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Installation, Maintenance, and Parts Manual

Automation Series AS40Z Conveyors

QC Industries LLC
4057 Clough Woods Dr.
Batavia, OH 45103
(513) 753-6000
Fax: (513) 753-6001

www.qcindustries.com

1.01 Warnings – General Safety



Observe safe practices when setting up and operating your QC Industries conveyor.

Climbing, sitting, walking, or riding on conveyor can cause severe injury. Keep off conveyors.

Do not operate conveyors in an explosive environment.

Exposed moving parts can cause severe injury. Lock out power before removing guards or performing maintenance.

Gearmotors may be hot. Do not touch gearmotors.

QC Industries cannot control the installation and/or application of conveyors. Taking protective measures is the responsibility of the user. When conveyors are used in conjunction with other equipment, or as part of a multiple conveyor system, check for potential pinch points and/or other mechanical hazards before system start-up.

During normal operation, please make sure that all guards are in place and securely attached to conveyor.

Loosening stand height or angle adjustment screws can cause conveyor sections to drop down unexpectedly, causing severe injury. Support conveyor sections prior to loosening stand height or angle adjustment screws.

Injury is possible if the stands are not lagged to the floor, cross ties are not used, or angle braces are not present. Never place a conveyor in operation until all proper mounts are installed and secured. It is the end user's responsibility to ensure that the support system is safe and secure.

Never operate equipment unless all operating instructions are understood and all guards, interlocks, covers, safety devices or circuits and protective components are functioning properly.

Never operate or service this equipment if under the influence of alcohol, drugs or other substances or conditions which decrease alertness or judgment.

1.02 Foreword

Congratulations on purchasing a conveyor from QC Industries, LLC, the leader in low profile conveyors! QC Industries offers the finest low profile conveyors available, using the highest quality materials and state of the art manufacturing processes. QC Industries conveyors boast a number of innovative engineering features to assure you hassle-free setup, smooth operation, and years of continued low maintenance use. We are proud of our quality products and are committed to providing you dependable service!



Check your shipment

Before opening the shipment, visually inspect the outside of the crate/box for shipping damage. Carefully unpack the crate/box, inspecting for component damage which may have occurred inside the packing materials. Contact the carrier and QC Industries regarding any damage that may have occurred during shipment. Check the contents of your shipment against the supplied packing slip and inform QC Industries of any discrepancies.



Please read this manual

Inside this manual you will find instructions on how to set up and maintain your QC Industries conveyor properly, as well as maximize its performance. Please take the time to read this manual and familiarize yourself with these setup and maintenance instructions. These instructions will help assure a long product life that requires a minimum amount of service, and keeps your conveyor working at its maximum capacity.



If you need assistance

If you need assistance with your QC Industries conveyor, a highly trained support staff is only a phone call away. QC Industries welcomes the opportunity to assist you. You can contact the Customer Service department Monday through Friday, 8am-5pm EST at (513) 753-6000. In addition, your local distributor can provide support in many ways. Our distributors have been trained at the factory and can be dispatched to your facility to help. You can also visit our website for additional information and technical documents: www.qcindustries.com

1.03 Product Description

The Automation Series AS40Z Conveyor has many typical conveyor components, as well as some new features exclusive to this product line. Below is a basic description of the parts and options for the Automation Series AS40Z Conveyor (**Figure 1**).

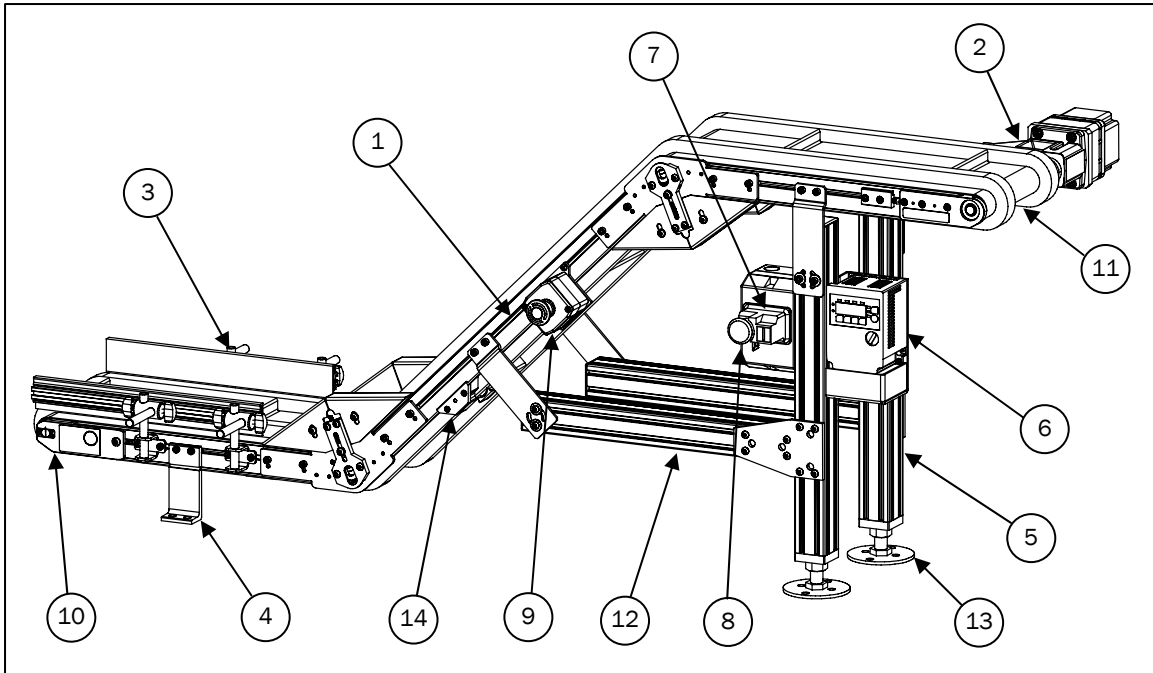


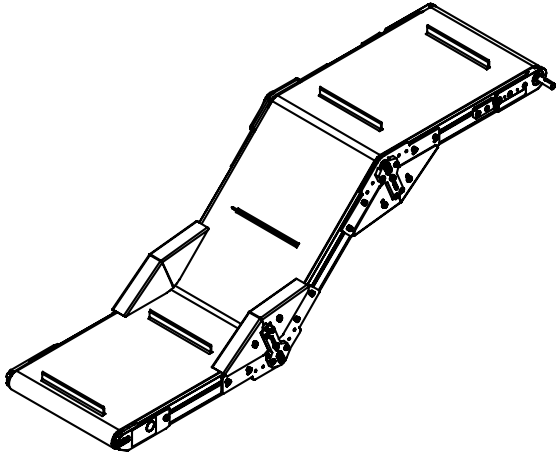
Figure 1

Typical Components:

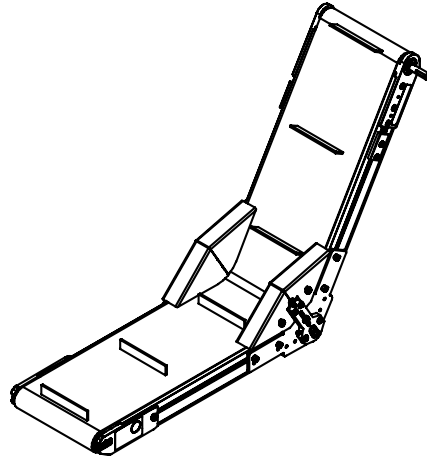
- | | | | |
|----|--------------------------------|-----|----------------------------------|
| 1. | Aluminum Extruded T-slot Frame | 8. | Emergency Stop |
| 2. | Gearmotor and Mounting Package | 9. | Remote Emergency Stop |
| 3. | Sides & Guides Accessories | 10. | Tension Release Tail Assembly |
| 4. | Standard Mounts | 11. | Drive End |
| 5. | Support Stands | 12. | Cross Tie / Angle Brace |
| 6. | Variable Speed Controller | 13. | Leveling Feet (Casters optional) |
| 7. | Motor Starter | 14. | Underside Idlers |

1.04 AS40Z Series Conveyor Configurations

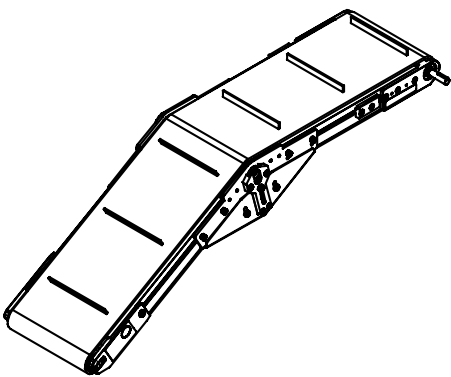
The Automation Series Z conveyor comes in four standard configurations: the Z conveyor, the L conveyor, the R conveyor, and the Full Width Idler R conveyor (non-cleated belts only).



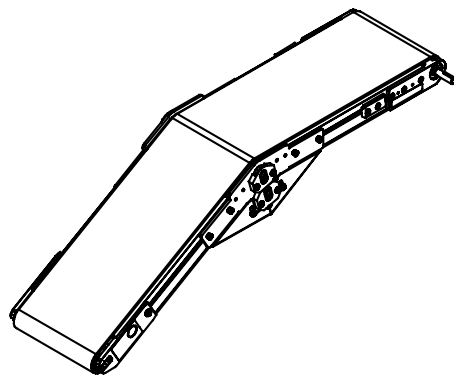
Z Conveyor



L Conveyor



R Conveyor



**Full Width Idler
R Conveyor
(Non-cleated)**

1.05 Tools Required

Set of **Metric** & Standard Allen Wrenches:



A Bubble Level for frame alignment



Set of **Metric** & Standard Wrenches:



Aluminum Cutting Hack Saw or equivalent



Torque Wrenches: 5-50 in-lb range
5-50 ft-lb range



Tape Measure



T30 Torx Bit



2.01 When Your Shipment Arrives

❶ Check your shipment for damage

- a. If you have not already done so, visually inspect the outside of the crate or boxes for shipping damage. If damage has occurred, take photos and do not discard the packaging; this will aid your damage claim with the carrier.
- b. Contact the carrier and QC Industries Customer Service Department (513-753-6000) regarding any damage that may have occurred during shipment.
- c. Carefully unpack the crate or box, inspecting the components for damage which may have occurred inside the packing materials.
- d. Check the contents of the shipment against the included packing slip and notify QC Industries of any discrepancies.

❷ Locate the items from your order

- a. In most cases, each individual conveyor and its accessories will ship in its own custom built box.
Note: On larger orders, it may be necessary to combine conveyors and accessories in one or more custom built boxes.
- b. Drive Mounting Packages are assembled at the factory with right angle gearboxes attached, and will be anchored to the bottom of the conveyor box. The motor will be in a separate box, anchored to the bottom of the conveyor box.
- c. Aluminum Exact Width Stands, casters, cross ties, and mounts – including all associated hardware – will be anchored inside the conveyor box.
- d. Sides and Guiderails are assembled and mounted to the conveyor at the factory.

❸ Record the Conveyor's Serial Number

- a. The conveyor's serial number is located on the frame at the drive end of the conveyor, opposite the side on which the gearmotor will be mounted.
- b. Record the serial number in a place where it can be accessed for reference; a place has been provided on the back cover that can be used for multiple conveyors. This will assist any future inquires regarding the conveyor, its accessories, the order it was shipped on, or replacement parts.
- c. Proceed to **Section 2.02** for the Sequence of Installation.

2.02 Installation

To set up the conveyor after receiving your shipment, QC Industries recommends following these steps. Please refer to their respective sections for more detailed instructions.

① Move the Conveyor and Accessories into location

Using appropriate equipment and safe moving methods, move the conveyor and accessories to the desired assembly, staging, or installation area (**Figure 1**). Set the conveyor in the correct operating orientation with regard to the drive position and belt direction.

See **Section 2.03** for detailed instructions

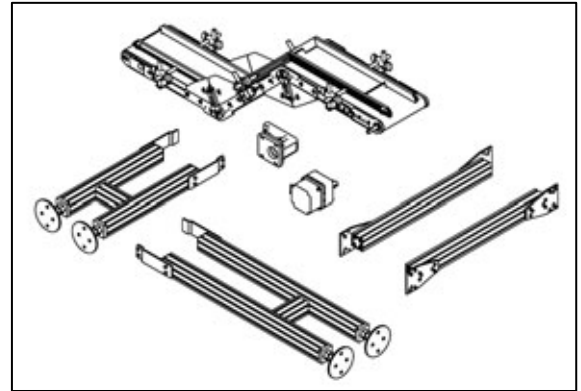


Figure 1

② Mount the Conveyor to its Stands and Cross Ties or Mounts

Use QC Industries stands and mounts (or any compatible stands and hardware) to mount the conveyor in the desired location (**Figure 2**). Make sure the three frame sections are level using the frame mounting bracket and stand leveling feet. QC Industries recommends that stands with leveling feet be anchored to the floor.

See **Sections 2.04 - 2.07** for detailed instructions

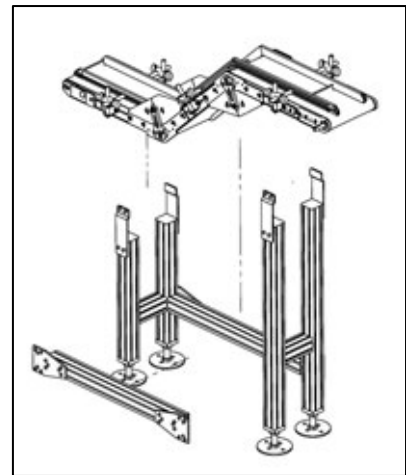


Figure 2

③ Install the Drive and Mounting Package

Wire the motor using the appropriate diagrams of the motor style, voltage and phase you have purchased (**Figure 3**). QC Industries recommends that all wiring be completed by a certified electrician.

See **Sections 2.08 - 2.12** for detailed instructions

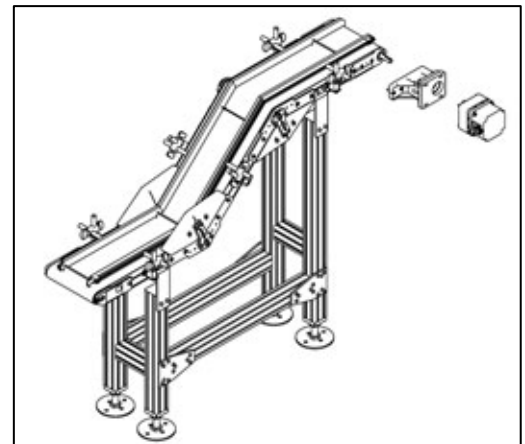


Figure 3

2.03 Conveyor Setup

1 Orient the Conveyor based on the Drive Location

a. Set the conveyor in its operating position, taking care to note its drive location. AS40Z Series conveyors are assembled with the drive pulling as standard, determined by the two drive positions available: LSF or RSF (**Figure 1**).

LSF Left Hand, Drive Pulling

RSF Right Hand, Drive Pulling

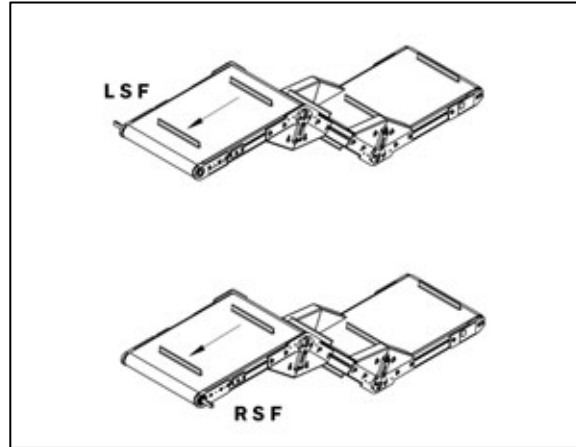


Figure 1

For a Z configuration, the 20th thru 22nd digits in the conveyor's part number will indicate the drive orientation and belt direction, as shown in the following example of a **Z conveyor** 12" wide x 24" long "A" section, 24" long "B" section, 24" long "C" section, at a 45 deg angle, **left hand drive position, single output pulley discharge, flip up tail pulley infeed**:

AE41Z12-024C024024-LSF-ZAM013

For an L or R configuration, the 17th thru 19th digits in the conveyor's part number will indicate the drive orientation and belt direction, as shown in the following example of an **L conveyor** 12" wide x 30" long "A" section, and 30" long "B" section, at a 45 deg angle, **right hand drive position, single output pulley discharge, flip up tail pulley infeed**:

AE41L12-030C030-RSF-ZAR013

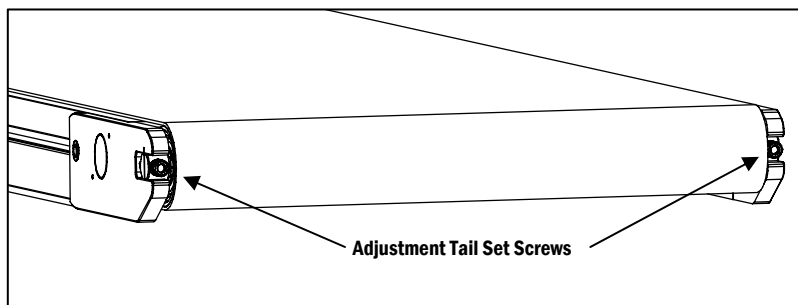


Figure 2

b. Position the conveyor for operation, taking care to note that when other equipment is nearby, access is needed for the tail pulley's adjustment set screws (**Figure 2**). This is important when tensioning or tracking the belt from the tail pulley end.

2.03 Conveyor Setup (continued)

② Install Stands, Mounts, Drives and Mounting Packages

- a. Proceed to **Sections 2.04 - 2.08** for instructions on installing Stands, Mounts, Angle Braces, Cross Ties, and Casters.
- b. Proceed to **Sections 2.09 - 2.12** for instructions on installing Drives and Mounting Packages.

③ Verify Belt Tracking

- a. Proceed to **Section 3.02** for instructions on tracking the conveyor belt.

2.04 Aluminum Exact Width Stands

Aluminum Exact Width Stands can be located anywhere along the length of the conveyor, as they mount directly into the aluminum extruded frame's T-Slot. When possible, the stands should be equally spaced along the length of the conveyor, and the maximum distance should be 6 feet apart (Figure 1).

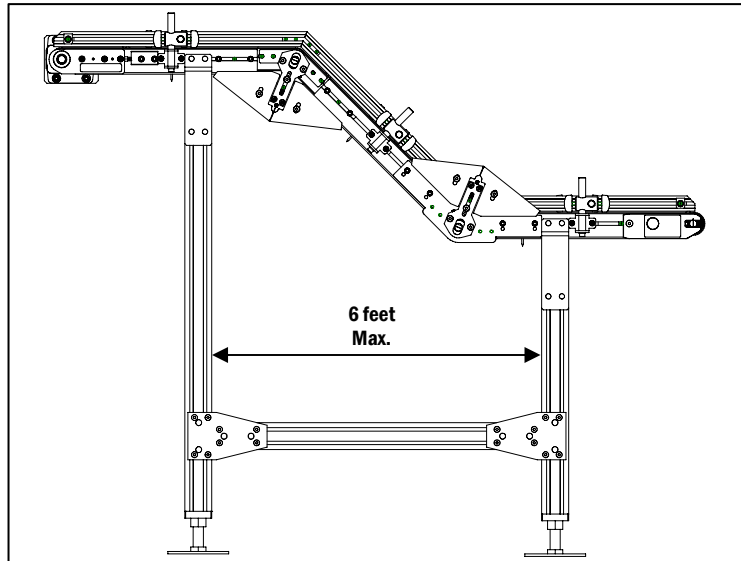


Figure 1

1 Prepare the Stand for Installation

a. For shipment, the stands will have their mounting brackets slid down the extrusion. Use an Allen wrench to loosen the M6 Socket Head Screws holding the Brackets and move them up to engage the conveyor frame, approximately 1 1/2" (or more for cleated belts) (Figure 2).

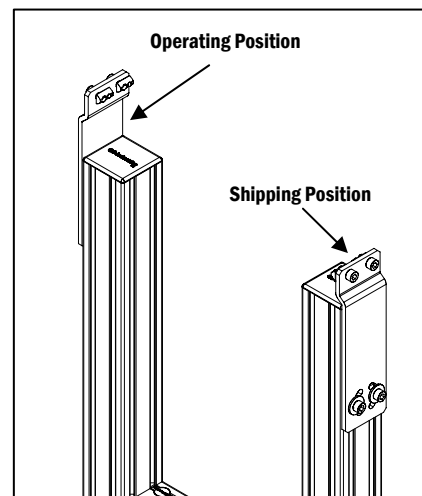


Figure 2

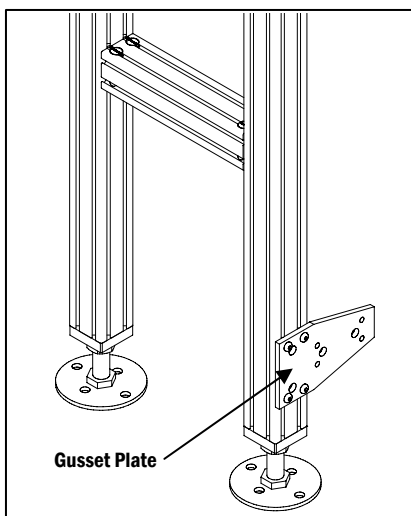


Figure 3

b. If the stands are to be used with Aluminum Cross Ties, it is advised to attach the Gusset Plates prior to mounting the conveyor (Figure 3). Refer to Section 2.06 on Aluminum Cross Ties for specific instructions.

2.04 Aluminum Exact Width Stands (continued)

② Install the Stand

a. Remove the Drop In Nuts from the bag of fasteners shrink wrapped to the Exact Width Stand.

b. Insert the Drop In Nuts into the T-Slot in the conveyor frame. Line up the stand assembly brackets to the Drop In Nuts, insert the M6 Socket head Cap Screws through the bracket and fasten the stand to the frame (**Figure 4**).

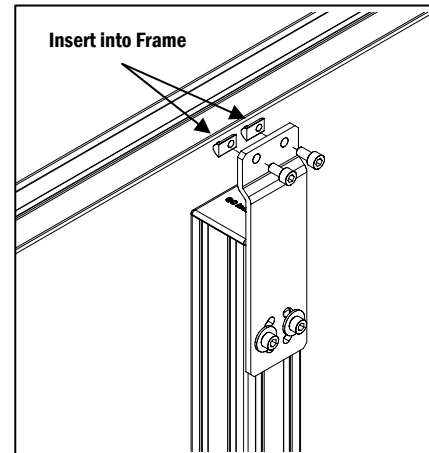


Figure 4

③ Adjust the Height using the Leveling Feet

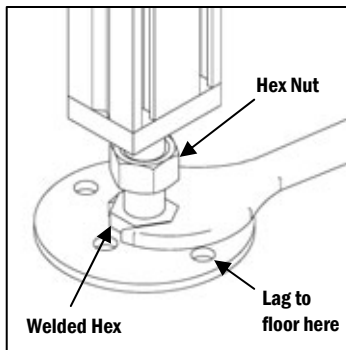


Figure 5

The Leveling Feet on all QC Industries Stands are designed to allow fine adjustment and so they can be lagged to the floor. Note: if it is not feasible to permanently attach the stands to the floor or the conveyor is to be made mobile with casters, then Cross Ties or Angle Braces must be used.

To adjust the stand height with the Leveling Feet:

- Use a large adjustable wrench to loosen the Hex Nut
- Rotate the hex welded to the foot to the desired height (**Figure 5**).
- Retighten the Hex Nut to secure it in position.



Injury is possible if the stands are not lagged to the floor, cross ties are not used, or angle braces are not present. Never place a conveyor in operation until all proper mounts are installed and secured.

d. Frame alignment is one of the key items that assure the belt properly tracks during startup. Make sure the conveyor frame has no twist by using a bubble level and checking measurements from the mounting surface.

e. Proceed to **Section 2.05** for instructions on installing Angle Braces.

f. Proceed to **Section 2.06** for instructions on installing Cross Ties.

2.05 Angle Braces

When it is not feasible to bolt the Aluminum Exact Width Stands to the floor, they can be stabilized by use of Angle Braces. Angle Braces will only work for conveyors mounted horizontally. If your conveyor is mounted at an incline, Cross Ties must be used instead. Also, Angle Braces will only work with stands that are 18" or taller (e.g., part number 1A0010A-18-21-WWWW).

Angle Braces are shipped as a set, with one Right Hand Brace and one Left Hand Brace. Each Brace has four Socket Head Cap Screws and four Drop in Nuts.

Before installing Angle Braces, the Aluminum Exact Width Stands should already be assembled to the conveyor.

❶ Install the Angle Braces to Exact Width Stands

a. Start by rotating two Drop In Nuts into the stand leg extrusion's T-Slot, one in each slot (**Figure 1**).

b. Insert two Drop In Nuts into the conveyor frame's T-Slot.

c. Place the Angle Brace over the Drop In Nuts, and insert the Socket Head Cap Screws into the Drop In Nuts, but do not fully tighten them (**Figure 2**).

d. Tighten the Socket Head Screws so the Brace is secured to the stand, and repeat the installation for the Brace on the other side.

e. Frame alignment is one of the key items that assure the belt properly tracks during startup. Make sure the conveyor frame has no twist by using a bubble level and checking measurements from the mounting surface.

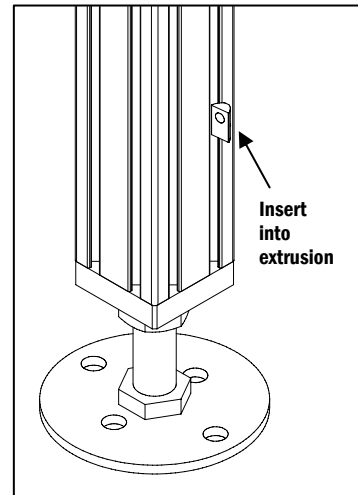


Figure 1

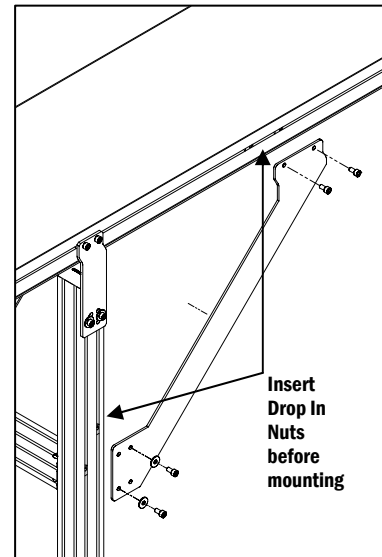


Figure 2

2.06 Aluminum Cross Ties

When it is not feasible to bolt the Aluminum Stands to the floor, the conveyor and stand assembly can be stabilized by use of Cross Ties.

Cross Ties are sold in standard lengths, and are meant to be cut to length during installation based on the final placement of the stands.

The Cross Ties can be installed once the conveyor has been secured to the stands.

In the box that contains the Cross Ties, there will be a bag containing the Cross Tie Gusset Plates and fasteners.

❶ Install the Gusset Plates to Aluminum Stands

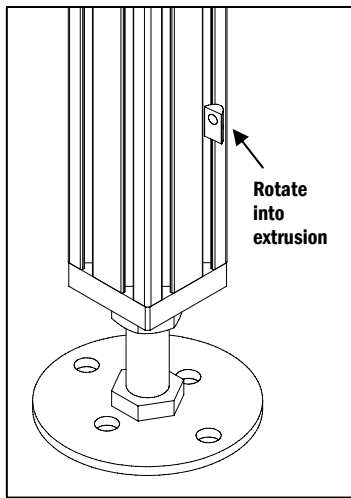


Figure 1

a. Insert four Drop In Nuts into each stand leg extrusion's T-Slot, two in each slot (Figure 1).

b. The Gusset Plate should be positioned over the Drop In Nuts in the stand extrusion T-Slot and secured with the Socket Head Screws. Slide the Cross Tie nuts into the cross tie extrusion prior to assembly (Figure 2). Although there are twelve holes in the Gusset Plate, only the smaller eight holes will be used.

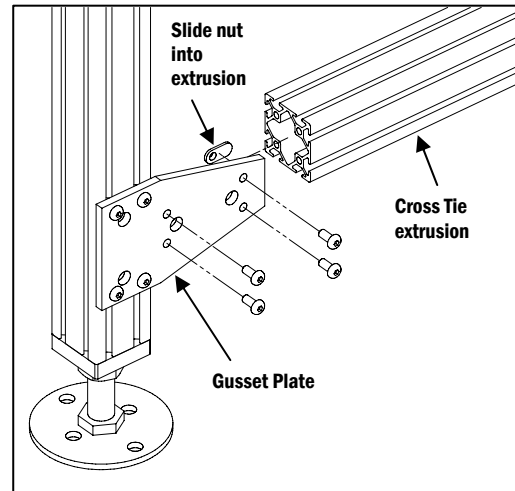


Figure 2

❷ Install the Cross Tie Extrusions

a. Ensure stands are level using a bubble level on the conveyor slider bed.

b. Measure the distance between the stands and cut the Cross Tie Extrusion to fit with a saw blade that is appropriate for cutting Aluminum (Figure 3).

c. The Gusset Plates can mount to the inside or outside of the stand's leg, or to the stand's Cross Member if there is no room on the leg.

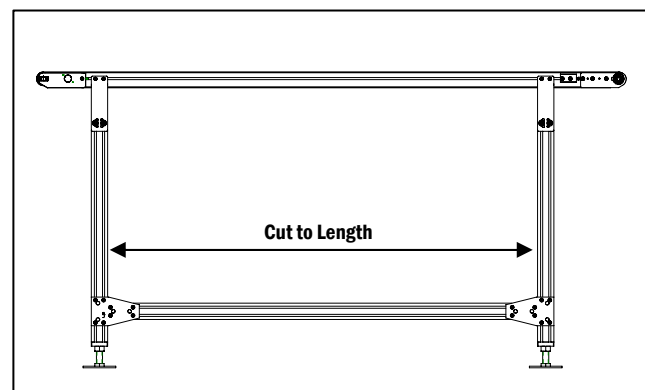


Figure 3

2.07 Casters

QC Industries offers swivel locking casters to replace the stands' leveling feet for applications when conveyors need to be movable. In most cases, casters will arrive already assembled to exact width stands they are to be used on.

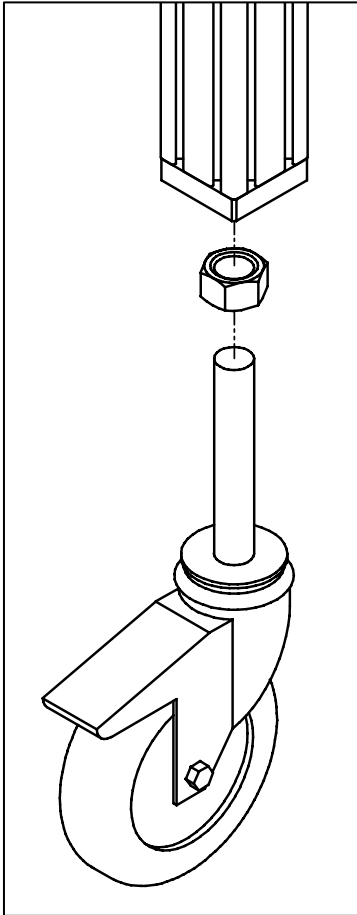


Figure 1

① Adjust Casters on Aluminum Stands

a. Once the conveyor is mounted on the stand, the caster's stem can be used for final height adjustment, up to 1 1/2" up or down. Use a large adjustable wrench to loosen the hex nut, engage the swivel lock, then rotate the caster to the desired height by hand, and finally retighten the Hex Nut to secure it in position (**Figure 1**).

② Secure the System

a. When the conveyor is not being moved or is in operation, the Caster's swivel lock should be engaged. It is conveniently located over the caster's wheel so it can be engaged and disengaged by foot.

b. QC Industries requires the use of Cross Ties or Angle Braces if Casters are used. Note: The width of the system should be no less than 1/3 of the system's height (e.g., for a 36" high system, a stand assembly on casters should be at least 12" wide). When assembling, please make sure the assembly is stable for your application.



Warning: Moving conveyors with casters can create dynamic forces that could tip the conveyor. Use caution when moving a conveyor with casters.

c. Proceed to **Section 2.09 – 2.12** for instructions on installing Drives and Mounting packages.

2.08 Underside Idlers

Underside Idlers are used on Automation Series AS40Z conveyors to prevent the belt from sagging below the bottom of the extruded aluminum frame. Not all conveyors require underside idlers. Variables, such as conveyor length, conveyor width, cleated and corrugated sidewall belts - or any combination of these variables - affect whether underside idlers are used. If your conveyor requires underside idlers, they will already be mounted to your conveyor. Use the steps below to adjust or relocate your underside idlers.

a. There are two different styles of underside idlers, dependent on the size of the conveyor and style of belt: stub idlers and full width idlers. Both styles mount to the conveyor in the same way (**Figure 1**).

b. Loosen the two M5 Socket head Cap Screws tightened in the clamp from the extruded guard (**Figure 2**). For Full Width Underside Idlers, loosen the screws on both ends, and also the M5 set screws on the bottom of the Clamp Plates (**Figure 3**).

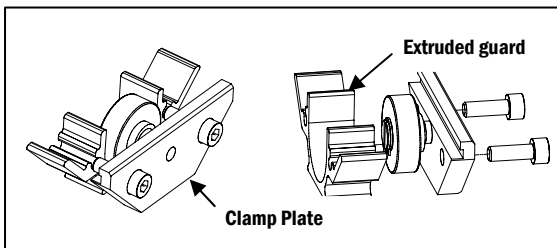


Figure 2

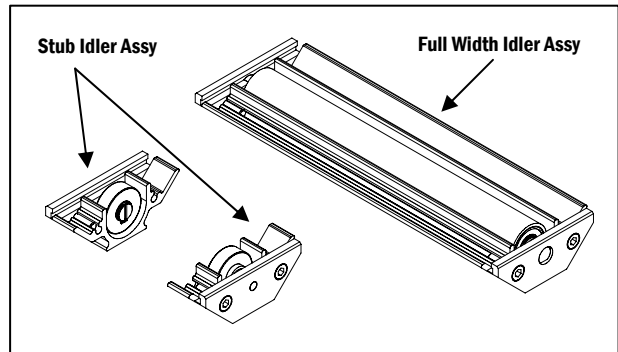


Figure 1

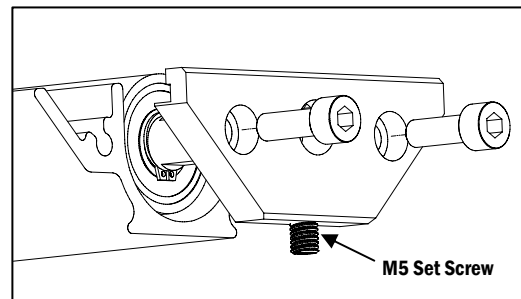


Figure 3

c. Determine the new location for Underside Idler assemblies on the conveyor; they should be evenly spaced down the length of the conveyor. If stub idlers are used, they should be mounted directly across from each other.

d. Clamp the Underside idler assembly into place by threading the M5 Socket Head Cap Screws through the Clamp Plate and into the extruded guard. The assembly will lock against the bottom corner of the aluminum extruded conveyor frame (**Figure 4**). For Full Width idler assemblies, the M5 Set Screws will also need to be tightened through the Clamp plate against the flat on the idler shaft (**Figure 5**).

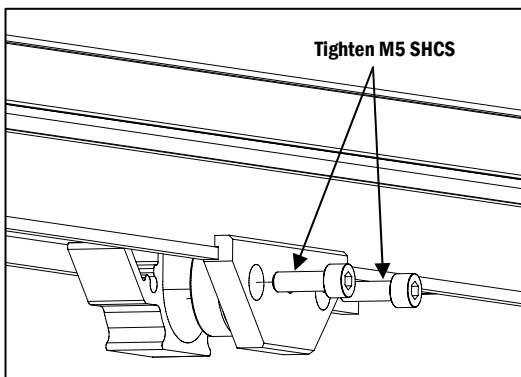


Figure 4

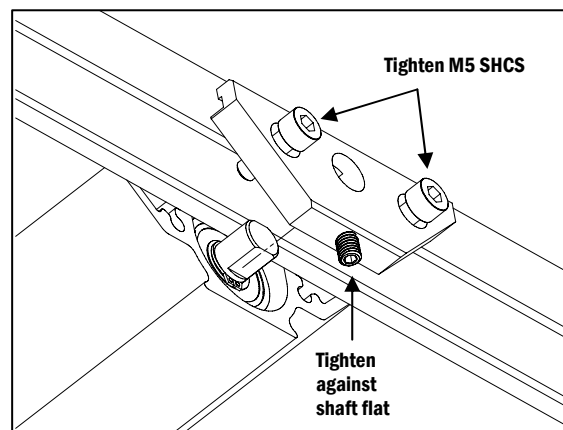


Figure 5

2.09 Side Mounts

The Side Mounts are used to mount the conveyor to a flat mounting surface. There are two versions available: Flush Mount (1A0030A-001), and 5" Raised Mount (1A0030A-005).

The Flush Mounts are used for conveyors with no cleats, corrugated sidewalls, or underside idlers. They will create a top of belt height of approximately 49.5mm [1.95"] from the mounting surface.

If the conveyor has cleats, corrugated sidewalls, or underside idlers, the 5" Raised Side mounts are used. They will create a top of belt height of approximately 128.5mm [5.06"] from the mounting surface. The same rules for stand placement on the conveyor apply for mounts.

① Flush Side Mounts

a. With Flush Mounts, the mount can be installed on the conveyor anywhere along its length where the T-Slot is exposed and accessible.

b. Insert the Drop In Nuts into the T-Slot in the conveyor frame. Line up the Flush Mount to the Drop In Nuts, insert the M6 Socket head Cap Screws through the mount and fasten to the frame (**Figure 1**).

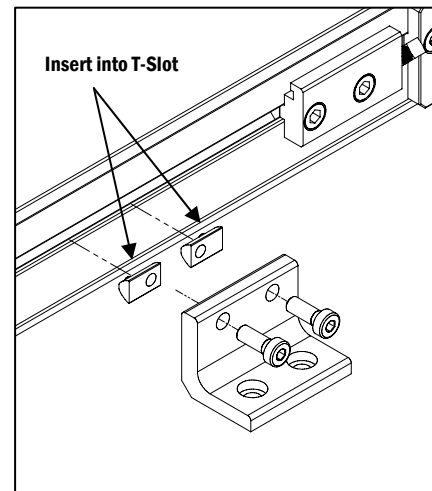


Figure 1

② Raised Side Mounts

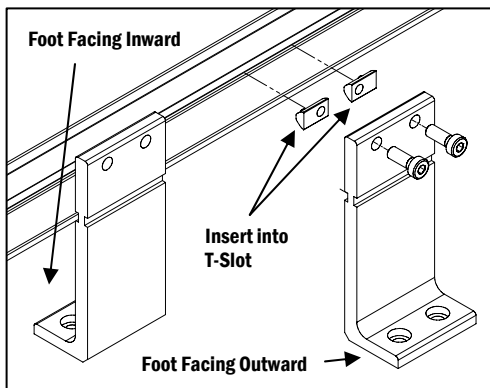


Figure 2

a. With Raised Mounts, the mount can be installed on the conveyor anywhere along its length where the T-Slot is exposed and accessible. However, the conveyor should be supported at least every 6', and the maximum distance the mount should be from the tail end is 9", and 20" from the drive end.

b. Insert the Drop In Nuts into the T-Slot in the conveyor frame. Line up the Raised Mount to the Drop In Nuts, insert the M6 Socket head Cap Screws through the mount and fasten to the frame. The Raised Mount mounting foot can face either inward or outward (**Figure 2**).

2.10 Side Drive Mounting Packages

Side Drives are direct-coupled to the conveyor's drive pulley. There are two types of side drives offered for the AS40Z: Standard Duty Electric and Heavy Duty Electric. Standard Duty Electric gearmotors use in-line gearboxes. Heavy Duty Electric gearmotors use right angle gearboxes.

With Standard Duty Side Drives, the gearbox and motor will ship installed on the drive mounting package. With Heavy Duty Side Drives, only the gearbox will ship installed on the mounting package. The heavy duty motor is always shipped in its own box.

The drive package will ship separate from the conveyor with the gearbox (and motor, if Standard Duty) attached.



Warning: Disengaging the Tension Release Tail Assy during drive installation may cause the driver assembly to fall. Keep conveyor belt tensioned during drive installation. **DO NOT** disengage Tension Release Tail Assy during drive installation.

1 Prepare the conveyor

- Remove and discard the three M6 Low Head Cap Screws with an Allen Wrench from the drive side Bearing Block (Figure 1).
- Leave the bearing Block intact and in place. It will not move under belt tension.
- Locate the box with the drive mounting package and loosely install the flex coupling half that mounts to the drive pulley. Only tighten the set screw on this half of the coupling enough to keep it on the pulley, but still loose enough so it can slide to the correct position.

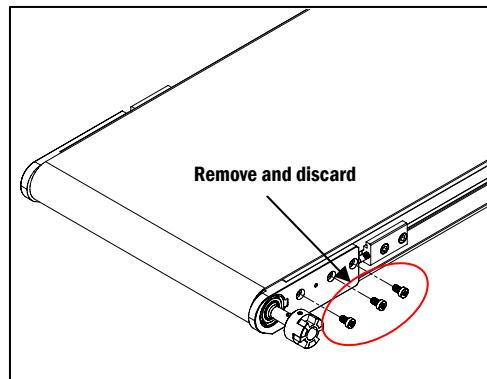


Figure 1

2 Prepare the Drive Package

- Remove the Drive Mounting Sub Plate/gearbox/motor assy from the casting by removing four M6 Socket Head Cap Screws using a Allen Wrench (Figure 2 & Figure 3).

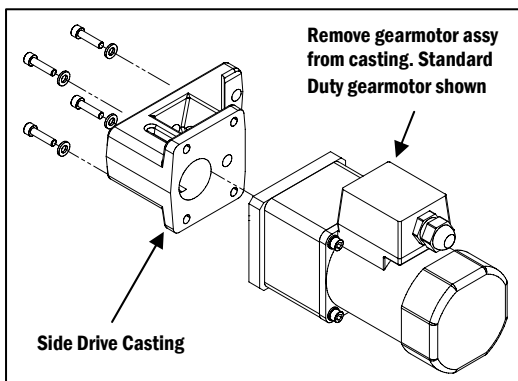


Figure 2

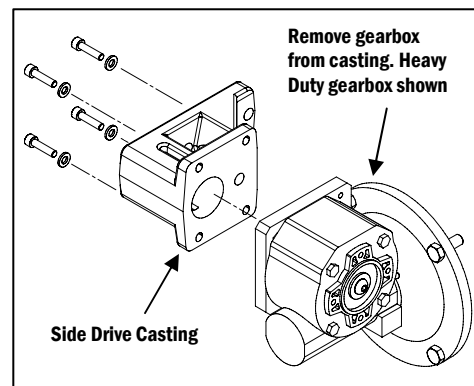


Figure 3

2.10 Side Drive Mounting Packages (continued)

③ Install the Drive Mounting Casting

a. Rotate the conveyor drive pulley so that the set screw on the coupling half mounted to the gearmotor will be oriented in the 12 o'clock position when engaged with the conveyor coupling half.

b. Place the Drive Mounting Casting over the conveyor's bearing block. Align the pins in the casting to the holes in the bearing block and secure it in place with the three M6 Socket Head Cap Screws supplied with the mounting package (Figure 4).

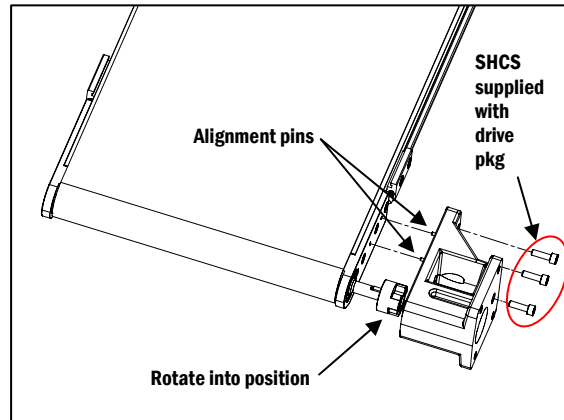


Figure 4

④ Install the Drive Package

a. Ensure the set screw on the gearmotor coupling half will be in the 12 o'clock position when engaged with the conveyor coupling half. Mount the gearmotor/subplate/coupling assy to the casting by tightening the four M6 Socket Head Cap Screws (Figure 5). Motor can be rotated in 90° increments for electrical wiring access.

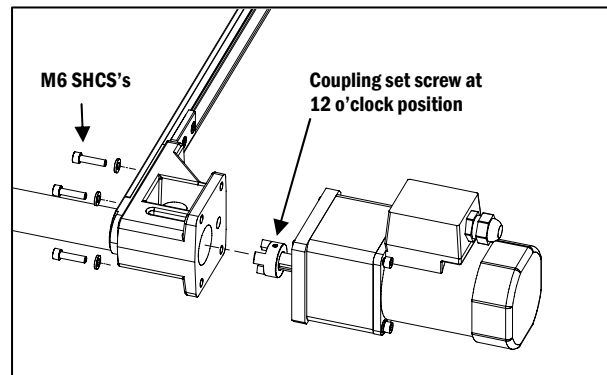


Figure 5

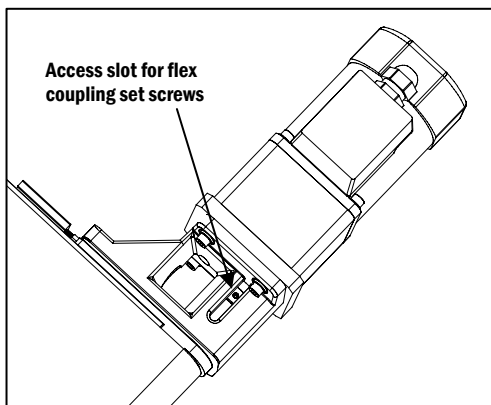


Figure 6

b. The Set Screws on both Coupling Halves will be visible through the top opening in the Casting by rotating the drive pulley (Figure 6). Using an Allen Wrench, tighten the Set Screws to secure their position.

c. QC Industries recommends that all wiring be completed by a certified electrician. Refer to the documentation contained in the motor's box for instructions on electrical connections. Once the motor is wired, the conveyor is ready for operation.

⑤ Install the Heavy Duty Motor

a. For Heavy Duty Electric Gearmotors, proceed to **Section 2.12** for instructions on installing the motor.

2.11 Pivot Drive Mounting Package

For space savings, the Pivot Drive was designed to mount the gearmotor either above or below the conveyor - and the entire range in between (**Figure 1**). It is only available with in-line gearmotors, which are mounted parallel to the drive pulley.

The Drive Package will ship separate from the conveyor with the gearbox and motor attached, and the gearbox sprocket already attached to its shaft.

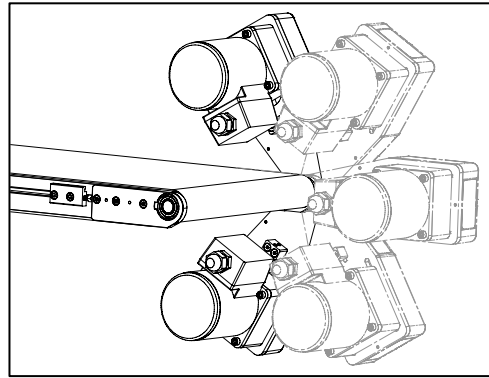


Figure 1



Warning: Disengaging the Tension Release Tail Assy during drive installation may cause the driver assembly to fall. Keep conveyor belt tensioned during drive installation. DO NOT disengage Tension Release Tail Assy during drive installation.

1 Prepare the conveyor

a. Remove and discard the three M6 Low Head Cap Screws with an Allen Wrench from the drive side Bearing Block (**Figure 2**).

b. Leave the bearing Block intact and in place. It will not move under belt tension.

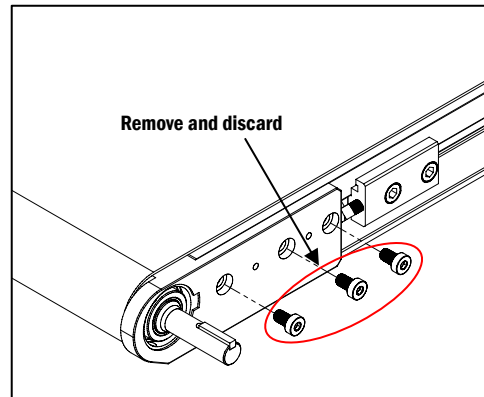


Figure 2

2 Prepare the Drive Package

a. Remove the Guard in the Drive package by removing the three M4 Socket Head Cap Screws using an Allen Wrench (**Figure 3**). The top Sprocket and Belt are loose under the Guard.

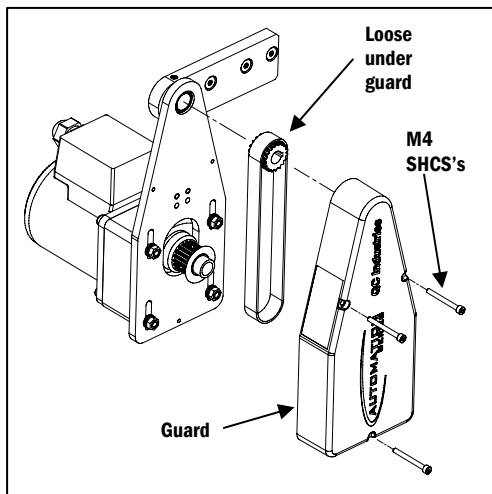


Figure 3

b. Ensure that the two M6 Socket Head Set Screws on the top and bottom of the Mounting Plate are securely tightened so that Rotate Plate does not move during mounting and handling (**Figure 4**).

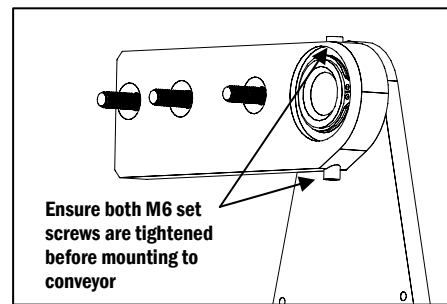


Figure 4

2.11 Pivot Drive Mounting Package (continued)

③ Install the Drive Mounting Package

- a. Mount the Drive Mounting Plate over the drive side bearing Block and align the mounting holes.
- b. Install and tighten the M6 Flat Head Screws included with the drive mounting package into the countersunk holes of the Drive Mounting Plate (**Figure 5**).

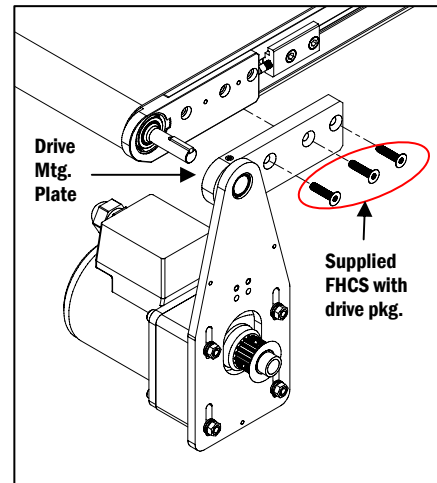


Figure 5

④ Install the drive belt

- a. Remove the nylon tape that holds the key during shipment from the conveyor's drive pulley output shaft.

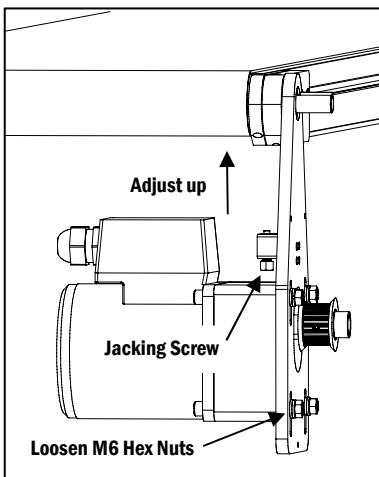


Figure 6

- b. Loosen (but do not remove) the four M6 Hex Nuts holding the gearbox (and subplate, if applicable) in position, using an Allen Wrench and box wrench.

- c. Thread the Tracking Screw up to allow the gearbox (and subplate, if applicable) to move toward the conveyor (**Figure 6**).

- d. Slide the top Sprocket onto the conveyor's output Shaft and Key, so it is centered over the lower Sprocket. Secure it in place by tightening the two Set Screws with an Allen Wrench.

- e. Install the Timing Belt over the Sprockets.

⑤ Prepare for operation

- a. Tension the Timing Belt by running out the Square Head Set Screw to move the gearbox (and subplate, if applicable) away from the conveyor. The Square Head Set Screw and Jacking Block may need to be relocated up or down to best accommodate the tensioning of the timing belt.

- b. The Timing Belt is properly tensioned when it takes approximately 6 lbs of force to deflect one span of the belt .09".

- c. Retighten the four M6 Hex Nuts with a box wrench to hold the gearbox (and subplate, if applicable) in position (**Figure 7**).

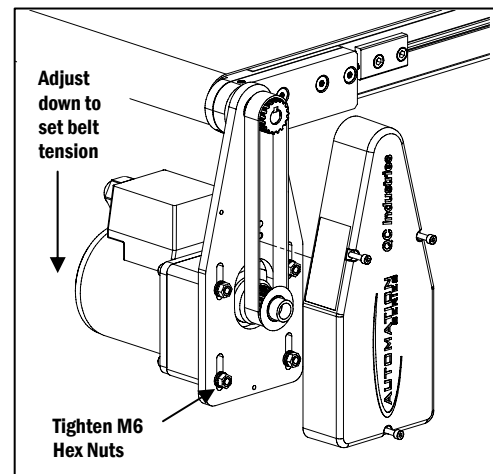


Figure 7

2.11 Pivot Drive Mounting Package (continued)

d. Replace the Guard and secure it with the three M4 Socket Head Cap Screws using an Allen Wrench.

e. Loosen the M6 set screws in the top and bottom of the Mounting plate, and orient the drive package into the desired position for operation. Tighten the set screws, **using caution to keep hands and fingers away from the Rotate Plate should it swing down**, until the set screws are securely fastened. (Figure 8).

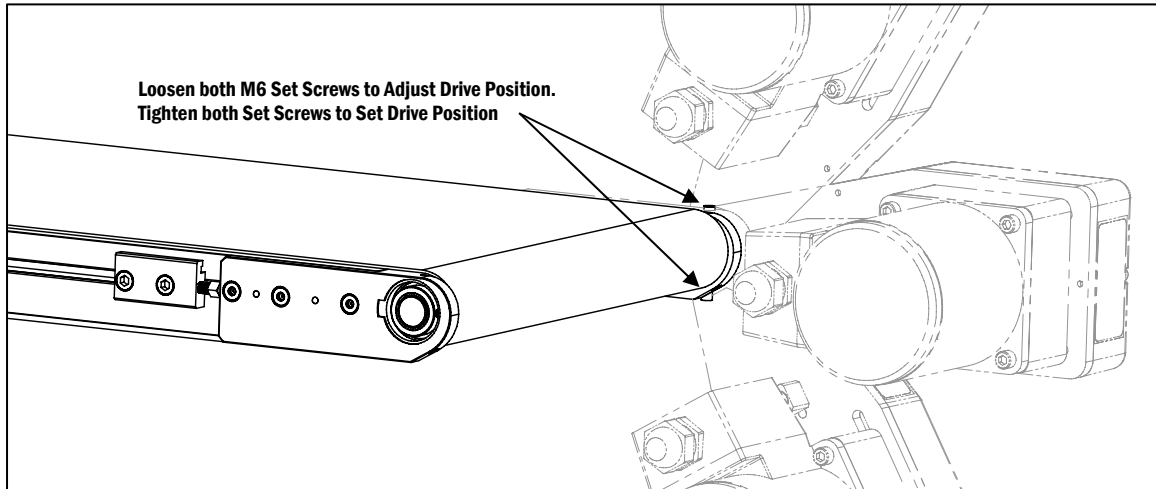


Figure 8

f. QC Industries recommends that all wiring be completed by a certified electrician. Refer to the documentation contained in the motor's box for instructions on electrical connections. Once the motor is wired, the conveyor is ready for operation.

2.12 Heavy Duty Drive Mounting Package

The Heavy Duty Drive Mounting package is designed for heavier loads and demanding applications. It is a fixed position Top or Bottom drive that utilizes a right angle gearbox.

The Drive Package will ship separate from the conveyor with the gearbox attached, and the gearbox sprocket already attached to its shaft. The heavy duty motor, if purchased, is always shipped in its own box.



Warning: Disengaging the Tension Release Tail Assy during drive installation may cause the driver assembly to fall. Keep conveyor belt tensioned during drive installation. DO NOT disengage Tension Release Tail Assy during drive installation.

1 Prepare the conveyor

- a. Remove and discard the three M6 Low Head Cap Screws with an Allen Wrench from the drive side Bearing Block (**Figure 1**).
- b. Leave the bearing Block intact and in place. It will not move under belt tension.

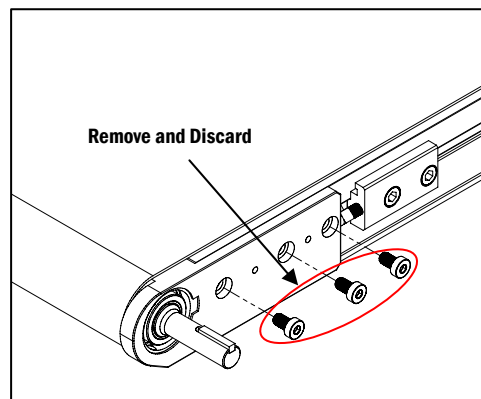


Figure 1

2 Prepare the Drive Package

- a. Remove the Guard in the Drive package by removing the four M4 Socket Head Cap Screws using an Allen Wrench (**Figure 2**). The top Sprocket and Belt are loose under the Guard.

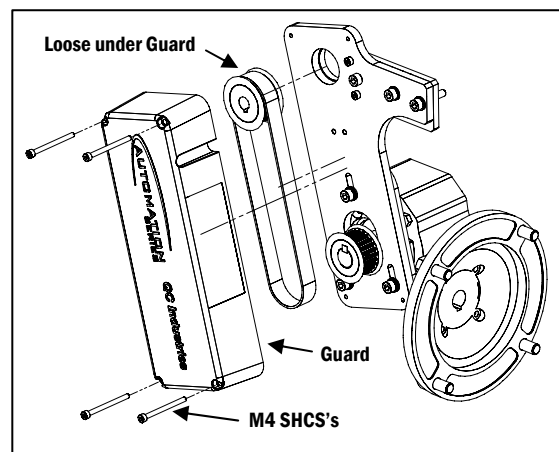


Figure 2

2.12 Heavy Duty Drive Mounting Package (continued)

③ Install the Drive Mounting Package

- a. Mount the Drive Mounting Plate over the drive side bearing Block and align the mounting holes.
- b. Install and tighten the three M6 Socket Head Screws included with the drive mounting package into the holes of the Drive Mounting Plate (**Figure 3**).

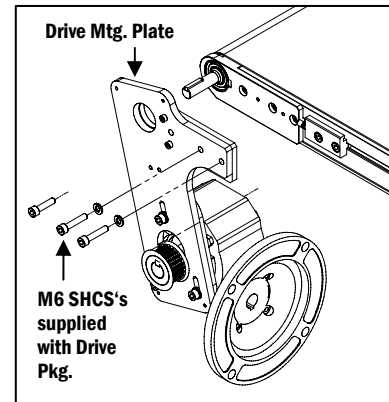


Figure 3

④ Install the drive belt

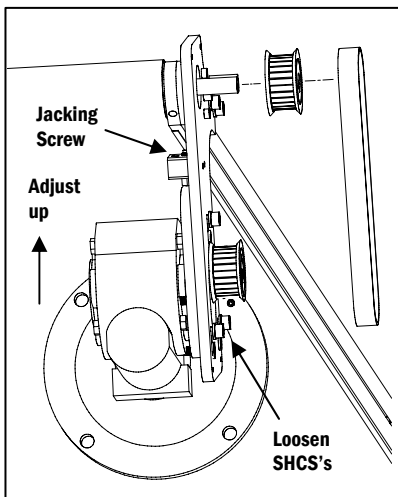


Figure 4

- a. Remove the nylon tape that holds the key during shipment from the conveyor's drive pulley output shaft.
- b. Loosen (but do not remove) the three M6 Socket head Cap Screws holding the gearbox and subplate in position, using an Allen Wrench.
- c. Thread the Tracking Screw up to allow the gearbox and subplate to move toward the conveyor (**Figure 4**).
- d. Slide the top Sprocket onto the conveyor's output Shaft and Key, so it is centered over the lower Sprocket. Secure it in place by tightening the two Set Screws with an Allen Wrench.
- e. Install the Timing Belt over the Sprockets.

⑤ Prepare for operation

- a. Tension the Timing Belt by running out the Square Head Set Screw to move the gearbox and subplate away from the conveyor.
- b. The Timing Belt is properly tensioned when it takes approximately 6 lbs of force to deflect one span of the belt .09".
- c. Retighten the three M6 Socket head Cap Screws with an Allen Wrench to hold the gearbox and subplate in position (**Figure 5**).
- d. Replace the Guard and secure it with the four M4 Socket Head Cap Screws using a 2mm Allen Wrench.

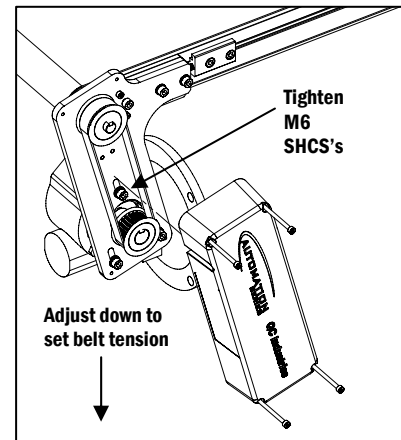


Figure 5

⑥ Install the Heavy Duty Motor

- a. For Heavy Duty Electric Motors, proceed to **Section 2.12** for instructions on installing the motor.

2.13 Installing a Heavy Duty Motor

Heavy Duty motors are always shipped in their own box. They must be installed onto the speed reducer by the installer.

❶ Discard the Motor Key and use the Reducer Key

- a. Unpack the motor from its box and packaging.
- b. Discard the key that is included with the motor. Only the special key provided with the Leeson Speed Reducer should be used with the Leeson Speed Reducer (for more, refer to Leeson's Speed reducers Installation, Lubrication, and Maintenance Instructions document provided with the speed reducer or download it at www.qcindustries.com).

❷ Install the Motor to the Speed Reducer

- a. On the Speed Reducer, rotate the input quill by hand until the keyway is in the 12 o'clock position. Do the same with the motor.
- b. Open the packet of anti-seize compound that shipped with the Speed Reducer. Generously apply it to the speed reducer input quill and motor shaft.
- c. Install the motor onto the speed reducer by guiding the keyed shaft into the speed reducer input quill.
- d. Rotate the motor until the workbox is in the desired location (normally pointing horizontally away from the conveyor) and secure it in place with the 4 Hex Head Screws provided using a 9/16" Wrench.
- e. QC Industries recommends that all wiring be completed by a certified electrician. Refer to the documentation contained in the motor's box for instructions on electrical connections. Once the motor is wired, the conveyor is ready for operation.

3.01 Maintenance Foreword

Managing conveyor life is both a comprehensive and important consideration from the day a system is conceived until the day it is retired from service. From a business perspective, maintenance is an essential activity for the achievement of optimal return on investment, as well as a key to remaining competitive in a hyper-competitive world.

Like maintenance for many other systems, the maintenance of conveyor systems divides into three broad categories: predictive, preventive, and corrective. The obvious advantage of predictive and preventive maintenance is that downtime surprises can be avoided, and when action needs to be taken, all of the parts, materials, and timing can be arranged for operational convenience.

To assure the highest performance for your conveyor system, QC Industries has combined a selection of high quality durable components and superior design criteria that support all aspects of conveyor operational effectiveness with the minimal amount of conveyor preventive maintenance.

Preventive maintenance, such as the cleaning of the conveyor, replacement of conveyor belt and bearings will be regimented by the type of environment the conveyor system is subjected to, the number of hours in operation, and the amount of performance demanded of the system.

Predictive measures, such as belt replacement schedules, periodic bearing replacement intervals, and overall equipment inspection shall be determined by the environment the conveyor is subjected to, the number of hours in operation, and the production effects of measures taken at the corrective phase.

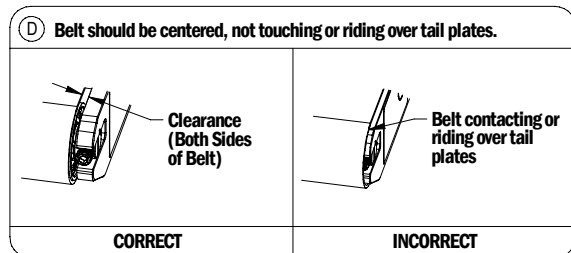
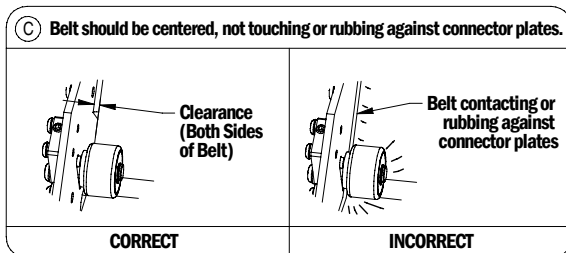
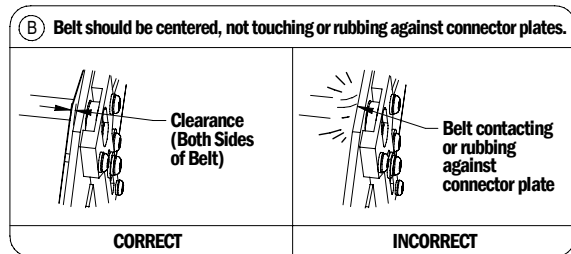
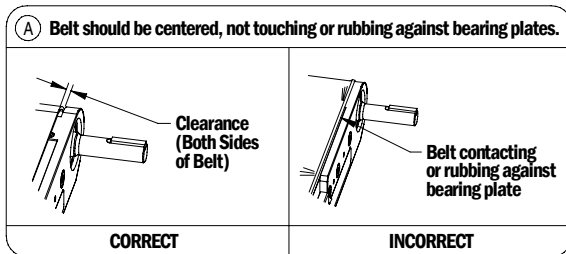
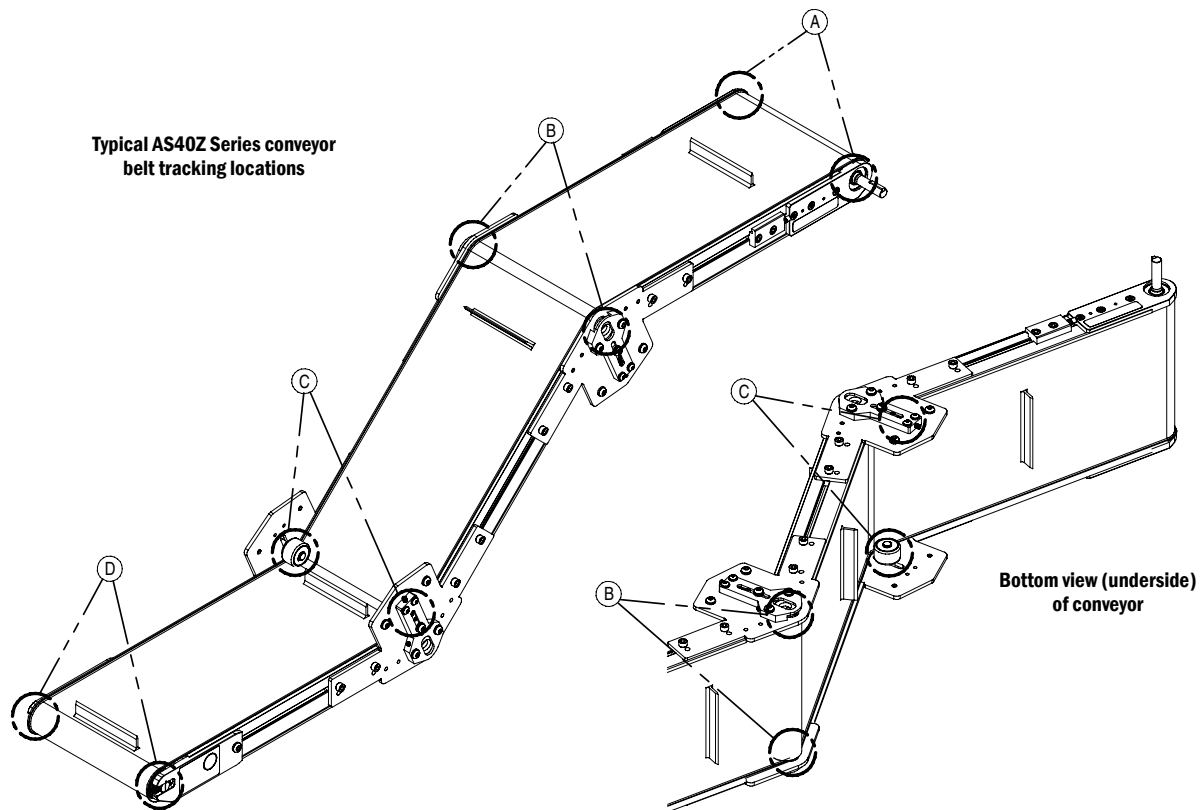
Maintenance, in general, affects all aspects of conveyor operational effectiveness and risks, not just system availability and cost – specifically safety, operational efficiency, energy efficiency, product quality, and environmental integrity.

The following sections are QC Industries' requirements for assuring the conveyor system is always operating at the factory specifications with minimal production interruption. Please follow these guidelines and if any questions arise, call our customer service department at (513) 753-6000.

3.02 Belt Tracking

All AS40Z Series conveyors are shipped assembled with the belt pre-tracked from the factory; **however, the conveyor tracking must be checked/adjusted after conveyor installation.** Follow the instructions in this section both for initial tracking and if you find the tracking needs adjustment over time. Failure to properly track the belt could damage the belt or conveyor and void your warranty.

The belt is considered to be properly tracked when, while running, both edges **and top surface** of the belt clear all conveyor components along the entire belt path. The illustrations below provide explanations of correct and incorrect belt tracking conditions along the conveyor. If one or more of the incorrect conditions occur, the belt tracking needs to be adjusted to prevent premature wear. Note: some lateral oscillation of the belt from side to side is common, and is acceptable provided the belt edges clear all conveyor components.

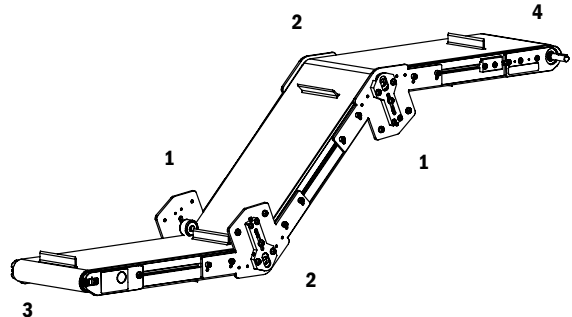


3.02 Belt Tracking (continued)

Belt tracking can be adjusted from several locations along the conveyor. A general rule is that adjustments should be made at points upstream of the belt mistrack location. There is also an order of adjustments you can follow that may be beneficial in systematically tracking the belt.

Note: Most belt tracking corrections are made via the Z-Track idlers. Frames must be level for proper tracking. Idler Guards should be inspected to assure there is no belt contact.

- ❶ Make tracking adjustments at the Z-Track idlers.
- ❷ Make tracking adjustments at the full width idlers.
- ❸ Make tracking adjustments at the tail end.
- ❹ Make tracking adjustments at the drive end.



❶ Z-Track Idler Adjustment

Z-Track Idler assemblies provide both belt tracking adjustment and tension adjustment, and can be adjusted independently of each other (Figure 1). Tracking adjustments made in this area should be made in small, modest increments, as they have an effect along the entire conveyor. **Let the belt make at least two revolutions around the conveyor, checking the entire belt path for alignment, before adjusting more or moving to the next step.**

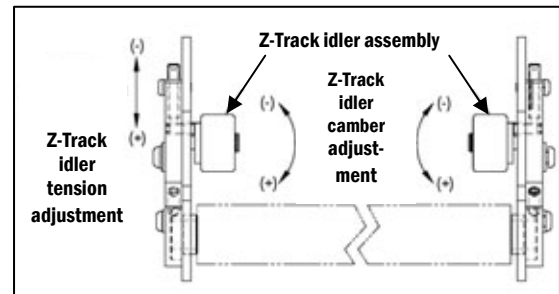


Figure 1 (Idler Covers removed for clarity)
Do not let idler covers touch the belt!

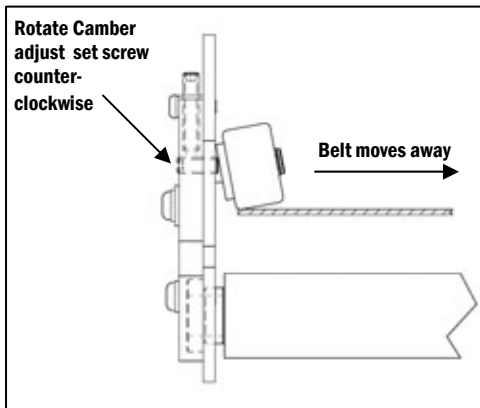


Figure 2

a. Determine the side of the conveyor belt that has the mistrack condition.

b. Turn camber adjust set screw counter-clockwise (threading out). Decreasing the Z-Track camber adjustment on that side will push the belt away from the idler (Figure 2). Wait for two belt revolutions around the conveyor to see if the adjustment corrects the issue. If not, move to the next step.

c. Loosen tension lock screw to enable Z-Track idler tension adjustment. Turn the tension adjust set screw clockwise (threading in). Increasing the Z-Track idler tension adjustment on that side will push the belt away from the idler (Figure 3). Tighten tension lock screw and wait for two complete belt revolutions to see if adjustment corrects the issue. Do not over-adjust tension to the point that the belt path interferes with the tops of the conveyor frames. (Figure 4, next page). If this step does not correct the issue, move to the next step.

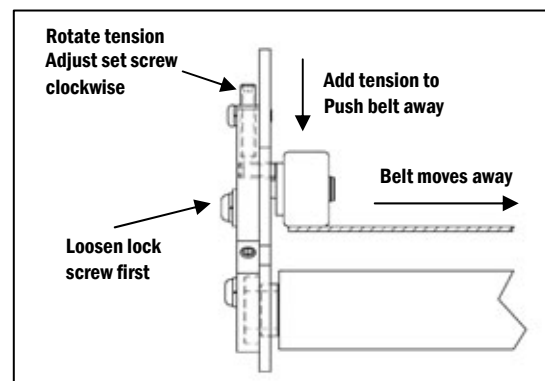


Figure 3

3.02 Belt Tracking (continued)

d. On the side of the conveyor opposite the previous adjustments, turn camber adjust set screw clockwise (threading in). Increasing the Z-Track camber adjustment slightly on that side will pull the belt toward the idler (**Figure 5**). Wait for two belt revolutions around the conveyor to see if the adjustment corrects the issue. If not, move to the next step, as excessive adjustments in this area can damage the belt.

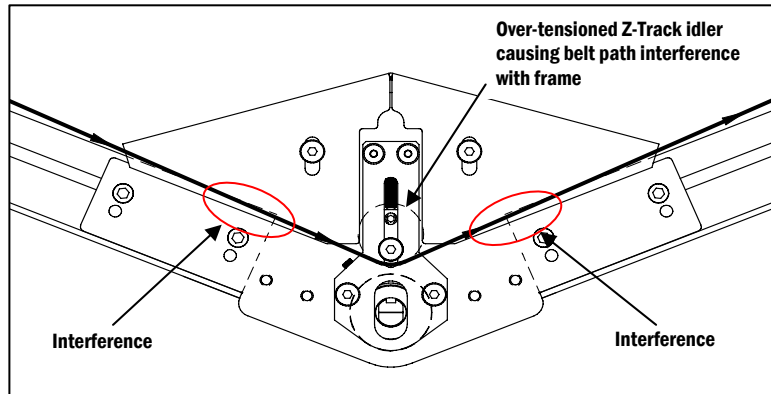


Figure 4

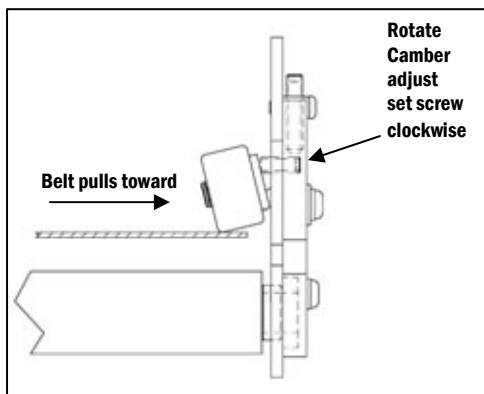


Figure 5

e. Loosen tension lock screw to enable Z-Track Idler tension adjustment. Turn the tension adjust set screw counter-clockwise (threading out). Decreasing the Z-Track idler tension adjustment on that side will pull the belt toward the idler (**Figures 6**). Tighten tension lock screw and wait for two complete belt revolutions to see if adjustment corrects the issue.

f. The idler guard (not shown in figures) may have to be readjusted to clear the idler with an excessive adjustment. It should never clear the belt more than 1/8", as this could create pinch points. **Idler Covers should never touch the top surface of the belt!**

g. The previous steps a. – f. may have to be performed more than once, and in other areas, as adjustments made at Z-Track idlers affect tracking in other areas. For example, the adjustments made at a set of Z-Track idlers will cause a reaction on either side of that adjustment location (**Figure 7**).

h. If the above steps have been performed several times without successfully tracking the belt, it may be beneficial to check belt tension and make adjusts there. Refer to **Section 3.03 Adding tension** for directions.

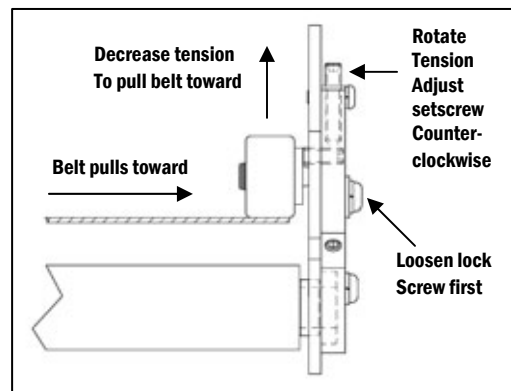


Figure 6

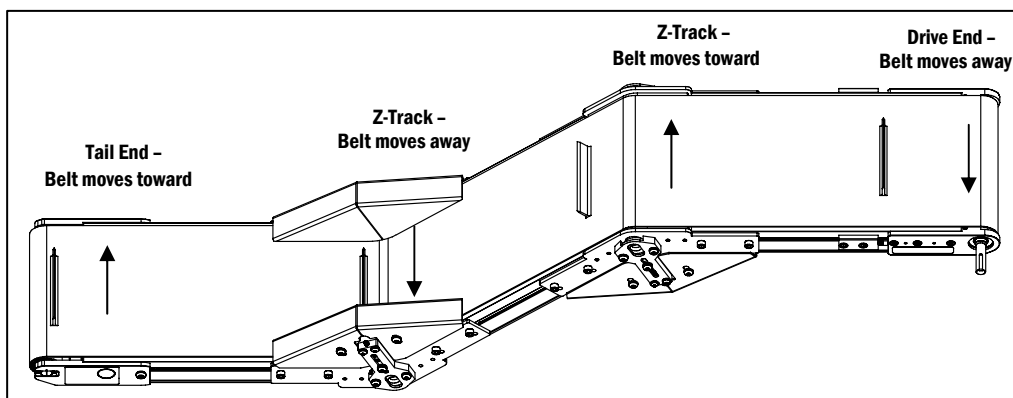


Figure 7

3.02 Belt Tracking (continued)

Z-Track™ Full Width Idler Adjustment

Full Width Idler assemblies span the width of the conveyor between a pair of connector plate assemblies. They track the belt by applying tension to it, and are designed to accommodate different adjustment settings on either side of the conveyor. This is accomplished by threading the adjustment set screws in or out accordingly (**Figures 8 & 9**).

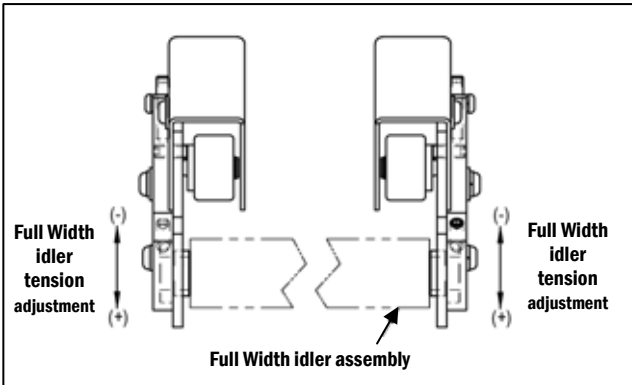


Figure 8

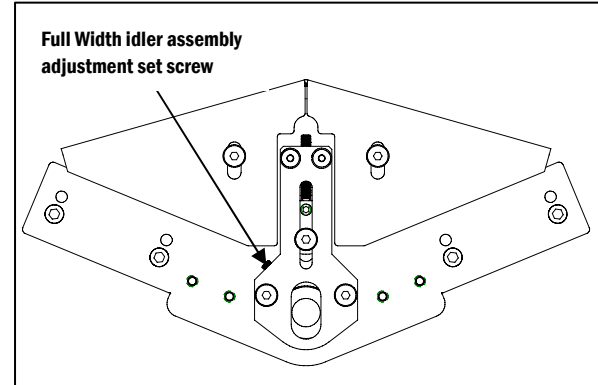


Figure 9

- Determine the side of the conveyor belt that has the mistrack condition.
- Turn the tension adjust set screw clockwise (threading in). Increasing tension on this side will push the belt toward the opposite side (**Figure 10**). Wait for two belt revolutions around the conveyor to see if the adjustment corrects the issue. If not, move to the next step.
- On the opposite side of the conveyor from the previous adjustments, turn the tension adjust set screw counter-clockwise (threading out). Decreasing tension on this side will pull the belt toward this side (**Figure 11**).

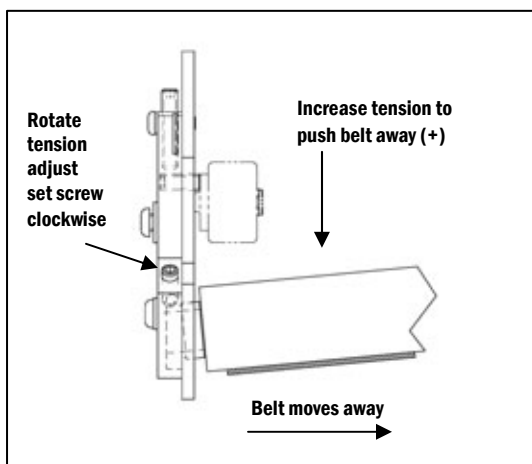


Figure 10

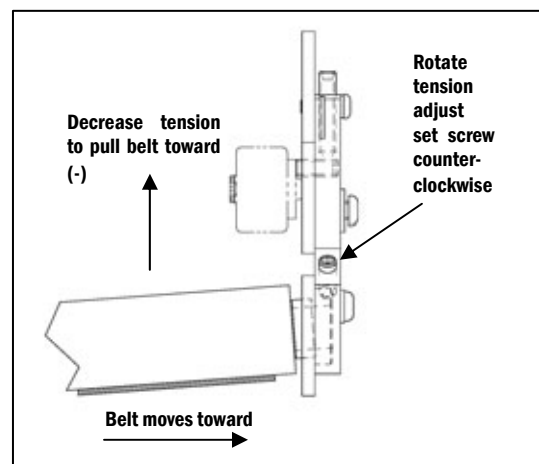


Figure 11

3.02 Belt Tracking (continued)

③ Tail End Tracking

A unique feature to QC Industries' Automation Series conveyor is the Tension Release Tail Assembly. This assembly, which provides a quick release mechanism for relieving belt tension, also provides belt tracking and belt tensioning capabilities. The pulley is initially assembled to the conveyor in the "neutral" position (defined as the index mark on the pulley aligned to the index mark on the tail plate), but may have been adjusted at the factory for belt tracking purposes; therefore, your tail assembly may not be in the neutral position when received.

a. With the conveyor running, determine the side of the conveyor where the belt is riding too close. On that side, adjust the M8 Set Screw on the Tail Pulley assembly so that the Tail Pulley Assembly moves away from the conveyor. Use the index marks on the tail shaft and tail plate as the points of reference. This will set the Tail Pulley Assembly at an angle to move the belt away from that side (Figure 1).

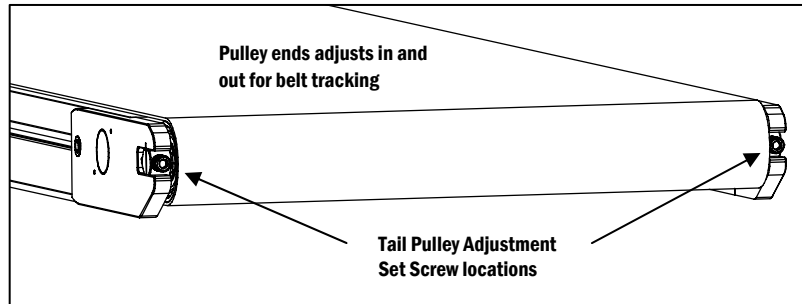


Figure 1

b. The tracking adjustment at the tail end is very responsive. For best results, make only minor adjustments. Allow the belt to make several revolutions to determine if more adjustment is necessary. The Tail End is tracked when the belt can make several revolutions without contacting the inside edges of the tail plates (Figure 2).

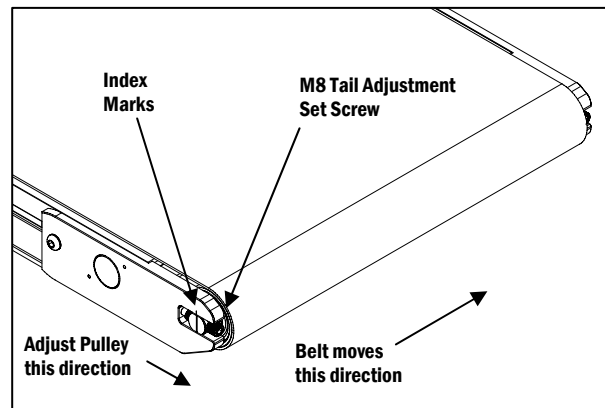


Figure 2

④ Drive End Tracking

The drive end of AS40Z Series conveyors provide fine belt tracking adjustment via the drive assembly jacking screws. These jacking screws either add tension to the belt or take tension off the belt depending on which way the screws are turned.

a. Loosen (do not remove) the six M6 Driver Assembly Screws in the Bearing Blocks (three on each side), about one-half turn.

b. With the conveyor running, rotate the M6 Square Head Tracking Screw toward the Drive Pulley on the side of the conveyor where the belt is riding too close – this will set the Driver Assembly at an angle and move the belt away from that side (Figure 3).

c. For best results, make adjustments to only one side at a time. The Drive End is tracked when the belt can make a full revolution without contacting either bearing plate.

d. Re-tighten all six M6 Driver Assembly Screws.

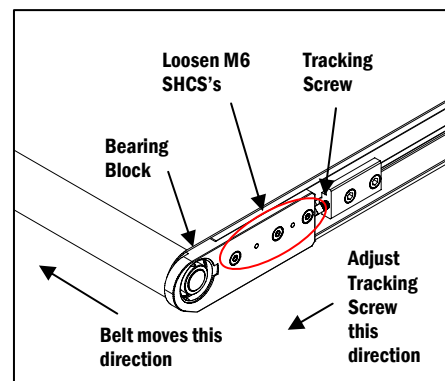


Figure 3

3.03 Adding Tension

All Automation Series AS40Z conveyors are shipped assembled with the belt pre-tensioned and pre-tracked from the factory. This process ensures that the belt has the recommended amount of tension to maximize the conveyors load carrying capacity. For the life of a standard belt you should not have to adjust its tension. However, if there is a need to add additional tension to extend the service life of a belt that has elongated, the Tracking Screws may be used to increase tension.

Note: overtensioning belts adds unnecessary load to bearings, and subsequently will reduce the bearings' useful life.

① Add tension to the Belt at the Tail End

a. Increase the belt tension by adjusting the M8 set screws at the Tail Assembly so the Tail Pulley moves away from the conveyor frame (**Figure 1**). The **screws should be extended the same amount** so the belt tracking is not adversely affected (**refer to Belt Tracking in Section 3.02**).

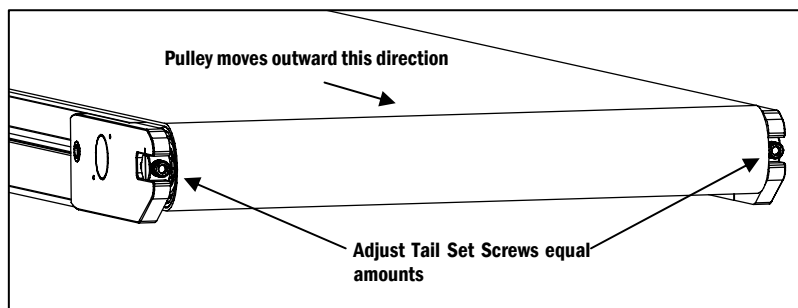


Figure 1

② Add tension to the Belt at the Drive End

a. Loosen (do not remove) the six M6 Driver Assembly Screws in the Bearing Blocks (three on each side), about one-half turn (**Figure 2**).

b. Increase the tension by extending the M6 Square Head Tracking Screws **on both sides of the conveyor** until desired tension is achieved. The **screws should be extended the same amount** so the belt tracking is not adversely affected (**refer to Belt Tracking in Section 3.02**).

c. Retighten the six M6 Driver Assembly Screws to lock the assembly in position.

d. If after following these steps additional belt tension is needed, it is recommended that a new belt be purchased.

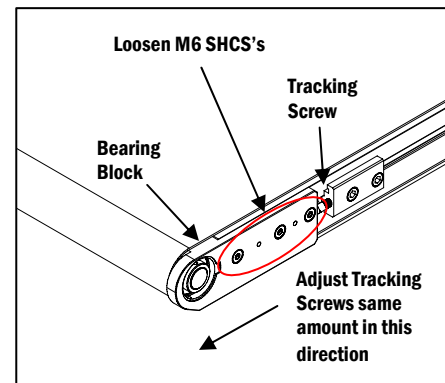


Figure 2

Ⓢ **Although possible, it is not recommended to add belt tension at the Z-Track connector plate assemblies, as these adjustments may negatively affect belt tracking through these areas or other locations.**

3.04 Adjustable Guide Rail Removal

Adjustable Guides are the only guides available on AS40Z Series conveyors, and come assembled to the conveyor from the factory. Adjustable Guides are available in 3 heights: 1", 2", and 3", and are available with either thumbscrew adjustment or set screw adjustment. The guide rails are supported by a bracket/cross block/adjustment rod assembly that come assembled from the factory on AS40Z Series conveyors.

Adjustable Guides must be removed for belt change. Please refer to the following instructions should you have to remove guides for belt replacement or other maintenance. Installation steps are opposite of removal steps.

❶ Remove Guide Rail from Guide Brackets

a. Loosen all the guide rail/rod/cross block assemblies, along one side of the conveyor, from the vertical rods connected to the guide brackets, and slide them off vertically (**Figure 1**).

b. Leave cross block assemblies mounted to the rails in their existing location. Try to keep guide rail assemblies intact when removing them from the conveyor by not twisting or bending them. This will prevent the rail sections from coming detached and aid in reinstallation.

c. Lay guide rail flush on floor or other flat surface. Repeat for the opposite side of conveyor.

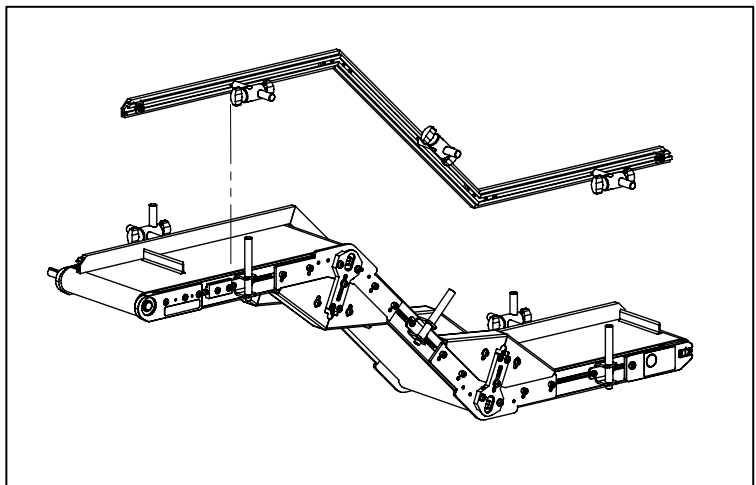


Figure 1

❷ Remove the Guide Brackets

a. Mark existing guide bracket locations on conveyor. This will ensure that adjustable rails will be reinstalled in the same location as before.

b. Remove the guide brackets from the conveyor frame by unscrewing the M6 screws (**Figure 2**).

c. Repeat for opposite side of conveyor.

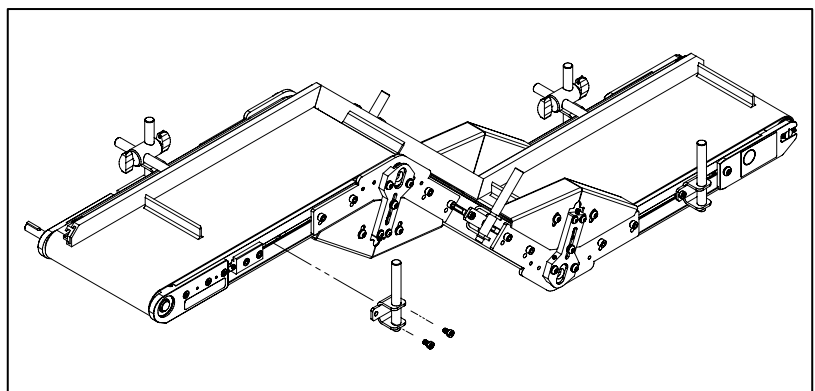


Figure 2

3.05 Belt Change

When the belt becomes tattered at the edges, stretched beyond the tension adjustment limits of the conveyor, or has cleats or corrugated sidewall delaminating from the top surface, a belt change is recommended. QC Industries recommends stocking at least one replacement belt for every conveyor. This will minimize downtime and ensure optimum performance for your particular application.

1 Belt Removal

a. Remove Adjustable Guide Rails, if necessary. Conveyors with Corrugated Sidewall belts will not have guide rails. Refer to **Section 3.04 Adjustable Guide Rail Removal**.

b. At the tail end of the conveyor, locate the push buttons on both sides of the Tension Release Tail Assembly. Simultaneously push in both buttons to disengage the locking mechanism, and rotate the Tension Release Tail Assembly up towards the drive end of the conveyor (**Figure 1**).

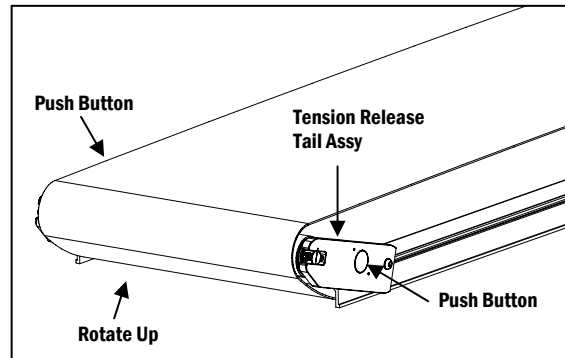


Figure 1

c. Remove tension from the belt by rotating the Tension Release Tail Assembly completely up to the disengaged position while supporting the Tail Pulley. Remove the tail pulley from the tail assembly by lifting it upward and setting it aside temporarily, making sure to place it where it cannot be dropped or damaged. Note the orientation of the Tail Pulley Assy when removed to ensure that it is reinstalled in the same position. The Tension Release Tail Assembly will then rest in the up, unlocked position (**Figure 2**).

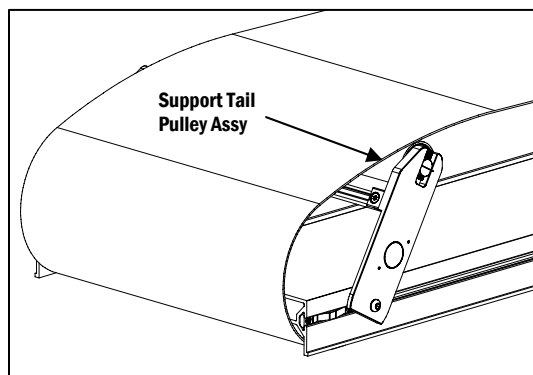


Figure 2

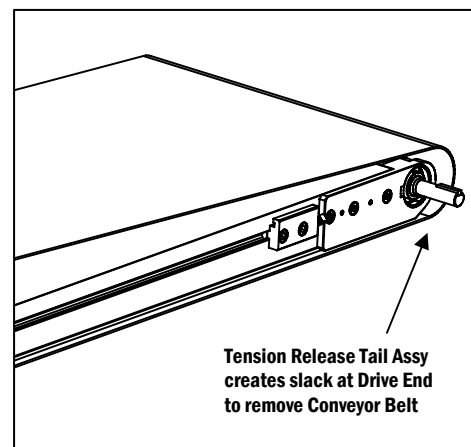


Figure 3

d. Transfer the belt slack towards the Drive End of the conveyor (**Figure 3**).

3.05 Belt Change (continued)

e. Remove idler pulley guards from the Z-Track connector plates using an Allen Wrench. There will be two idler guards per frame bend (Figures 4 & 5).

f. Once these guards have been removed, set them aside temporarily. The idlers will now be exposed (Figure 6).



Figure 4



Figure 5



Figure 6

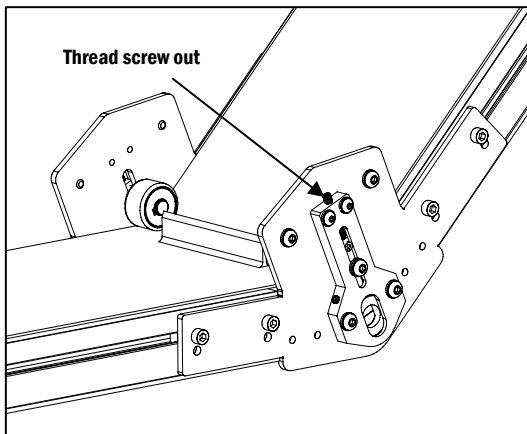


Figure 7

g. Relax all Z-Track idlers to their most disengaged position by threading out the tension adjustment screw. This will aid in the removal of the old belt and installation of the new belt by providing the clearance needed to thread the belt on the conveyor frame and between the idlers (Figure 7).

h. Bend the area of the belt where each idler is located and pull the belt out from underneath each idler; this can be accomplished by pulling on a cleat near the idler. Let the relaxed belt rest on top of the idlers (Figures 8, 9, & 10).



Figure 8



Figure 9



Figure 10

3.05 Belt Change (continued)

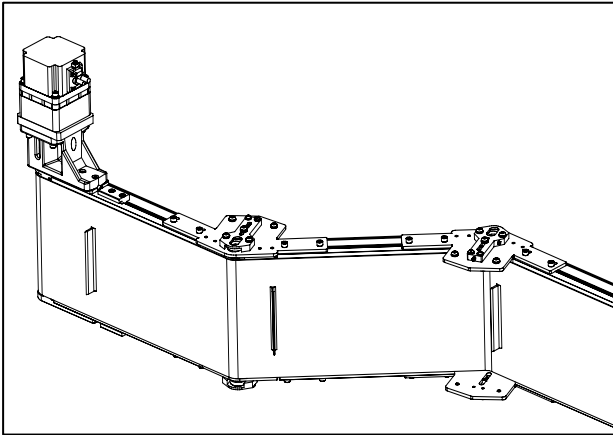


Figure 11

i. If feasible, detach the stands or mounts from one side of the conveyor to allow the belt to be completely removed from the conveyor. It may be necessary to remove the entire conveyor from all mounts and/or stands to accomplish this. To ensure maximum safety while performing this task, QC Industries recommends at least two people for conveyors up to 8 feet in length; and 3-4 people for conveyors over 8 feet in length.

j. The conveyor may then be placed on its side; but should be placed on the side opposite of which the drive package is mounted (Figure 11).

Note: The drive package should **not** need to be removed in order to remove and replace belt.

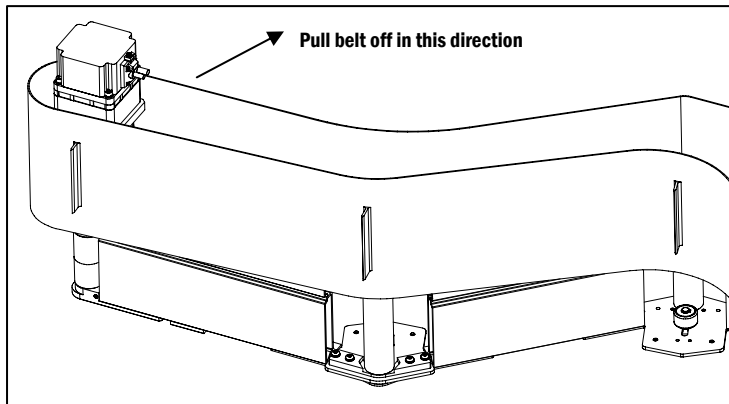


Figure 12

k. Starting at the drive end first, remove the belt from the conveyor by sliding the belt off to the drive side of the conveyor and pulling it around the drive mounting package (Figure 12).

l. Work down the length of the conveyor, continuing down toward the tail end. Finish by sliding the belt off at the tail end of the conveyor (Figure 13).

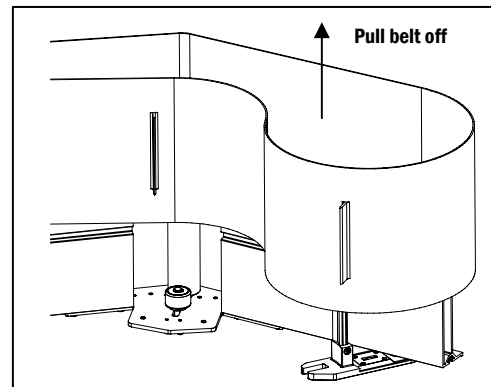


Figure 13

3.05 Belt Change (continued)

🔩 Installing a New Belt

a. AS40Z Series belts may have a rotation direction arrow inscribed on the back side of the belt. If your new belt has a direction arrow marked on the underside, ensure that the belt flow will be in the same direction as the rotation arrow indicates.

b. Install the new belt by first sliding the belt over the tail end of the conveyor frame and continuing on towards the drive end (Figures 14 & 15). Mount the conveyor back on its stands.

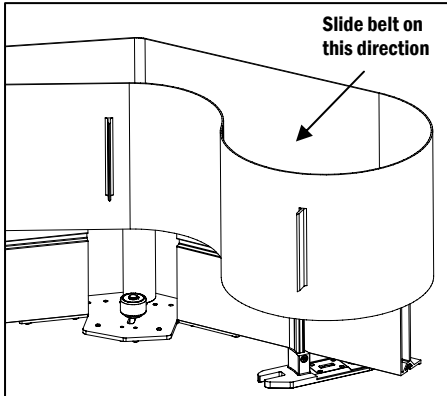


Figure 14

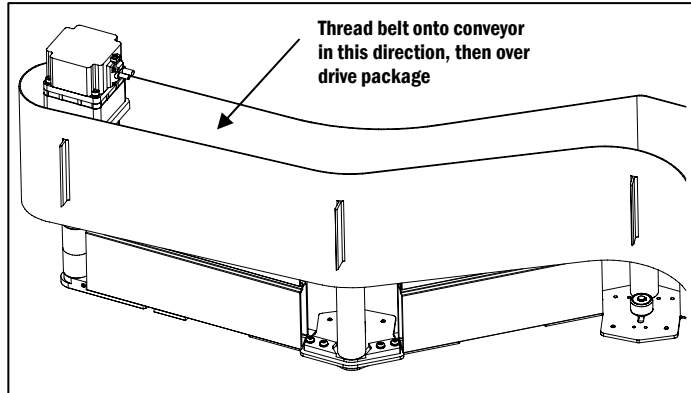


Figure 15

c. Bend the area of the belt where each Z-Track idler is located and slide the belt underneath each idler pulley (Figure 16). Be careful to not pull excessively on the cleats or corrugated sidewall on new belts, as this could delaminate them from the belt top cover.



Figure 16

d. Reset the Z-Track idlers and full width idlers in their neutral position. This process will reset all previous adjustments so that the new belt can be tracked properly. This is accomplished by threading out the Z-Track tension adjustment screw six complete turns from flush with the top of the retainer, threading out the full width idler tension adjustment screw four complete turns from flush with the edge of the retainer, and leveling out the Z-Track idler camber (Figure 17).

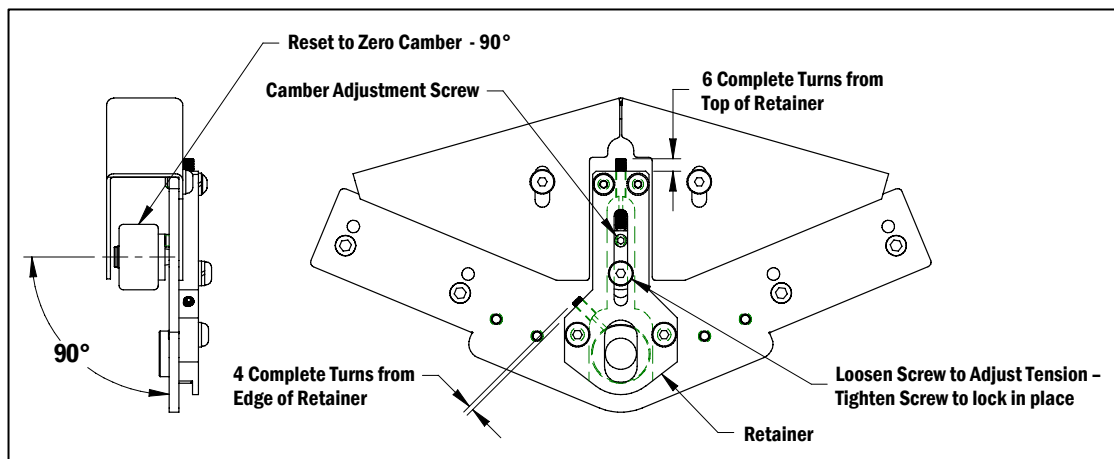


Figure 17

3.05 Belt Change (continued)

e. Set the initial tension of the conveyor belt (Neutral) by ensuring that the bearing plates seat flush up against the slider bed with no gap. This is accomplished by loosening (do not remove) the six M6 Driver Assembly Screws in the Bearing Blocks (three on each side), about one-half turn. Thread the M6 Square Head Tracking Set Screws into their jacking blocks. Push the driver assembly towards the slider bed until it is flush with it, then re-tighten the M6 Driver Assembly Screws (**Figure 18**).

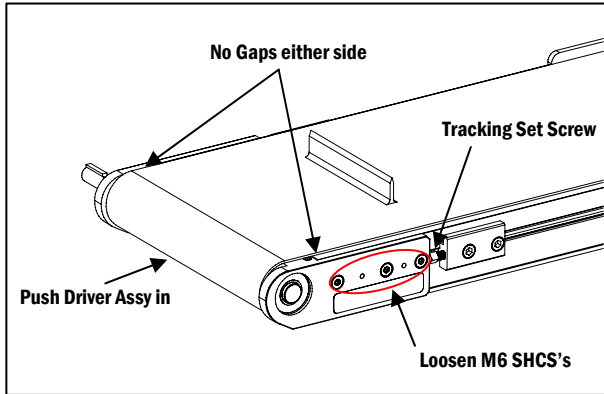


Figure 18

f. Replace the tail pulley that was set aside earlier by seating it into the forked tail plates of the Tension Release Tail Assembly. Make sure that tail pulley assembly is oriented correctly by ensuring the setscrew hex keys face out for belt tracking and tension adjustments (**Figure 19**).

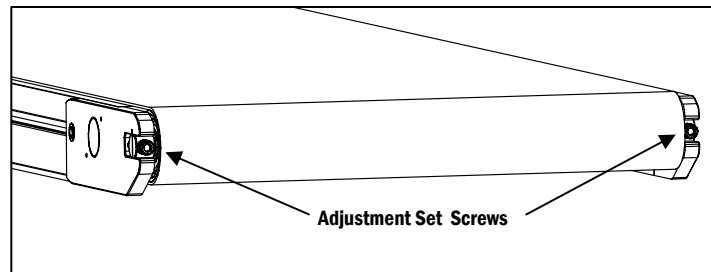


Figure 19

g. While supporting the weight of the Tail Pulley Assembly, rotate the Tension Release Tail Assembly down into the locked, run position. Take caution to keep hands and fingers away from the edge of the conveyor frame where the Tension Release Tail Assembly will engage (**Figure 20**).

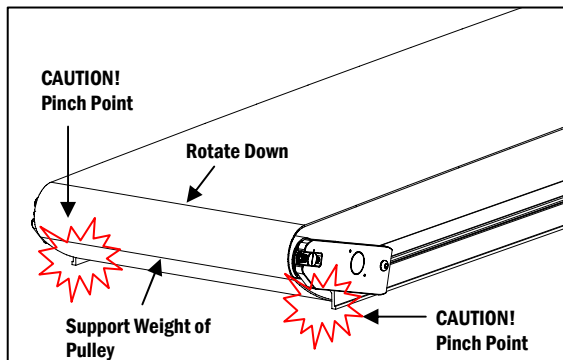


Figure 20

h. Set the initial tension of the conveyor belt (Neutral) by aligning the index marks on the Tail Pulley Assembly to the index marks on the Tension Release Tail Assembly (**Figure 21**).

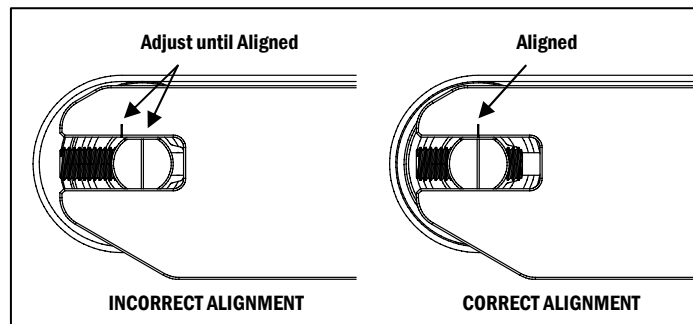


Figure 21

i. The new belt must now be properly tracked and tensioned before use. Refer to Section 3.02 Belt Tracking.

3.06 Belt Care

1 Belt Cleaning

Belts can usually be cleaned with general household cleaners, however some cleaners (that contain alcohols, acetone, MEK, chlorinated solvents, etc.) may attack belts.

Never hose off the bearings or use solvents in these areas as this may significantly reduce bearing life.

2 Physical Damage

Worn edges do not hurt the conveyor's operation, as the pulleys are crowned; however, the cause of the edge wear should be determined. For example, scoring line in the belt's surface could be due to accessories such as adjustable guides or connector plate guards improperly positioned and in contact with the belt. Care should be taken to avoid constant contact between the belt edges and conveyor components all along the conveyor belt path.

3 Camber

Belt camber is the lateral oscillation of the belt, most noticeable at the drive and tail ends between the Bearing Plates. All belts have some camber due to the endless splice not being perfectly square. Crowned pulleys and tracking adjustments should overcome the belt's camber, but in some cases will not (such as if the belt is excessively worn or has been exposed to an inappropriate chemical or solvent). Excessive camber is when the belt cannot be tracked without the edges staying in contact with the Bearing Plates. It is possible that the conveyor can continue to perform at a high level even with excessive camber, but if it is a problem, replacement of the belt is suggested.

4 Belt Slippage

Belt slippage occurs when the belt is undertensioned for the load, which could be caused by a number of factors:

- a. Excessive load on the conveyor. Refer to the product performance data to determine the conveyor's application capacity.
- b. Reduced friction between the belt and drive pulley.
- c. Belt elongation due to overtensioning.
- d. Excessive belt wear due to accumulating product.
- e. Belt elongation due to exposure to a chemical or ultraviolet light.

If slippage cannot be overcome by either removing the condition causing it or by adding tension at the Drive End and/or Tail End, it is likely the belt needs to be replaced.

3.07 Bearing Replacement

Automation Series AS40Z conveyors use sealed for life, double row ball bearings. QC Industries recommends that these bearings are checked annually at a minimum, and replaced when worn. The replacement interval is dependent on the speed at which the conveyor is running, the load on which the conveyor is carrying, and the environment in which the conveyor is operating.

Note: The replacement interval can be drastically affected by environmental issues such as moisture, dust, heat, and chemicals. Please consider these factors when determining the correct inspection and replacement interval for your application.

① Drive End Bearing Replacement

a. Remove the conveyor belt (refer to **Belt Change Section 3.05**), and drive package from the conveyor. The Driver Assembly should be removed from the conveyor for easier access.

b. At the drive end of the conveyor, locate the bearing screw access holes in each Bearing Block. Using an Allen Wrench, completely remove both set screws and set aside (**Figure 1**).

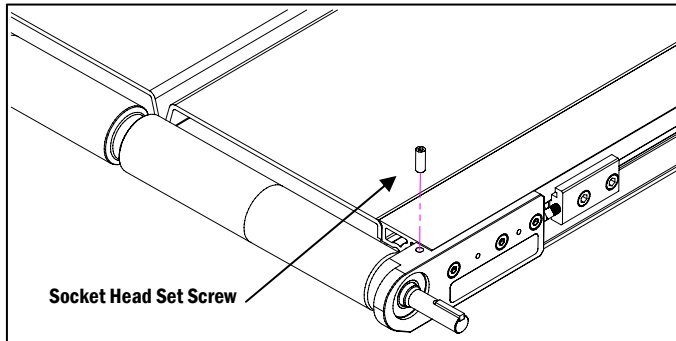


Figure 1

c. Remove the three M6 Low Head Cap Screws in the bearing Block with an Allen Wrench and slide the bearing plate off of the Drive Pulley's outer bearing diameter. Ensure the Drive Pulley's bearings or inner diameter of the bearing plate do not get nicked or gouged, as this may complicate the installation of new bearings (**Figure 2**).

NOTE: Do not use excessive force (like a press) when trying to remove bearing plates.

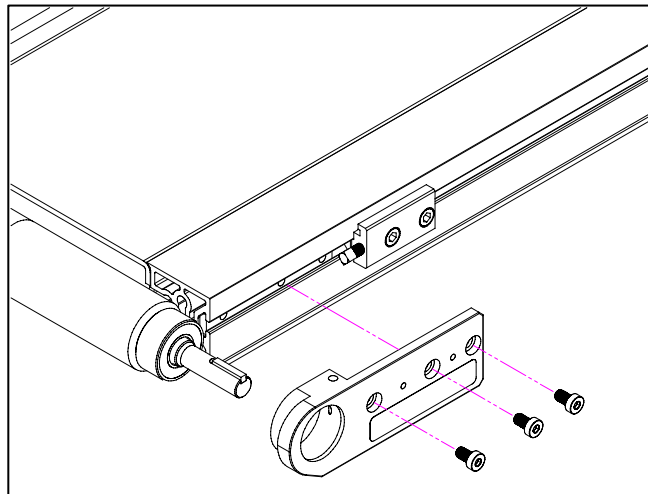


Figure 2

3.07 Bearing Replacement (continued)

d. Remove the Drive Bearing from the bearing journal on the drive pulley by using a press and QC Industries removal tool (PN: 1A0077A) or similar. Mount removal tool as shown (Figure 3). Removal tool can be purchased from QC or a print can be provided upon request.

e. Next, place in a press and press the bearings off the pulley. Use extreme caution that drive pulley does not get damaged in any way (Figure 4).

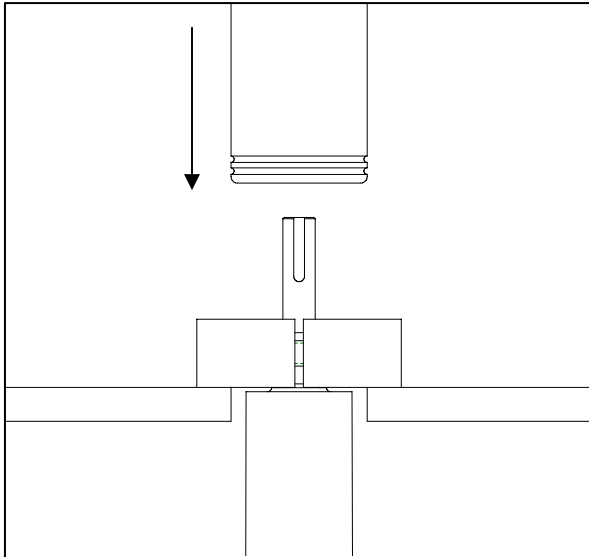


Figure 4

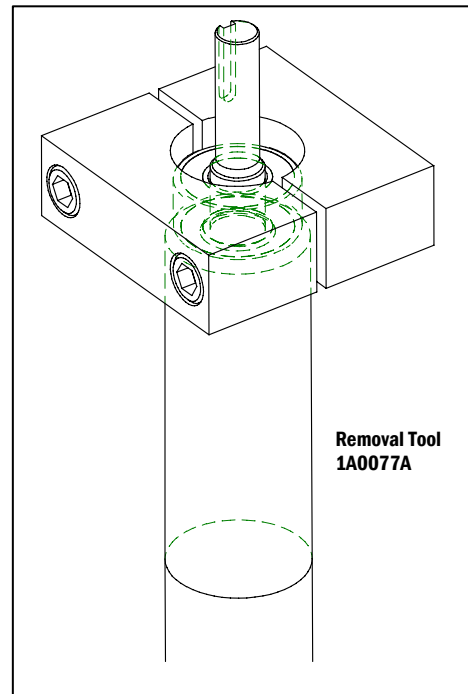


Figure 3

f. If necessary clean the Drive Pulley bearing journal surfaces. Check journal diameters with digital calipers. **Minimum journal size should be 14.997mm [.5904"] for the bearing press operation. If either drive pulley journal diameters are smaller than this, a new drive pulley is needed.**

g. Using a small tubular piece, press the new bearing's inner diameter (DO NOT press on outer diameter of bearing) onto the pulley journal until it stops against the journal shoulder. Be sure to secure the pulley while using a press to ensure no damage is done to the press, pulley, or bearing (Figure 5).

h. Replace the three M6 Low Head Cap Screws in each Bearing Block and tighten with an Allen Wrench (Figure 6). Center the Drive Pulley V-Groove to the V-Groove in the slider bed. Tighten the bearing set screws in to the bearing screw access holes in each Bearing Block to lock the bearings into place (Figure 1). There should be no lateral float in the assembly.

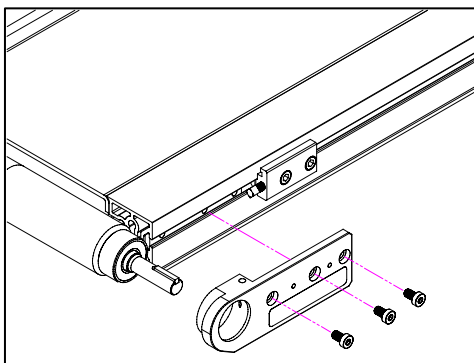


Figure 6

i. The Drive pulley and new bearings must be in alignment. Spin the Drive Pulley to ensure it turns smoothly.

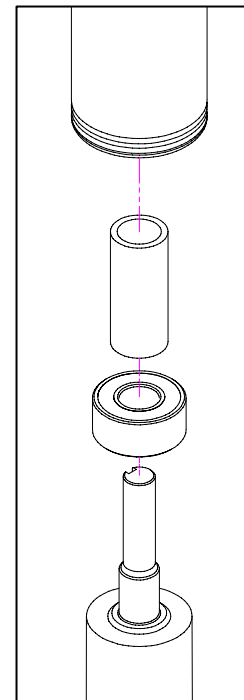


Figure 5

3.08 Fastener Tightening Torque Specifications

The following torque values are supplied for general informational purposes associated with disassembly and reassembly of QC Industries conveyors and equipment. It is the end user's responsibility to inspect all equipment at installation to ensure that fasteners have not loosened during shipment, and to ensure that fasteners are secure at all times during operation.

Conveyor Fasteners

Description	Part #	Fastener	Torque	Section
Driver Bearing Housing Screws	SLHCS-M6X100X010-BX	M6 x 10mm LG	8 ft-lbs.	3.02
Driver Jacking Block Screws	SHCS-M06X100X010-ZP	M6 x 10mm LG.	8 ft-lbs	3.09
Tension Release Tail Assy Pivot	1D0225A	M6 x 14mm LG.	8 ft-lbs	3.09
Button Head Shoulder Screw				
Tension Release Tail Assy	SLHCS-M05X080X010-ZP	M5 x 10mm LG.	5 ft-lbs	3.09
Stiffener Mtg Screws				
Tension Release Tail Assy Mtg. Set Screws	SHSS-M06X100X006-ZP	M6 x 6mm LG.	5 ft-lbs	3.09
Underside Idler Clamp Screws	SHCS-M05X080X016-ZP	M5 x 16mm LG.	8 ft-lbs	2.08
Conveyor T-Slot/Drop-in Nut	Varies	M6	10 ft-lbs	2.04
Mtg. Screws (includes fasteners for Mounts, Sides & Guides, Angle Braces, etc)				2.05 2.06

Drive Mounting Package Fasteners

Description	Part #	Fastener	Torque	Section
Side Drive Mtg. Screws	SHCS-M6X100X020-ZP	M6 x 20mm LG	10 ft-lbs.	2.10
Side Drive Sub Plate Mtg. Screws	SHCS-M6X100X025-ZP	M6 x 25mm LG	10 ft-lbs.	2.10
Pivot Drive Mtg. Screws	FHCS-M06X100X025-ZP	M6 x 25mm LG.	8 ft-lbs.	2.11
Pivot Drive Subplate Mtg Screws	Varies	M6	8 ft-lbs	2.11
Pivot Drive Adjustment	SHSS-M06X100X010	M6 x 10mm LG.	8 ft-lbs.	2.11
Set Screws	SHSS-M06X100X005	M6 x 5mm LG.	8 ft-lbs.	2.11
Heavy Duty Drive Mtg. Screws	SHCS-M6X100X030-ZP	M6 x 30mm LG	10 ft-lbs.	2.12
Heavy Duty Drive Subplate Mtg Screws	Varies	M6	10 ft-lbs	2.12
Heavy Duty Drive Gearbox Output Shaft Mtg Screw	BHCS-M08X125X025-ZP	M8 X 25mm LG.	20 ft-lbs.	2.12

Stand & Stand Accessory Fasteners

Description	Part #	Fastener	Torque	Section
Stand T-Slot/Drop-in Nut	Varies	M6	10 ft-lbs	2.04
Mtg. Screws				

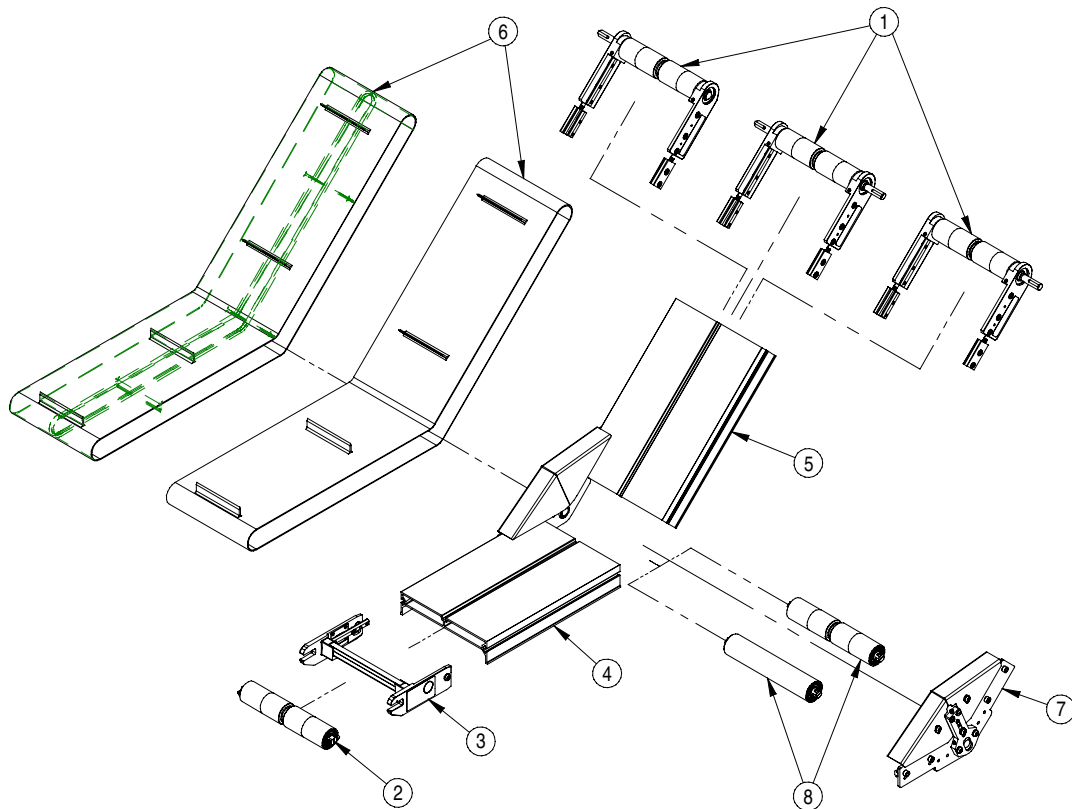


8"-12" Wide AS40Z Series Conveyor L Configuration

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# AE41LWW-LLLALLL-LSF-ZAXNNN

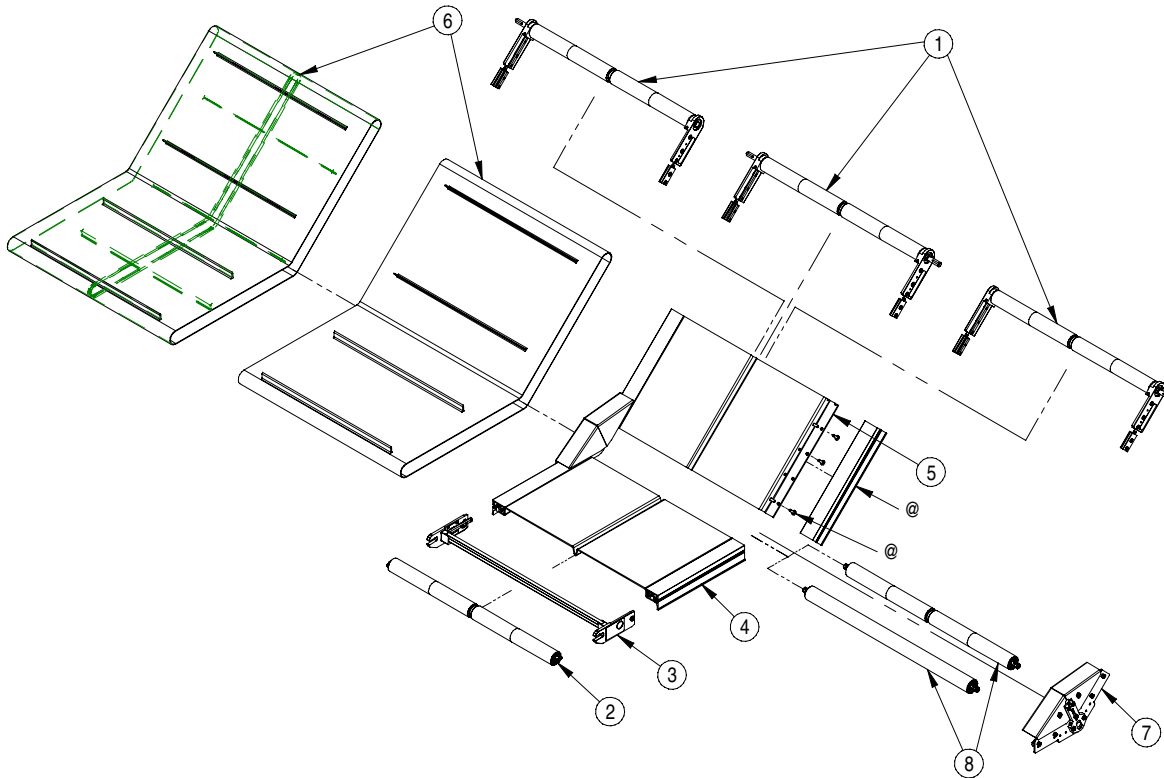


Item	Part No.	Description	Item	Part No.	Description
1	1A0028C00WW	ASSY END DRIVE SINGLE OUTPUT LH	8	1A0043A00WW	ASSY - CENTER DRIVE IDLER
	1A0029C00WW	ASSY END DRIVE SINGLE OUTPUT RH		1A0049A00WW	ASSY - CENTER DRIVE IDLER, V-GUIDED
	1A0031C00WW	ASSY END DRIVE DUAL OUTPUT			
2	1A0039B00WW	ASSY TAIL V-GUIDED			
3	1A0038A00WW	TAIL PLATE ASSEMBLY			
4	1D0017ALLL	SLIDER BED ALUM. EXTRUSION 8" WIDE SECTION A			
	1D0060ALLL	SLIDER BED ALUM. EXTRUSION 10" WIDE SECTION A			
	1D0061ALLL	SLIDER BED ALUM. EXTRUSION 12" WIDE SECTION A			
5	1D0017ALLL	SLIDER BED ALUM. EXTRUSION 8" WIDE SECTION C			
	1D0060ALLL	SLIDER BED ALUM. EXTRUSION 10" WIDE SECTION C			
	1D0061ALLL	SLIDER BED ALUM. EXTRUSION 12" WIDE SECTION C			
6	AEL-WW-LLLA-ZAXNNN	BELT AUTOMATION Z SERIES STANDARD			
	AEL-WW-LLLA-ZVXNNN	BELT AUTOMATION Z SERIES V-GUIDED			
7	1A0086ALAN	Z TRACK CONNECTOR PLATE, L CONFIG NARROW			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# AE41LWW-LLLALLL-LSF-ZAXNNN

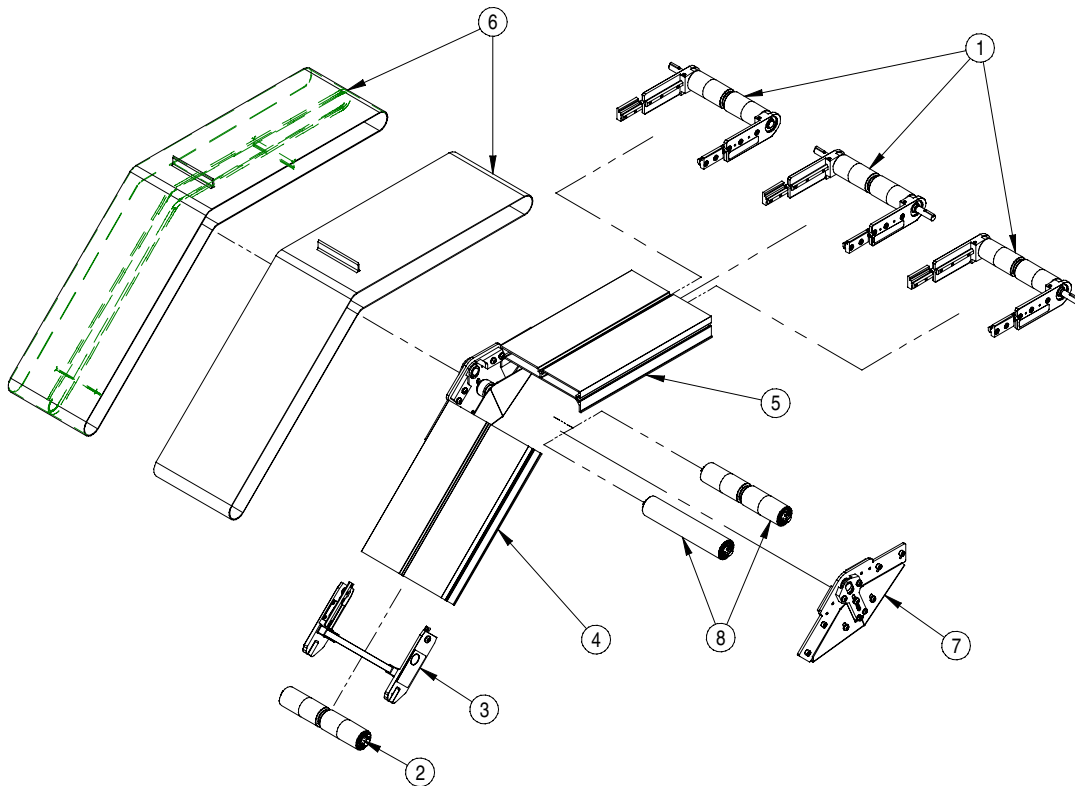


Item	Part No.	Description	Item	Part No.	Description
1	1A0028C00WW	ASSY END DRIVE SINGLE OUTPUT LH			
	1A0029C00WW	ASSY END DRIVE SINGLE OUTPUT RH			
	1A0031C00WW	ASSY END DRIVE DUAL OUTPUT			
2	1A0039B00WW	ASSY TAIL V-GUIDED			
3	1A0038A00WW	TAIL PLATE ASSEMBLY			
4	1A0090A-WW-LLL	AS40 Z SERIES, MULTI-PIECE FRAME SECTION A			
5	1A0090A-WW-LLL	AS40 Z SERIES, MULTI-PIECE FRAME SECTION C			
6	AEL-WW-LLLA-ZAXNNN	BELT AUTOMATION Z SERIES STANDARD			
	AEL-WW-LLLA-ZVXNNN	BELT AUTOMATION Z SERIES V-GUIDED			
7	1A0087ALAN	Z TRACK CONNECTOR PLATE, L CONFIG WIDE			
8	1A0043A00WW	ASSY - CENTER DRIVE IDLER			
	1A0049A00WW	ASSY - CENTER DRIVE IDLER, V-GUIDED			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# AE41RWW-LLLALLL-LSF-ZAXNNN

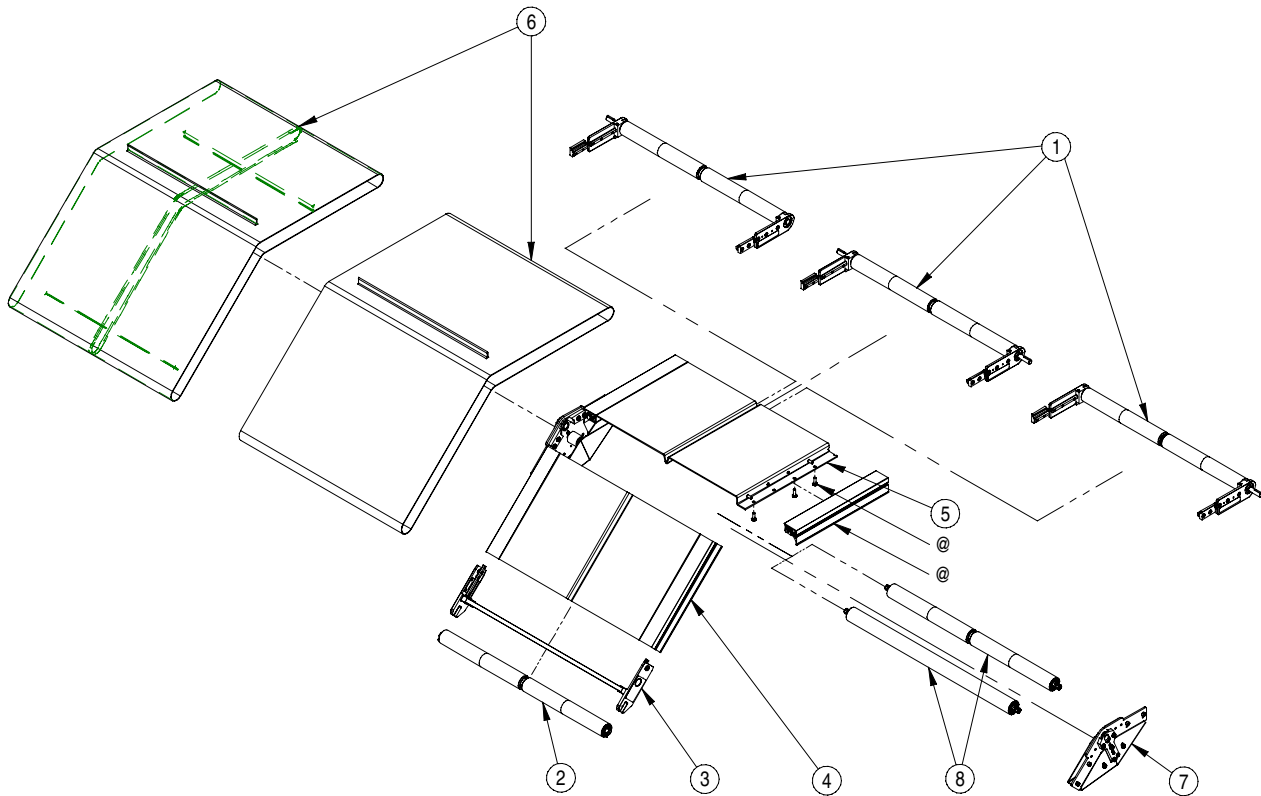


Item	Part No.	Description	Item	Part No.	Description
1	1A0028C00WW	ASSY END DRIVE SINGLE OUTPUT LH	8	1A0043A00WW	ASSY - CENTER DRIVE IDLER
	1A0029C00WW	ASSY END DRIVE SINGLE OUTPUT RH		1A0049A00WW	ASSY - CENTER DRIVE IDLER, V-GUIDED
	1A0031C00WW	ASSY END DRIVE DUAL OUTPUT			
2	1A0039B00WW	ASSY TAIL V-GUIDED			
3	1A0038A00WW	TAIL PLATE ASSEMBLY			
4	1D0017ALLL	SLIDER BED ALUM. EXTRUSION 8" WIDE SECTION A			
	1D0060ALLL	SLIDER BED ALUM. EXTRUSION 10" WIDE SECTION A			
	1D0061ALLL	SLIDER BED ALUM. EXTRUSION 12" WIDE SECTION A			
5	1D0017ALLL	SLIDER BED ALUM. EXTRUSION 8" WIDE SECTION C			
	1D0060ALLL	SLIDER BED ALUM. EXTRUSION 10" WIDE SECTION C			
	1D0061ALLL	SLIDER BED ALUM. EXTRUSION 12" WIDE SECTION C			
6	AER-WW-LLLA-ZAXNNN	BELT AUTOMATION Z SERIES STANDARD			
	AER-WW-LLLA-ZVXNNN	BELT AUTOMATION Z SERIES V-GUIDED			
7	1A0086ARAN	Z TRACK CONNECTOR PLATE, R CONFIG NARROW			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# AE41RWW-LLLALLL-LSF-ZAXNNN

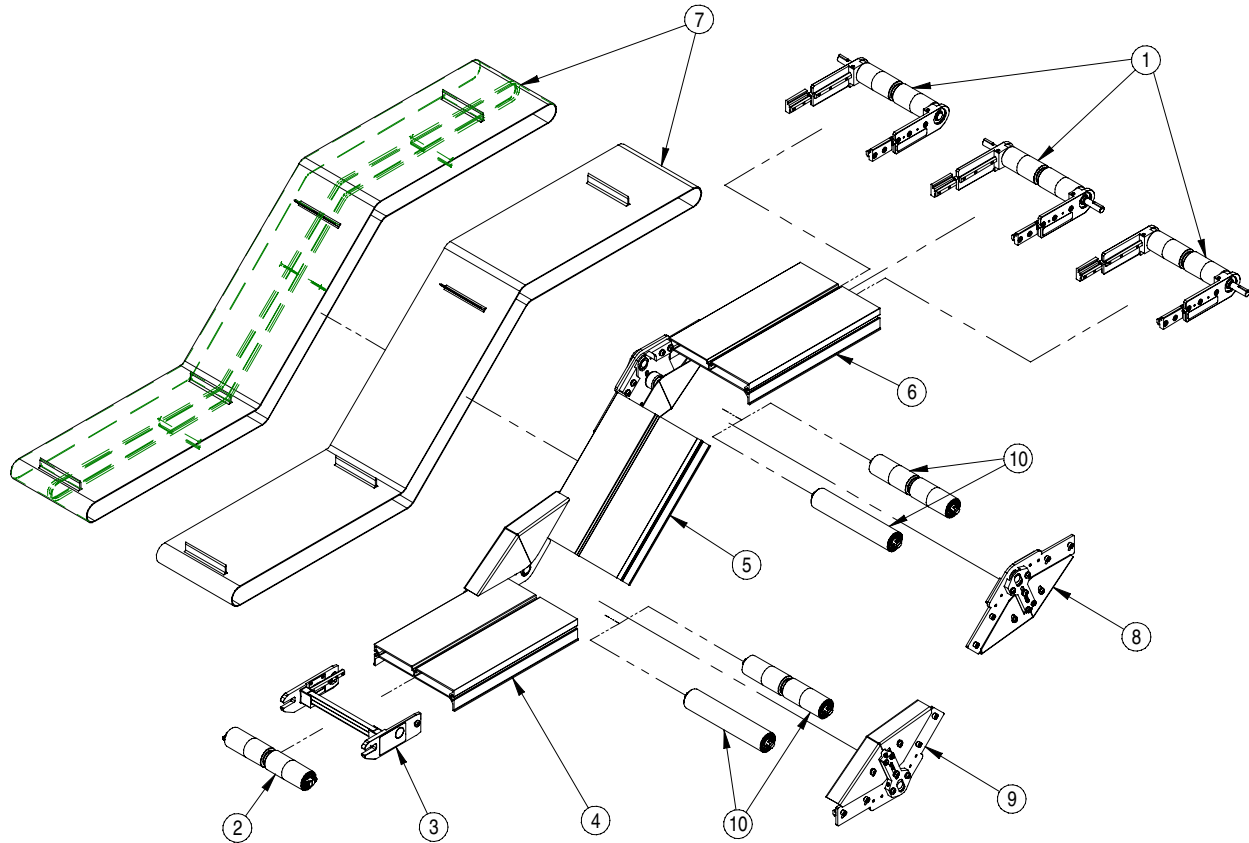


Item	Part No.	Description	Item	Part No.	Description
1	1A0028C00WW	ASSY END DRIVE SINGLE OUTPUT LH			
	1A0029C00WW	ASSY END DRIVE SINGLE OUTPUT RH			
	1A0031C00WW	ASSY END DRIVE DUAL OUTPUT			
2	1A0039B00WW	ASSY TAIL V-GUIDED			
3	1A0038A00WW	TAIL PLATE ASSEMBLY			
4	1A0090A-WW-LLL	AS40 Z SERIES, MULTI-PIECE FRAME SECTION A			
5	1A0090A-WW-LLL	AS40 Z SERIES, MULTI-PIECE FRAME SECTION C			
6	AER-WW-LLLA-ZAXNNN	BELT AUTOMATION Z SERIES STANDARD			
	AER-WW-LLLA-ZVXNNN	BELT AUTOMATION Z SERIES V-GUIDED			
7	1A0087ARAN	Z TRACK CONNECTOR PLATE, R CONFIG WIDE			
8	1A0043A00WW	ASSY - CENTER DRIVE IDLER			
	1A0049A00WW	ASSY - CENTER DRIVE IDLER, V-GUIDED			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# AE41ZWW-LLLALLLLL-LSF-ZAXNNN



Item	Part No.	Description	Item	Part No.	Description
1	1A0028C00WW	ASSY END DRIVE SINGLE OUTPUT LH	7	AEZ-WW-LLLA-ZAXNNN	BELT AUTOMATION Z SERIES STANDARD
	1A0029C00WW	ASSY END DRIVE SINGLE OUTPUT RH		AEZ-WW-LLLA-ZVXNNN	BELT AUTOMATION Z SERIES V-GUIDED
	1A0031C00WW	ASSY END DRIVE DUAL OUTPUT	8	1A0086ARAN	Z TRACK CONNECTOR PLATE, R CONFIG NARROW
2	1A0039B00WW	ASSY TAIL V-GUIDED	9	1A0086ALAN	Z TRACK CONNECTOR PLATE, L CONFIG NARROW
3	1A0038A00WW	TAIL PLATE ASSEMBLY	10	1A0043A00WW	ASSY - CENTER DRIVE IDLER
4	1D0017ALLLL	SLIDER BED ALUM. EXTRUSION 8" WIDE SECTION A		1A0049A00WW	ASSY - CENTER DRIVE IDLER, V-GUIDED
	1D0060ALLLL	SLIDER BED ALUM. EXTRUSION 10" WIDE SECTION A			
	1D0061ALLLL	SLIDER BED ALUM. EXTRUSION 12" WIDE SECTION A			
5	1D0017ALLLL	SLIDER BED ALUM. EXTRUSION 8" WIDE SECTION B			
	1D0060ALLLL	SLIDER BED ALUM. EXTRUSION 10" WIDE SECTION B			
	1D0061ALLLL	SLIDER BED ALUM. EXTRUSION 12" WIDE SECTION B			
6	1D0017ALLLL	SLIDER BED ALUM. EXTRUSION 8" WIDE SECTION C			
	1D0060ALLLL	SLIDER BED ALUM. EXTRUSION 10" WIDE SECTION C			
	1D0061ALLLL	SLIDER BED ALUM. EXTRUSION 12" WIDE SECTION C			

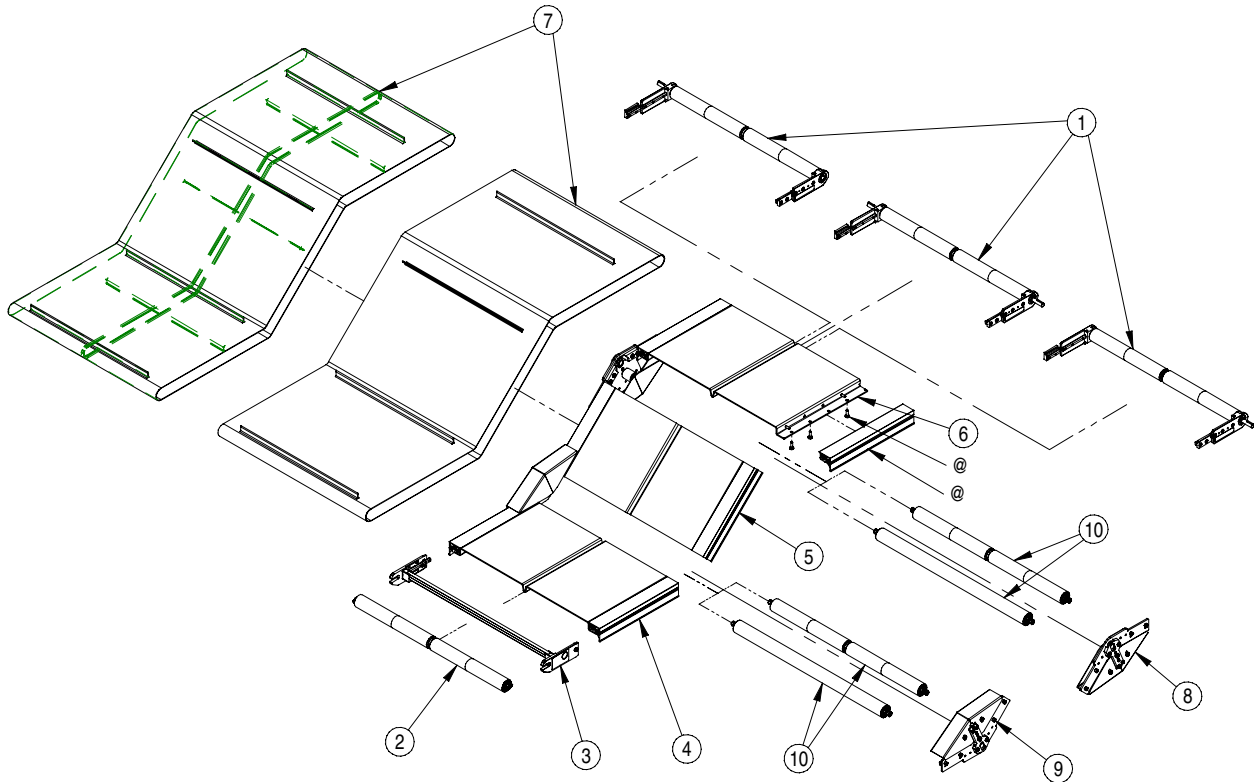


18"-24" Wide AS40Z Series Conveyor Z Configuration

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# AE41ZWW-LLLALLLLL-LSF-ZAXNNN

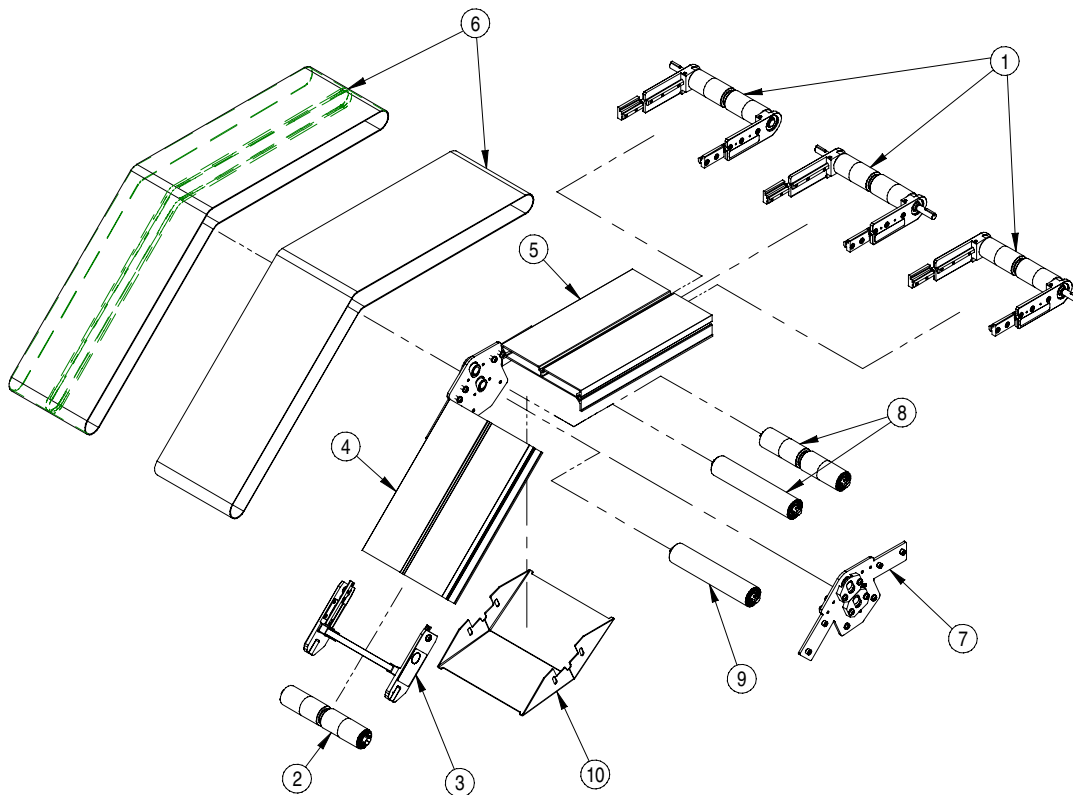


Item	Part No.	Description	Item	Part No.	Description
1	1A0028C00WW	ASSY END DRIVE SINGLE OUTPUT LH			
	1A0029C00WW	ASSY END DRIVE SINGLE OUTPUT RH			
	1A0031C00WW	ASSY END DRIVE DUAL OUTPUT			
2	1A0039B00WW	ASSY TAIL V-GUIDED			
3	1A0038A00WW	TAIL PLATE ASSEMBLY			
4	1A0090A-WW-LLL	AS40 Z SERIES, MULTI-PIECE FRAME SECTION A			
5	1A0090A-WW-LLL	AS40 Z SERIES, MULTI-PIECE FRAME SECTION B			
6	1A0090A-WW-LLL	AS40 Z SERIES, MULTI-PIECE FRAME SECTION C			
7	AEZ-WW-LLLA-ZAXNNN	BELT AUTOMATION Z SERIES STANDARD			
	AEZ-WW-LLLA-ZVXNNN	BELT AUTOMATION Z SERIES V-GUIDED			
8	1A0087ARAN	Z TRACK CONNECTOR PLATE, R CONFIG WIDE			
9	1A0087ALAN	Z TRACK CONNECTOR PLATE, L CONFIG WIDE			
10	1A0043A00WW	ASSY - CENTER DRIVE IDLER			
	1A0049A00WW	ASSY - CENTER DRIVE IDLER, V-GUIDED			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# AE41FWW-LLLALLL-LSF-XAX



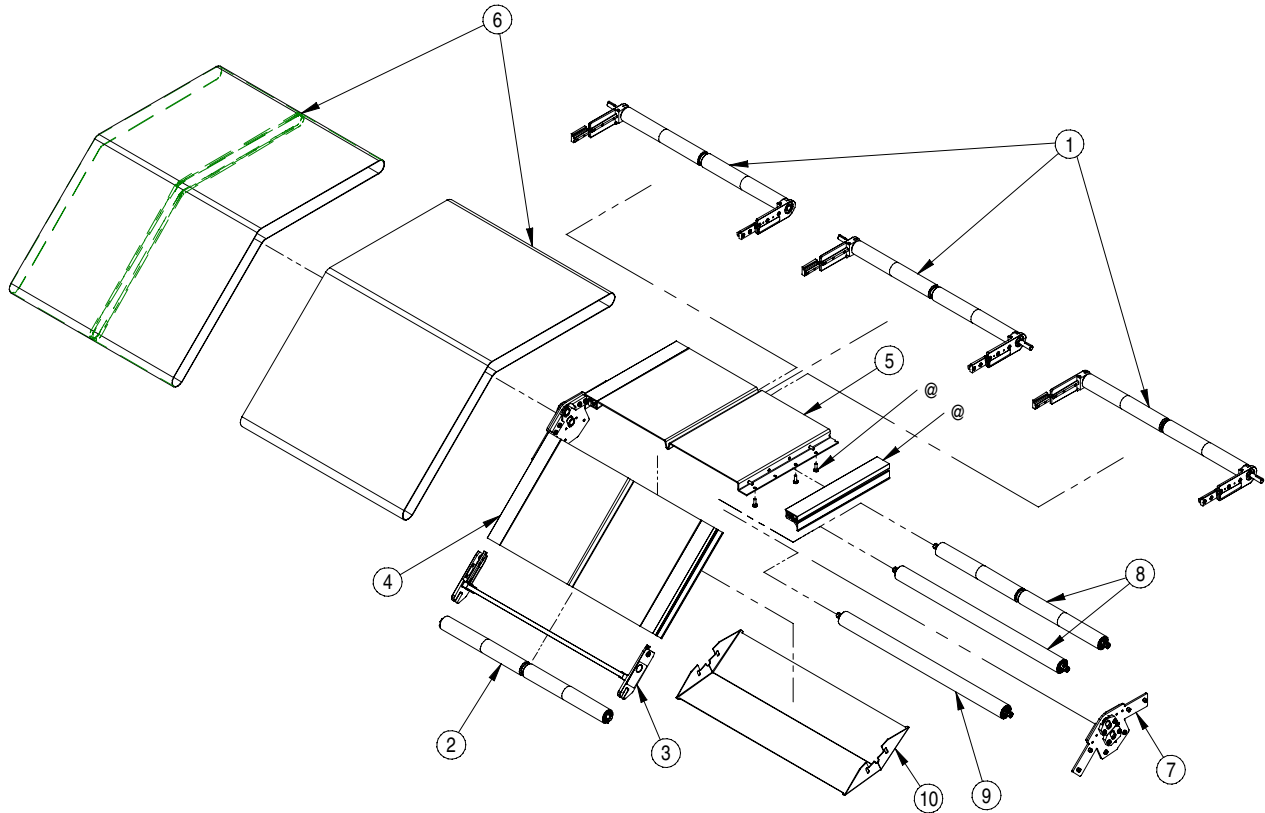
Item	Part No.	Description	Item	Part No.	Description
1	1A0028C00WW	ASSY END DRIVE SINGLE OUTPUT LH	8	1A0043A00WW	ASSY - CENTER DRIVE IDLER
	1A0029C00WW	ASSY END DRIVE SINGLE OUTPUT RH		1A0049A00WW	ASSY - CENTER DRIVE IDLER, V-GUIDED
	1A0031C00WW	ASSY END DRIVE DUAL OUTPUT	9	1A0043A00WW	ASSY - CENTER DRIVE IDLER
2	1A0039B00WW	ASSY TAIL V-GUIDED	10	1D0337A0AN-00WW	CONNECTOR PLATE GUARD
3	1A0038A00WW	TAIL PLATE ASSEMBLY			
4	1D0017ALLLL	SLIDER BED ALUM. EXTRUSION 8" WIDE SECTION A			
	1D0060ALLLL	SLIDER BED ALUM. EXTRUSION 10" WIDE SECTION A			
	1D0061ALLLL	SLIDER BED ALUM. EXTRUSION 12" WIDE SECTION A			
5	1D0017ALLLL	SLIDER BED ALUM. EXTRUSION 8" WIDE SECTION C			
	1D0060ALLLL	SLIDER BED ALUM. EXTRUSION 10" WIDE SECTION C			
	1D0061ALLLL	SLIDER BED ALUM. EXTRUSION 12" WIDE SECTION C			
6	AEF-WW-LLLA-XAX	BELT AUTOMATION SERIES STANDARD			
	AEF-WW-LLLA-XVX	BELT AUTOMATION SERIES V-GUIDED			
7	1A0088A0AN	Z TRACK CONNECTOR PLATE, FULL WIDTH IDLERS			



18"-24" Wide AS40Z Series Conveyor Full Width Idler R Configuration

LEGEND

⑤ Location on Parts List
 @ Part not sold separately
 PART# AE41FWW-LLLALLL-LSF-XAX



Item	Part No.	Description	Item	Part No.	Description
1	1A0028C00WW	ASSY END DRIVE SINGLE OUTPUT LH			
	1A0029C00WW	ASSY END DRIVE SINGLE OUTPUT RH			
	1A0031C00WW	ASSY END DRIVE DUAL OUTPUT			
2	1A0039B00WW	ASSY TAIL V-GUIDED			
3	1A0038A00WW	TAIL PLATE ASSEMBLY			
4	1A0090A-WW-LLL	AS40 Z SERIES, MULTI-PIECE FRAME SECTION A			
5	1A0090A-WW-LLL	AS40 Z SERIES, MULTI-PIECE FRAME SECTION C			
6	AEF-WW-LLLA-XAX	BELT AUTOMATION SERIES STANDARD			
	AEF-WW-LLLA-VX	BELT AUTOMATION SERIES V-GUIDED			
7	1A0088A0AN	Z TRACK CONNECTOR PLATE, FULL WIDTH IDLERS			
8	1A0043A00WW	ASSY - CENTER DRIVE IDLER			
	1A0049A00WW	ASSY - CENTER DRIVE IDLER, V-GUIDED			
9	1A0043A00WW	ASSY - CENTER DRIVE IDLER			
10	1D0337A0AN-00WW	CONNECTOR PLATE GUARD			

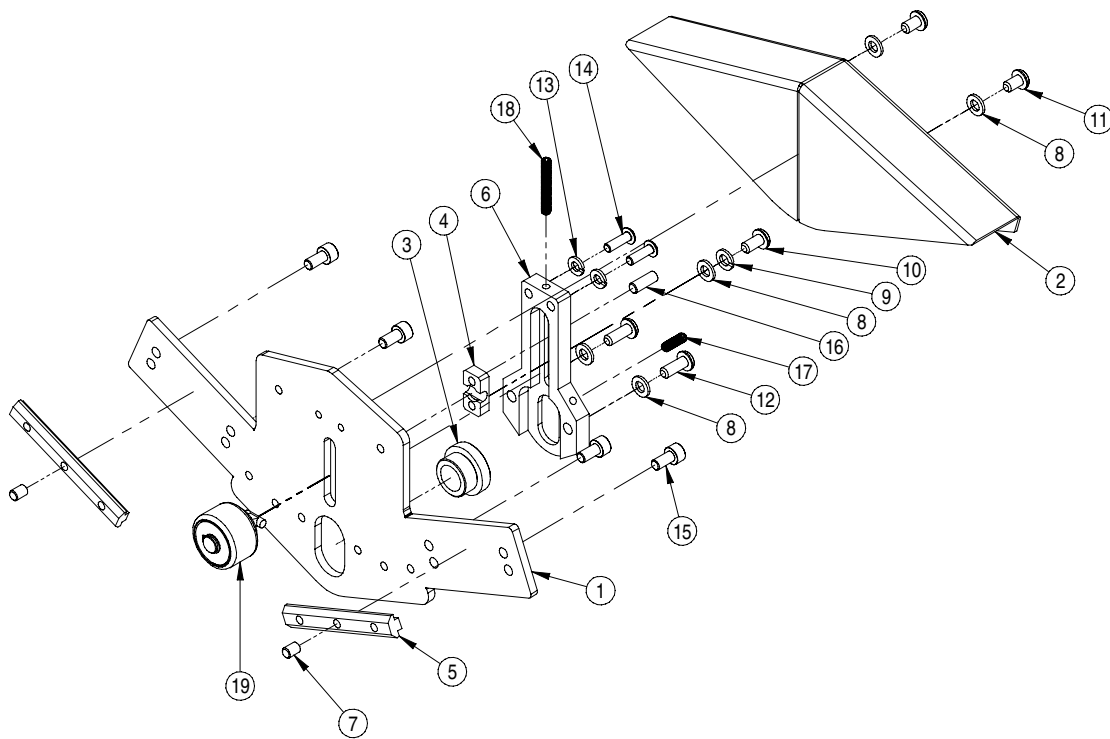


AS40Z Series Z Track Connector Plate Assembly L Configuration Widths 8", 10", 12"

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A0086ALAN



Item	Part No.	Description	Item	Part No.	Description
1	1D0342A030	30° CONNECTOR PLATE	11	BHCS-M06X100X010-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 10mm ZP
	1D0342A045	45° CONNECTOR PLATE	12	BHCS-M06X100X016-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 16mm ZP
	1D0342A060	60° CONNECTOR PLATE	13	WSHL-M05-ZP	WASHER LOCK M5 ZP
2	1D0324A030	NARROW GUARD, 30° CONNECTOR PLATE	14	BHCS-M05X080X016-ZP	SCREW BUTTON HEAD CAP M5 X 0.8 X 16 LG ZP
	1D0324A045	NARROW GUARD, 45° CONNECTOR PLATE	15	SHCS-M06X100X012-ZP	SCREW SOCKET HEAD CAP M6 X 1 X 12mm ZP
	1D0324A060	NARROW GUARD, 60° CONNECTOR PLATE	16	SHSS-M06X100X016-ZP	SCREW SOCKET HEAD SET M6 X 1.0 X 16 mm LG. ZP
3	1D0326A	IDLER SHAFT BUSHING	17	SHSS-M05X080X020-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 20mm LG. SS
4	1D0327A	Z-IDLER ADJUSTING BLOCK	18	SHSS-M05X080X035-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 35mm LG. SS
5	1D0344A	CONNECTOR PLATE ANCHOR BAR	19	Z-0011-001-ASY	8"-12" BELT TENSIONING IDLER ASSY
6	1D0345A	BUSHNG RETAINER			
7	SHSS-M06X100X008-ZP	SCREW SOCKET HEAD SET M6 x 1.0 x 8 mm LG. ZP			
8	WSHF-M06X12X16-ZP	WASHER M6 X 12mm OD X 1.6mm THICK ZP			
9	WSHL-M06-ZP	WASHER LOCK M6 ZP			
10	BHCS-M06X100X012-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 12mm ZP			

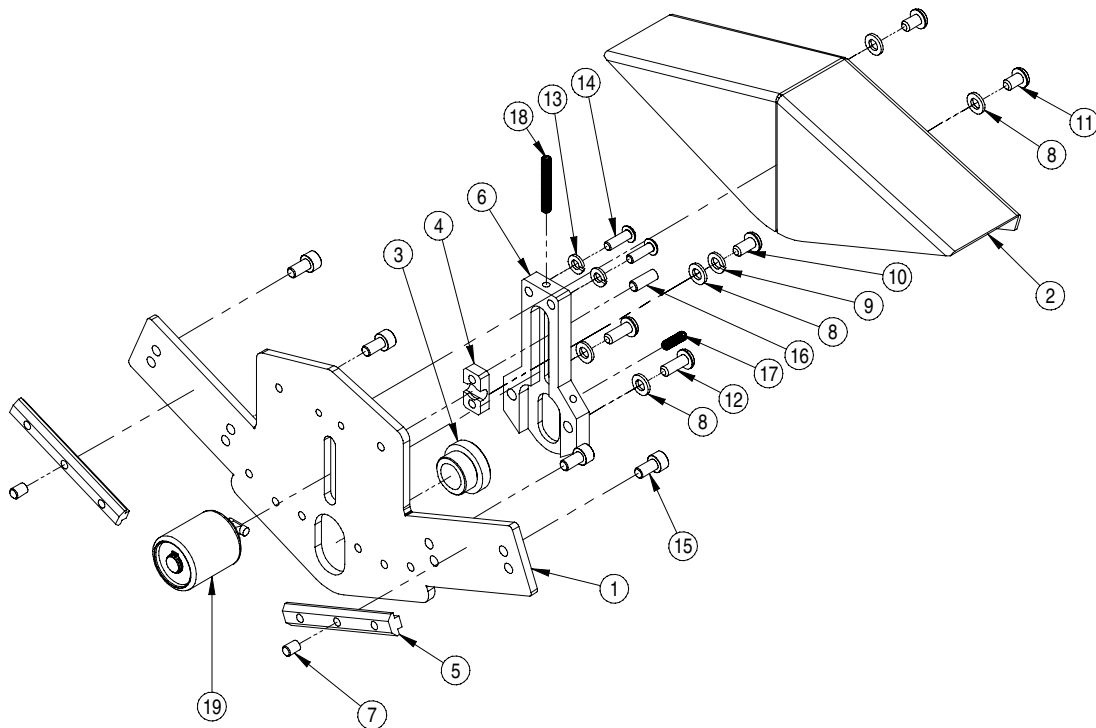


AS40Z Series Z Track Connector Plate Assembly L Configuration Widths 18", 21", 24"

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A0087ALAN



Item	Part No.	Description	Item	Part No.	Description
1	1D0342A030	30° CONNECTOR PLATE	11	BHCS-M06X100X010-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 10mm ZP
	1D0342A045	45° CONNECTOR PLATE	12	BHCS-M06X100X016-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 16mm ZP
	1D0342A060	60° CONNECTOR PLATE	13	WSHL-M05-ZP	WASHER LOCK M5 ZP
2	1D0325A030	WIDE GUARD, 30° CONNECTOR PLATE	14	BHCS-M05X080X016-ZP	SCREW BUTTON HEAD CAP M5 X 0.8 X 16 LG ZP
	1D0325A045	WIDE GUARD, 45° CONNECTOR PLATE	15	SHCS-M06X100X012-ZP	SCREW SOCKET HEAD CAP M6 X 1 X 12mm ZP
	1D0325A060	WIDE GUARD, 60° CONNECTOR PLATE	16	SHSS-M06X100X016-ZP	SCREW SOCKET HEAD SET M6 X 1.0 X 16 mm LG. ZP
3	1D0326A	IDLER SHAFT BUSHING	17	SHSS-M05X080X020-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 20mm LG. SS
4	1D0327A	Z-IDLER ADJUSTING BLOCK	18	SHSS-M05X080X035-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 35mm LG. SS
5	1D0344A	CONNECTOR PLATE ANCHOR BAR	19	Z-0011-002-ASY	18"-24" BELT TENSIONING IDLER ASSY
6	1D0345A	BUSHNG RETAINER			
7	SHSS-M06X100X008-ZP	SCREW SOCKET HEAD SET M6 x 1.0 x 8 mm LG. ZP			
8	WSHF-M06X12X16-ZP	WASHER M6 X 12mm OD X 1.6mm THICK ZP			
9	WSHL-M06-ZP	WASHER LOCK M6 ZP			
10	BHCS-M06X100X012-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 12mm ZP			

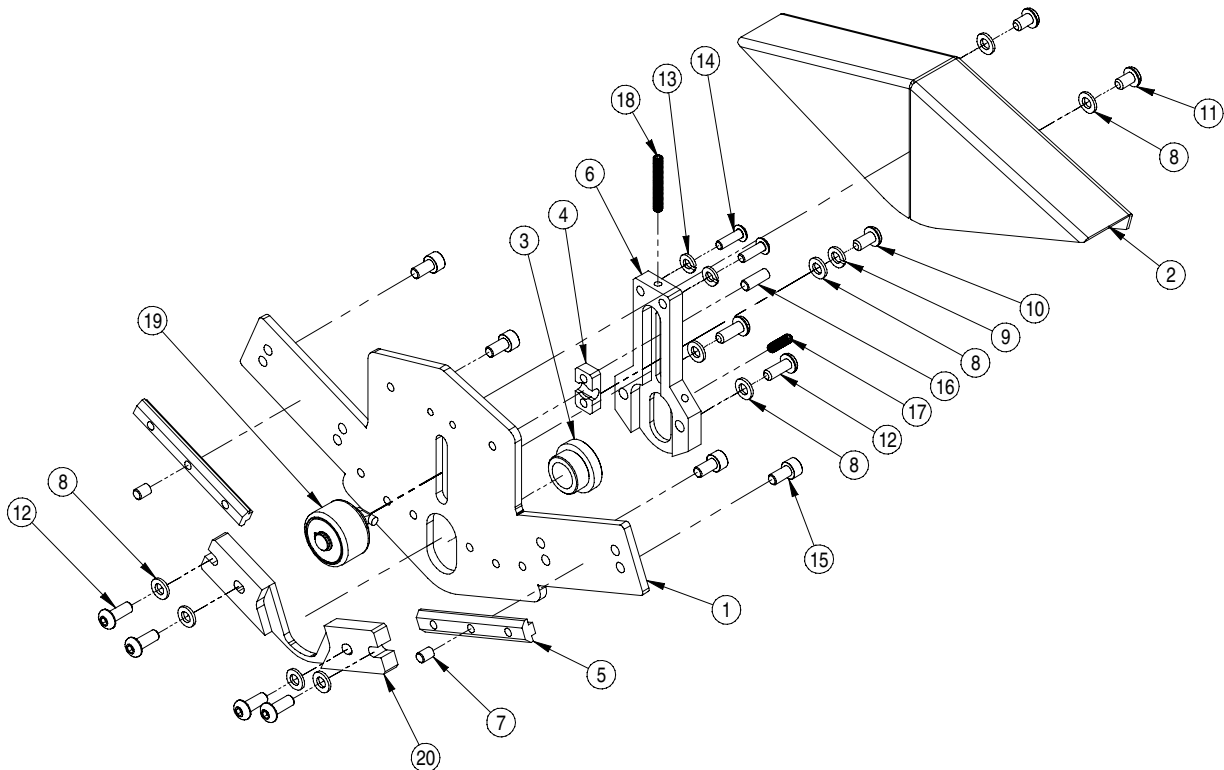


AS40Z Series Z Track Connector Plate Assembly R Configuration Widths 8", 10", 12"

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A008GARAN



Item	Part No.	Description	Item	Part No.	Description
1	1D0342A030	30° CONNECTOR PLATE	11	BHCS-M06X100X010-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 10mm ZP
	1D0342A045	45° CONNECTOR PLATE	12	BHCS-M06X100X016-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 16mm ZP
	1D0342A060	60° CONNECTOR PLATE	13	WSHL-M05-ZP	WASHER LOCK M5 ZP
2	1D0324A030	NARROW GUARD, 30° CONNECTOR PLATE	14	BHCS-M05X080X016-ZP	SCREW BUTTON HEAD CAP M5 X 0.8 X 16 LG ZP
	1D0324A045	NARROW GUARD, 45° CONNECTOR PLATE	15	SHCS-M06X100X012-ZP	SCREW SOCKET HEAD CAP M6 X 1 X 12mm ZP
	1D0324A060	NARROW GUARD, 60° CONNECTOR PLATE	16	SHSS-M06X100X016-ZP	SCREW SOCKET HEAD SET M6 X 1.0 X 16 mm LG. ZP
3	1D0326A	IDLER SHAFT BUSHING	17	SHSS-M05X080X020-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 20mm LG. SS
4	1D0327A	Z-IDLER ADJUSTING BLOCK	18	SHSS-M05X080X035-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 35mm LG. SS
5	1D0344A	CONNECTOR PLATE ANCHOR BAR	19	Z-0011-001-ASY	8"-12" BELT TENSIONING IDLER ASSY
6	1D0345A	BUSHING RETAINER	20	1D0338A	PINCH GUARD
7	SHSS-M06X100X008-ZP	SCREW SOCKET HEAD SET M6 X 1.0 X 8 mm LG. ZP			
8	WSHF-M06X12X16-ZP	WASHER M6 X 12mm OD X 1.6mm THICK ZP			
9	WSHL-M06-ZP	WASHER LOCK M6 ZP			
10	BHCS-M06X100X012-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 12mm ZP			

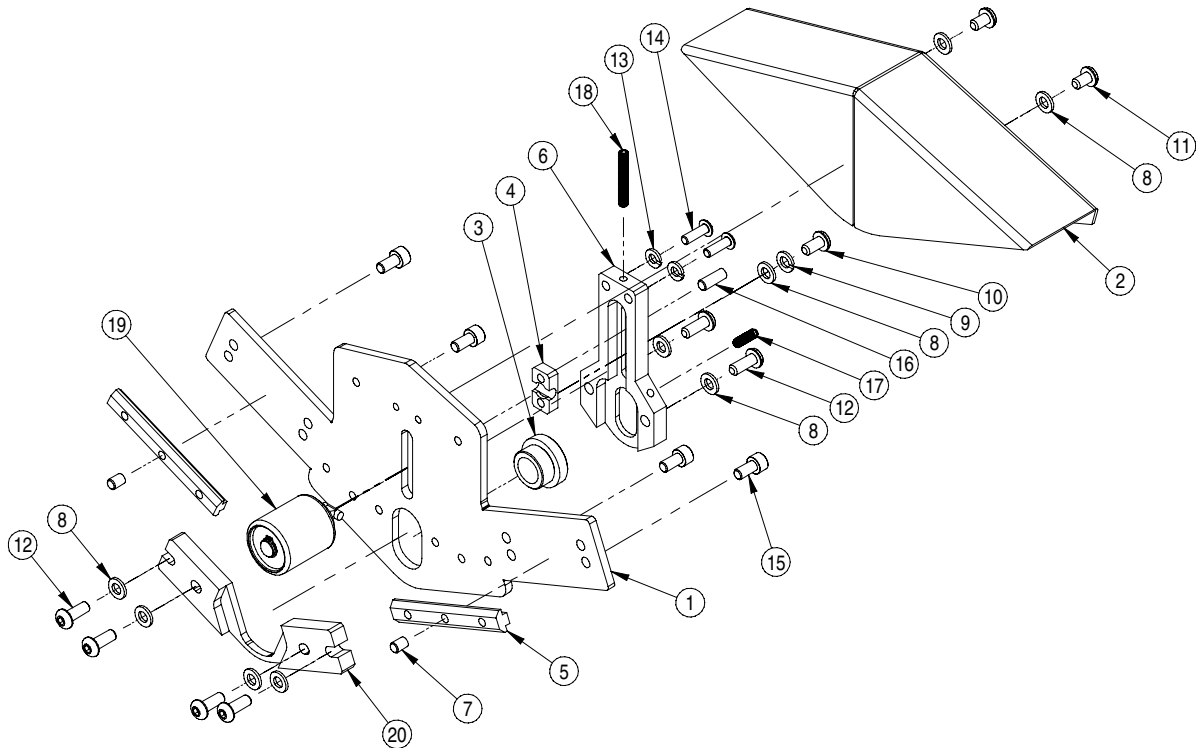


AS40Z Series Z Track Connector Plate Assembly R Configuration Widths 18", 21", 24"

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A0087ARAN



Item	Part No.	Description	Item	Part No.	Description
1	1D0342A030	30° CONNECTOR PLATE	11	BHCS-M06X100X010-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 10mm ZP
	1D0342A045	45° CONNECTOR PLATE	12	BHCS-M06X100X016-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 16mm ZP
	1D0342A060	60° CONNECTOR PLATE	13	WSHL-M05-ZP	WASHER LOCK M5 ZP
2	1D0325A030	WIDE GUARD, 30° CONNECTOR PLATE	14	BHCS-M05X080X016-ZP	SCREW BUTTON HEAD CAP M5 X 0.8 X 16 LG ZP
	1D0325A045	WIDE GUARD, 45° CONNECTOR PLATE	15	SHCS-M06X100X012-ZP	SCREW SOCKET HEAD CAP M6 X 1 X 12mm ZP
	1D0325A060	WIDE GUARD, 60° CONNECTOR PLATE	16	SHSS-M06X100X016-ZP	SCREW SOCKET HEAD SET M6 X 1.0 X 16 mm LG. ZP
3	1D0326A	IDLER SHAFT BUSHING	17	SHSS-M05X080X020-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 20mm LG. SS
4	1D0327A	Z-IDLER ADJUSTING BLOCK	18	SHSS-M05X080X035-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 35mm LG. SS
5	1D0344A	CONNECTOR PLATE ANCHOR BAR	19	Z-0011-002-ASY	18"-24" BELT TENSIONING IDLER ASSY
6	1D0345A	BUSHING RETAINER	20	1D0338A	PINCH GUARD
7	SHSS-M06X100X008-ZP	SCREW SOCKET HEAD SET M6 X 1.0 X 8 mm LG. ZP			
8	WSHF-M06X12X16-ZP	WASHER M6 X 12mm OD X 1.6mm THICK ZP			
9	WSHL-M06-ZP	WASHER LOCK M6 ZP			
10	BHCS-M06X100X012-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 12mm ZP			

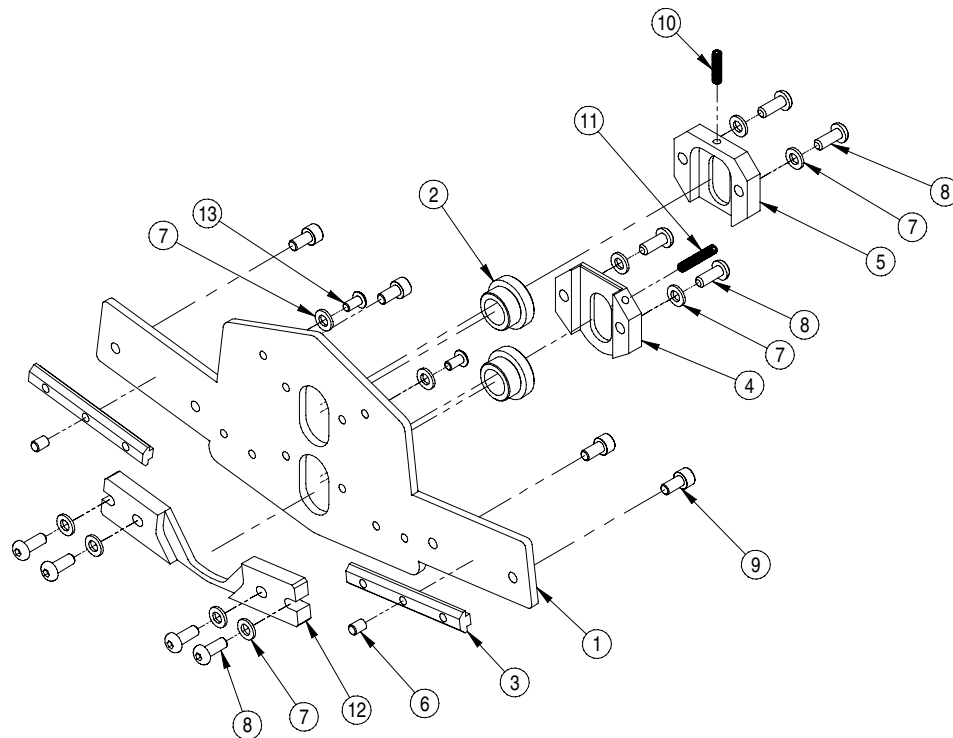


AS40Z Series Z Track Connector Plate Assembly Full Width Idler R Configuration

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A0088A0AN

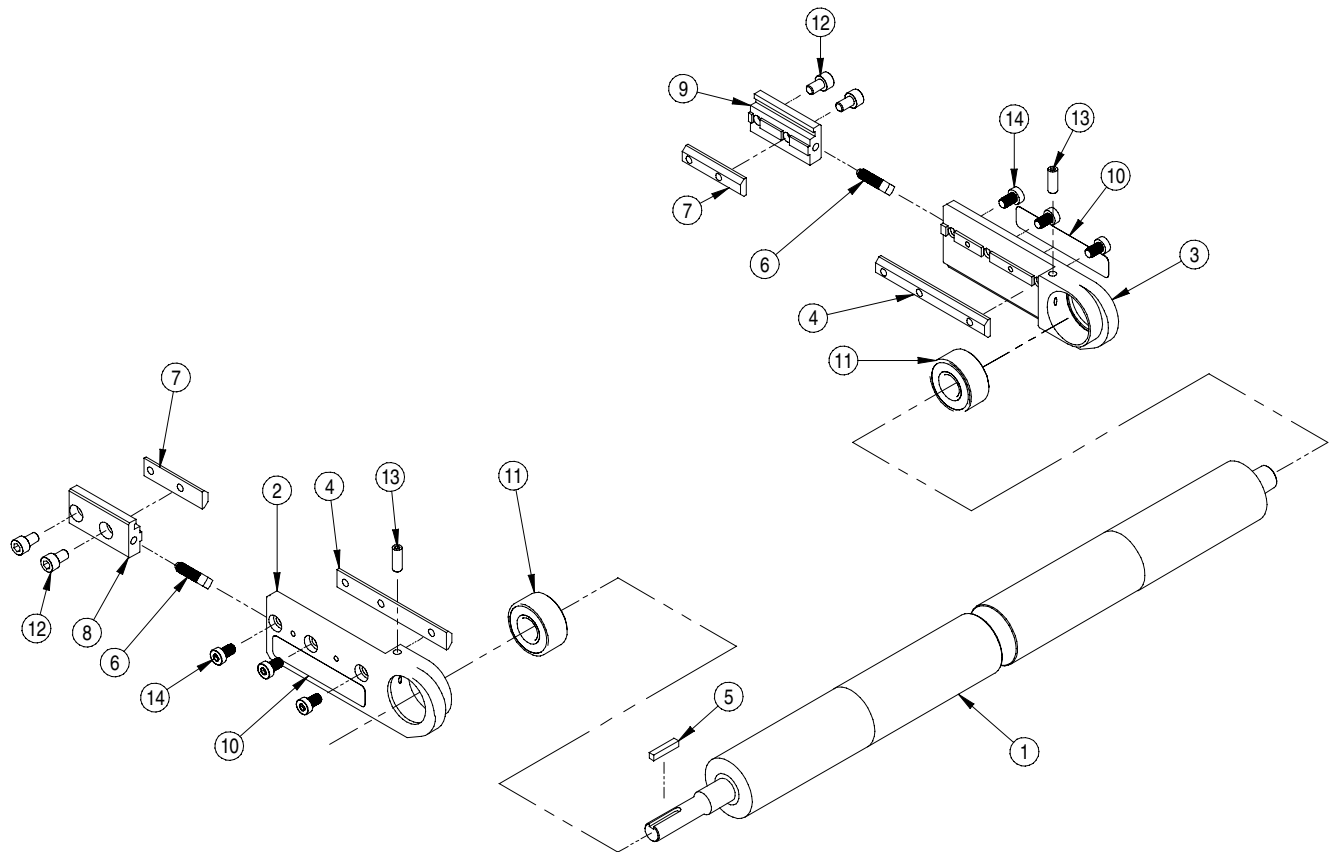


Item	Part No.	Description	Item	Part No.	Description
1	1D0343A015	15° CONNECTOR PLATE			
2	1D0326A	IDLER SHAFT BUSHING			
3	1D0344A	CONNECTOR PLATE ANCHOR BAR			
4	1D0346A	BUSHING RETAINER, LOWER			
5	1D0347A	BUSHING RETAINER, UPPER			
6	SHSS-M06X100X008-ZP	SCREW SOCKET HEAD SET M6 x 1.0 x 8 mm LG. ZP			
7	WSHF-M06X12X16-ZP	WASHER M6 X 12mm OD X 1.6mm THICK ZP			
8	BHCS M06X100X016-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 16mm ZP			
9	SHCS-M06X100X012-ZP	SCREW SOCKET HEAD CAP M6 X 1 X 12mm ZP			
10	SHSS-M05X080X020-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 20mm LG. SS			
11	SHSS-M05X080X035-SS	SCREW SOCKET HEAD SET M5 X 0.8 X 35mm LG. SS			
12	1D0338A	PINCH GUARD			
13	BHCS-M06X100X010-ZP	SCREW SOCKET HEAD BUTTON M6 X 1 X 10mm ZP			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A002_C00WW

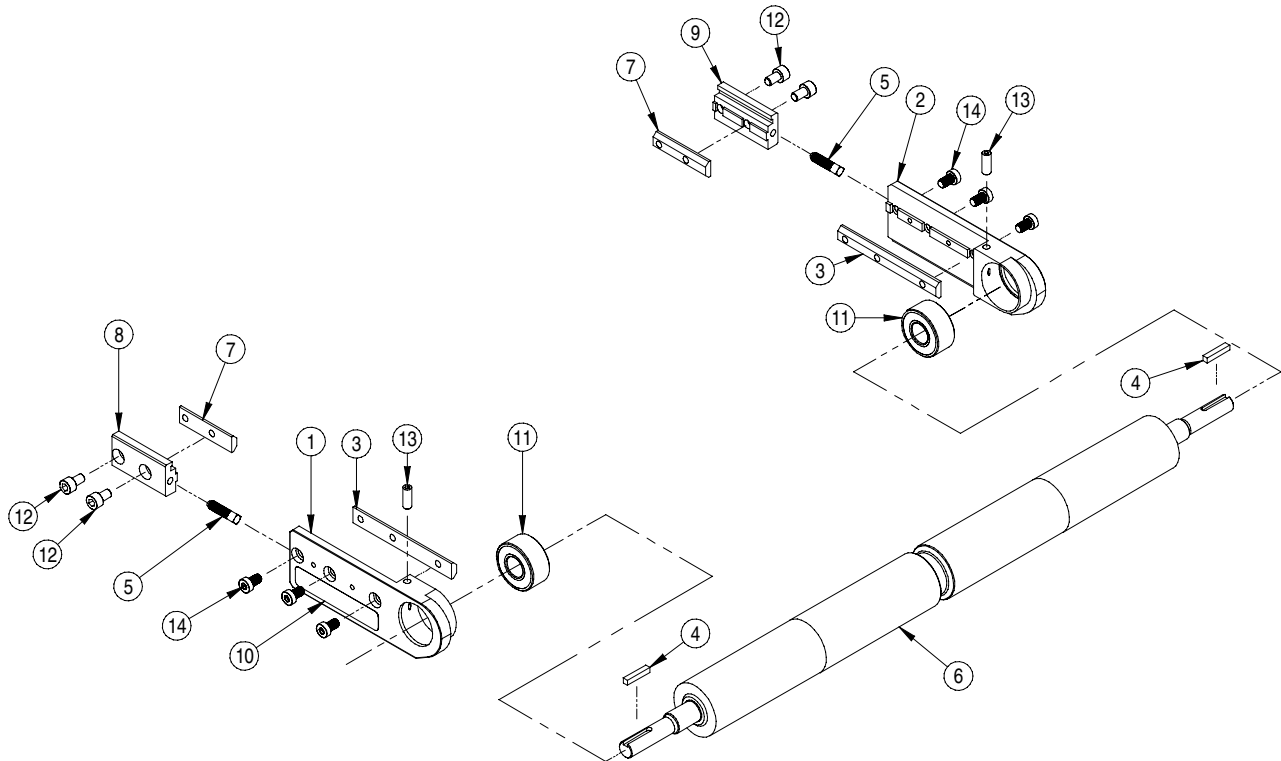


Item	Part No.	Description	Item	Part No.	Description
1	1D0062C00WW	PULLEY END DRIVE 15MM JOURNAL			
2	1D0064B	DRIVE BEARING HOUSING, LH			
3	1D0065B	DRIVE BEARING HOUSING, RH			
4	1D0080A	ANCHOR BAR, T-SLOT, DRIVE END			
5	1D0084A	KEY, 4mm x 4mm SQ. x 21mm LG.			
6	1D0116A	SCREW SQUARE HEAD M6 X 20 MM LG			
7	1D0124A	ANCHOR BAR, T-SLOT, JACKING BLOCK			
8	1D0125A	BLOCK, JACKING, LH, DRIVE END, AS40			
9	1D0126A	BLOCK, JACKING, RH, DRIVE END, AS40			
10	1D0266A	LABEL QC INDUSTRIES 3.06" x 0.6"			
11	1D0317A	BEARING DOUBLE ROW BALL DOUBLE SEAL			
12	SHCS-M06X100X010-ZP	SCREW SOCKET HEAD CAP M6 X 1 X 10mm ZP			
13	SHSS-M06X100X016-ZP	SCREW SOCKET HEAD SET M6 x 1.0 x 16 mm LG.			
14	SLHCS-M6X100X010-BX	SCREW SOCKET LOW HEAD M6 x 1.00 x 10mm BX			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A0031C00WW

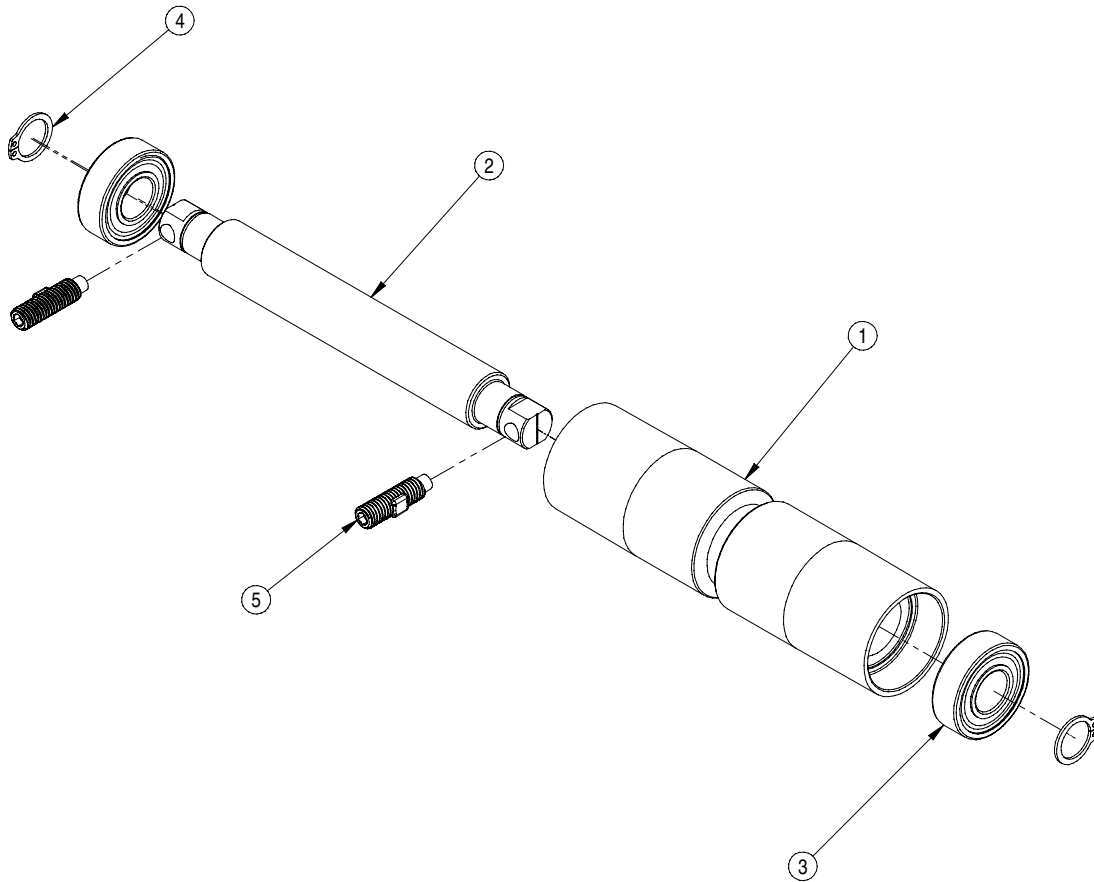


Item	Part No.	Description	Item	Part No.	Description
1	1D0064B	DRIVE BEARING HOUSING, LH			
2	1D0065B	DRIVE BEARING HOUSING, RH			
3	1D0080A	ANCHOR BAR, T-SLOT, DRIVE END			
4	1D0084A	KEY, 4mm x 4mm SQ. x 21mm LG.			
5	1D0116A	SCREW SQUARE HEAD M6 X 20 MM LG			
6	1D0123C00WW	PULLEY END DRIVE 15MM JOURNAL			
7	1D0124A	ANCHOR BAR, T-SLOT, JACKING BLOCK			
8	1D0125A	BLOCK, JACKING, LH, DRIVE END, AS40			
9	1D0126A	BLOCK, JACKING, RH, DRIVE END, AS40			
10	1D0266A	LABEL QC INDUSTRIES 3.06" x 0.6"			
11	1D0317A	BEARING DOUBLE ROW BALL DOUBLE SEAL			
12	SHCS-M06X100X010-ZP	SCREW SOCKET HEAD CAP M6 X 1 X 10mm ZP			
13	SHSS-M06X100X016-ZP	SCREW SOCKET HEAD SET M6 x 1.0 x 16 mm LG.			
14	SLHCS-M6X100X010-BX	SCREW SOCKET LOW HEAD M6 x 1.00 x 10mm BX			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A0039BWWWW

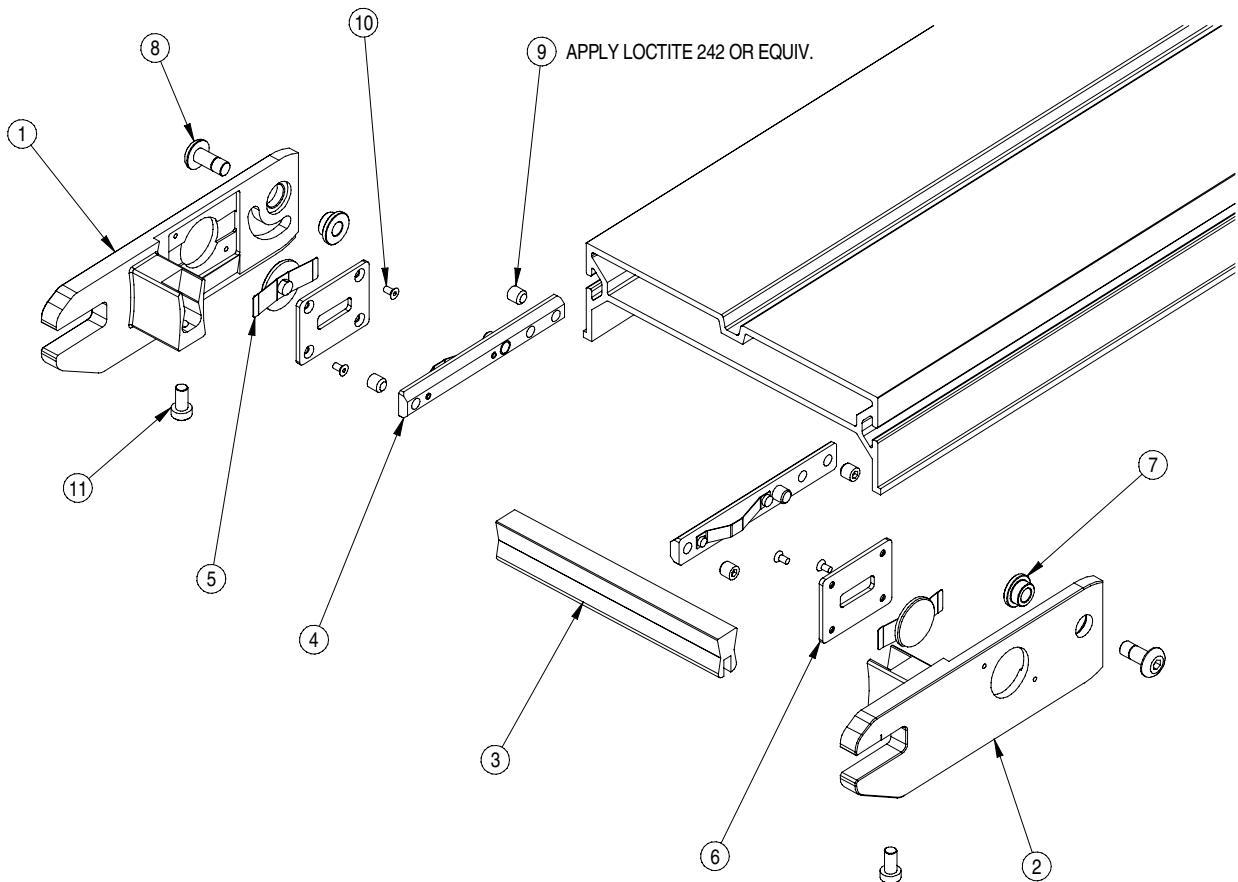


Item	Part No.	Description	Item	Part No.	Description
1	1D0157BWWWW	TAIL PULLEY			
2	1D0158AWWWW	TAIL SHAFT			
3	1D0132A	BEARING			
4	1D0121A	RETAINING RING			
5	SHDSS-M08X125X030-BX-B	SCREW SOCKET HD. SET DOG PT. M8x1.25 30mm LG.			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A0038AWWWW

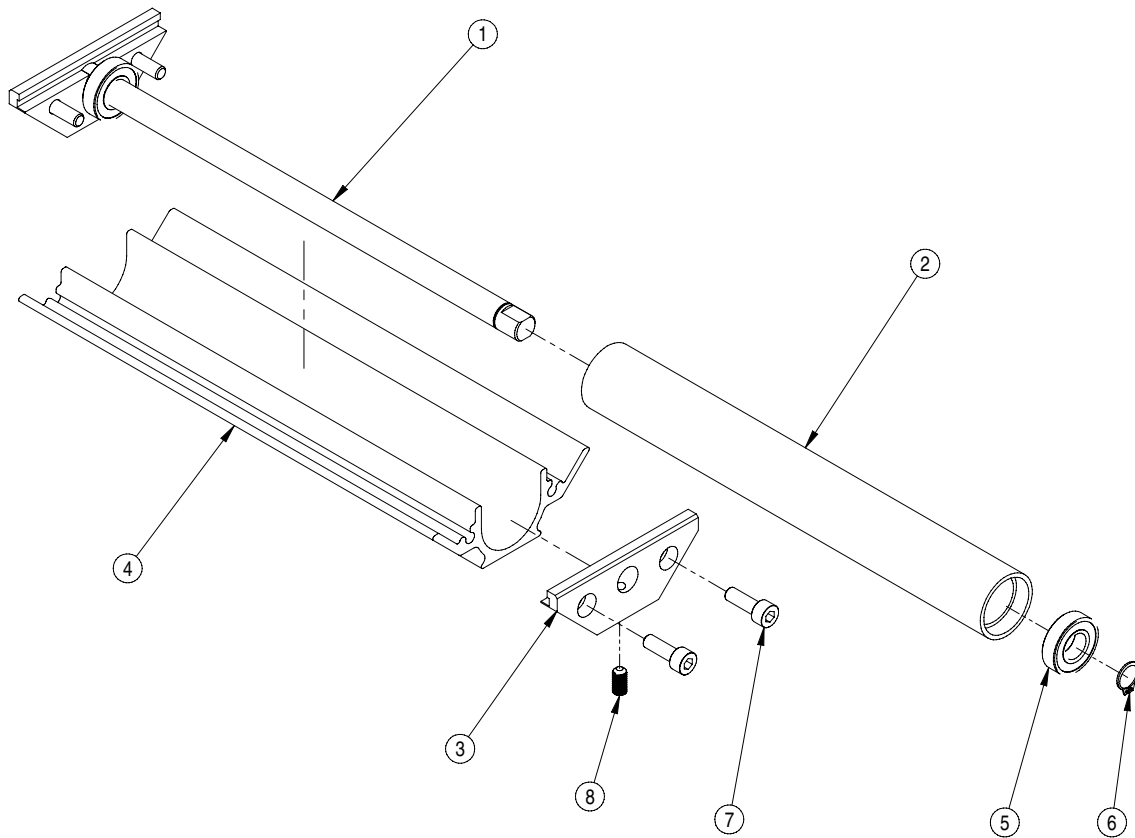


Item	Part No.	Description	Item	Part No.	Description
1	1D0181A	TAIL PLATE RH			
2	1D0182A	TAIL PLATE LH			
3	1D0172AWWWW	TAIL STIFFENER			
4	1A0072A	ASSY ANCHOR BAR/TAIL SPRING/DOWEL PIN			
5	1D0164A	TAIL BUTTON			
6	1D0165A	BUTTON RETAINING PLATE			
7	1D0168A	BUSHING			
8	1D0225A	BUTTON HEAD SHOULDER SCREW			
9	SHSS-M06X100X006-ZP	SCREW SOCKET HEAD SET M6x1.0 6mm LG.			
10	FHCS-M02.5X045X005-BX	SCREW SOCKET FLAT HEAD M2.5x0.45 5mm LG.			
11	SLHCS-M05X080X010-ZP	SCREW SOCKET LOW HEAD CAP M5x0.8 10mm LG.			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A0042Awwww

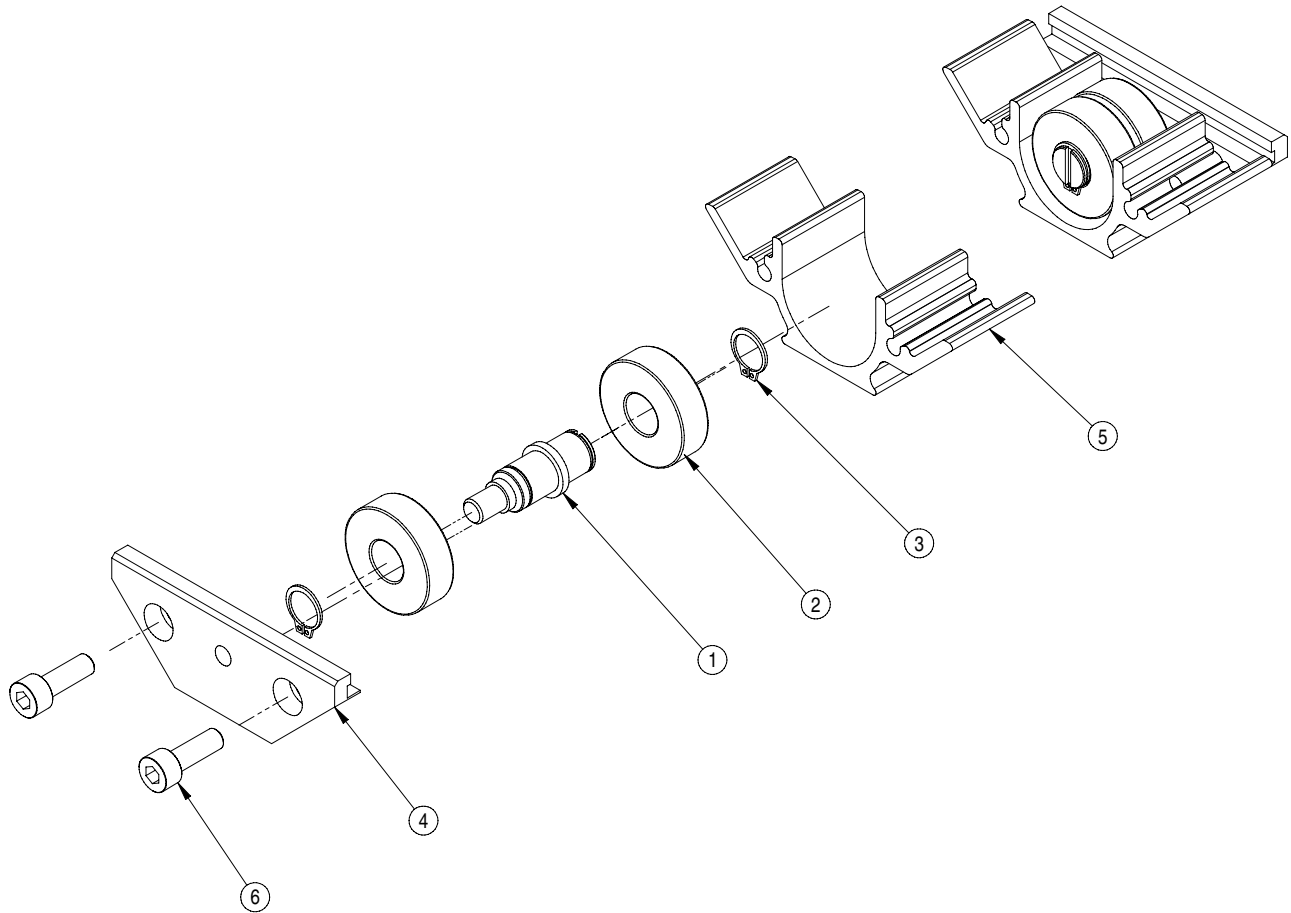


Item	Part No.	Description	Item	Part No.	Description
1	1D0215Awwww	SHAFT UNDERSIDE IDLER FULL WIDTH			
2	1D0155Awwww	ROLLER UNDERSIDE IDLER FULL WIDTH			
3	1D0208A	CLAMP UNDERSIDE IDLER FULL WIDTH			
4	1D0147Awwww	GUARD UNDERSIDE IDLER FULL WIDTH			
5	1D02040A	BEARING UNDERSIDE IDLER FULL WIDTH			
6	43-0050-52	RETAINING RING			
7	SHCS-M05X080X016-ZP	SCREW SOCKET HEAD CAP M5x0.8 16mm LG.			
8	SHSS-M05X080X010-BX	SCREW SOCKET HEAD SET M5x0.8 10mm LG.			

LEGEND

- ⑤ Location on Parts List
- @ Part not sold separately

PART# 1A0041A



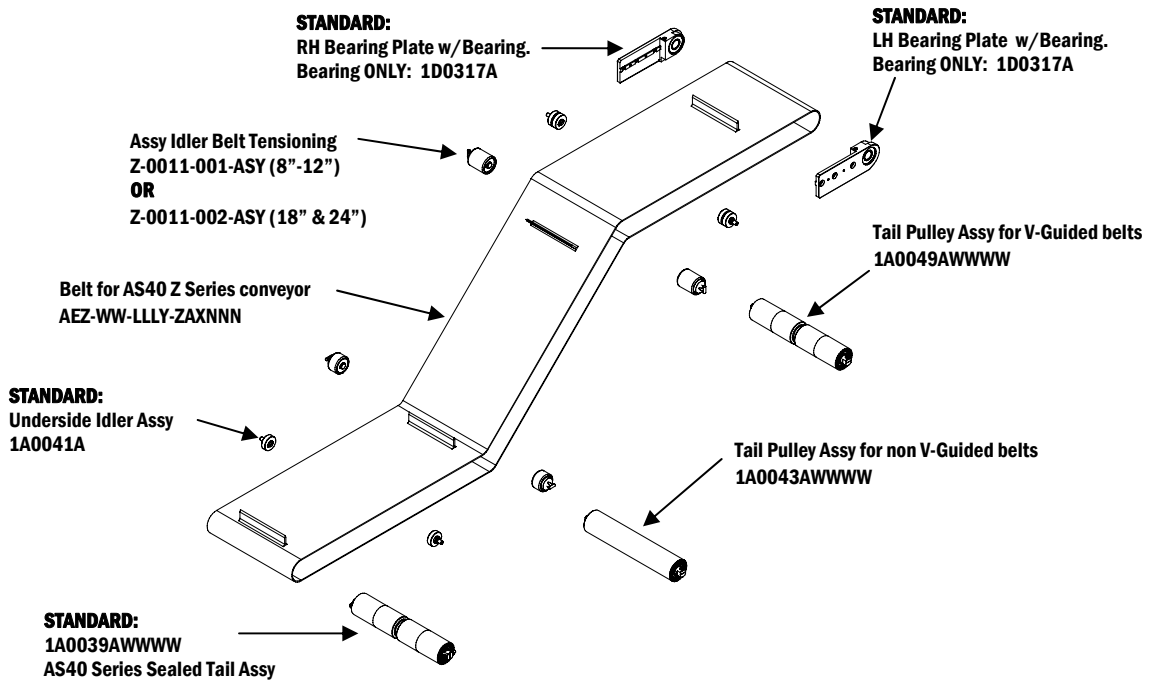
Item	Part No.	Description	Item	Part No.	Description
1	1D0153A	SHAFT STUB UNDERSIDE IDLER 8" - 24"			
2	43-0050-51	BEARING UNDERSIDE IDLER STUB			
3	43-0050-52	RETAINING RING			
4	1D0151A	CLAMP UNDERSIDE IDLER STUB			
5	1D0149A	GUARD UNDERSIDE IDLER STUB 8" - 24"			
6	SHCS-M05X080X016-ZP	SCREW SOCKET HEAD CAP M5x0.8 16mm LG.			

3.10 Recommended Spare Parts

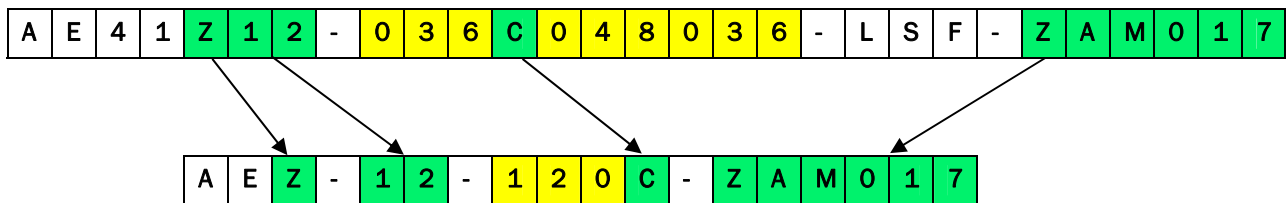
QC Industries recommends that the items listed below be stocked as spares to minimize downtime and ensure optimum performance of your AS40Z Series conveyor.

Part #	Description	Min. Qty.
AE_-WW-LLLY-Z_XNNN	Belt for "Z", "L", or "R" (cleated), A (std) or V (V-guided)	1
1A0039AWWWW	Sealed Tail Assembly	1
1A0043AWWWW	Full Width Idler Assembly for non V-guided belt	1
1A0049AWWWW	Full Width Idler Assembly for V-guided belt	1
1A0035C	Drive End Bearing Housing w/ Bearing RH	1
1A0034C	Drive End Bearing Housing w/ Bearing LH	1
1A0041A	Underside Idler 8"-24" Wide	2
Z-0011-001-ASY	Assy Idler Belt Tensioning for 8"-12" Widths	2
Z-0011-002-ASY	Assy Idler Belt Tensioning for 18"-24" Widths	2

- Y = angle of conveyor bend, designated by letter (e.g., B=30, C =45, D=60)
- WW(WW) = the conveyor's nominal width in inches (e.g., 08)
- LLL = the conveyor section nominal length in inches (e.g., 060)
- X = cleat height (e.g., M = 20mm, P = 40mm, Q = 60mm, etc.)
- NNN = number of cleats (odd numbers only - e.g., 013)



Conveyor Part Number to Belt Part Number conversion:



To order spare or replacement parts, contact QC Industries Customer Service at (513) 753-6000.

3.11 Troubleshooting

Note: if you are unable to remedy the problem with these corrective actions, please contact QC Industries Customer Service at (513) 753-6000. Failure to correct the problem may lead to abnormal use of the conveyor, thereby voiding the warranty.

Symptoms	Possible Cause	Corrective Action
Belt is slipping or stops under load	Application demand is more than the conveyor is rated for	Verify the conveyor's capacity for the application
	Lubrication between drive pulley and belt	Clean bottom of belt and drive pulley
	Tail Pulley assembly not tensioned properly.	Refer to Section 3.03 Figure 1
Belt does not move without load	Timing Belt or Chain under drive guard is not connected	Verify correct installation as instructed in Section 2.09
	Tail Pulley assembly not tensioned properly.	Verify that tail pulley is in correct position as instructed in Section 3.03 Figure 1
Belt will not track at Drive End	Accumulation; belt wear	Track the belt as instructed in Section 3.02 or Switch to V-Guided Belt.
Belt will not track at Tail End / Z-Track connector plates	Belt wear; irregular product loading	Track the belt as instructed in Section 3.02 Switch to V-Guided Belt.
Belt is becoming brittle or delaminating	Belt is being attacked by chemicals or excessive heat	Contact factory to discuss application parameters for proper belt selection
	Belt's useful life has expired	Replace the belt
Belt is discoloring	Urethane Belts are subject to discoloration when exposed to UV light	None
Motor is hot	Normal operation - motor can run with a skin temperature of 221°F under normal conditions	None
	Motor is not protected with overload protection and is drawing too much current	Install overload protection on the motor
Speed Reducer is hot	Normal operation – speed reducer can run with a skin temperature of 225°F under normal conditions	None
	Initial installation not performed correctly and speed reducer input shaft is damaged	Purchase a new speed reducer and follow manufacturer's installation instructions carefully
Bearing Noise	Bearings are damaged or failing	Replace bearings
Belt is traveling the reverse of the desired direction	Motor or speed controller not wired properly	Check wiring, correct per wiring instructions
Belt top surface has premature wear or grooves at outer edges	Z-Track Idler Guards are adjusted too low and digging into belt surface; or belt is over tensioned at connector plates and rubbing on aluminum frame.	Adjust Idler Guards to clear belt top surface (maximum of 1/8" clearance to minimize pinch points); or track belt as instructed in Section 3.02

4.01 Conveyor Serial Number

The conveyor's serial number is located underneath the tracking block at the drive end of the conveyor, opposite the side on which the gearmotor will be mounted (**Figure 1**).

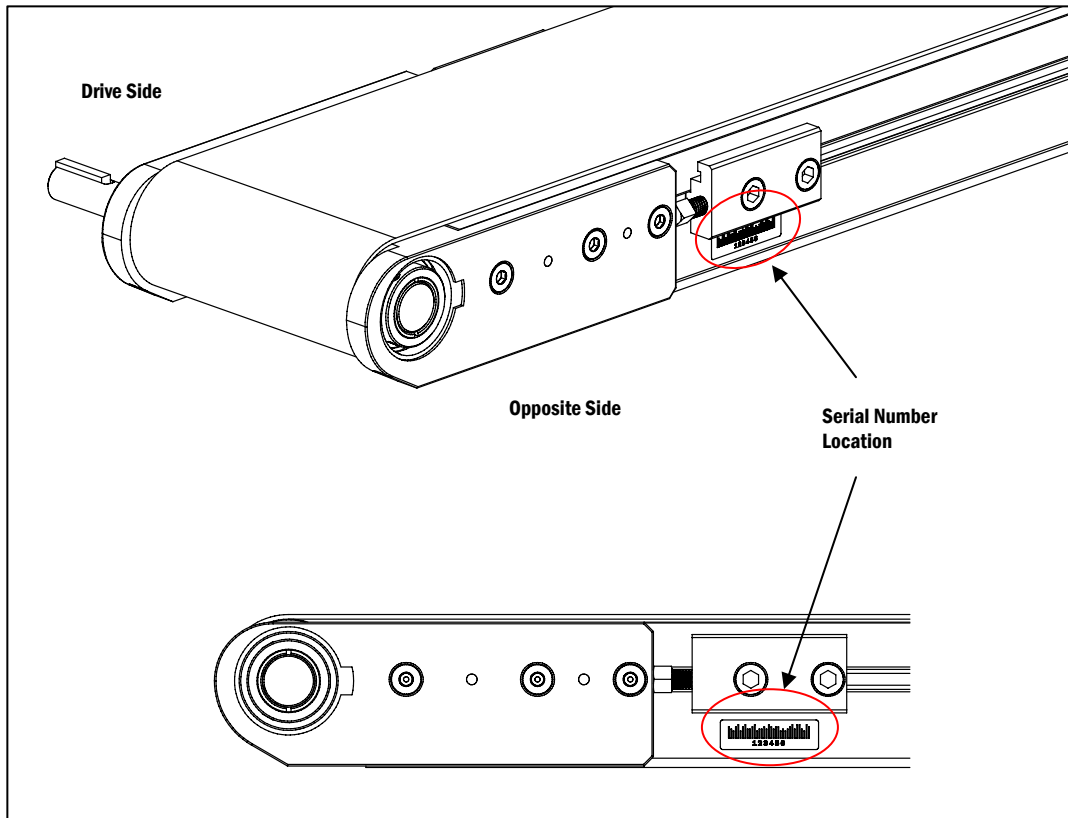


Figure 1

Record the serial number in a place where it can be accessed for reference; a place has been provided on the back cover that can be used for multiple conveyors. This will assist any future inquiries regarding the conveyor, its accessories, the order it was shipped on, or replacement parts.

4.02 Conveyor Warranty

QC INDUSTRIES warrants that our conveyors are free from defects in materials and workmanship and fit for the ordinary purposes for which such goods are used, under normal installation, use and service for five (5) years from date of purchase or 10,500 hours of running use, whichever is sooner. QC INDUSTRIES will replace any defective part within the warranty period, without charge, provided:

- (1) The Purchaser gives QC INDUSTRIES prompt written notice of the defect, including the date of purchase and original purchase order number.
- (2) The Purchaser will then be given a return goods authorization number (RGA#) which must be displayed on all labels and packing slips returned with merchandise. (See RGA section)
- (3) The Purchaser pays for delivery of the defective part to QC INDUSTRIES for inspection and verification of the defect.
- (4) The Purchaser shall pay all shipping and insurance charges for the replacement part from QC INDUSTRIES and the cost of installing the replacement part.

This warranty is limited to the replacement of defective parts. QC INDUSTRIES WILL NOT BE LIABLE FOR ANY DAMAGES CAUSED BY ANY DEFECT IN THIS UNIT. This warranty shall not apply if any failure of this unit or its parts is caused by unreasonable use, lack of maintenance, improper maintenance and/or repairs, incorrect adjustments, exposure to corrosive or abrasive material, moisture causing damage, or any modification or alteration affecting the operation of the unit which is not authorized by QC INDUSTRIES in writing. This warranty shall not apply to the following items that are covered by their manufacturer's warranty, subject to any limitation contained in those warranties.

- | | |
|--------------|---|
| (A) Bearings | (D) Controllers |
| (B) Motors | (E) Casters |
| (C) Reducers | (F) Belts (unless otherwise agreed to in writing) |

CAUTION: Any attempt to repair such items may actually void the manufacturer's warranty. Any description of this unit is only to identify it and is not a warranty that the unit fits the description. Only an official of QC INDUSTRIES may make any warranties for QC INDUSTRIES. Any warranties implied by law are limited in duration to the five (5) year term of this warranty. EXCEPT AS SET FORTH HEREIN, QC INDUSTRIES MAKES NO OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING MERCHANTABILITY FOR FITNESS OR ANY PARTICULAR PURPOSE.

Lost or Damaged Goods

Shipments should be inspected immediately upon receipt for lost or damaged goods. Any loss or damage should be noted on the carriers receipt (or bill of lading) at the time of acceptance. If items are perceived to be lost or damaged after the shipment has been accepted, it becomes more difficult to file a claim with the carrier if the receipt does not indicate such loss or damage. Do not, at any time, request the carrier to return any items or shipment to QC Industries without previous authorization from our company for such a return. Please notify QC Industries as soon as any loss or damage is discovered and request the department that handles the lost or damaged goods. You will need to know a complete description of all lost or damaged items. If replacement items are needed, a purchase order made out to QC Industries will need to be supplied. QC Industries will then contact the carrier's local agent and request that an inspection of the items be performed. This is absolutely necessary. Unless an inspection is performed, the carrier will not entertain any claim for loss or damage. After the inspection has been completed, the carrier will notify QC Industries. If the carrier takes responsibility for the claim, a credit will be issued to you for the replacement item(s), including freight charges from QC Industries, where applicable. If the carrier does not take responsibility for the claim, a representative of QC Industries will contact you.

4.03 Returns

If, for any reason, an item needs to be returned to QC Industries or an in-house order needs to be canceled or revised, the Purchaser is required to adhere to the following series of steps to ensure that the return or cancellation is handled in the proper manner.

RGA Policy/Instructions:

- (1) Promptly call QC Industries Customer Service at (513) 753-6000 and request a Returned Goods Authorization. At this time, you will be asked to answer pertinent questions relating to the returned items. We ask that you have the following information ready:
 - (A) Name of distributor (if applicable) through which item(s) were purchased.
 - (B) Name of the Customer and/or end user of the item(s).
 - (C) Any/all purchase order numbers related to the item(s) in question.
 - (D) Phone numbers and names of contacts involved in the return (if it becomes necessary that they be contacted later).
 - (E) Complete part numbers of all items involved in the return.
 - (F) Complete description as to the reason for the return and the actions that need to be taken. (If the item is to be replaced, a new purchase order number must be supplied by the Purchaser along with complete shipping and billing instructions. These replacements will be treated as separate orders by QC Industries and evaluated for possible credit only after returned items are received and evaluated.
- (2) After the call is made to QC Industries, we will process your RGA and you will be faxed the RGA number to use for returning the item(s). RGA numbers will not be given verbally over the phone.
- (3) Upon receipt of your RGA, you are required to return the item(s) within 30 days of receipt of authorization. After 30 days, the Return Authorization will be void if item(s) are not received by QC Industries. All shipping charges and freight insurance charges of returned goods will be the responsibility of the Purchaser.
- (4) The RGA number must be clearly marked on the outside of all packages. It must also be on any paperwork, packing slips, or delivery receipts. If there is no RGA number visible on the package, the package may be refused and sent back at the Purchaser's expense.
- (5) After receipt of returned goods, QC Industries will evaluate the item(s) for credit and take the appropriate action. Standard items that are returned in new, resalable condition will be credited for the amount of the purchase less 20%. Full credit will only be issued on items that are considered to be defective at the time of shipment from QC Industries and are evaluated to be under warranty. Please allow 30 days for credits to be issued.

Order Cancellation / Revision Policy

If it becomes necessary to cancel or revise an order prior to the order being shipped, QC Industries reserves the right to evaluate each order that is to be canceled or revised and determine if any charges are applicable. A 20% restocking charge will apply if an order is assembled and ready to ship prior to its cancellation or revision and the order is totally comprised of standard stock items. If the order contains other than stock items, an evaluation will be made based on the status of the order. Additional charges will be included with the 20% restocking charge if any of the following conditions are met:

- (A) The order contains any items that are considered to be non-stock items and these items have already been produced by QC Industries or one of its suppliers.
- (B) The order contains any items that require special handling or assembly and these processes have been completed.
- (C) The Customer has specified that they will pick-up an order from QC Industries' facility by a predetermined time and that time frame has expired. In this case, QC Industries will make an attempt to notify the Customer. If this cannot be accomplished in a reasonable time, the order will be disassembled and the Customer will be charged a restocking fee and any additional charges based on the orders contents as explained herein.

Notes

For future reference, record the date, part number and serial number for each conveyor in your order.

Date	Part Number	Serial Number

Additional Conveyor Products from QC Industries



125 Series Belt Conveyors

- Available in four styles:
 - Automation
 - Corrosion Resistant
 - Cleated
 - Magnetic
- Less than 5-minute belt change
- Widths up to 24", lengths up to 25'



Flextrac Plastic Chain

- Low 3.03" profile
- High speeds – up to 375 fpm – and heavy loads – up to 500 lbs.
- More than 100 belt type and material combinations
- Partial belt changes reduce maintenance costs



300 Series Indexing

- Precision indexing tolerance of .015"
- Self-tracking V-Guide
- Custom cleats and profiles
- High speeds up to 2000 feet per minute
- Available in washdown and metric versions



InnerDrive Conveyors

- Save space by moving the motor inside the conveyor frame
- Safe, efficient 24vdc motor
- Low profile design
- Variable speed control card easily integrates with "run-on-demand" applications

For more information, visit our website – www.qcindustries.com – or contact a member of our knowledgeable sales staff at (513) 753-6000