

# Wheelchair Trailer Lift

## Operations & Parts Manual

Maintenance Schedule



Keith Consolidated Industries  
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- Overview •



The KCI Wheelchair Trailer lift was designed to aid in the loading and unloading of powered wheelchairs to and from the aircraft cargo hold. Traditional loading and unloading methods were such that damage to the chair, aircraft or injury to personnel could occur. With the introduction of the Wheelchair Trailer Lift powered chairs can be loaded into the “barge” at ground level and transferred to the aircraft without heavy lifting. With the chair securely restrained in the barge, transfer to the cargo hold is seamless!

## • Operations •

### • *Tow Bar and Towing* •

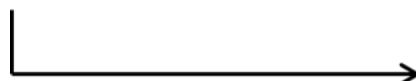
1. While pushing the Towbar towards the wheels, lift the yellow safety latch.



2. With the safety latch lifted, lower the towbar, attach to towing apparatus.



3. When towing is complete, disconnect the towbar from the towing apparatus and lift until yellow safety latch engages.



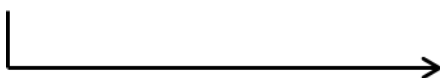
**The towbar must always be in the up and locked position when not attached to a towing apparatus.**



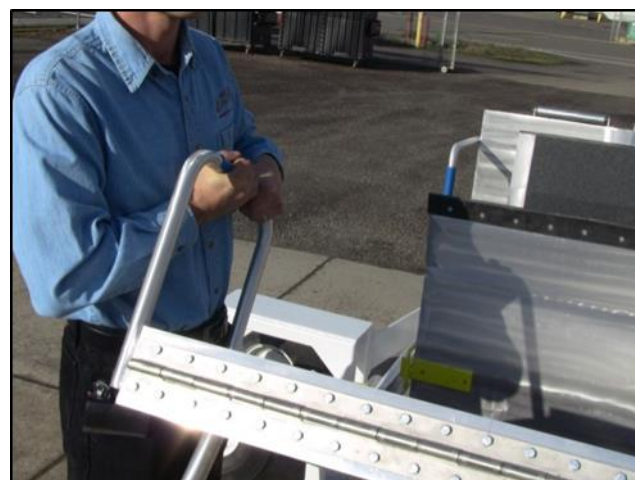
## • Operations •

### • *Operating the Loading/Unloading Ramp* •

1. Grasp the handrail of the ramp to be lowered, depress the yellow safety latch as shown.



2. Begin to lower the ramp, once the ramp has cleared the safety latch, both hands may be used to assist in the lowering.



3. Lower the ramp completely to the ground. Do not allow the ramp to drop of its own weight, damage to equipment or personnel could occur.



## • Operations •

### • *Operating the Loading/Unloading Ramp* •

4. Once the main ramp has been fully lowered, grasp the small underside handle and lift so as to deploy the flip extension.



5. Grasping the flip extension with both hands, continue to lower the extension to the ground.



6. Gently rest the extension on the ground. Do not allow the extension to fall or drop of its own weight.



## • Operations •

### • *Operating the Loading/Unloading Ramp* •

Once the main ramp has been deployed, it is necessary to prepare the transition ramp for use.

7. Lift up on the yellow safety latch and begin lowering the transition ramp.



8. Lower the transition ramp until it rests on the main loading/unloading ramp.



9. Unbuckle and place the wheelchair restraint belt outside of the transition ramp or wheelchair barge


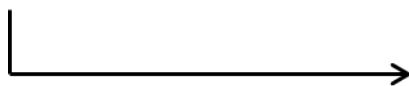




## • Operations •


### • *Loading the Wheelchair* •

Prior to loading any wheelchair, verify it has been placed in neutral.

1. Standing behind the wheelchair, firmly push it up the ramp. 
2. Continue up the ramp until the wheelchair is completely within the barge and is centered for proper use of the restraint belt. 



**Caution should be exercised during loading of the Wheelchair as it will be in neutral. Maintain a secure grasp and firm footing until barge ramp is in the up and locked position.**

3. While holding the yellow safety latch up, lift the transition ramp to its upright position. Lower the yellow safety latch to secure the transition ramp. 





## • Operations •

### • *Loading the Wheelchair* •

4. Lift the flip extension off the ground and over onto the ramp. →



5. Lift the ramp with both hands to the vertical position. This will allow the yellow safety latch to reengage. →



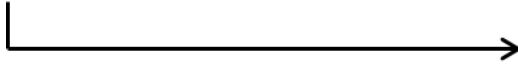
6. Ensure that the yellow safety latch is locked in place before releasing the ramp. →



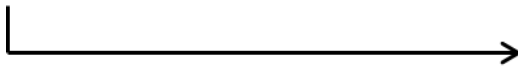
## • Operations •

### • *Securing the Wheelchair* •

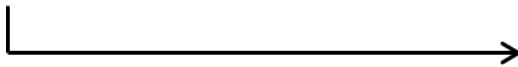
1. Extend the restraining belt to provide adequate length to go completely over the wheelchair.



2. Place the restraint belt over the wheelchair in a secure location, such as over the armrests or seat.



3. Once the restraint belt is in the proper position, place the small metal flap into the buckle until it clicks. Remove any excess slack by pulling the loose end of the belt until it is tight.



The wheelchair is now secure and ready for travel.

## • Operations •

### • *Raising and Lowering the Lift* •

1. To raise the lift, step on the foot lever to pump the hydraulic cylinder. Continue pumping the foot lever until the desired height is achieved.



2. To lower the lift, pull the release handle upwards to release pressure from the hydraulic cylinder. Continue until desired height is achieved.





## • Operations •

### • *Loading onto Aircraft* •

1. With the trailer attached to a tug, approach the belt loader from the rear of the plane (if the belt loader is deployed on the port side, when the belt loader is deployed starboard, approach from the front.) This will ensure the proper transition ramp is facing the belt loader.
2. Align the transition ramp with the belt loader approximately one foot away from the end of the belt loader. Raise the lift until it is approximately 6 inches above the belt loader height.
3. Unbuckle the restraining belt and place the loose ends inside the barge. Ensure the power chair is in neutral.
4. Depress the yellow safety latch so as to release the transition ramp. →



**CAUTION-** The belt loader must be stopped prior to completing step 5 below.

5. Ensure the lift is adjusted to the proper unloading height. Lower the transition ramp to the surface of the belt loader. →



## • Operations •

### • Loading onto Aircraft •

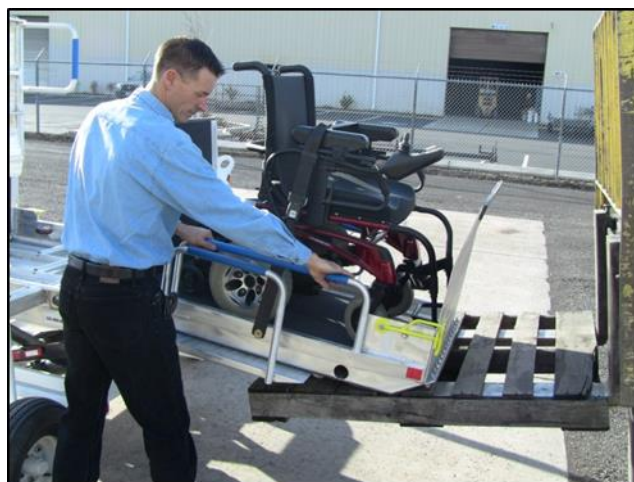
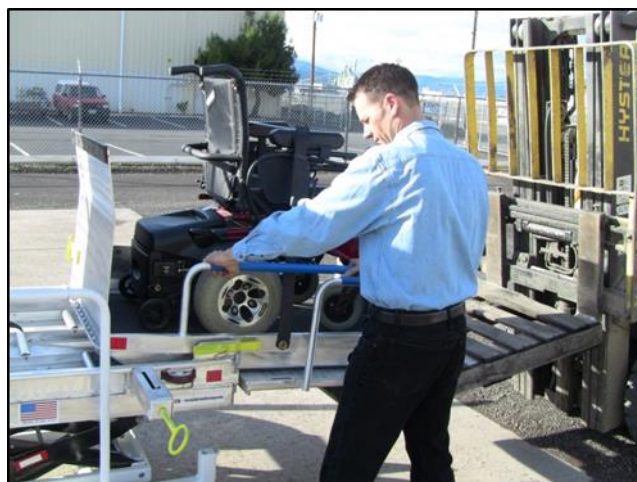
6. Pull the yellow locking pin so as to unlock and release the barge. →



7. Twist the yellow locking pin into the key slot to lock into the open position. →



8. With the belt loader running upwards, grasp the barge handrail with both hands and pull onto moving belt.



## • Operations •

### •Loading onto Aircraft•

9. Once the barge reaches the belt loader, the belt loader will assist in pulling the barge out of the trailer. As this is happening, ensure proper alignment onto the belt. ***It is imperative the barge not be crooked as it ascends/descends the belt loader.***
10. When the wheelchair reaches the top of the belt loader, the belt must be stopped to prepare for unloading into the cargo compartment of the aircraft.
11. Once the belt loader comes to a stop, depress the yellow safety latch to release the transition ramp.
12. Pull the wheelchair out of the barge and into the cargo compartment of the aircraft.
13. Lift the transition ramp until it locks with the yellow safety latch.
14. Lower the trailer to properly receive the unloaded barge.



**Transition ramp shown level with trailer in preparation to unload**



**Trailer shown slightly lower than belt loader to receive unloaded barge.**

15. Change the direction of the belt loader to descending and turn the belt loader on to send the barge back to the lift.
16. Pull the barge back into the lift and secure by releasing the yellow locking pin.
17. Raise the transition ramp until it locks with the yellow safety latch.
18. Lower the lift to its lowest position. The lift is now ready for travel.

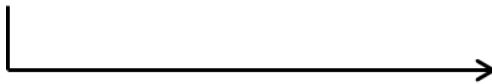


## • Operations •

### •Unloading from the Aircraft •

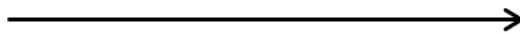
1. With the trailer attached to a tug, approach the belt loader from the rear of the aircraft, (if the belt loader is deployed on the port side of the aircraft, when the belt loader is deployed starboard, approach from the front.) This will ensure the proper transition ramp is facing the belt loader.
2. Align the transition ramp with the belt loader approximately one foot away from the end of the belt loader. Raise the lift until it is approximately 6 inches above the belt height.
3. Unbuckle the restraining belt and place loose ends inside the barge.

4. Depress the yellow safety latch to release the transition ramp.



**CAUTION-**The belt loader must be stopped prior to completion of step 5 below.

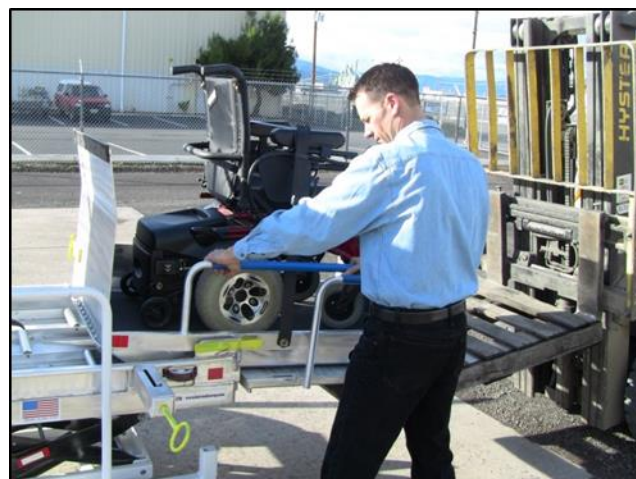
5. Lower the transition ramp to the surface of the belt loader, ensuring the lift is adjusted to the proper height.



## • Operations •

### • *Unloading from the Aircraft* •

6. Pull the yellow locking pin and twist into the key slot to unlock and release the barge.
7. With the belt loader running, grasp the handrail of the empty barge with both hands and pull onto the moving belt. Once the barge reaches the belt, the belt loader will assist in pulling the barge out of the trailer. As this is happening, ensure proper alignment of the barge onto the belt.
8. Once the barge has reached the top of the belt loader, the belt must be stopped to prepare for unloading the wheelchair from the cargo hold of the aircraft.
9. Once the belt loader has come to a stop, depress the yellow safety latch to release the transition ramp.
10. Remove the wheelchair from the cargo hold of the aircraft and load into the barge. Secure wheelchair using restraint belt, lift the transition ramp and ensure yellow safety latch is engaged.
11. Adjust the height of the lift to receive the now loaded barge.



## • Operations •

### • *Unloading from the aircraft* •

12. Change the direction of the belt loader to descending and turn the belt loader on to send the barge and wheelchair down to the lift.
13. Pull the barge and wheelchair into the lift and secure by releasing the locking pin.
14. Raise the transition ramp until the yellow safety latch is fully engaged.
15. Ensure the restraining belt is secure; lower the lift to its lowest position. The lift is now ready for travel.





## ***Warnings and Restrictions Summary***



1. It is the responsibility of the operating staff to ensure that the aircraft is not damaged when using the KCI Wheelchair trailer lift.
2. When performing preventative maintenance, it is required to deploy the mechanical safety locks to prevent accidental lowering of the scissor lift.
3. To ensure the aircraft is not damaged, the lift should never come in contact with the aircraft.
4. Only trained and authorized personnel should raise, lower, or adjust the lift, operate the hydraulic mechanism, adjust the lift's height, or load powered chairs into the lift.
5. Under no circumstances should the Wheelchair Trailer Lift be raised, lowered, moved, or towed with any person on it.
6. Water, ice, snow, or any other natural or foreign substance should not be allowed to accumulate on the lift's surface.
7. The lift should be inspected before each use to assure a clean and unobstructed pathway.
8. The Wheelchair Trailer Lift is not to be towed at speeds exceeding 10 mph and should always be stowed when not in use. Do not back up using the tow bar.
9. The Transition Ramps should always be up and locked when not in use.
10. The adhesive non-skid surface affixed to the lift will lose its traction enhancing properties over time, depending on the extent of usage and climatic conditions, which exist at each airport. Replacing non-skid surface is the responsibility of the wheelchair trailer lift owner; material can be obtained directly from KCI.
11. Do not let the transition Ramps drop of their own weight.
12. Qualified airport ground crew personnel or airline personnel should always be present when the lift is in use.
13. The ramp and the bridges have been designed solely for the usual and customary operation of loading and deplaning of qualifying aircraft. Any other use is strictly forbidden, and voids any and all warranties relating to the Wheelchair Trailer Lift.



## ***Warnings and Restrictions Summary***



14. Never tow the Wheelchair trailer in a raised or slightly raised position! The lift must be lowered to its lowest setting prior to towing.
15. The belt loader must be fully stopped prior to lowering the transition ramp.
16. The Wheelchair Trailer lift has a maximum capacity of 700 lbs.

## • Preventative Maintenance Checklist •

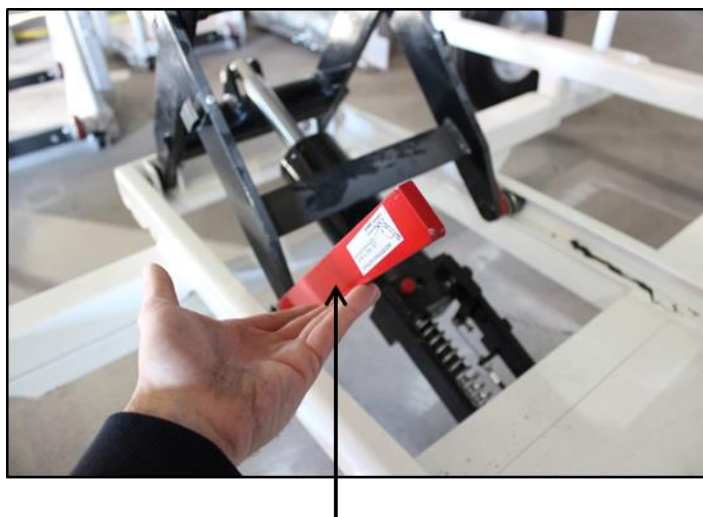
The following is a general maintenance checklist which covers the major components of your Wheelchair Trailer Lift. It is recommended that the following be checked regularly as scheduled to ensure proper function, longevity, and serviceability of your Wheelchair Trailer Lift.

COMPONENT	SUGGESTED ACTION	SCHEDULE		
		Monthly	Quarterly	Bi-Annually
<b>WHEELS</b>	Grease swivel wheels and pillow block bearings.			
<b>STRUCTURAL</b>	General Check: Loose bolts, etc. tightened. Cracks, broken areas.			
<b>TIRES</b>	Inspect for serviceability.			
<b>HYDRAULICS</b>	Check cylinder fluid level			

## • Preventative Maintenance •

### ! • Safety • !

The mechanical safety locks **MUST** be deployed any time maintenance is being performed. Failure to do so could cause injury to personnel or damage to equipment.



Safety lock shown being deployed

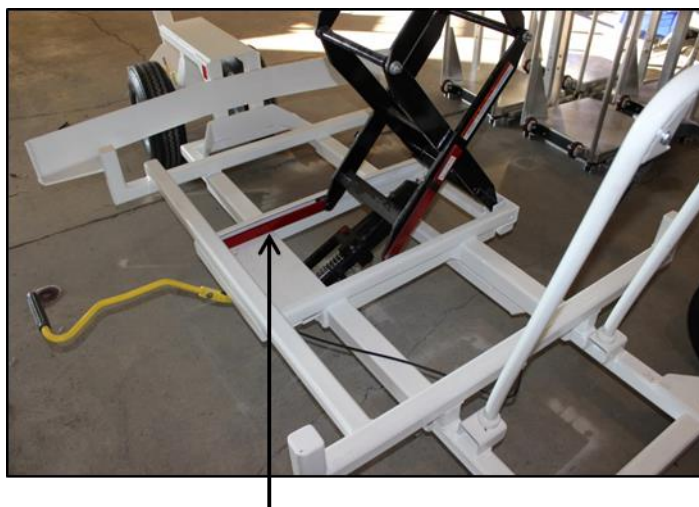


Image showing deployed safety lock



## • Preventative Maintenance •

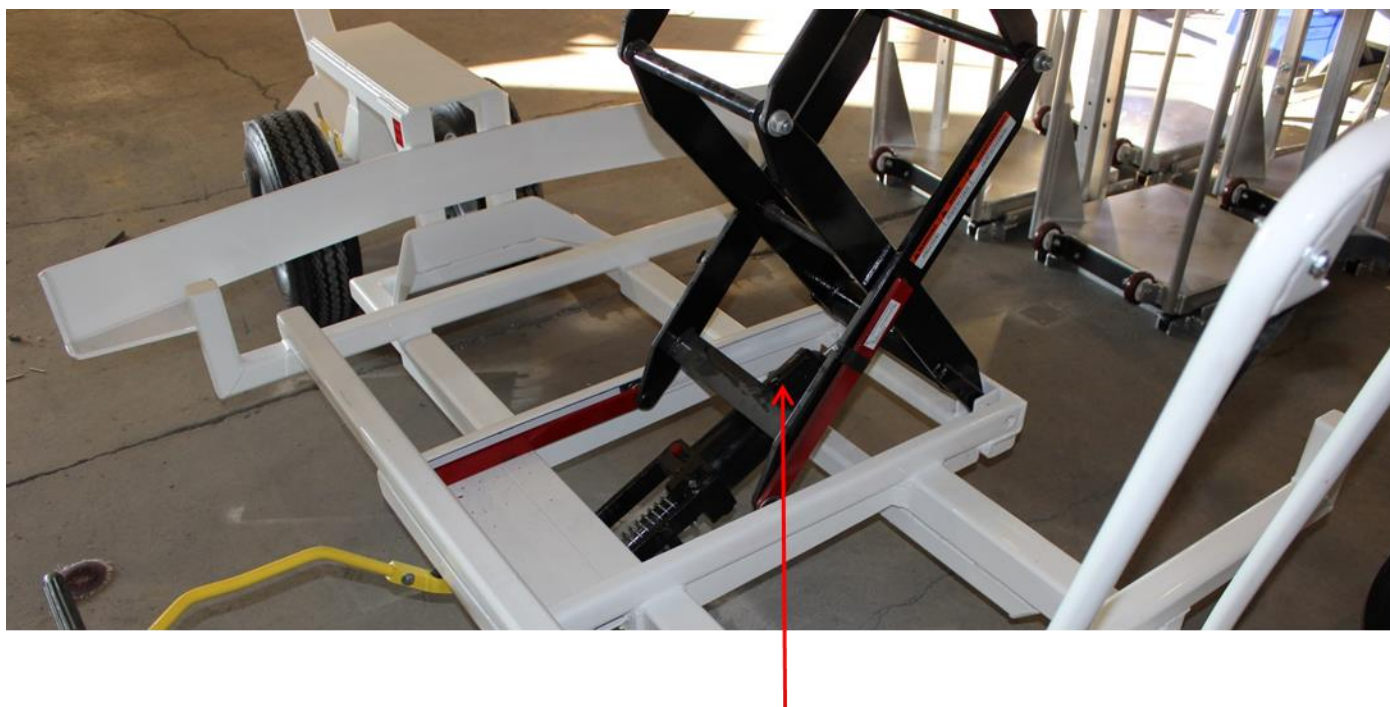
### • *Hydraulic Oil* •

The hydraulic oil should be changed once every two years or sooner if the oil darkens or becomes gritty. Flush reservoir before refilling. Presence of water is indicated if the oil turns milky.

Recommended oil: AW-32 Grade Hydraulic Oil

For low oil condition:

1. Fully raise the lift.
2. Remove the oil fill plug.
3. Add 1 oz. of oil at a time.
4. Pump the foot control.
5. Repeat steps 3-4 until the unit's maximum height is achieved.
6. Once the maximum height is reached, add 1 oz. of oil and reinstall the fill plug.



Hydraulic oil fill hole

## • Preventative Maintenance •

### • *Hydraulic Oil Continued* •

For annual oil change:

1. Raise the platform and deploy mechanical safety locks.
2. Remove the upper cylinder pin.
3. Loosen the set screw in the lowering lever linkage.
4. Release the lowering valve.
5. Collapse the cylinder rod back inside the cylinder.
6. Remove the oil fill plug.
7. With the cylinder horizontal, fill with AW-32 grade hydraulic oil.
8. Reinstall the fill plug, and then reinstall the cylinder.


## • How to Order Replacement Parts •


**Please have model number and serial number available when ordering replacement parts**

When ordering replacement parts:

- Contact the KCI parts dept. at (541) 830-4877 or email [msankey@kci.nu](mailto:msankey@kci.nu)
- Give the Model Number, Serial Number, and Mfg. Date) to the parts representative.
- If possible, give the part number and a description from the parts list. Or describe the needed part(s) to the best of your ability.
- If you are in a breakdown situation, please tell us, we will try to get your unit operational as soon as possible.



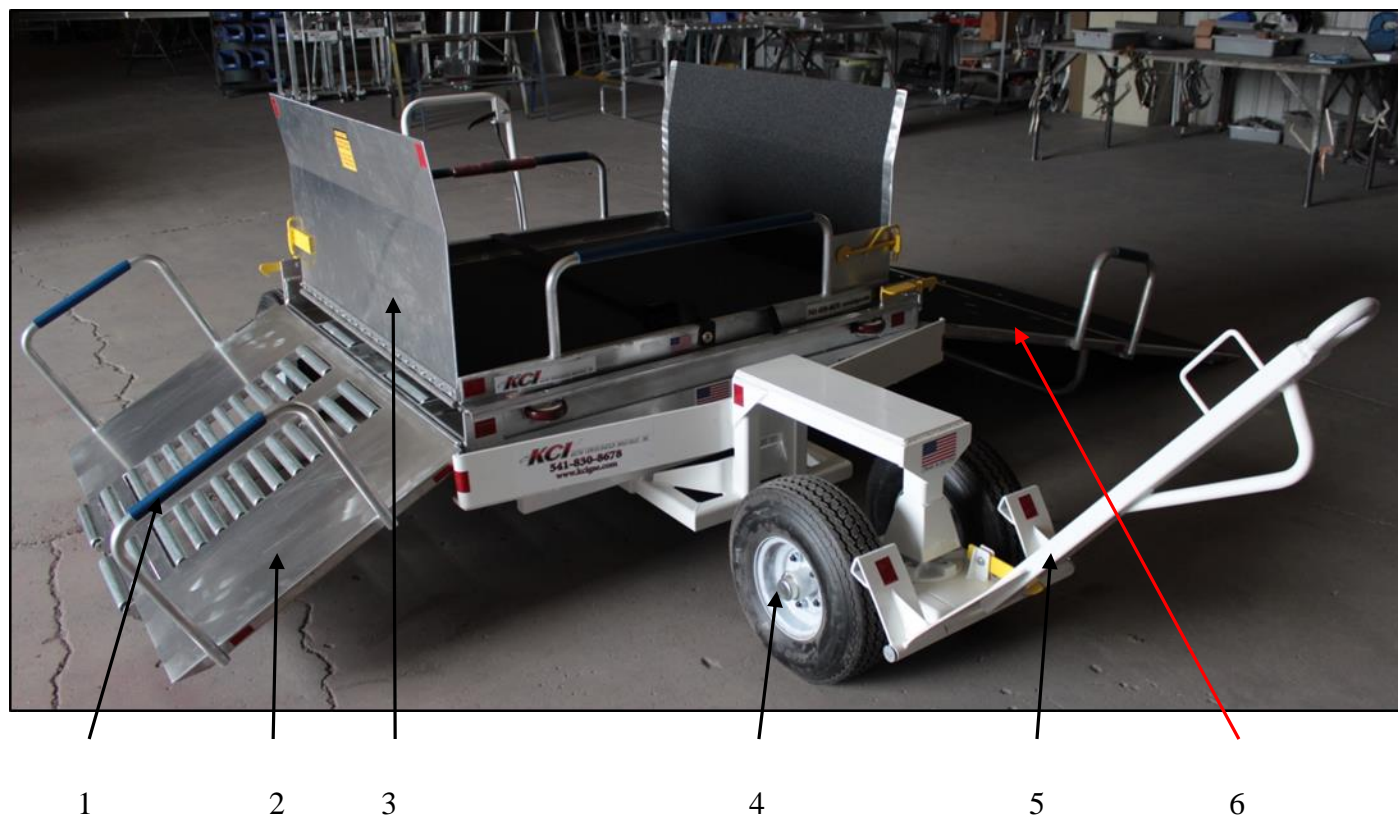
  
**Serial Number**  
(The ID Plate is located on the frame.)

  
**Mfg. Date**  
(You may be asked the Mfg. Date of your unit, have it ready if you are asked for it)





## • Parts Breakdown •



<i>Item</i>	<i>Description</i>	<i>Part Number</i>
1	Blue Handrail Cover	P00064
2	Transition Roller Ramp	K00852
3	Wheelchair Barge	K00907
4	Wheel	P00243
5	Towbar	K00743
6	Wheelchair Loading Ramp	K00905

## • Parts Breakdown •



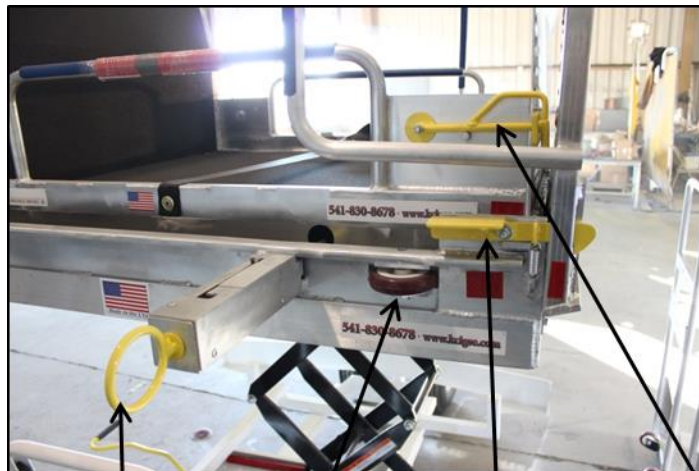
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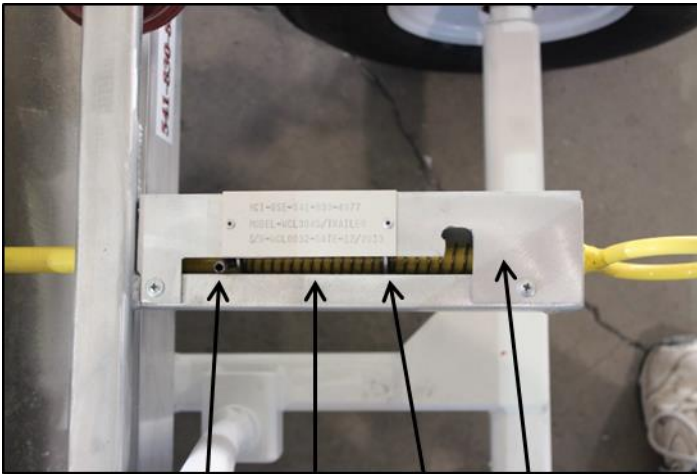
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<i>Item</i>	<i>Description</i>	<i>Part Number</i>
7	Towbar Safety Latch	K00735
8	Foot Actuated Pump Lever	K00736
9	Scissor Lift	P00241
10	Hydraulic Release Cable/Handle	K00737
11	Barge Release Handle	K00738
12	Guide Roller Wheel	P00242
13	Ground Ramp Release Latch	K00259
14	Barge Ramp Release Latch	K00740

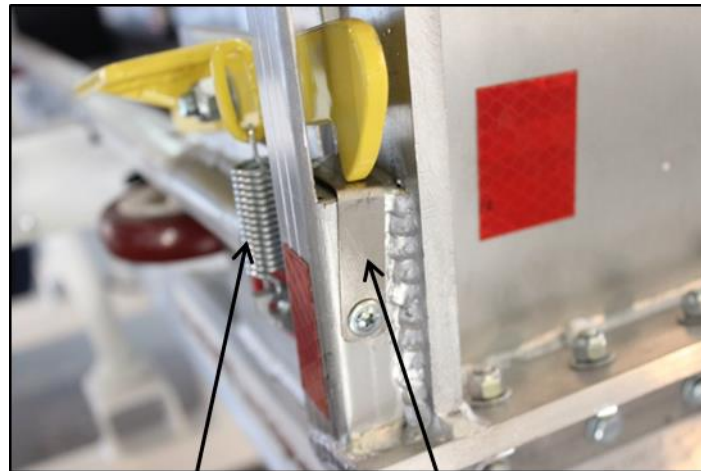
## • Parts Breakdown •



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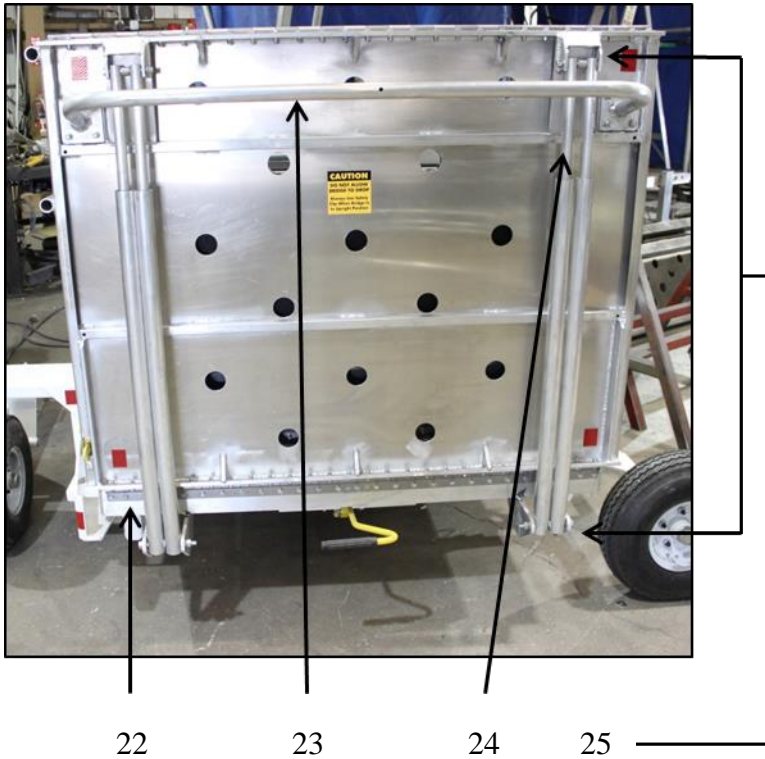
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<i>Item</i>	<i>Description</i>	<i>Part Number</i>
15	Rolled Pin	P00094-065
16	Spring	P00244
17	Washer	P00011-009
18	Barge Release Handle Cover	K00741
19	Wheelchair Restraint Belt	P00245
20	Latch Spring	P00023
21	Guide Clip	K00742



## • Parts Breakdown •



<i>Item</i>	<i>Description</i>	<i>Part Number</i>
22	Outer Spring Tube	OSTK00666
23	Support Bar	WCL-T001
24	Inner Spring tube	ISTK00666
25	Spring Tube Assembly	K00666
26	Hydraulic Release Handle	K00737

## • Warranty •

This warranty is in lieu of all other warranties, either expressed or implied.

### **What is Covered:**

This warranty covers equipment manufactured by KCI, Inc. from any defects in materials, workmanship and/or installations performed.

### **Period of Coverage:**

This warranty lasts for a period of two years, electrical component coverage is for one year from the date the product ships, or until the original ownership of the ramp is transferred to another party, whichever comes first. Any repairs or modifications without the express written consent of KCI, Inc. will be grounds to immediately void all or part of this warranty.

### **What is Not Covered:**

This warranty does not cover the following:

1. Accidental damage.
2. Misuse or abuse.
3. Damage caused by adverse weather, disasters, or other forces of nature.
4. Worn out adhesive skid walk.
5. Worn out tires/wheels.
6. Worn out/faded canvas canopies.
7. Any other wear or damage caused by the equipments general use.
8. Any consequential or incidental damages to include:
  - a. Any loss of profit.
  - b. Loss by reason of airport or flight line shutdown.
  - c. Non-operation or increased expense of operation.
  - d. Loss of passengers or business.

### **What KCI Will Do:**

Repair or replace any original part, component or piece of equipment that is found to have defects from time of shipment through the end of the period of coverage.

### **How to Make a Service Claim:**

Provide a claim in writing within the period of coverage to the address listed below or email to [msankey@kci.nu](mailto:msankey@kci.nu). We will then determine if the problem is a defect with the product. Once the nature of the problem is ascertained, we will notify the buyer of our planned resolution. This may include an on-site visit by KCI, Inc. for repairs, or that the buyer ships the defective part or component to us for inspection and replacement at KCI's expense.

KCI GSE Inc.  
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