

JWBL Belt Loader

Training, Operations & Parts Manual

Maintenance Schedule



Keith Consolidated Industries
www.kcigse.com

541-830-8678
1718 Antelope Rd.
White City, OR 97502

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• Overview •



The JWBL Belt Loader is designed to be mounted to an aircraft passenger boarding bridge next to the external stairs that lead from the ramp to the platform located next to the bridge crew door. The JWBL is attached to the bridge platform with a steel hinge assembly at the top. The bottom rests on two swivel casters that roll on the ramp surface. The unit moves both vertically and horizontally with the movement of the bridge. The sole intended use of this unit is to transfer carry-on baggage from the top of the bridge to the ramp and from the ramp to the top of the bridge. The JWBL is designed to work in all weather conditions and temperatures found in the USA. All steel parts are powder coat finished.

This Operations manual covers the 16 ft. 20 ft. and 24 ft. Belt Loaders.

• Important Notes •

-  Left and Right sides are determined by standing at ground level, looking up.
-  The Head drum (also known as a “Drive Pulley”) is the Drum/pulley that goes into the gear box.
-  The Tail drum (also known as the “Tail Pulley”) is located at the opposite end of the gear box and motor.
-  The gear box and motor are located at the top of some units and at the bottom of others.
-  Bearings at both ends of the belt loader need to be greased periodically. This will vary based on usage.

• General Specifications •

Carry-on Bridge Mounted Conveyor Belt System

This unit is designed to be mounted to an aircraft passenger loading bridge next to the external stairs that lead from the ramp to the platform located next to the bridge crew door.

The unit is attached to the bridge platform with a steel hinge assembly at the top. The bottom rests on two swivel casters that roll on the ramp flooring. The unit moves both vertically and horizontally with the movement of the bridge.

The sole intended use of this unit is to transfer carry-on baggage from the top of the bridge to the ramp and from the ramp to the top of the bridge.

This unit is not designed for any use, other than that described in the previous paragraph.

The unit consists of an extruded aluminum frame, head and tail drum belt drive rollers, an 18 inch wide conveyor belt, an electric motor, gear box, 2 lower swivel casters, and an electrical control system. Control switches (along with E stops) are located at both ends of the unit.

The unit is designed to work in all weather conditions and temperatures that are found in the USA. All steel parts are powder coat finished. All aluminum parts are natural finish.

SPECIFICATIONS:

JWBL-16 Beltloader 16 ft. 5 in. X 26 in. wide - 300 lbs. capacity

JWBL-20 Beltloader 20 ft. 5 in. X 26 in. wide - 400 lbs. capacity

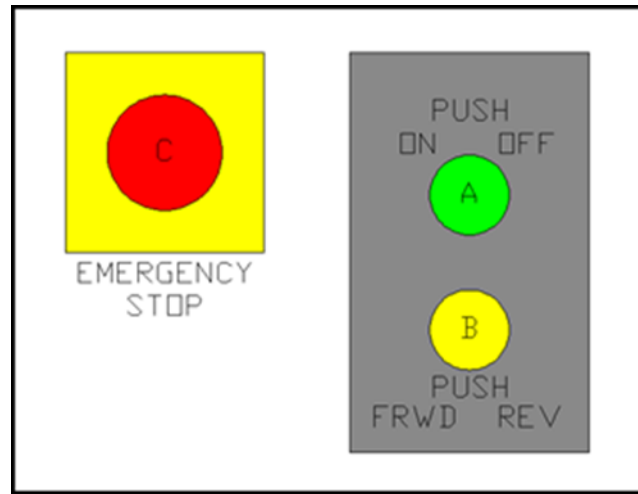
JWBL-24 Beltloader 24 ft. 5 in. X 26 in. wide - 500 lbs. capacity

Deck 52" X 52" Height 46" with handrails

Weight:	JWBL-16	Total: 700 lbs. On Bridge Platform: 290 lbs. On Swivel Castors: 408 lbs.
	JWBL-20	Total: 800 lbs. On Bridge Platform: 340 lbs. On Swivel Castors: 458 lbs.
	JWBL-24	Total: 900 lbs. On Bridge Platform: 390 lbs. On Swivel Castors: 508 lbs.

Electrical: Powered by 120 VAC, 15 amp circuit (average draw is 4 amps).

• Unit Controls •



This is the basic layout of the controls on the Beltloader. These controls are located at either end of the belt loader. See the table below for control operations.

Button		Action	Function
A	On/Off	Push	This button will start and stop the beltloader
B	Forward/Reverse	Push	This button controls the direction of belt travel. Operators should expect a short delay between changing direction, this is normal and is necessary to prevent damage to the beltloader
C	Emergency Stop	Push/Pull	This button is used to stop the beltloader in the event of an emergency. Push the button to perform the emergency stop function. When restarting the beltloader verify both E-stop buttons are pulled out.

When changing the travel direction of the beltloader, it is important to stop the unit, then press the forward/reverse button, then restart the unit.

- Unit Controls •

- *Timer Enable and Bypass Switch* •



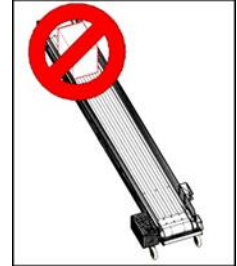
Located on the side of the electrical enclosure is the timer bypass/enable switch. When the Beltloader is placed into “TIMER” mode, the beltloader will automatically shut down after 30 minutes of operation. Pressing the start button will re-engage the unit and reset the timer. In “BYPASS” mode, the unit will run until the stop button is pressed.

• Operations •

• *Daily Start up Routine* •

The following procedure has been put together as a checklist to be performed daily prior to use. All belt loader units are tested in our factory to be sure they are in proper working order prior to shipment. If this procedure is not performed daily, KCI cannot be held liable for errors in the system, or belt damage.

A) Check belt for obstructions. If something was left on the belt, safely remove it before continuing on with the Daily Start-up Routine. **DO NOT ATTEMPT TO START BELT LOADER WHEN LOAD WEIGHT EXCEEDS 200 POUNDS!**



B) Make sure all personnel are clear of the belt loader before starting it.



D) Listen for belt rubbing on the belt loader frame, or guards. If there is any evidence of rubbing, do not use the unit, notify maintenance personnel to perform a belt adjustment. If the problem is not corrected, belt damage can occur!

•Remember to shut down your belt loader when it is not in use, it will extend the life of the wearable parts.

WARNING

DO NOT move the jetbridge while the beltloader is operating, DAMAGE CAN OCCUR! The beltloader must be in the OFF position prior to moving the jetbridge.

• Preventative Maintenance Checklist •

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

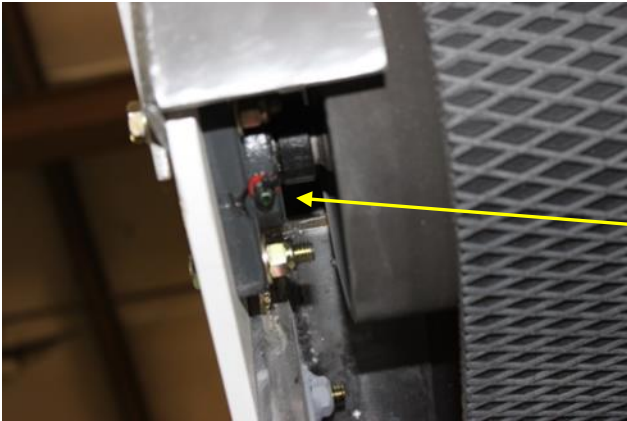
COMPONENT	SUGGESTED ACTION	SCHEDULE		
		Monthly	Quarterly	Bi-Annually
MOTOR	Check for noise			
	Check mounting bolts			
GEAR BOX	Check for noise			
	Check oil level			
BELT	Check tracking			
	Check Lacing			
BEARINGS	Check for noise			
	Check mounting bolts			
	Grease bearings & wheels			
STRUCTURAL	General Check: Loose bolts, etc. tightened. Cracks, broken areas.			
	Mounting pins: Check for wear			
	Check all mounting points, steel & aluminum for cracks/breaks			

• Preventative Maintenance Continued •

• *Periodic Lubrication* •

Bearings and Wheels:

The bearings and wheels are lubricated with Lubriplate #1200-2 heavy duty lithium grease before they leave KCI. The bearings should be re-lubed every 4-10 months. Wheels should be done at the same time.



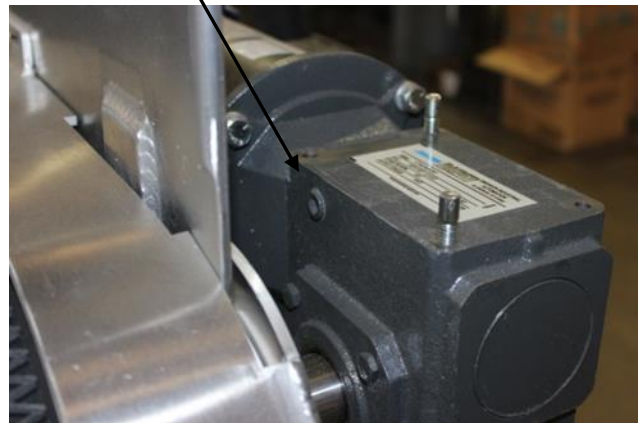
The roller bearing grease points are accessible from the underside of the conveyor

Gear Box:

Breather valve



Filler valve



Your gear reduction box comes pre-filled with AMGA #8C oil. Factory installed lubricants should be changed after 500 hours, or 5 weeks, whichever comes first. Subsequent lubricant changes should be made every six months, or 2500 service hours. If severe operating conditions exist, change oils every 1 to 3 months.

Refer to the manufacturer's specifications for oil fill capacities, and other suitable lubricants that are recommended for the unit.

- Preventative Maintenance Continued •

- *Canopy Check* •



Canopy cover should be tight and free from cuts or tears

• Troubleshooting Guide •

The tables below contain helpful information, which may aid you in correcting any operational problems that may occur during the use of your KCI Belt Loader system.

• *Electrical* •

Problem	Possible Causes	Solution
•Belt Loader will not start, or other electrical problem	1) The unit is unplugged 2) The E-Stop switch hasn't been reset 3) The fuse in electrical box has blown 4) The belt loader is overloaded.	1) Check plug 2) Reset E-Stop switch 3) Check fuse, replace if necessary 4) Remove some of the load. Do not exceed 200lbs on start up.
If you have worked through the electrical trouble shooting steps, and the belt loader is still inoperable, please contact KCI for additional assistance.		

To access the PLC Box to check for fault codes or to perform maintenance or testing follow the steps listed.

Illustration on Page 11.

- Using a 5/32" Allen wrench, loosen the set screw on the lock collar located at the upper end of the sliding tube.
- While supporting the sliding tube, remove the steel pin. Lower the sliding tube to the ground.
- The PLC Box can now be accessed.
- Most fault codes can be reset by unplugging the unit, wait 1-2 minutes to allow the unit to completely power down, that is all lights inside the PLC Box shut off, then plug the unit back in until all lights are back on. Verify E-Stops are pulled out, and attempt to start the beltloader.
- If further troubleshooting is required, please contact KCI for assistance at 541-830-8678.
- When all work is complete, replace the slider tube and reinsert the steel pin at the upper end, secure with the lock collar using the 5/32 Allen Wrench.



Prior to starting any work on the beltloader, at least one E-Stop should be pushed in to avoid accidental or unexpected energizing of the beltloader.

• Troubleshooting Guide •



Slider Tube

PLC Enclosure

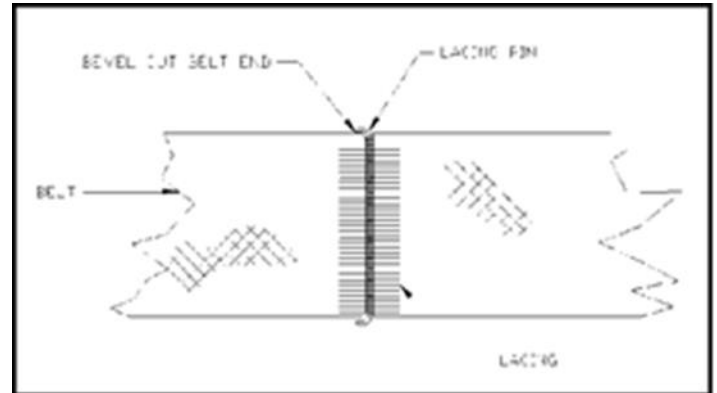
Lock Pin

• *Belt Tracking* •

Problem	Cause	Solution
•The entire belt creeps to one side •The belt creeps to one side at the tail drum •Any other tracking problems	1) Conveyor rollers are out of adjustment 2) Bearing(s) or conveyor rollers(s) have gone bad 3) Possible belt damage	1) See the belt tracking section for instructions on how to re-align the belt 2) Contact KCI to order replacement parts 3) Contact KCI to order new belt

• Belt Installation •

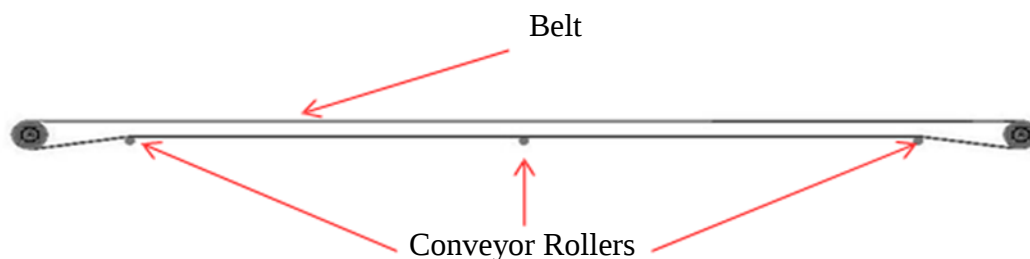
The belt has been pre-cut to the proper length for your specific belt loader model. The lacing has also been pre-installed for ease of belt installation. The belt can be threaded through the drums and rollers in either direction, as it is reversible. To install a new belt, follow the instructions below...



- 1: Thread the belt through the loader as shown in the diagram below. Remember, the rubber side faces out.
- 2: Pull the ends together, and insert lacing pin. Cut excess overhang off, leaving about 1/4 inch on each side.
- 3: If the belt ends cannot be pulled together, you will have to adjust the head drum, and tail drum in towards the center of the belt loader.
- 4: Adjust the belt tension by moving the head drum, and tail drum out. Remember to keep them square as you adjust them out.
- 5: See next page for belt tracking instructions.

Caution!

Excessive slippage of the belt reduces the life expectancy considerably, as well as damage to the head drum. Never apply more tension than is needed. Over tension of the belt will also cause unwanted wear. The correct tension can be determined by a qualified maintenance technician.



• Belt Tracking •

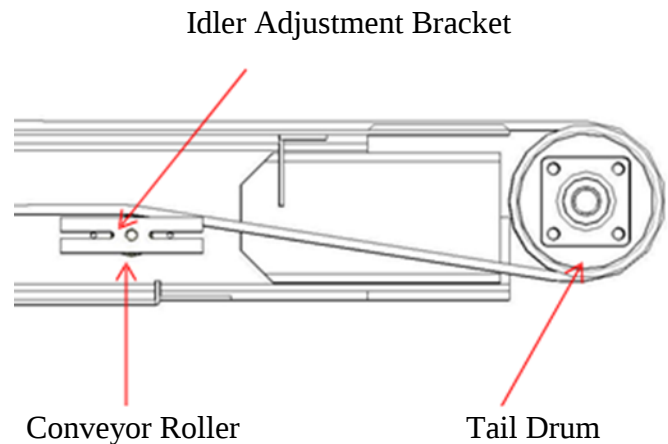
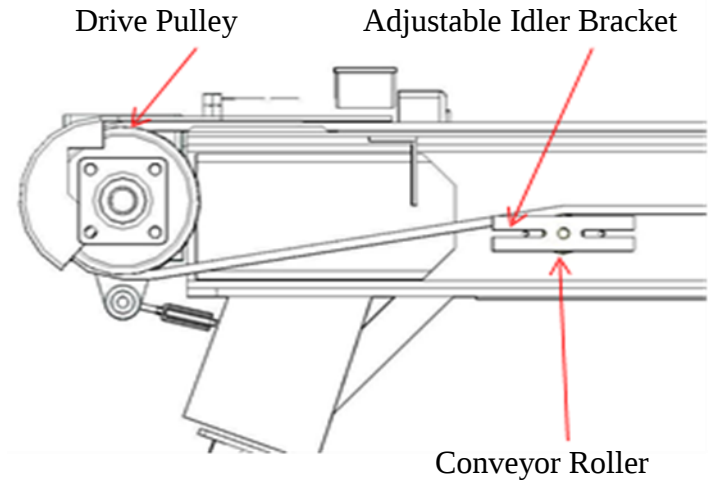
• Principals of belt tracking

The belt is tracked by adjusting the head drum, tail drum and conveyor rollers.

*Pre-Tracking Inspection

Before attempting to track the belt you must...

1. Remove bottom covers, end belt guards, and motor/gear box cover.
2. Check to make sure all drums and conveyor rollers are square with the belt loader body.
3. Make sure belt has been properly threaded through belt loader. (See “Belt Installation”)
4. Check for improper loading. Feed should be in direction of belt travel, and centered on the belt.
5. Make sure belt lacing is square with the belt, and has been installed correctly.



• Belt Tracking •

CAUTION!

Only trained personnel should attempt to track the belt, which must be done while the beltloader is under power. Use extreme caution!

When tracking the belt, adjust the rollers in small increments. 1/16 of an inch at a time would be sufficient. Be sure to allow enough time for the belt to react to the adjustment. Tracking the belt properly takes some time, being prepared will help. Some of the tools you may require are as follows:

Wrenches or sockets:

- 7/16"
- 3/4"

More than one of each may be required

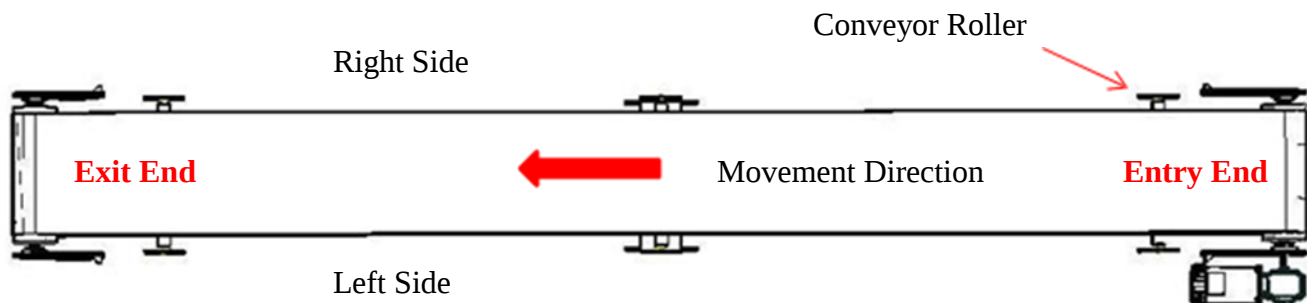
How to “steer” the belt:

Depending on which direction the belt is moving will determine which conveyor roller is to be adjusted. The majority of the time you will be adjusting the roller closest to the “ENTRY” end of the beltloader. The diagram below will help determine which end will be the entry end, and how to adjust the conveyor roller. It is recommended that you get the belt to track like the diagram below, and then attempt to track it in the opposite direction. You may need to reverse directions several times to ensure the belt remains tracked.

Possible Conditions

- When the belt is moving in the direction with the arrow, but drifting towards the “RIGHT” side, move the conveyor roller closest to the “ENTRY” end on “LEFT” side towards the “ENTRY” end of the beltloader.
- If the belt is moving in the direction of the arrow, but drifting towards “LEFT” side, move the conveyor roller closest to the “ENTRY” end on “RIGHT” side towards the “EXIT” end of the beltloader.

*If the belt direction is reversed, the above conditions will remain the same as the diagram, except you will be viewing the beltloader from the opposite end.





Warnings and Restrictions Summary



1. No climbing, sitting, walking or riding on the beltloader at any time. Damage, injury or death could occur.
2. A lockout/Tag out procedure should be performed prior to servicing the beltloader.
3. Do not start the beltloader until all personnel are clear.
4. Never perform lubrication or repair service while the beltloader is running.
5. Never operate the beltloader with missing guards.
6. Never allow any part of body to come in contact with conveyor pulleys while the unit is running, injury can occur.
7. Never reposition the PBB with the beltloader running, damage to equipment can occur.
8. Do not start the beltloader when the load exceeds 200lbs.
9. If any of the controls, start, stop, reverse or e-stop are not functioning properly, do not use the beltloader, notify maintenance personnel.
10. The beltloader should always be shut down when not in use.
11. Only trained and authorized personnel should attempt to track the belt or perform periodic maintenance, damage or injury can occur.
12. It is the employers responsibility to implement the above and provide adequate protection for any particular use, operation or service of the beltloader.

• 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
- 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.

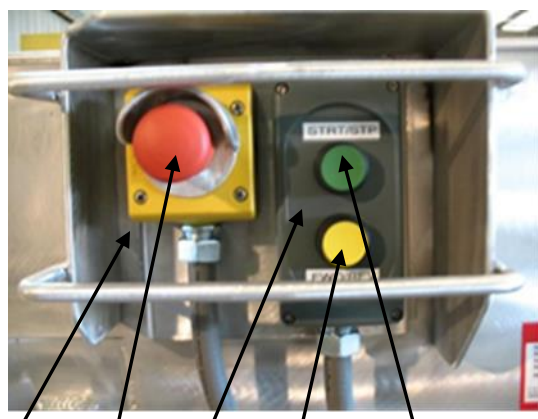


Serial Number
(The ID Plate is located on the frame.)

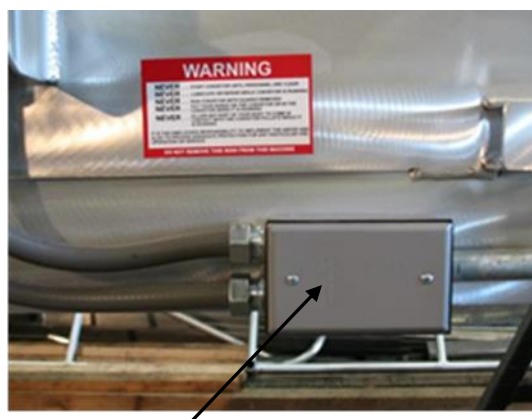
Mfg. Date
(You may be asked the Mfg. Date of your unit, have it ready if you are asked for it)



• Parts Breakdown •



1 2 3 4 5



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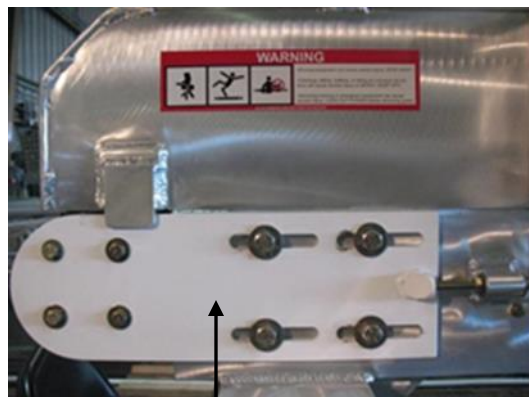
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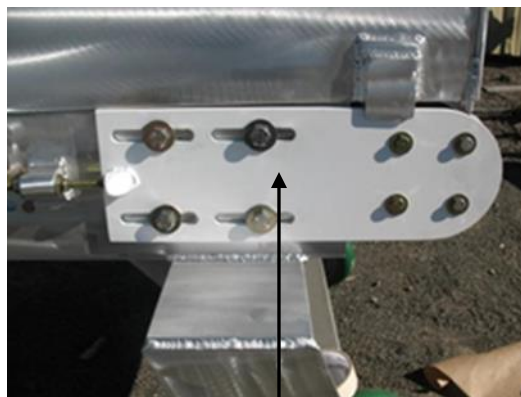
9

<i>Item</i>	<i>Description</i>	<i>Part Number</i>
1	Emergency Stop Box	BL-ESB221
2	Red Knob (E-Stop Button)	BL-ERB001
3	Control Box	BL-2BB2
4	Yellow Button	BL-PBY001
5	Green Button	BL-PBG001
6	Junction Box	BL-JB001
7	Power Box (Complete Assembly)	BL-PBA1816
8	Power Box (Box only)	BL-PBO1816
9	Transformer	BL-6040SH

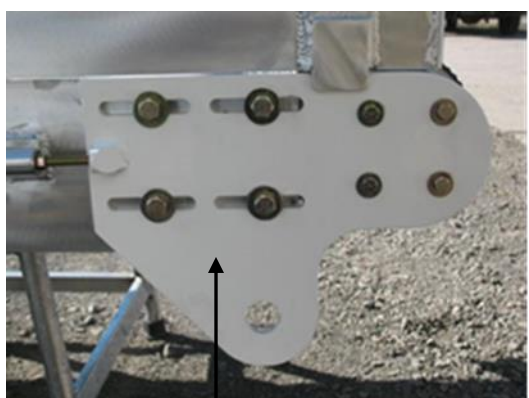
• Parts Breakdown •



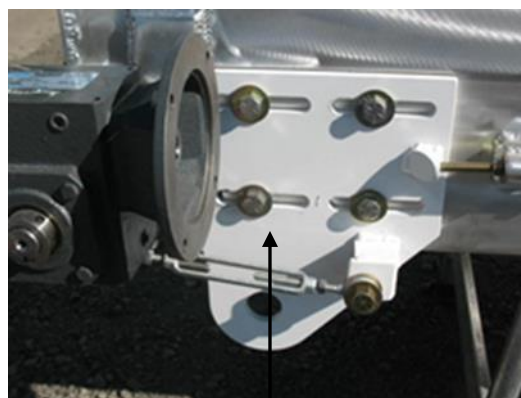
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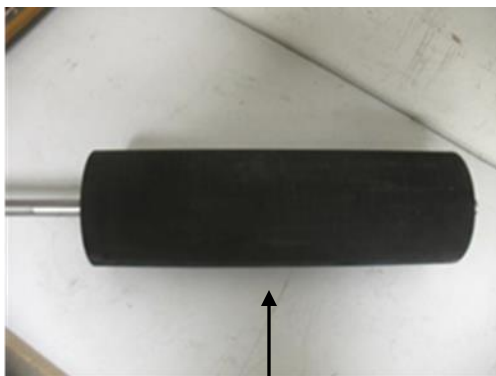
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<i>Item</i>	<i>Description</i>	<i>Part Number</i>
10	Lower Adjustment Plate (Right Side)	BL-S375-46-RH
11	Lower Adjustment Plate (Left Side)	BL-S375-46-LH
12	Upper Adjustment Plate (Right Side)	BL-S375-45-RH
13	Upper Adjustment Plate (Left Side)	BL-S375-45-LH

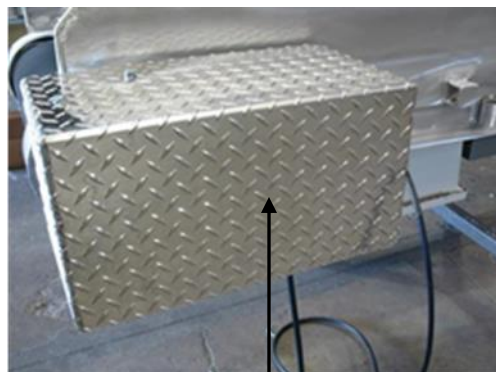
• Parts Breakdown •



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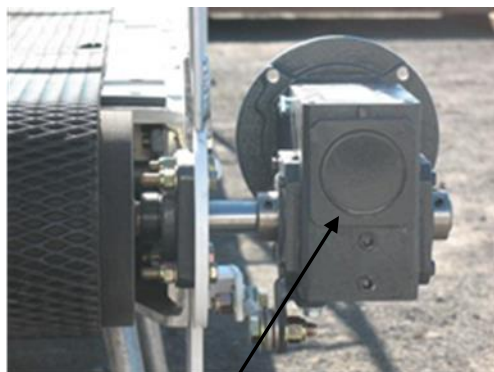
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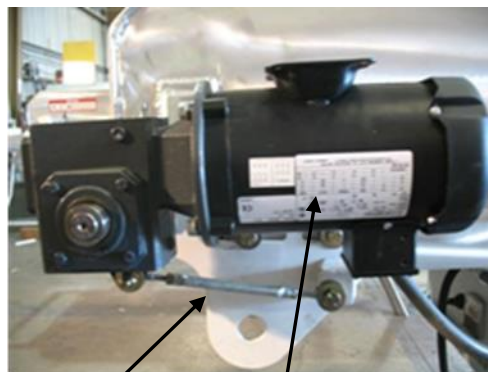
17

<i>Item</i>	<i>Description</i>	<i>Part Number</i>
14	Head Drum	BL20HD
15	Tail Drum	BL20TD
16	Gear Box Cover	BL-DP1029
17	1" Bearing	B116

• Parts Breakdown •

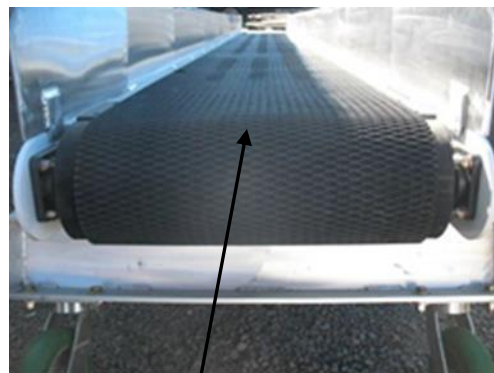


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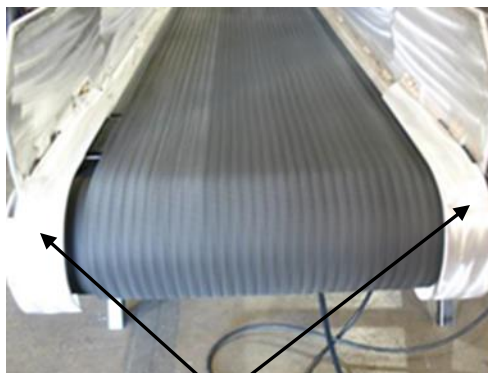


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21,21A,21B



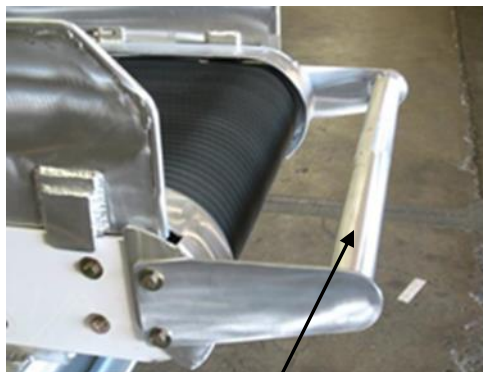
22,22A

Item	Description	Part Number
18	Gear Box	BL-GB175
19	5/16" Adjustment Turnbuckle	BL-TB450
20	Motor	BL-M56C
21	Belt Loader Belt (16 ft. Units)	BL394DRB
21A	Belt Loader Belt (20 ft. Units)	BL514DRB
21B	Belt Loader Belt (24 ft. Units)	BL610DRB
22	Belt Guard (Left Side)	BL-BGL24
22A	Belt Guard	BL-BGR24

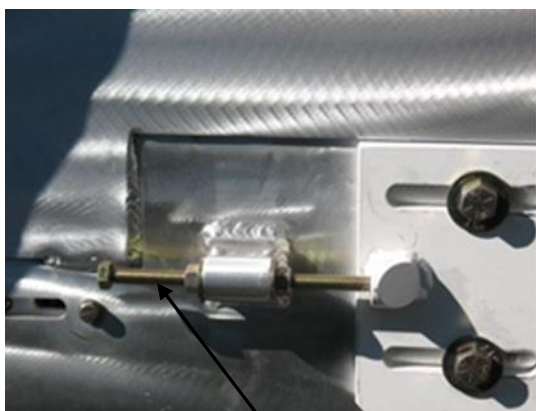
• Parts Breakdown •



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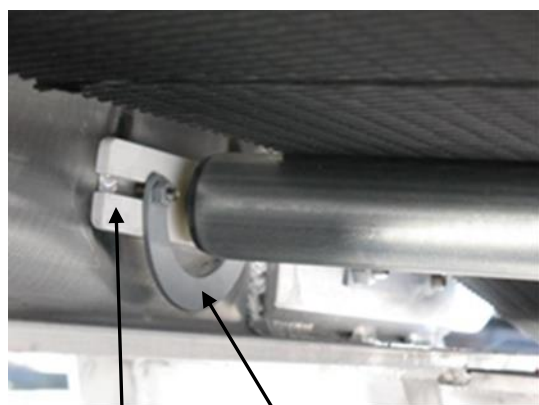
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26

<i>Item</i>	<i>Description</i>	<i>Part Number</i>
23	Belt End Cover	BL-BC2426
24	Leg Guard	BL-LG1024
25	Adjustment Bolt	BL-AB600
26	8" x 2" Swivel Castor	P00181

• Parts Breakdown •



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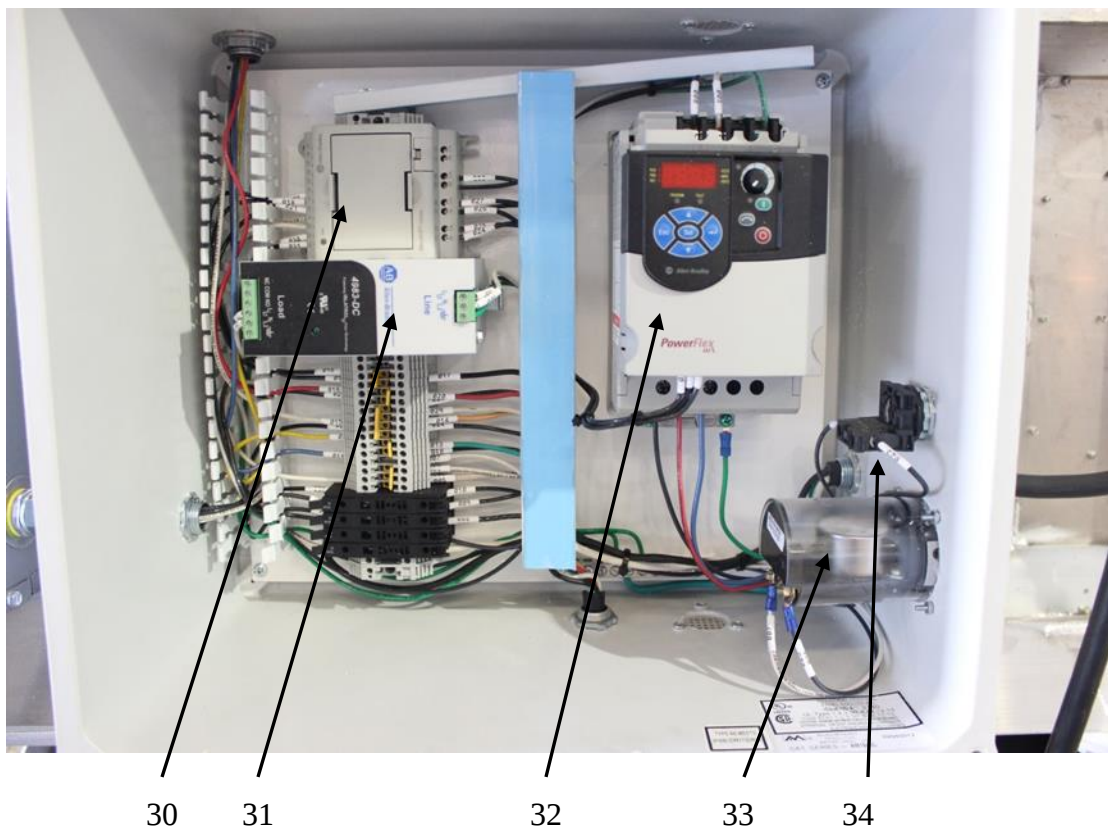
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<i>Item</i>	<i>Description</i>	<i>Part Number</i>
27	Idler Adjustment Bracket	BL-S250-48
28	Idler Nut Retainer Bracket	BL-S100-79
29	Conveyor Belt Roller	5928K72

• Parts Breakdown •



<i>Item</i>	<i>Description</i>	<i>Part Number</i>
30	PLC Control	2080-LC10-12AWA
31	Surge Protector	4983-DC
32	Powerflex 4M controller	22F-V4P5N103 Series A
33	Hour Meter	240211AA-AB8
34	Two Position Switch	ABB C2SS210B-10

• 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 belt loader's 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. 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