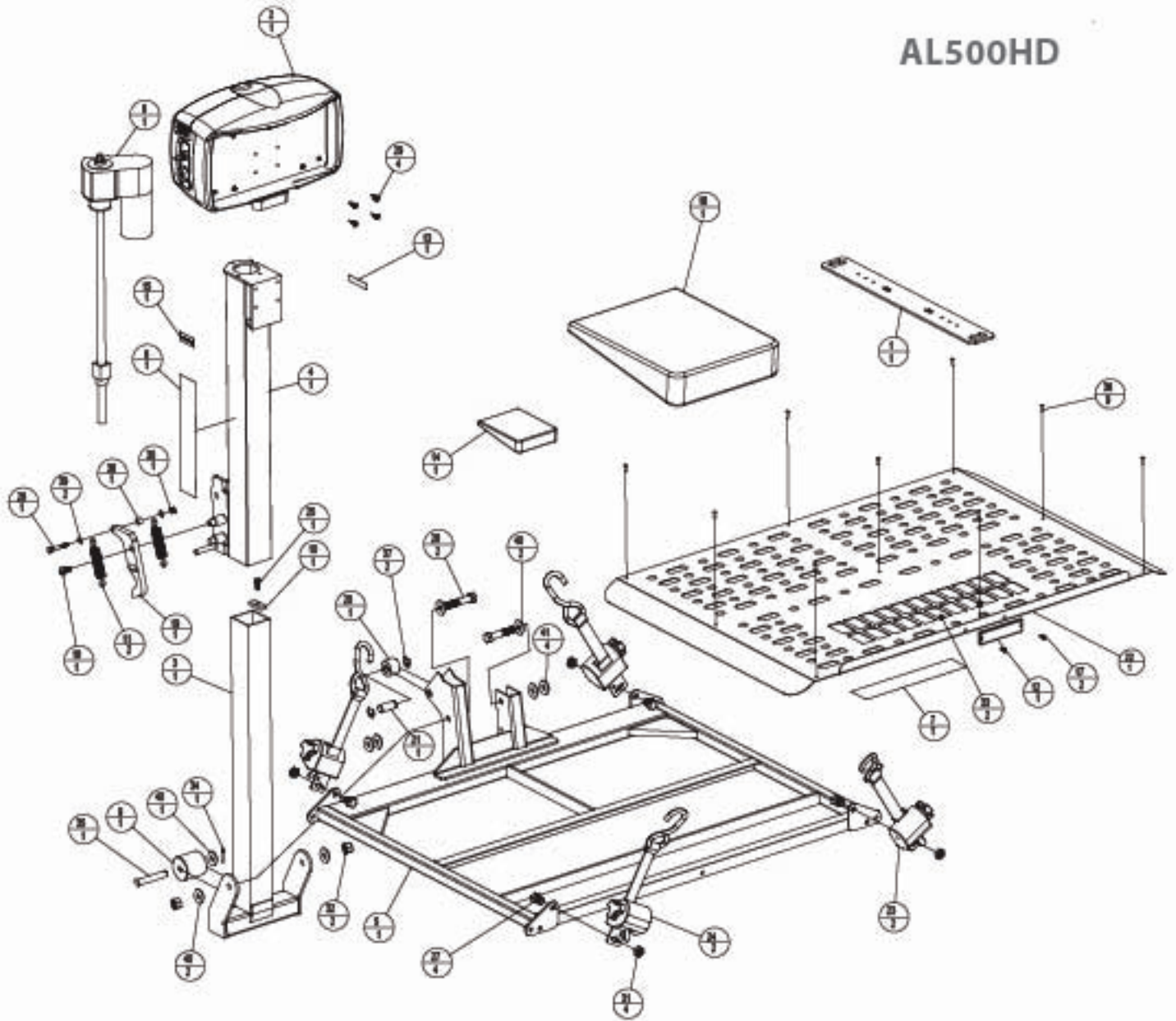
AL301XLHD



ASSEMBY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
1	1	353041A	MOTOR COVER, ASSEMBLY, OUTSIDE LIFTS
2	1	35-2A9C	INNER TUBE
3	1	35-2A9C	OUTER TUBE
4	1	35-2A4C	XL HD PLATFORM
5	1	35-2A9C	ALUMINUM FRONT WHEEL CHAIRS
6	1	35-2A9C	A 3/8" BUSHING CHAIRS
7	4	35-2A9C	SPREADER BAR BRACKET
8	1	353041A	HD OUTSIDE LIFTS/CHER
9	1	353041A	ITCHER PLATFORM
10	1	AL301	ANCHOR PLATE, STEEL
11	1	AL301SPND	ACTUATOR
12	1	AL301R	ROLLER PLATE/STEEL
13	1	AL301R	TRK, ACTUATOR
14	2	AL301S	SPACER/STEEL
15	1	AL301R	RED REFLECTOR
16	1	AL301R	PARENTS/CHER
17	1	AL301	U-BOLTS/STEEL
18	1	AL301R	LABEL, SERIAL NUMBER
19	12	BHCS 35-2A-4 7545	BUTTON HEAD 3/16" 3/16, SS
20	1	BHCS 35-2A-1 35-2A-4P	BUTTON HEAD 1/8" 1.3855
21	2	BHCS 35-2A-1 35-2A-4P	BHCS 35-2A-1 35-2A-4P
22	1	H3541-A	HD HIGHBACKPACK
23	1	H3541	JCM

ASSEMBY PARTS			
ITEM	QTY	PART NO.	DESCRIPTION
24	1	H3541	ROLLER
25	1	H3541	CLEVER PIN
26	1	H3541	ALUMINUM SHIM 3/16"
27	2	H3541	LEFT HAND, OUTERMAT - BLUE
28	2	H3541	RIGHT HAND, OUTERMAT - BLUE
29	1	H3541 35-2A-4 7545P-Z	HEXHEAD, 3/16" X 1/2", 3P
30	1	H3541 35-2A-1 752	HEXHEAD, 3/16" X 1/2", 3P
31	2	H3541 35-2A-1 752	HEXHEAD, 3/16" X 1/2", 3P
32	4	H3541 35-2A-1 752	HCS, 3/16" NYLON/BRASS/STEEL
33	4	H3541 35-2A-1 752	HEXWASHER, 3/16" X 1/2", 3P
34	1	H3541 35-2A-1 752	NUT W/LOC, 3/16", 3P STEEL
35	12	H3541 35-2A-1 752	WASHER, 3/16", 3P STEEL
36	2	H3541 35-2A-1 752	NUT W/LOC, 3/16", 3P STEEL
37	4	H3541 35-2A-1 752	TRIMMER, W/LOC, 3/16", 3P
38	2	H3541 35-2A-1 752	WASHER, 3/16", 3P
39	1	H3541 35-2A-1 752	COTTER PIN
40	1	H3541 35-2A-1 752	CLEVER PIN 1/8" X 1/2", 3P
41	12	H3541 35-2A-1 752	RIVET
42	2	H3541 35-2A-1 752	5-CLIP, 3/16" SHFT
43	1	H3541 35-2A-1 752	SPRINGER, 3/16" X 1/2", 3P
44	2	H3541 35-2A-1 752	WASHER, 3/16", 3P, SS
45	1	H3541 35-2A-1 752	WASHER, 3/16", 3P, SS
46	4	H3541 35-2A-1 752	WASHER, 3/16", 3P, PLASTIC

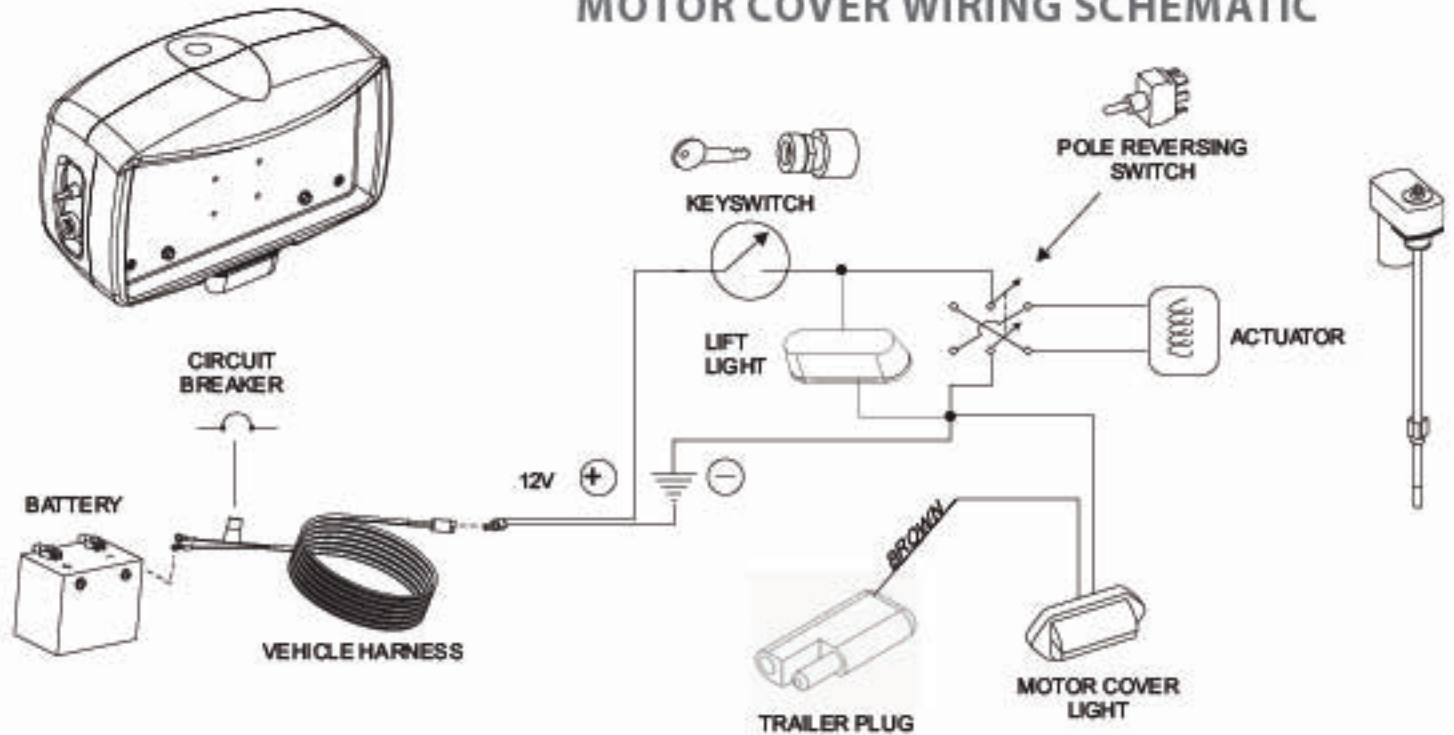
AL500HD



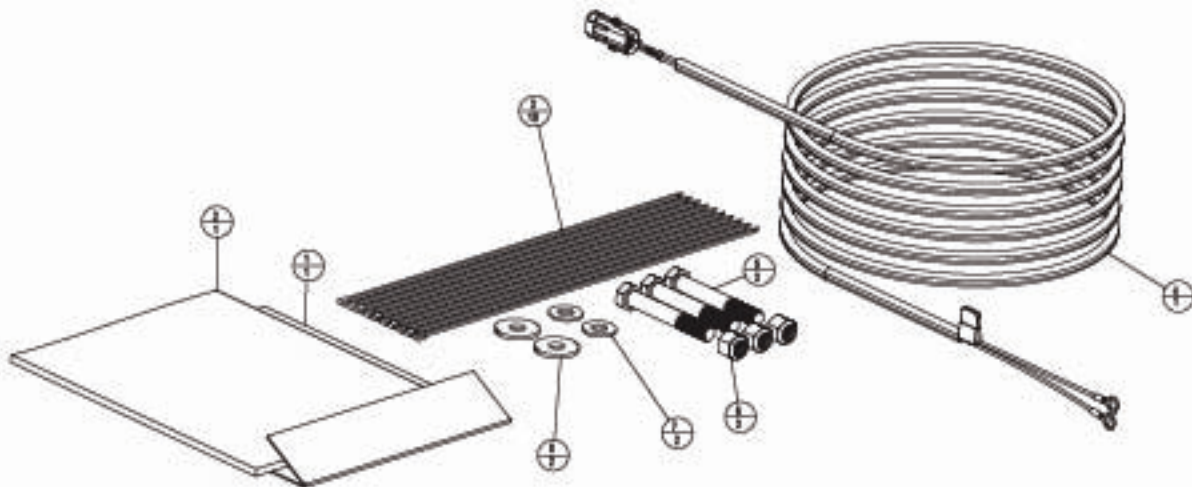
ITEM		QTY	PARTNO.	DESCRIPTION
1	1	1	1B-3P3C	3P ANCHOR PLATE
2	1	1	2B-2A1A	MO TOR COVER ASSEMBLY, OUTSIDE LEFT
3	1	1	2B1ZAMB	INNER TUBE
4	1	1	2B2ZABC	OUTER TUBE
5	1	1	2B-2M1C	1D PLATFORM
6	1	1	2B-2M1A	1D OUTSIDE LEFT STOPPER
7	1	1	2B-2M2A	STOPPER, PLATFORM
8	1	1	ALA1B1REV2	ACTUATOR
9	1	1	ALA1B2	ROLLER 2" DIA/ALUMN
10	1	1	ALA1B3	3IN. ACTUATOR
11	2	2	ALA1B5	EXTENSION SPRING
12	1	1	ALA1B4	RED REFLECTOR
13	1	1	ALA1B6	WEIGHTS COVER
14	1	1	ALA1B	WEIGHT HARDWARE KIT
15	1	1	ALA1B5	LABEL, SERIAL NUMBER
16	1	1	BHCS-27-16-1 B40HP	BUTTON HEAD 3 - 1/8 X 1/8 SS
17	2	2	BHCS-16H-4 SS-SS	BUTTON HEAD, PH-24 X 1/8 SS
18	1	1	H8-2M1-A	1D HARDWARE PACK
19	1	1	HT100	JOIM
20	1	1	HWH	ROLLER

ITEM		QTY	PARTNO.	DESCRIPTION
21	1	1	HWH5	CLEVER RH
22	1	1	HWH7	ALUMINUM PLATE
23	2	2	H8000	LEFT HAND, G-STRAP - BLUE
24	2	2	H8070	RIGHT HAND, G-STRAP - BLUE
25	1	1	HKCS-25-25-2 25HP-2	HEX HEAD, 1/4X1/4X 1/2
26	1	1	HKCS-24-1 25-2	HEX HEAD, 1/4X1/4X 1/2
27	4	4	HKCS-24-2 25-2	HEX HEAD, 1/8X1/8X 1/2
28	2	2	HKCS-24-3 25-2	HEX HEAD, 1/8X1/8X 1/2
29	4	4	HWS-14-2 25-2	HEX WASHER, PH SELF DRILL, 0.25, 3P
30	1	1	NUT-25-24X1/8X2	NUT, W/LOX, 1/4X 1/2
31	4	4	NUT-25-15-HL-00X1/2	THIN NUT, W/LOX, 1/8-1/2
32	2	2	NUT-25-24X1/8X2	NUT, W/LOX, 1/8X 1/2
33	2	2	NUT-24X1/8X1/2	NUT, W/LOX, PH-24, 3P
34	1	1	PH-2 1/2-1 B40-SS	COTTER PIN
35	1	1	PH-2 1/2-1 B40-2	CLEVER RH 1/2" X 1/2", 2P
36	1	1	PH-1/8-SS	RIVET
37	2	2	PH-2 1/2-1 B40-2	COTTER PIN
38	1	1	SPCR-25-2 1/4-1 24-H	SPACER, 1/4" G-STRAP
39	2	2	WASHE 24 1/8-2 1/4-SS	WASHER, FLAT, 1/8", SS
40	2	2	WASHE 24 1/8-2 1/4-SS	WASHER, FLAT, 1/8", SS
41	4	4	WASHE 1/4 1/8-2 1/4-13H	WASHER, FLAT, 1/8", W/LOX

MOTOR COVER WIRING SCHEMATIC



TYPICAL HARDWARE PACK CONTENTS



		ASSEMBLY PARTS	
ITEM	QTY	PART NO.	DESCRIPTION
1	1	NA	WARRANTY FORM
2	1	NA	OWNER MANUAL
3	10	0744-BLK	CABLE, 1/2" BLACK
4	1	1610	3/8 GAGE METAL WIRE HARNESS
5	2	WHS-2 24-34 24-2	HD NUTCAPSCREW 2 3/8 X 1/8", 2P
6	2	WHS-2 24-34 24-2	NUT BLOCK, 24-34, 2P
7	2	WHS-2 24-34 24-2	WASHER, FLAT, 1/2" ID X 1/8" OD X 3/16", 2P
8	2	WHS-2 24-34 24-2	WASHER, FLAT, 1/2" ID X 1/8" OD X 3/16", 2P



VEHICLE LIFTS THREE YEAR TRANSFERABLE LIMITED WARRANTY

PLEASE FILL OUT ALL FIELDS AND RETURN A COPY.

Fax completed form to 1-866-234-5680 or mail to Harmar, ATTN: Warranty Department, 2075 47th Street, Sarasota, Florida 34234. You may also register online at www.harmar.com. Keep a copy of this form for your records.

Harmar Mobility warrants its lift products against defects in material, mechanical and electrical components (parts), excluding labor cost, batteries, paint and covers, for a period of three (3) years from date of retail purchase, provided that the products have been installed, maintained and operated properly. This warranty does not cover defects in vehicles on which Harmar products are installed or defects in Harmar products caused by defects in any part of the vehicle upon which the product is installed. This warranty does not cover maintenance or adjustments. Harmar will not be charged for labor, consequential damage or repair expenses. Harmar will not, under any circumstances, be liable for the loss of the use of its products or loss of time. This warranty becomes null and void if the product has been lost, damaged by accident, over-stressed, misused and/or neglected, or if the product has been modified in any way. Defective parts must be returned, prepaid, to Harmar at the address listed above, for inspection prior to credit, repair or replacement, at Harmar's option. Harmar's sole obligation and the exclusive remedy under this warranty is limited to such credit, repair or replacement.

THIS EXPRESS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, INCLUDING ALL IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION OF THE LIMITED WARRANTY DESCRIBED HEREIN. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH VARY FROM STATE TO STATE.

PRODUCT INFORMATION

Model: _____
Serial Number: _____
Purchase Date: _____

INSTALLER INFORMATION

Company Name: _____
Contact Name: _____
Address: _____

Phone: _____
Fax: _____
Email: _____

APPLICATION INFORMATION

Scooter Power Chair Wheelchair
Year: _____
Manufacturer: _____
Model: _____

PURCHASER INFORMATION

Name: _____
Address: _____

Phone: _____
Email: _____

ADDITIONAL INFORMATION

How did you hear about Harmar?

- Harmar Dealer Friend or Acquaintance
 Internet Saw Harmar product somewhere
 Magazine Other _____

Which _____

Do you have internet access? Yes No

I purchased my Harmar lift because of?

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

Outside Lifts

Installation & Owner's Manual



Harmar.

America's Lift Leader™

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