

# PXO UN 175-737 MAX

## Operations & Parts Manual

Maintenance Schedule



Keith Consolidated Industries  
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## • Overview •



The KCI PXO-UN175 MAX Boarding Stairs are towable, non-motorized stairs that are easily deployable in less than one minute. The PXO-UN175 MAX Stairs feature a hand crank style lifting mechanism for fast and easy height adjustment. The PXO-UN175 MAX Stairs also offer outriggers and stabilizer feet as well as cushioning bumpers on the level platform and can be used on the L-1 or L-2 door of the aircraft.



## • Initial Setup •

### •Assembly•



**This Assembly Requires Two People**



Tools Required:

- Socket Driver with 9/16" and 3/4" sockets
- Wrenches, 9/16", 3/4"
- Alignment Bar
- Cordless Drill or Impact Driver (Optional)
- Rubber Mallet
- Forklift
- Loc-Tite® Threadlocker
- 5/32" Allen wrench

1. Remove all shipping wrap, retain both 10' 2 x 4's.
2. Using a forklift, slightly raise the frame of the stairs off of the ground. Place cribbing blocks or jack stands under the frame to prevent injury. Remove the shipping wheels and install the red axles and 22" wheels using the provided hardware. The axle bolts require Loc-Tite.



3. Attach 2 Stabilizer Feet using the provided hardware. (4 ea. 1/2" x 3" bolts)

Remove these shipping wheels



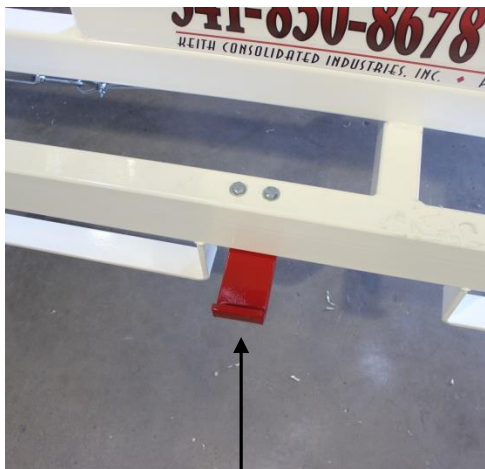
**Place cribbing blocks or jackstands under the frame while attaching the axles to prevent unintentional lowering of the frame while working.**



## • Initial Setup •

### • *Outriggers* •

When performing the assembly of the outriggers, it should be noted all parts will have either 1 or 2 “dimples” on them. Parts with 1 dimple attach to the side of the frame with 1 dimple, parts with 2 dimples to the side of the frame with 2 dimples.

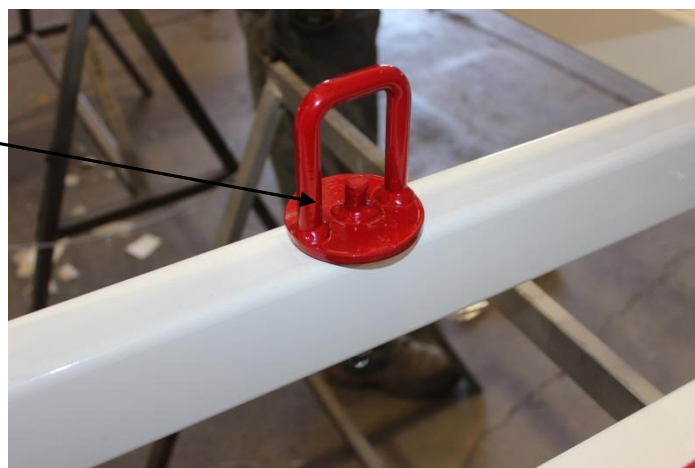


Saddle



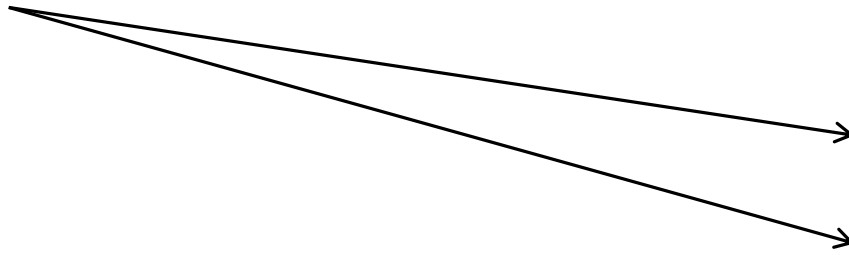
Mounting Bracket

1. Attach the outrigger mounting bracket and “saddle” using the provided hardware.
2. Attach the outrigger lock tube guide to the frame.



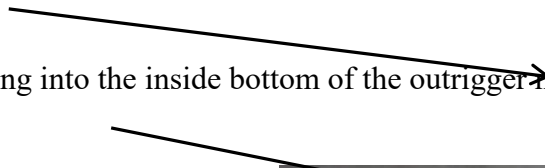
## • Initial Setup •

3. Insert the 1" full bushings into the red outrigger.

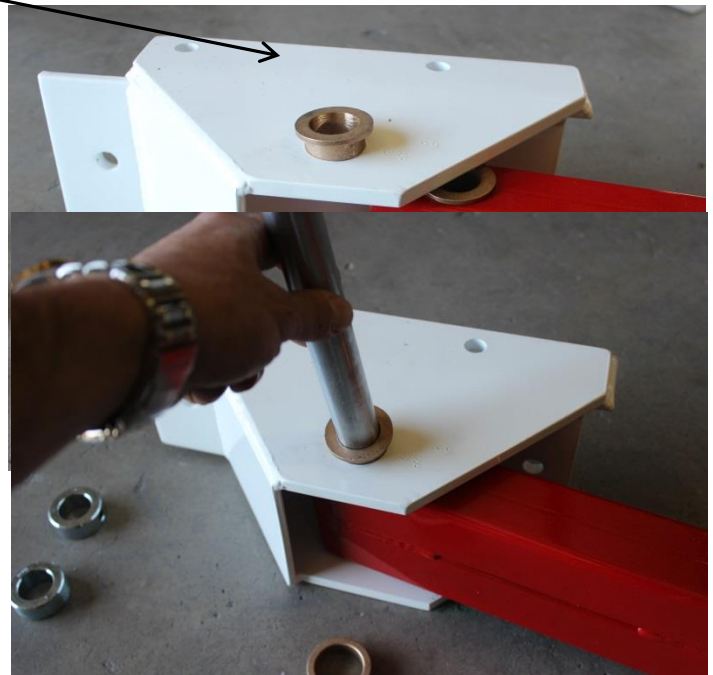


4. Insert the 1" half bushing into the top plate of the outrigger mount.

5. Insert the 1 1/4" half bushing into the inside bottom of the outrigger mount.



6. Place the outrigger into the mount, line up the holes and insert the Chromoly pin, secure with 2, 1" lock collars.



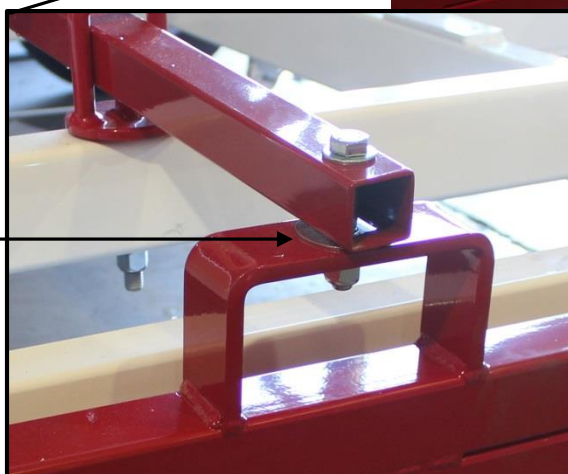
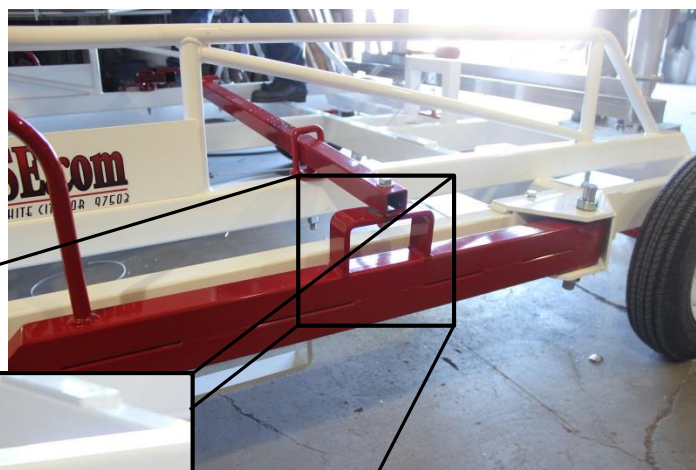
## • Initial Setup •

7. Insert the outrigger sliding tube as shown and secure to the outrigger with the provided hardware.



8. When securing the sliding stop tube to the outrigger be sure not to overtighten the bolts.

- Note the position of the “Fender Washer”





## • Initial Setup •

### • *Level Deck and Handrails* •

1. Attach the hand railing to the perimeter level deck. Bolt connections through the framework will use a 3/8" x 3 1/4" bolt, all other connections will use a 3/8" x 1 1/2" bolt.



2. Once the hand railing has been attached and those bolts tightened, place the provided 10' long 2 x 4's through the railing, ABOVE the light strip. These 2 x 4's will allow for the deck to be lifted into position.



Image showing the perimeter level deck being lifted.



**No person should be under the perimeter level deck while it is being lifted into position. SERIOUS INJURY CAN OCCUR!**



## • Initial Setup •

3. With one individual at the top of the stairs to assist, carefully place the perimeter level deck into position.



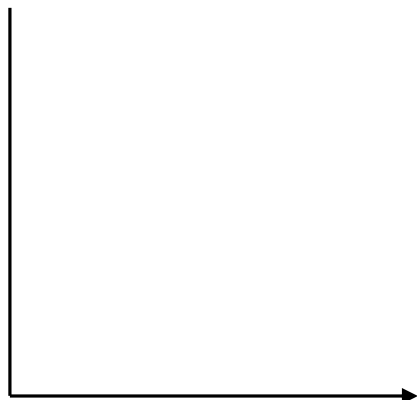
4. Once in position, use the provided  $\frac{3}{8}$ " x  $1\frac{1}{2}$ " bolts to secure the perimeter level deck to the main level deck. Once all bolts are in place, tighten and proceed to the next step.



## • Initial Setup •

5. With the assistance of a second individual, place the hand rail sections into place and secure using the provided  $\frac{3}{8}$ " x  $1\frac{1}{2}$ " bolts.

Be sure all bolts are in place before tightening.



## • Initial Setup •

### • *Level Deck Truss* •

1. Position the truss for installation as shown.

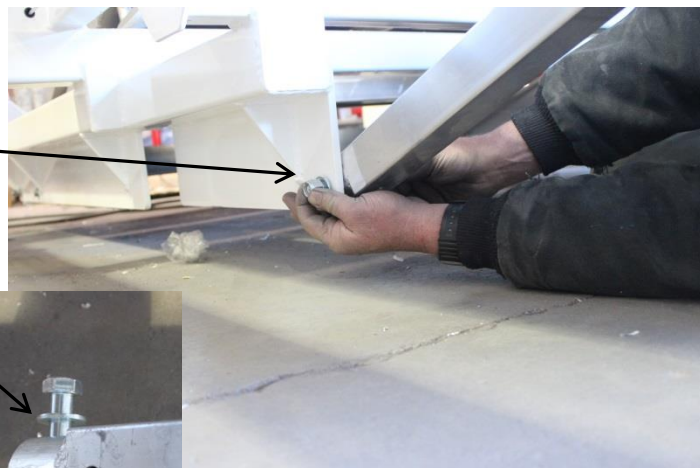
NOTE: Each truss has a drain hole in them, this drain hole should be to the bottom end (at the connection to the frame) and to the bottom side of the truss (facing toward the ground).



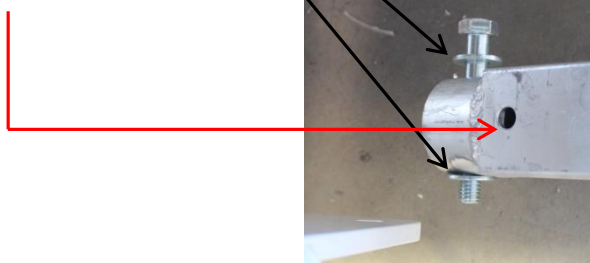
2. Attach the truss to the underside of the level deck using the provided  $\frac{1}{2}$ " x 4" bolts.



3. Attach the bottom end of the truss to the frame using the provided  $\frac{1}{2}$ " x 3  $\frac{1}{2}$ " bolts. NOTE: The position of three washers.



This image also shows the drain hole





## • Initial Setup •

### • *Brake Station* •

The Brake Station Handle will need to be bolted into place on some of the units.

1. Remove the wrapping from the brake station and bolt into place using the 4, 3/8" x 1" bolts



Brake Station Wrapped

Bolt Here

1. At this time, verify all hardware is tightened.
2. It may be necessary to make adjustments to the brake cable for proper operation. Loosen the Jam nuts on the brake cable turnbuckle, adjust the turnbuckle as needed. Re-tighten the jam nuts and re-ziptie the turnbuckle
3. Deploy the outriggers and verify proper operation, it may be necessary to adjust the torque on the bolts to accomplish proper function.
4. Raise and lower the stairs to check for proper function.

## • Operations •

### •Towing the PXO-UN175 MAX Stairs•



**Before moving, ensure that both Stabilizers are recovered and in the unlocked position.**

1. Unlock the Tow Bar by lifting the Tow Bar Latch and lowering it with handle. →



2. Lowering the Tow Bar will disengage the braking mechanism. →



3. Attach the Tow Bar to towing vehicle.
4. Proceed with towing.



**Before towing, ALWAYS visually inspect the Brake Plate to ensure it has been disengaged.**



**While towing stairs, do not exceed 10 mph.**



## • Operations •

### • *Brake / Push Station* •

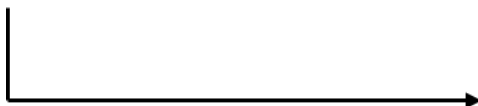
1. To begin moving, grasp the Brake Release/Push Station handle and pull downward.  
This will release the breaking mechanism



2. While keeping the handle held down, begin pushing the stairs to desired location



3. Once movement is complete, reengage braking mechanism by releasing the handle and allowing it to rise to the vertical position.





## • Operations •

### • Outriggers •

**Note: Not all stairs have the same outriggers, deployment and stowage procedure is the same.**

1. To deploy the Outrigger, grasp the handle and lift the outrigger out of the storage bracket.
2. Pull the Outrigger away from the stairs until the outrigger locks into place. An audible click can be heard and felt.
3. Visual verification that the Outrigger is locked can be made by looking underneath the outrigger. Ensure that the locking pin has inserted into the Outrigger.
4. Repeat for opposite Outrigger



**Always ensure that the Outriggers are locked when deploying them. This can be achieved by visually inspection or by attempting to recover the Outrigger to the stowed position. When properly locked, the Outrigger will not move to the stowed position.**

## • Operations •

### • Outriggers Continued •



5. To recover the Outrigger, lift up on the diagonal outrigger strut where it meets the main frame of the stairs. This will release the locking pin.



6. Continue by rotating the Outrigger back to the stowed position, ensuring that it is placed back into the storage bracket.
7. Repeat for opposite Outrigger



## • Operations •

### • Stabilizer Feet •

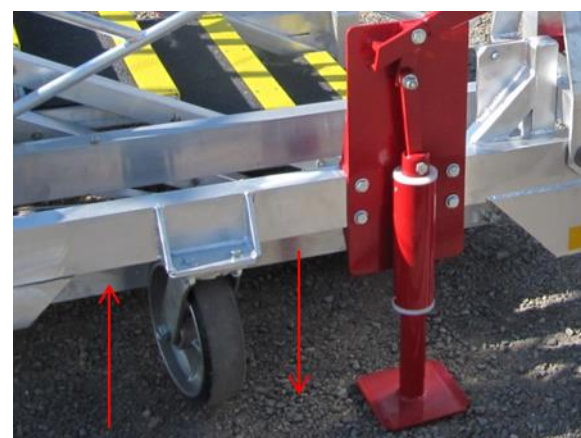
1. To deploy the stabilizer, grasp the handle and pull towards the rear of the stairs.



2. The stabilizer will lift the rear swivel wheel off the ground and lock into place once it has been fully engaged.



3. Repeat for opposite stabilizer.



**The Stabilizers must always be deployed when the unit is stowed and anytime the unit is in active passenger boarding or deplaning.**



**When positioning the stairs for CREW USE ONLY at the R-2 door of the aircraft, it is acceptable to use wheel chocks in lieu of stabilizer feet to ensure unit immobilization.**



## • Operations •

### • Stabilizer Feet Continued •

4. To recover the stabilizer, grasp the handle and pull towards the front of the stairs.



5. The stabilizer will unlock and lower the rear swivel wheel to the ground.



6. Repeat for the opposite stabilizer.



**To prevent injury, stand to the side of the Stabilizer when disengaging. Once unlocked, the handle will continue forward rapidly and forcefully**

## • Operations •

### • *Adjusting the Height* •



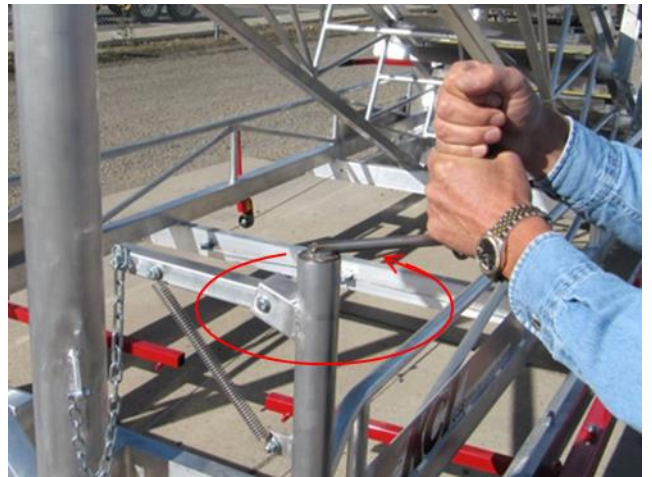
**Do not adjust the stairs if currently in use or otherwise occupied. Ensure there is ample overhead clearance if elevating the stairs.**

1. Rotate the Adjustment Handle clockwise to raise the lift.



Raising-clockwise

2. Rotate the Adjustment Handle counterclockwise to lower the lift.



Lowering-counter clockwise

## • Operations •

### • *Adjusting the Height* •

3. Raise or lower the stairs to the desired height using the provided markings



4. The Adjustment Handle has a built in limiting device to prevent the stairs from being raised too far. When the handle comes in contact with the rising bar, it has reached max height, as shown below





## • Operations •

### • *Deploying the Transition Plate* •

The purpose of this plate is to act as a bridge between the ramp level deck and the aircraft cabin. Using the transition plate allows the stairs to be set below the door height of the aircraft eliminating the possibility of the door being damaged by the stairs as the aircraft moves up or down. The transition plate also eliminates the need for the stairs to contact the fuselage of the aircraft.

The transition plate is typically stowed on the level deck when the stairs are not in use.

Once the stairs are properly positioned, simply pick up the transition plate and place the shorter end into the cabin of the aircraft.



Example of deployed transition plate

## • Operations •

### • *Level Deck* •

Once the stairs have been adjusted to the proper height:

1. Position the stairs up to the aircraft. The front cushioning bumper should remain 2-4 inches away from the fuselage.
2. Deploy the outriggers.
3. Proceed up the stairs to the level deck and open the aircraft door.
4. Deploy the transition plate as described on page 9.



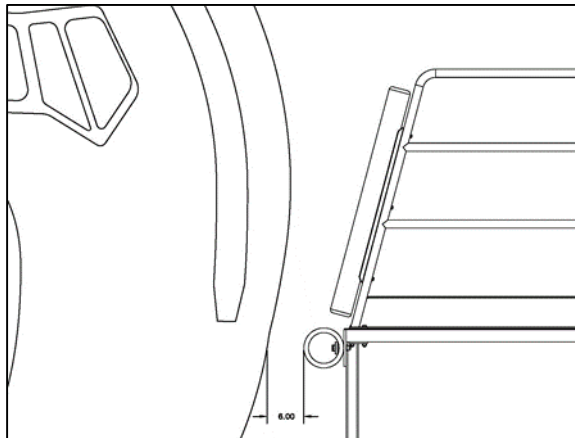
## • Operations •

### • *Positioning/Removing the Stairs* •



**The stairs should be inspected before each use to assure a clean and unobstructed pathway, and that all parts are secured and in good working order.**

1. Make necessary height adjustments for desired aircraft/door.
2. Recover the Outriggers to the stowed position and the Stabilizers to the unlocked/disengaged position.
3. Release the braking mechanism by lowering the Brake Release/Push Station handle.
4. Move the stairs to the aircraft and position within 6" of the aircraft



5. Engage the braking mechanism by releasing the Brake Release/Push Station handle. ensure the braking mechanism is engaged before proceeding.
6. Deploy both Stabilizers.
7. Board the stairs and open the cabin door, deploy the transition plate.
8. The stairs are now ready for passenger/crew/maintenance use.
9. Once all passenger/crew/maintenance use is complete, close the aircraft door, restore the stabilizers and outriggers.



**Engage both Outriggers when loading/unloading passengers in windy conditions where 45 mph gusts are possible.**



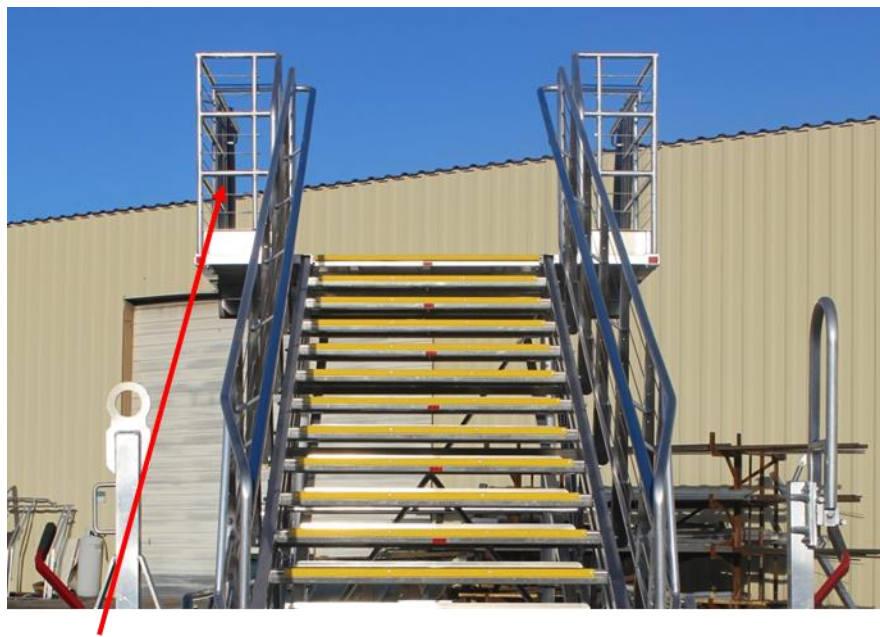
## • Operations •

### • *Positioning/Removing the Stairs* •

10. Exit the stairs and recover the Stabilizers to the disengaged position and the outriggers to the stowed position (if applicable).
11. Release the braking mechanism by lowering the Brake Release/Push Station handle.
12. Move the stairs to the designated staging area.
13. Engage the braking mechanism by releasing the Brake Release/Push Station handle. ensure the braking mechanism is engaged before proceeding
14. Deploy both Stabilizers.
15. Deploy both outriggers.
16. The unit is now safely stowed and ready for the next use.



When positioning the stairs to the 737 Combi aircraft, the left cushioning bumper of the level deck handrail should be positioned at least 1 - 3 inches aft of the L1 door to ensure adequate clearance for the K-Loader.



Left cushioning bumper of the level deck.



## • *Warnings and Restrictions Summary* •



1. It is the responsibility of the operating staff to ensure that the aircraft is not damaged when using the PXO UN 175-737 MAX.
2. Only trained and authorized personnel should adjust the height, operate or position the stairs.
3. The Stairs are to be maneuvered from the end with caster wheels; this end will be farthest from the aircraft when in place.
4. Under no circumstances should the stairs be moved or towed with any person on it.
5. Water, ice, snow, or any other natural or foreign substance should not be allowed to accumulate on the stairs walking surfaces.
6. The stairs should be inspected before each use to assure a clean and unobstructed pathway.
7. A visual check must be performed to verify the brake plate has been fully disengaged prior to towing.
8. The stairs are 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 stairs have a maximum capacity of 3,500 lbs.
10. Qualified airport ground crew personnel or airline personnel should always be present when the stairs are in use.
11. No passengers are allowed on or near the stairs except when it has been properly positioned at the aircraft.
12. The PXO UN 175-737 MAX 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 stairs.
13. The stairs must remain at least 1 foot aft of the L-1 door of the combi aircraft to ensure adequate clearance of the K-Loader.
14. The stabilizers must always be deployed when the unit is stowed and anytime the unit is in active passenger boarding or deplaning.
15. When positioning the stairs for CREW USE ONLY at the R-2 door, it is acceptable to use wheel chocks in lieu of stabilizer feet to ensure unit immobilization.

## • Preventative Maintenance Schedule •

The following is a general maintenance checklist which covers the major components of your PXO UN 175-737 MAX. It is recommended that the following be checked regularly as scheduled to ensure proper function, and the longevity, and safety of your PXO UN 175-737 MAX.

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>BRAKES</b>	Inspect for proper function, adjust as needed.			
<b>WALKING SURFACE</b>	General check for adequate traction, No loose rivets in Safeguard panels.			
<b>HANDRAIL CABLES</b>	General check, adjust or replace as needed.			

## • How to Order Replacement Parts •

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

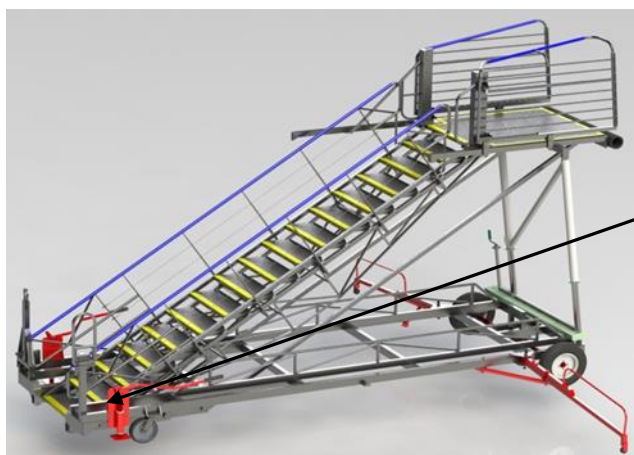
When ordering replacement parts:

- 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)

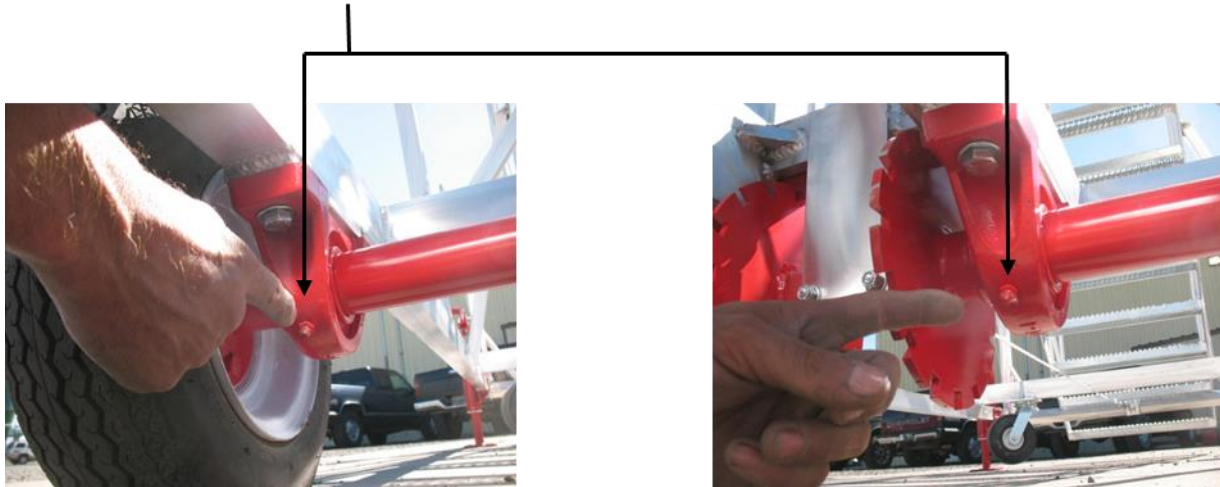




## • Preventative Maintenance •

### • *Lubrication of the PXO UN 175-737 MAX* •

Each front axle has two grease points



Lifting ram lubrication points

## • Preventative Maintenance •

Swivel wheel lubrication points



## • *Adjusting the Brakes* •

To adjust the brakes, loosen the backing nuts at the turnbuckle; adjust the tension in the brake cable as needed. Re-tighten the backing nuts.





- Preventative Maintenance •



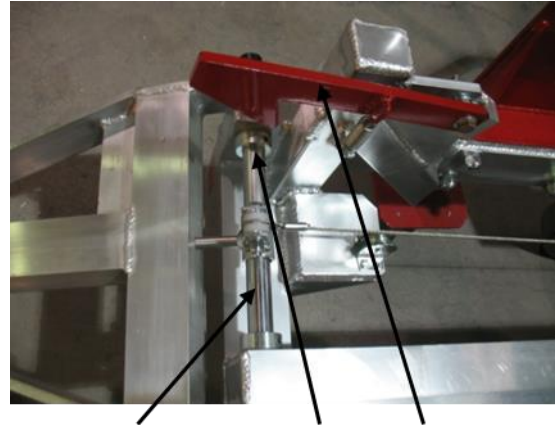
The areas indicated should be visually checked monthly.



## • Parts Breakdown •



1



2

3

4



5

6

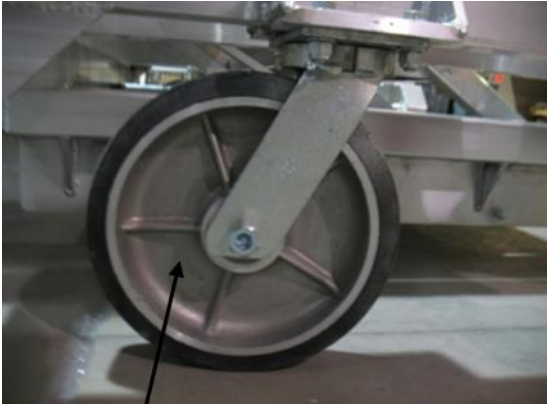
7



8, 9

<i>Item</i>	<i>Description</i>	<i>Part Number</i>
1	Tow Bar	K00239
2	Chromoly Pin	K00242
3	1" Lock Collar	P00078
4	Tow Bar Safety Latch	K00243
5	Brake Handle Trim Cover	PXO-3767-11
6	Brake Handle	K00409
7	Brake Handle Spring	P00034
8	Stabilizer Foot, Left Side	K00278
9	Stabilizer Foot, Right Side	K00279

## • Parts Breakdown •



10



11



12

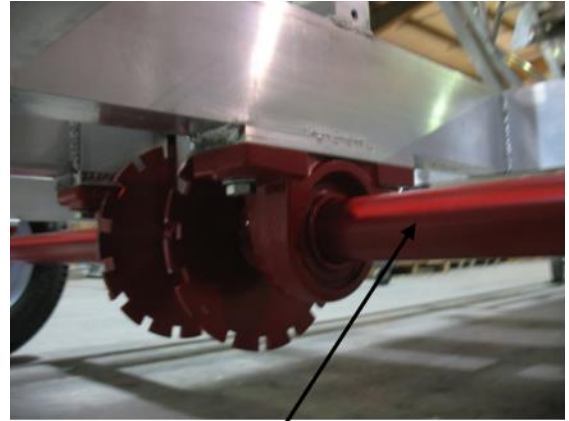
<i>Item</i>	<i>Description</i>	<i>Part Number</i>
10	Swivel Wheel	P00097
11	Swivel Wheel (PXO-757-F Model)	P00014
12	22" Tire	P00096

## • Parts Breakdown •



13

14



15



16

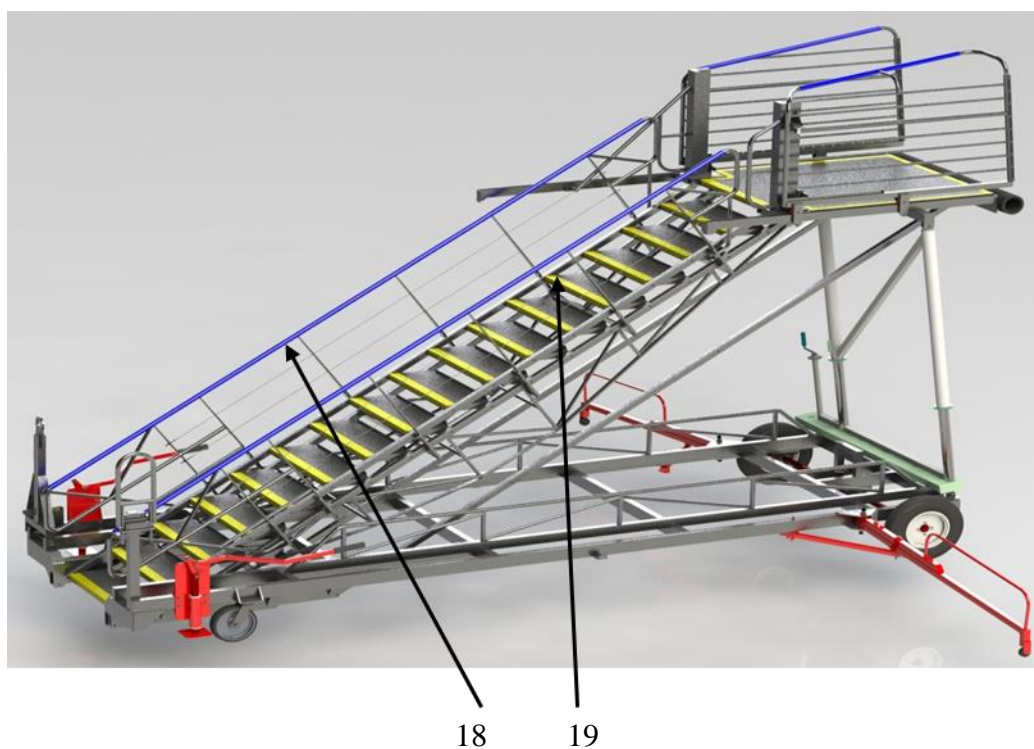


17

<i>Item</i>	<i>Description</i>	<i>Part Number</i>
13	Brake Plate	S-375-41
14	Brake Springs	P00045
15	Axle Assembly	K00231
16	Drive Ram Assembly	015992
17	Rubber Bumper	P00140



## • Parts Breakdown •



<i>Item</i>	<i>Description</i>	<i>Part Number</i>
18	Handrail Assembly, Left Side	K00246
19	Handrail Assembly, Right Side	K00245

## • Parts Breakdown •



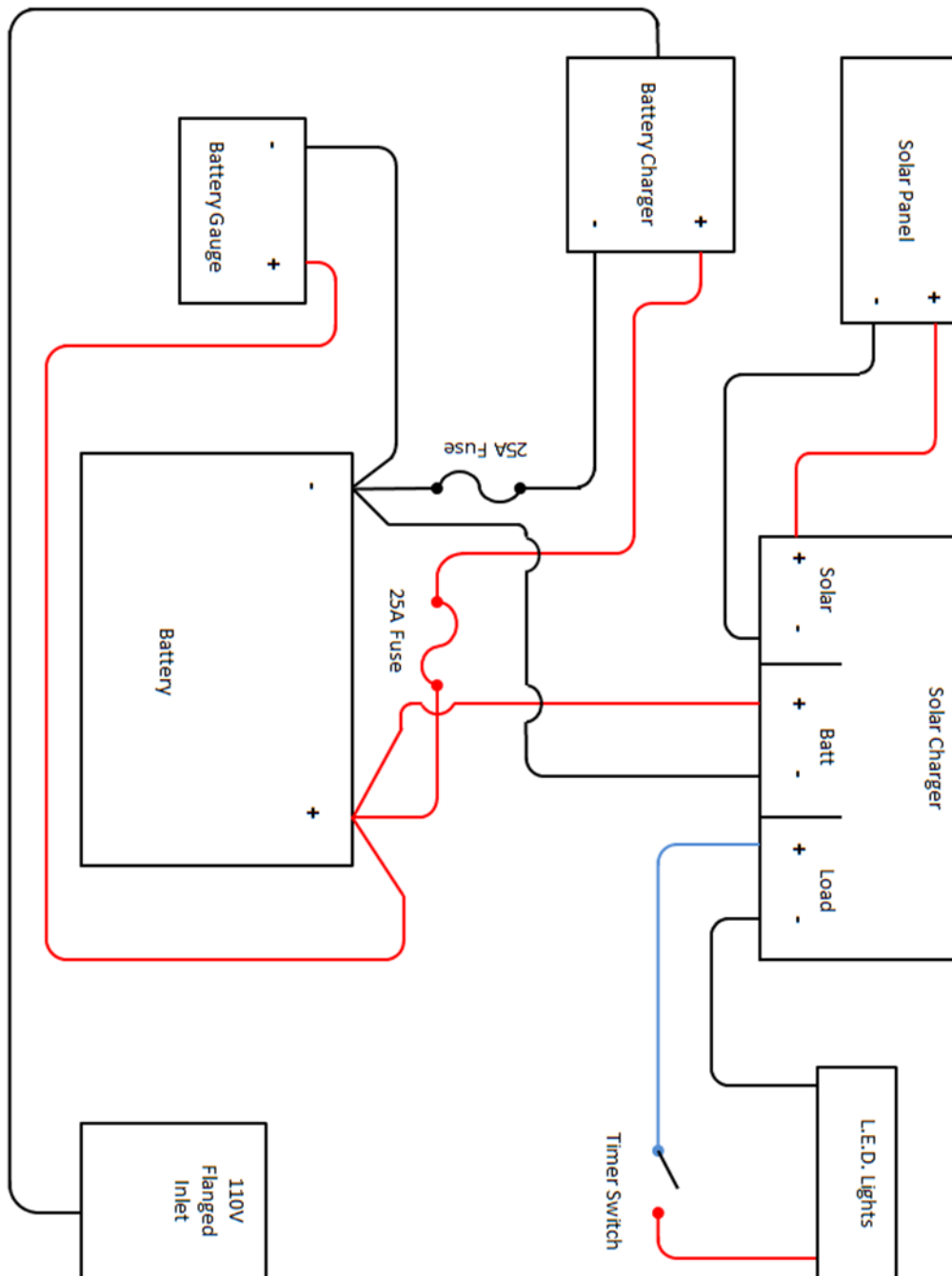
20 21 22 23



24 25 26

<i>Item</i>	<i>Description</i>	<i>Part Number</i>
20	Flanged Power Inlet	P00333
21	Battery Charger	P00312
22	Battery	P00277
23	Solar Charger Control	P00338
24	Battery Charge Indicator	P00156
25	Locking Enclosure Box	P00341
26	Timer Switch	P00362
27	Solar Panel (Not Pictured)	P00337
28	Solar Panel Frame (Not Pictured)	K00824
29	Solar Panel Support Arm (Not Pictured)	SPA0047

- Electrical Schematic •





## • Warranty Information •

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 ramp's or stairs 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.  
1718 Antelope Road  
White City, Oregon 97503