7400 Ultimate Series Curved Nose Bar Conveyors

Installation, Maintenance and Parts Manual

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851-671 Rev. D

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Introduction

⚠ CAUTION

Some illustrations may show guards removed. DO NOT operate equipment without guards.

Upon receipt of shipment:

- Compare shipment with packing slip. Contact factory regarding discrepancies.
- Inspect packages for shipping damage. Contact carrier regarding damage.Accessories may be shipped loose.
- See accessory instructions for installation.

The Dorner Limited Warranty applies.

Dorner 7400 series conveyors are covered by Patent Numbers 7,246,697, 7,207,435, 7,549,531 B2, 7,681,719 B2, 7,383,944, 8,042,682 B2 and corresponding patents and patent applications in other countries.

NOTE

Proper conveyor application, cleaning, and sanitation are the responsibility of the end user.

Dorner reserves the right to make changes at any time without notice or obligation.

Dorner has convenient, pre-configured kits of Key Service Parts for all conveyor products. These time saving kits are easy to order, designed for fast installation, and guarantee you will have what you need when you need it. Key Parts and Kits are marked in the Service Parts section of this manual with the Performance Parts Kits logo .

Intralox is a registered trademark of Laitram L.L.C. in the United States and / or other countries.

⚠ DANGER

SEVERE HAZARD!

KEEP OFF CONVEYORS. Climbing, sitting, walking or riding on conveyor will result in death or serious injury.

⚠ DANGER

EXPLOSION HAZARD!

- **DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT. The electric gearmotor generates heat and could ignite combustible vapors.**
- **Failure to comply will result in death or serious injury.**

⚠ WARNING

CRUSH HAZARD!

- **DO NOT place hands or fingers inside the conveyor while it is running.**
- **DO NOT wear loose garments while operating the conveyor. Loose garments can become caught up in the conveyor.**
- **Failure to comply could result in serious injury.**

⚠ WARNING

CRUSH HAZARD!

- **SUPPORT CONVEYOR SECTIONS PRIOR TO LOOSENING STAND HEIGHT OR ANGLE ADJUSTMENT SCREWS.**
- **Loosening stand height or angle adjustment screws may cause conveyor sections to drop down, causing serious injury.**

⚠ WARNING

SEVERE HAZARD!

LOCK OUT POWER before removing guards or performing maintenance. Exposed moving parts can cause serious injury.

⚠ WARNING

BURN HAZARD!

DO NOT TOUCH the motor while operating, or shortly after being turned off. Motors may be HOT and can cause serious burn injuries.

⚠ WARNING

PUNCTURE HAZARD!

Handle drive shaft keyway with care. It may be sharp and could puncture the skin, causing serious injury.

⚠ WARNING

SEVERE HAZARD!

- **Dorner cannot control the physical installation and 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 other mechanical hazards before system start-up.**
- **Failure to comply could result in serious injury.**

Product Description

Refer to **(Figure 1)** for typical conveyor components.

Typical Components	
1	Conveyor
2	Gearmotor
3	Belt
4	Return
5	Support Stands
6	Motor Controller
7	Drive End
8	Tension End

Figure 1

Specifications

Conveyor Width Reference (WW)	08 – 36 in 02 increments
Maximum Conveyor Load	20 lb / ft^2 (97 kg / m^2) with a maximum of 1000 lb / ft^2 (4882 kg / m^2)
Belt Travel	12" (305 mm) per revolution of pulley
Belt Take-up	2" (51 mm)
Conveyor Length Reference (LLL)	020 – 999 in 001 increments
Conveyor Length	20" (508 mm) – 999" (25.4 m) in 1" (25 mm) increments

IMPORTANT

Maximum conveyor loads are based on:

- *Non-accumulating product*
- *Product moving toward gearmotor*
- *Conveyor being mounted horizontally*
- *Conveyor being located in a dry environment*
- *Conveyor equipped with standard belt only*

Conveyor Supports

Maximum Distances:
1 (Infeed) = 3 ft (914 mm)
2 (Outfeed) = 3 ft (914 mm)
**** Stand positions will be determined by the factory.**

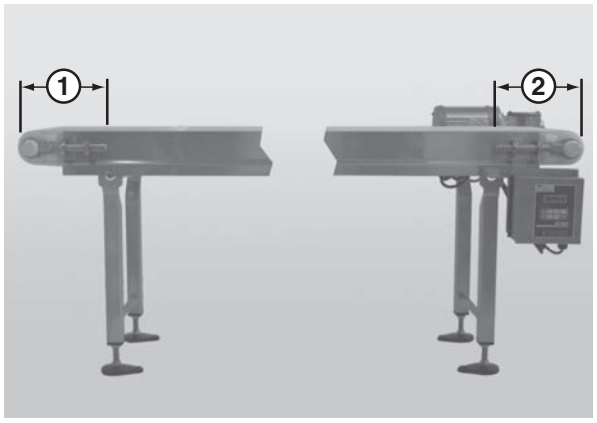
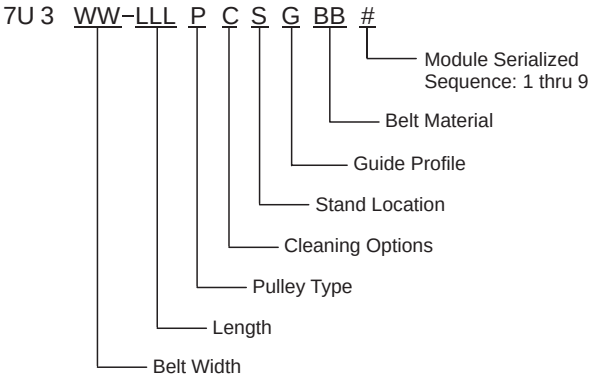


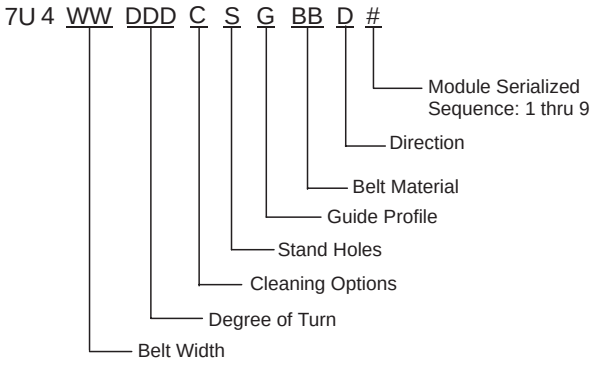
Figure 2

7400 Series Frame Section Numbers

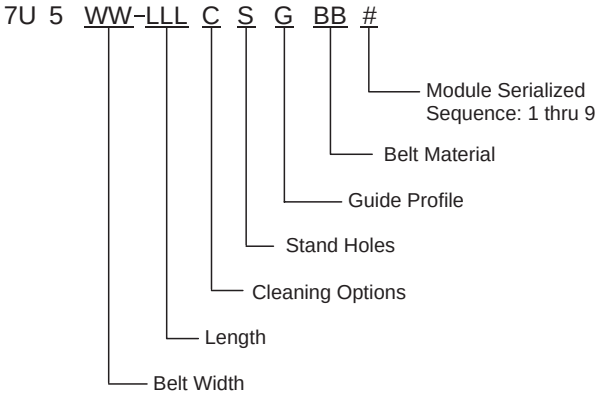
Straight Infeed / Idler Module



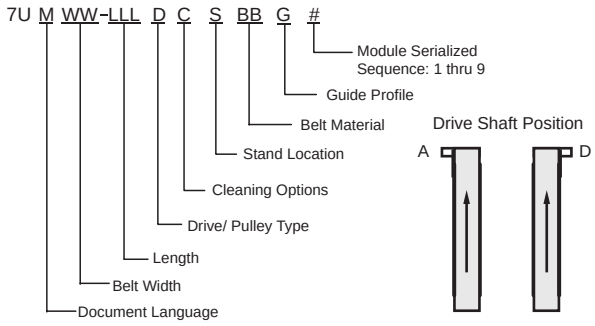
Curve Module



Straight Intermediate Module



Straight Exit / Drive Module



Installation

⚠ CAUTION

Dorner recommends cleaning all the "food zones" prior to placing conveyor into service. Ensure adequate access is provided for cleaning and servicing equipment so that the required level of hygiene can be maintained.

NOTE

Proper conveyor application, cleaning, and sanitation are the responsibility of the end user.

⚠ CAUTION

Conveyor MUST be mounted straight, flat, and level within confines of conveyor. Use a level (Figure 3, item 1), during setup.

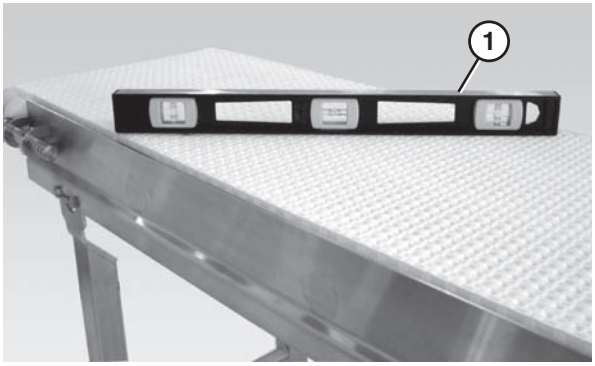


Figure 3

Required Tools

- 17 mm wrench (for hexagonal head fasteners)
- 4 mm hex wrench (for bearing shaft assembly fasteners)
- Level
- Torque wrench

Recommended Installation Sequence

1. Connect the frame sections together. "Frame Section Connection" on page 6.
2. Attach the stands to the conveyor. Refer to "Stand Installation" on page 7.
3. Attach the tail assemblies to the frame. Refer to "Tail Assembly Installation" on page 8.
4. Attach the lifters, if applicable. Refer to "Lifter Installation" on page 10.
5. Install the gearmotor, if applicable. Refer to the "7400 Series Drive Package Installation, Maintenance and Parts Manual."
6. Attach the wear strips. Refer to "Wear Strip Installation" on page 11.
7. Attach the belt returns. Refer to "Belt Return Installation – Straight Frame Sections" on page 14.
8. Install the belt. Refer to "Belt Installation" on page 13.
9. Attach any guides / accessories. Refer to the "Service Parts" section starting on page 26.

Conveyor Installation

Frame Section Connection

Typical Connection Components **(Figure 4)**

1	Conveyor frame section
2	Curved conveyor frame section
3	Hex post connector (x2)
4	Flat connector (x2)*
5	M10 - 1.5 x 12 mm hex head cap screw (x4)*
6	M10 - 1.5 x 16 mm hex head cap screw (x4)
7	O-ring (x8)

* For connections not supported by stands.

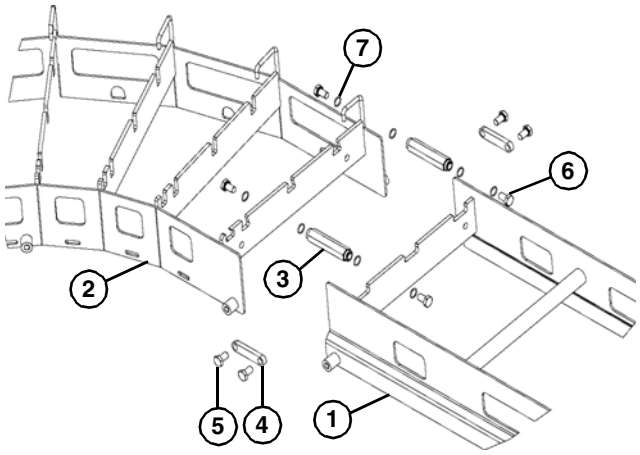


Figure 4

1. Locate and arrange conveyor sections by section labels **(Figure 5, item 1)**.

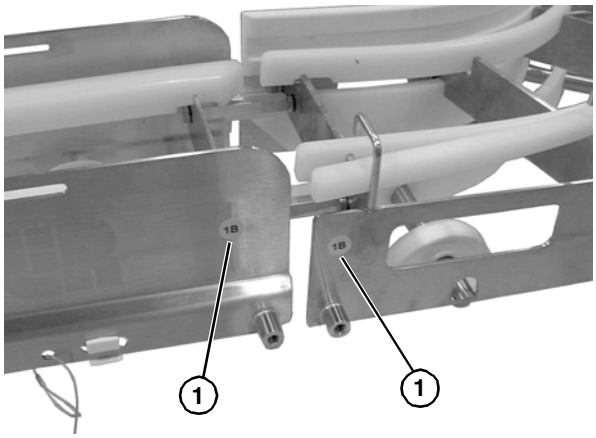


Figure 5

2. Position the frame sections in the correct order **(Figure 6)**.

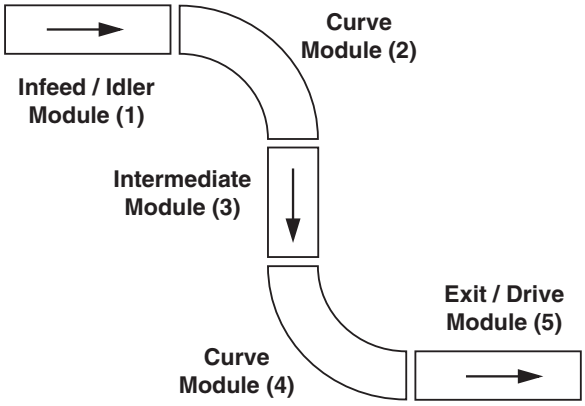


Figure 6

3. Connect the frame sections by bolting the hex post connectors **(Figure 4, item 3)** with O-rings **(Figure 4, item 7)** to the cross member supports of each frame section.
4. Attach the flat connectors **(Figure 4, item 4)**, if applicable, to the inside of the frame sections.

Stand Installation

Typical Stand Components **(Figure 7)**.

1	Conveyor frame
2	Stand
3	M10 - 1.5 x 16 mm hex head cap screws (x4)

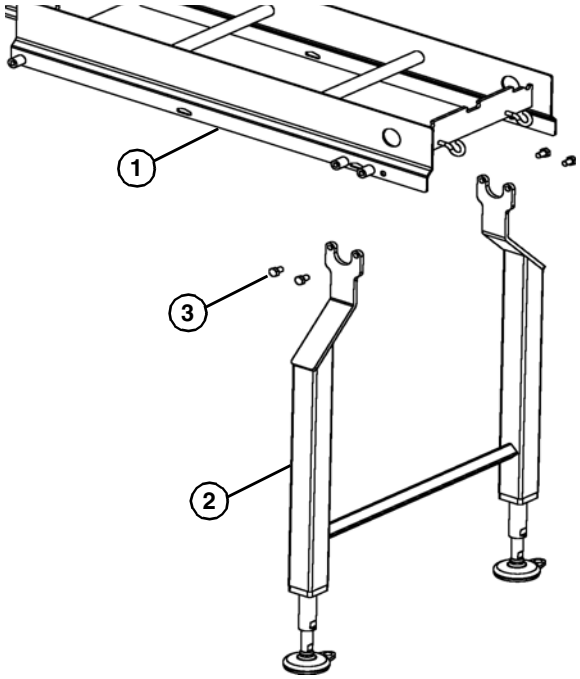


Figure 7

1. Position the stands on a flat, level surface.
2. Attach the stands to the frame **(Figure 8)**.

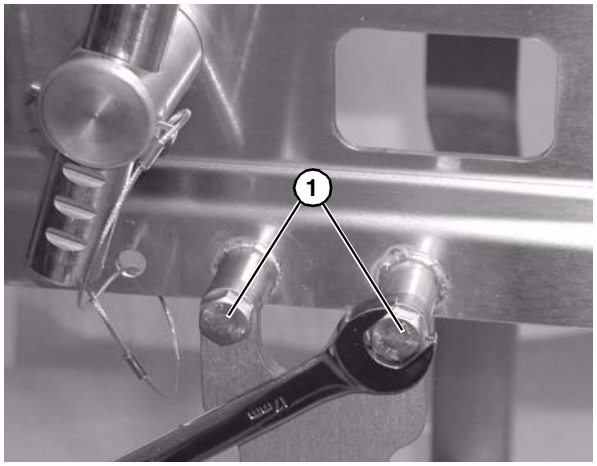


Figure 8

3. Tighten hex screws **(Figure 8, item 1)**.

Installation

Tail Assembly Installation

Nose Bar Drive Tail

Typical Nose Bar Drive Tail Components **(Figure 9)**.

1	Nose bar drive tail assembly
2	Conveyor frame

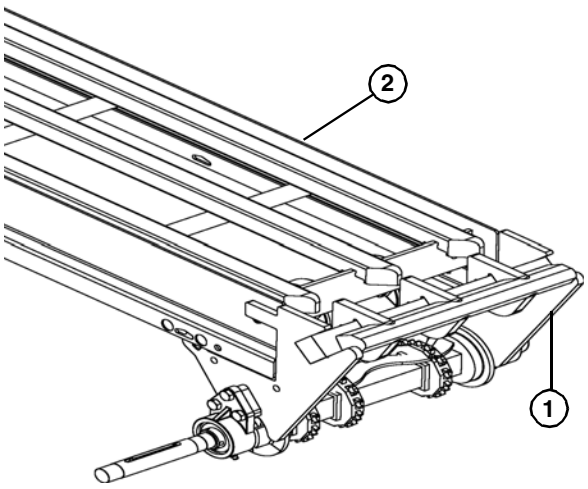


Figure 9

1. Install the drive package, if applicable. Refer to the "7400 Series Drive Package Installation, Maintenance and Parts Manual."

Tip Up Assembly

Typical Tip Up Assembly Components **(Figure 10)**

1	Hex Bar
2	Stop Key (x2)
3	Tip Up Sleeve (x2)

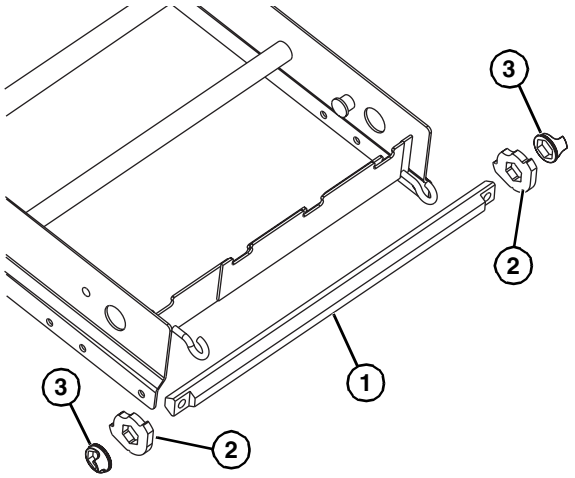


Figure 10

1. Slide stop keys **(Figure 11, item 1)** and tip up sleeves **(Figure 11, item 2)** onto hex shaft **(Figure 11, item 3)**. The tabs on the tip up sleeves face outward and align with the slotted ends of the hex shaft as shown.

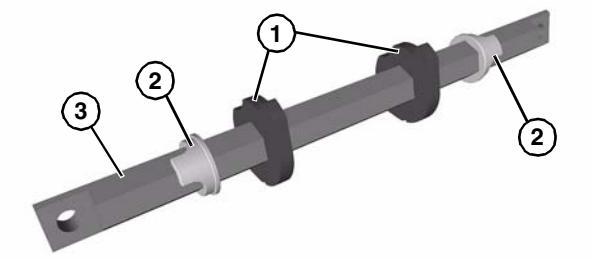


Figure 11

2. Place hex shaft assembly **(Figure 12, item 1)** through the conveyor frame tip up holes **(Figure 12, item 2)** and center with conveyor.

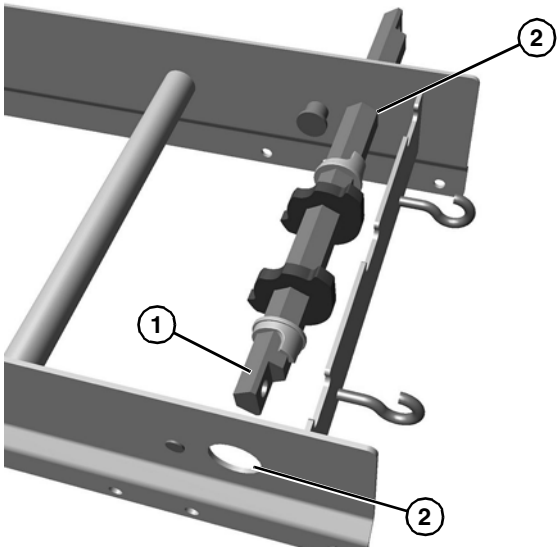


Figure 12

3. Hex shaft assembly will need to be rotated **(Figure 13)** for stop keys **(Figure 13, item 1)** to pass by the frame stops **(Figure 13, item 2)**.

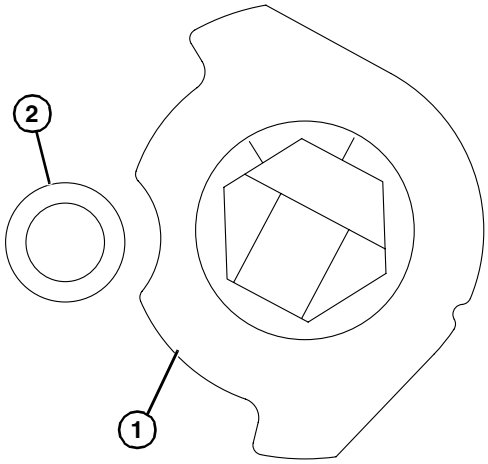


Figure 13

4. Slide the tip up sleeves **(Figure 14, item 1)** and stop keys **(Figure 14, item 1)** outward on hex shaft assembly **(Figure 14, item 3)** until the sleeves seat in the holes of the frame and stop keys are seated against frame stops **(Figure 14, item 4)**.

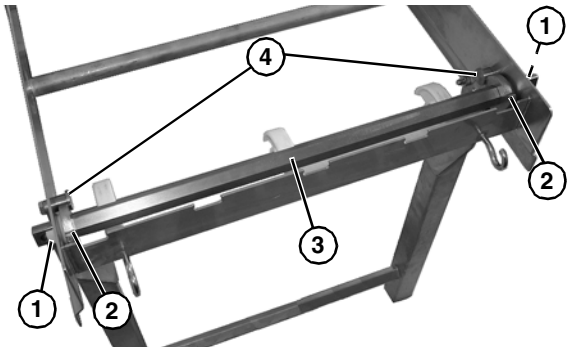


Figure 14

Idler Tail

Typical Idler Tail Components **(Figure 15)**.

1	Tip up tail assembly
2	Pull pin (x2)
3	Conveyor frame

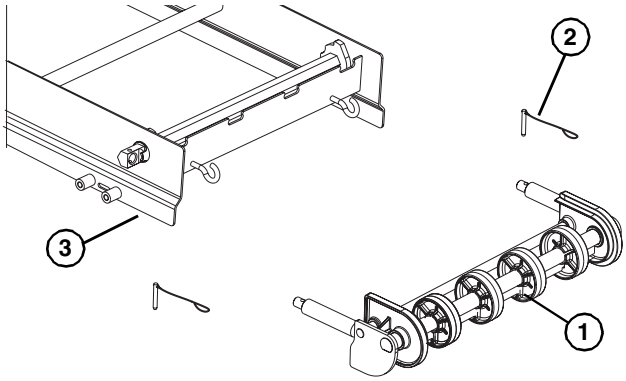


Figure 15

⚠ CAUTION

To avoid injury and damage to parts, have an assistant hold opposite end of idler tail when removing or installing it.

1. Place the idler tail assembly **(Figure 16, item 1)** against the holes in the tip up hex shaft assembly **(Figure 16, item 2)** and secure with a pull pin **(Figure 16, item 3)** on each side.

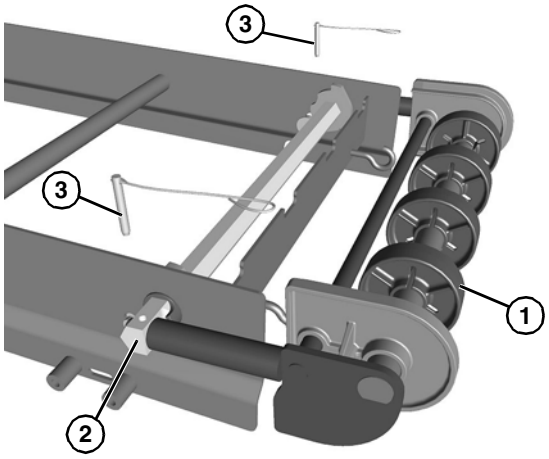


Figure 16

Nose Bar Idler Tail

Typical Nose Bar Tip Up Tail Components **(Figure 17)**.

1	Tip up tail assembly
2	Pull pin (x2)
3	Conveyor frame

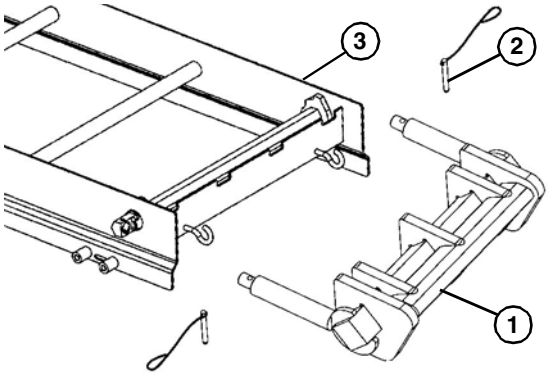


Figure 17

2. Attach nose bar idler shaft hands **(Figure 18, item 1)** to the tip up shaft **(Figure 18, item 2)** with a pull pin **(Figure 18, item 3)**.

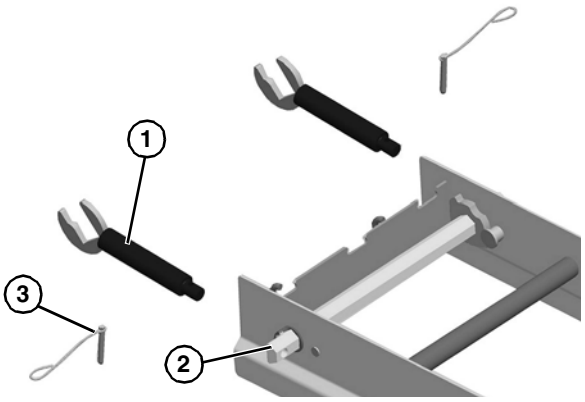


Figure 18

3. Attach the nose bar transfer post **(Figure 19, item 1)** to the nose bar idler shaft hands **(Figure 19, item 2)**.

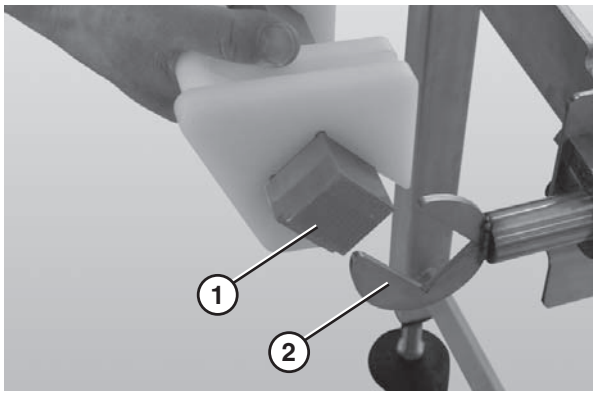


Figure 19

4. Ensure that the nose bar pucks **(Figure 20, item 1)** are in line with the conveyor frame **(Figure 20, item 2)**.

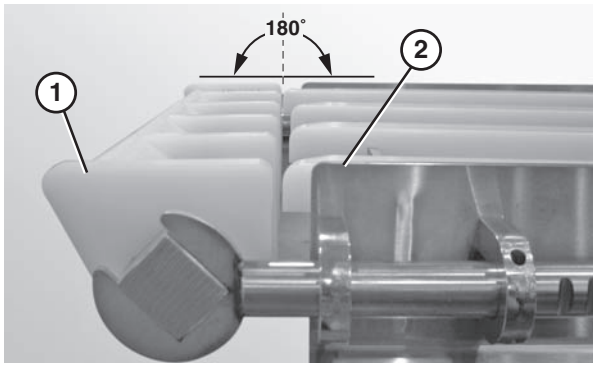


Figure 20

Lifter Installation

Typical Lifter Components **(Figure 21)**

1	Belt lift pivot bar
2	Lifter bars
3	Belt lift handle
4	M8 - 1.25 x 16 mm hex head cap screw

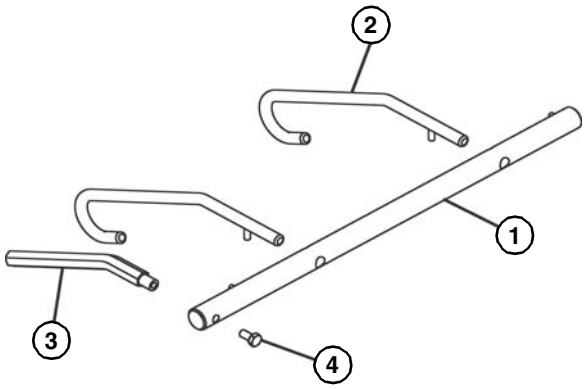


Figure 21

1. Slide the belt lift pivot bar **(Figure 22, item 1)** through the designated holes in the frame.

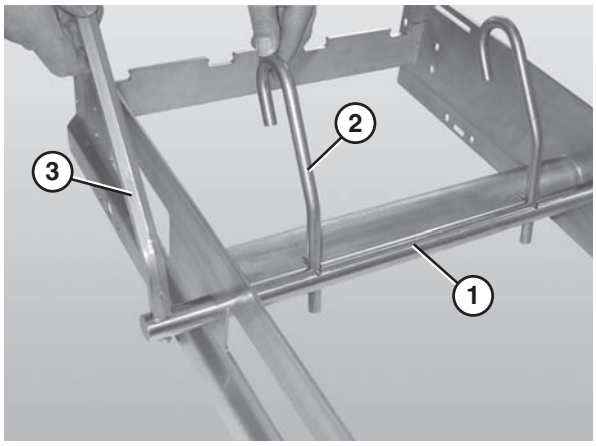


Figure 22

2. Attach the lifter bars **(Figure 22, item 2)** to the belt lift pivot bar **(Figure 22, item 1)**. Make sure the hooked ends of the lifter bars are facing down when resting against the frame.
3. Attach the lifter handle **(Figure 22, item 3)** to the belt lift pivot rod.

Wear Strip Installation

Straight Frame Sections

Typical Wear Strip Components **(Figure 23)**

1	Wear strip

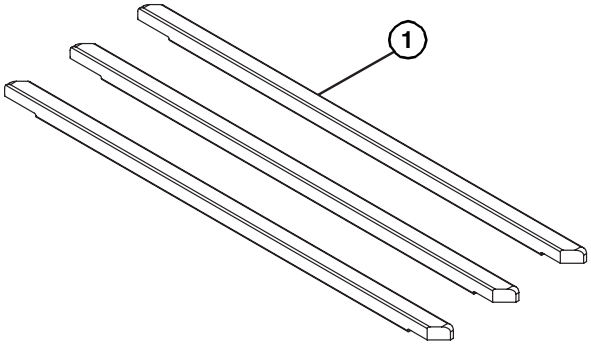


Figure 23

1. Position the wear strips **(Figure 24, item 1)** on the frame.

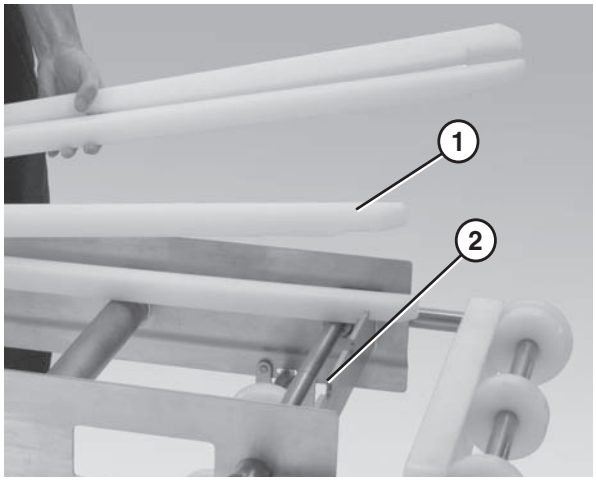


Figure 24

2. Make sure the wear strips are situated securely in the frame slots **(Figure 24, item 2)**.

Curved Frame Sections

Typical Curved Wear Strip Components **(Figure 25)**

1	Hold down wear strip
2	Wear strip
3	Inside curve top wear strip

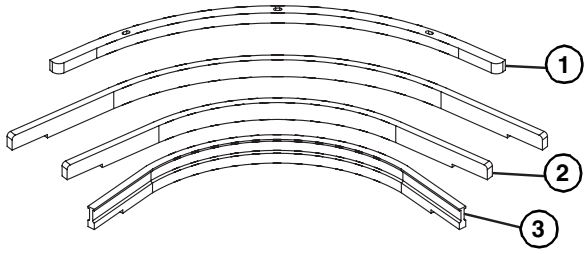


Figure 25

1. Insert the inside curve top wear strip **(Figure 26, item 1)** into the innermost slot **(Figure 26, item 2)** on the inside of the frame.

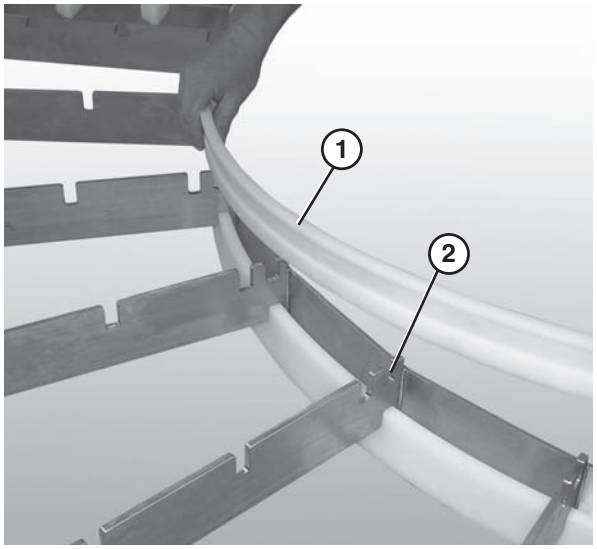


Figure 26

2. Attach the hold down wear strip **(Figure 27, item 1)** to the frame hooks **(Figure 27, item 2)** on the outside of the frame.

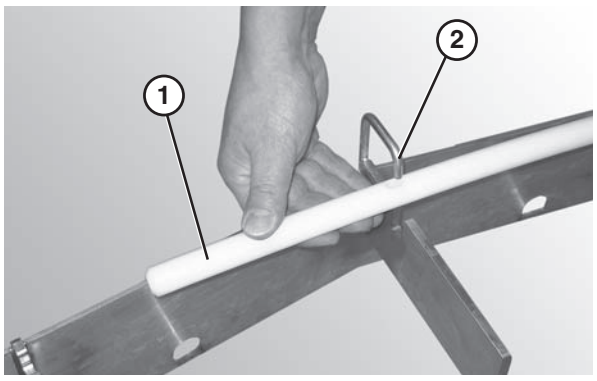


Figure 27

3. Insert the wear strips **(Figure 28, item 1)** into the appropriate slots in the frame **(Figure 28, item 2)**, starting with the shortest wear strip on the inside of the curved section and working outward to the longest.

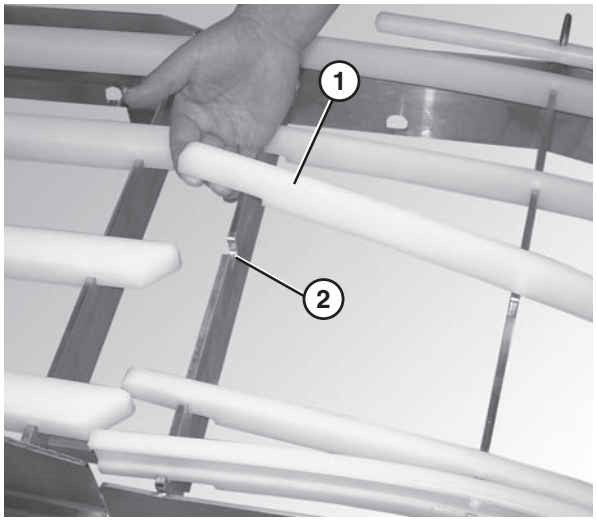


Figure 28

Belt Return Installation – Curved Frame Sections

Typical Curved Belt Return Components **(Figure 29)**

1	Return bottom wear strip
2	Curve return shaft
3	Chain return shoe
4	Inside return bottom wear strip

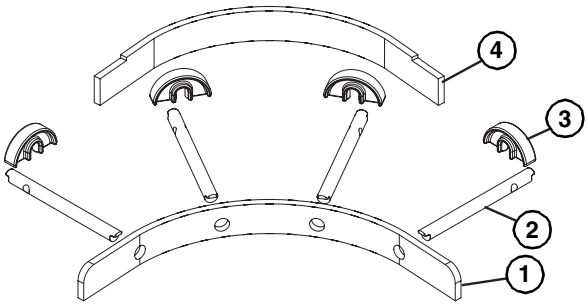


Figure 29

1. Insert the inside return bottom wear strip **(Figure 30, item 1)** into the slots **(Figure 30, item 2)** on the lower inside section of the frame (figure shown without the belt or wear strips).

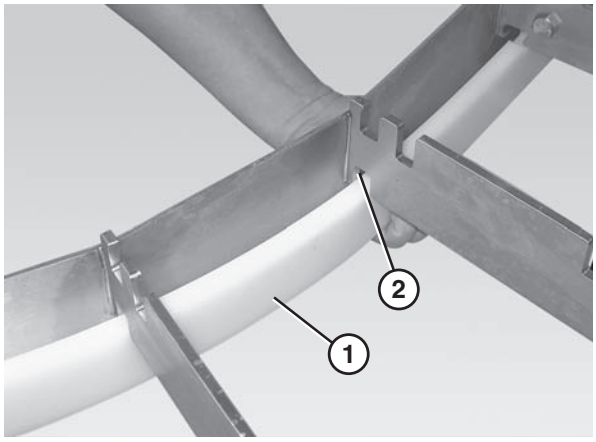


Figure 30

2. Attach the chain return shoes **(Figure 30, item 1)** to the curve return shafts **(Figure 30, item 2)**.
3. Slide the long end of the curve return shaft **(Figure 31, item 1)** through the center hole in the return bottom wear strip **(Figure 31, item 2)**.

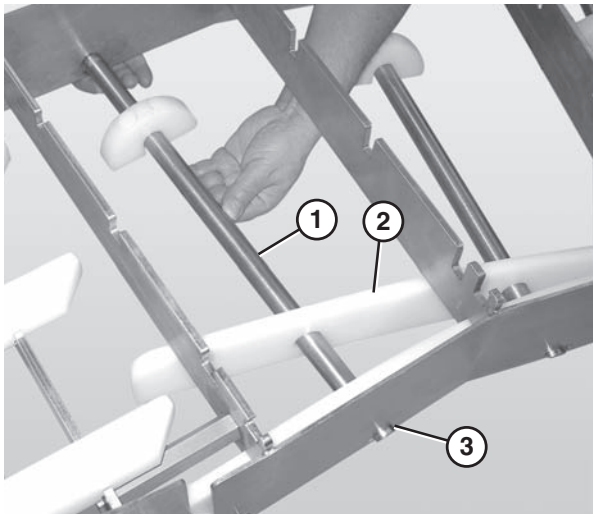


Figure 31

4. Slide the return shaft up and through the large slot in the frame. Make sure the holes in the return bottom wear strip match up with the holes in the conveyor frame.
5. Push up on the return shaft and slide the notched end of the shaft through the small slot on the opposite side of the frame **(Figure 31, item 3)**.
6. Repeat steps 4 – 5 with the remaining returns.

Belt Installation

Typical Belt Components **(Figure 32)**

1	Chain belt
2	Belt rod

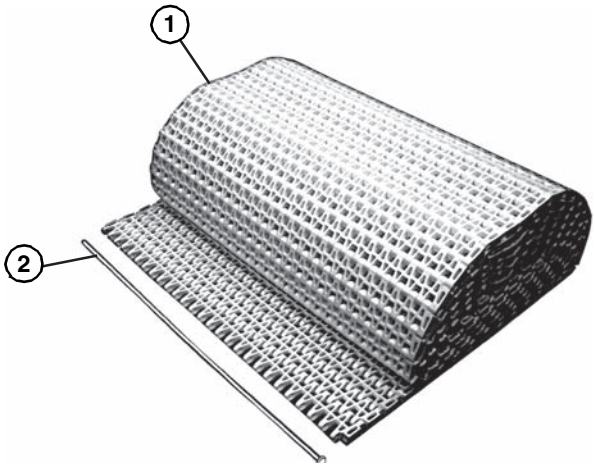


Figure 32

1. Position the belt on the conveyor frame **(Figure 33)**.

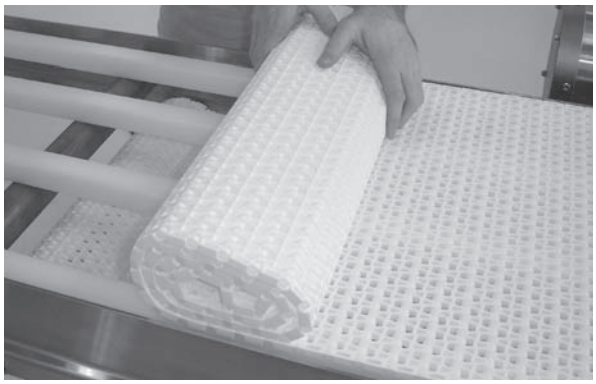


Figure 33

2. Orient the belt direction such that the pin heads **(Figure 34, item 1)** are on the outside of the belt radius **(Figure 34, item 2)**. The straight portion on the pin **(Figure 34, item 3)** will be on the inside radius.

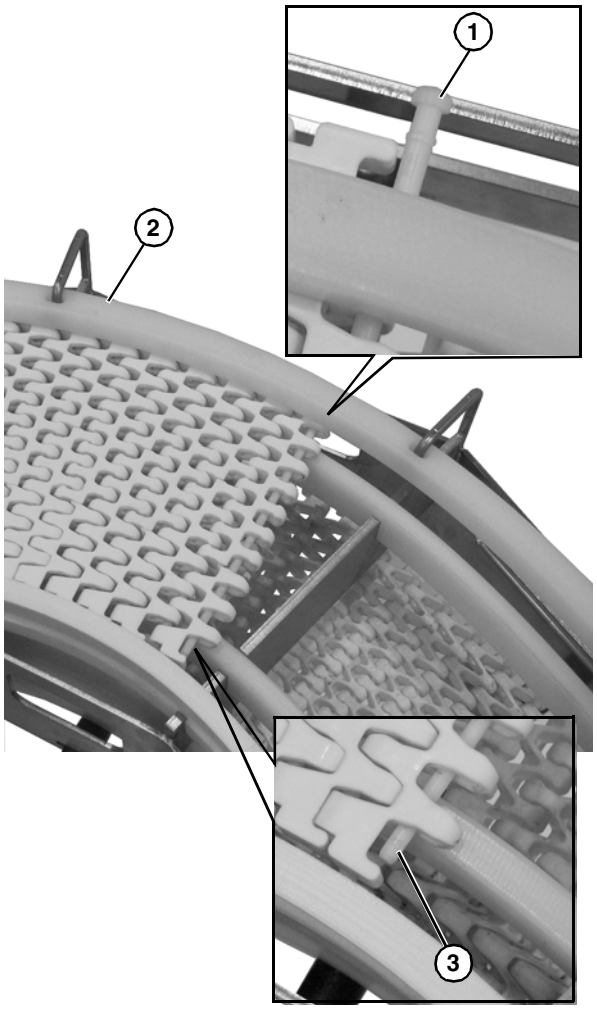


Figure 34

NOTE

For "S" shaped conveyors, the pin heads must be oriented on the outside of the belt radius on the exiting or last curve on the conveyor.

3. Wrap the belt around the conveyor, making sure the sprocket teeth have engaged the belt.
4. Bring the ends of the belt together **(Figure 35)**.

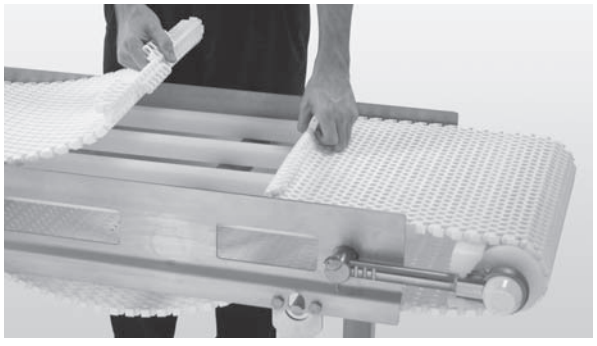


Figure 35

5. Insert the belt rod **(Figure 36, item 1)**.

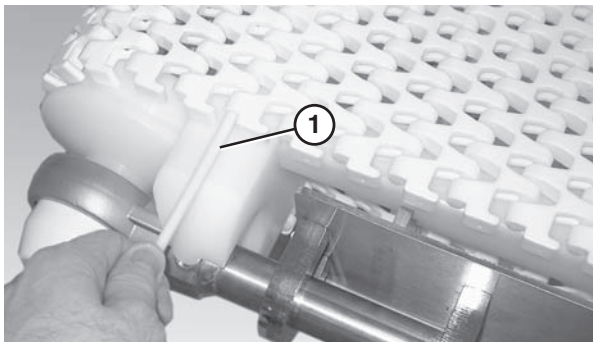


Figure 36

6. Push the belt rod in as far as possible.
7. Lightly tap the head of the rod with a hammer until it snaps into position.
8. Check belt sag by measuring from the top of the return **(Figure 37)**.

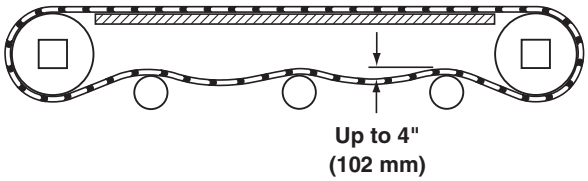


Figure 37

⚠ CAUTION

Belt sag should not exceed 4" (102 mm) from the top of the returns.

Belt Return Installation – Straight Frame Sections

Typical Belt Return Components **(Figure 38)**

1	Return shaft
2	Chain return shoe

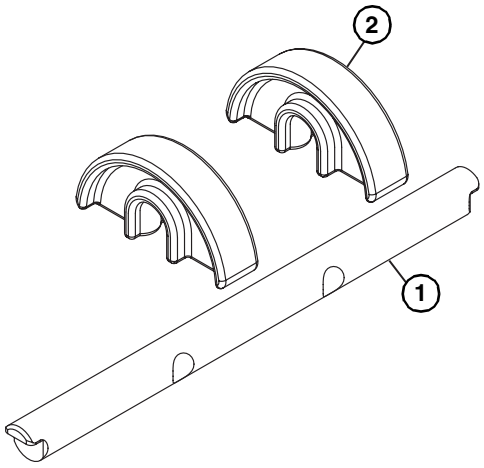


Figure 38

1. Attach the chain return shoes **(Figure 39, item 1)** to the return shaft **(Figure 39, item 2)**.

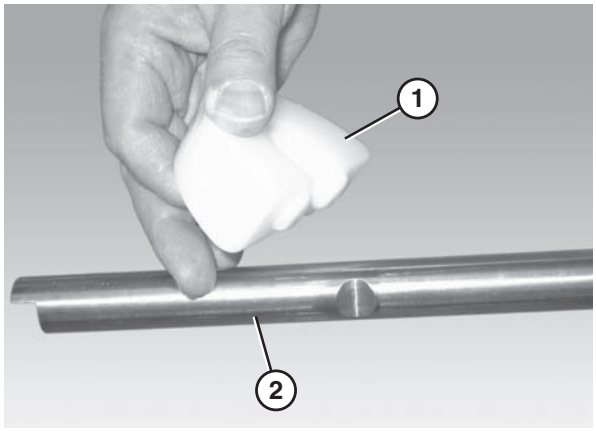


Figure 39

2. Slide the return shaft **(Figure 40, item 1)** up and through the large slot **(Figure 40, item 2)** in the frame (picture shown without the belt or wear strips).

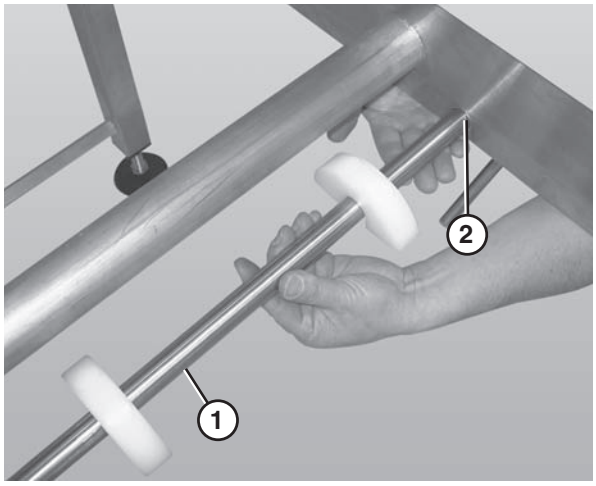


Figure 40

3. Push up on the return shaft **(Figure 40, item 1)** and slide the notched end of the shaft through the small slot on the opposite side of the frame.
4. Check belt sag by measuring from the top of the return **(Figure 41)**. Belt sag should not exceed 4" (102 mm). Follow steps 7 – 9 in the "Belt Installation" section on page 13 to remove slack from the belt.

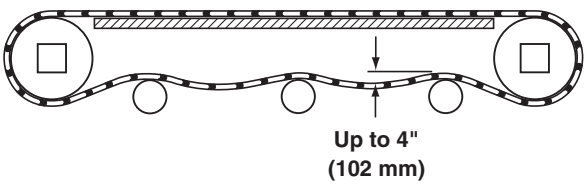


Figure 41

Required Tools

- 17 mm wrench (or adjustable wrench)
- 1/8" hex wrench (for bearing shaft assembly fasteners)
- 3 mm hex wrench
- Punch and hammer (to remove belt rod)

Checklist

- Keep service parts on hand. Refer to the "Service Parts" section starting on page 26 for recommendations.
- Replace any worn or damaged parts.

Cleaning

NOTE

Proper conveyor application, cleaning, and sanitation are the responsibility of the end user.

⚠ CAUTION

Dorner recommends cleaning all the "food zones" prior to placing conveyor into service. Ensure adequate access is provided for cleaning and servicing equipment so that the required level of hygiene can be maintained.

Routine Cleaning

⚠ WARNING

SEVERE HAZARD!

LOCK OUT POWER before removing guards or performing maintenance. Exposed moving parts can cause serious injury.

Dorner recommends cleaning the inside and the outside of the conveyor on a daily basis. Refer to the following steps to access the inside of the conveyor.

Standard Conveyors

1. Remove the guides, if applicable, by removing the pull pins **(Figure 42, item 1)** that connect the guide **(Figure 42, item 2)** to the frame.

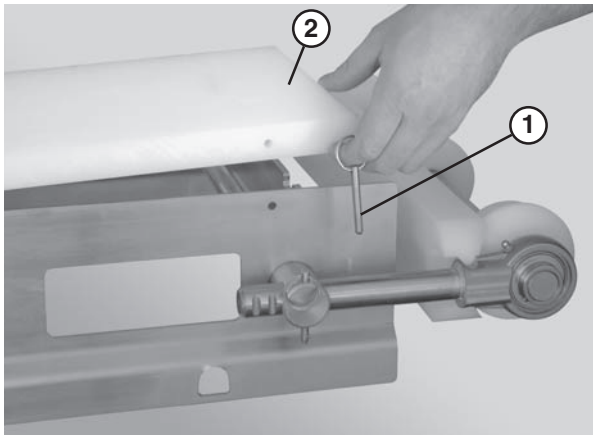


Figure 42

2. Tip up idler tail assembly **(Figure 43)**.

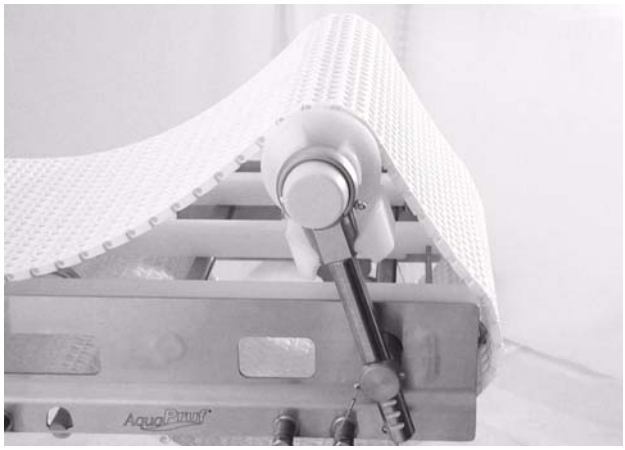


Figure 43

3. Lift up on the belt **(Figure 44)**.

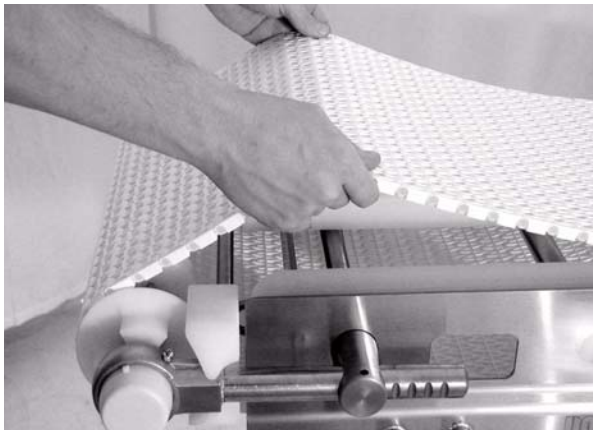


Figure 44

Conveyors with Tip Up Tails and Lifters

1. Remove the guides, if applicable, by removing the pull pins **(Figure 42, item 1)** that connect the guide **(Figure 42, item 2)** to the frame.
2. Use the lifter handle **(Figure 45, item 1)** to raise the lifters **(Figure 45, item 2)** and raise the tip up tail **(Figure 45, item 3)**.

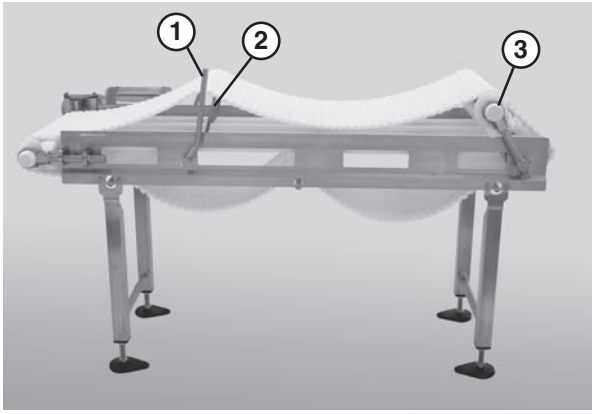


Figure 45

⚠ CAUTION

DO NOT submerge or soak bearing assemblies. This will reduce the life of the bearing.

Periodic Cleaning

Dorner recommends complete disassembly of the conveyor periodically for thorough cleaning.

For conveyor disassembly and reassembly instructions:

- Refer to “Conveyor Belt Replacement” on page 17.
- Refer to “Sprocket and Puck Removal” on page 19.
- Refer to “Reassembling Tail Assembly” on page 22.

Lubrication

Conveyor Bearings

Conveyor bearing lubrication is required. Dorner recommends using an H-1 food grade grease.

NOTE

Although bearings are sealed, re-greasing is recommended to increase bearing life. An H-1 food grade grease is recommended. The frequency of bearing re-greasing is dependent upon the application in which the conveyor is being used. Frequency of re-greasing will increase with the frequency of conveyor washing.

1. Add grease to the bearing using the zerk fitting **(Figure 46, item 1)** on the exterior of the bearing shaft assembly.

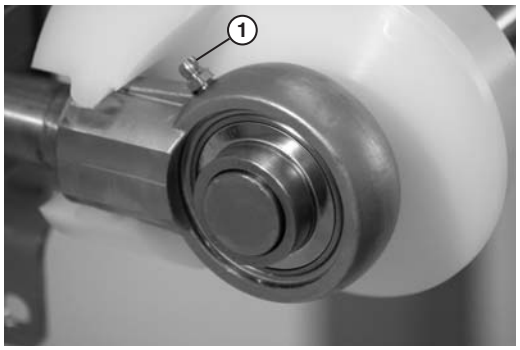


Figure 46

2. Replace the bearings if they become worn.

Wear Strips and Belt Returns

Replace the wear strips and belt returns if they become worn.

For wear strip and belt return installation instructions:

- Refer to “Wear Strip Installation” on page 11.
- Refer to “Belt Return Installation – Straight Frame Sections” on page 14.

Maintaining the Conveyor Belt

Troubleshooting

Inspect conveyor belt for:

- Surface cuts or wear
- Skipping

Damage to belt links or rods, surface cuts and / or wear indicate:

- Sharp or heavy parts impacting belt
- Jammed parts
- Accumulated dirt
- Foreign material inside the conveyor
- Improperly positioned accessories

Skipping indicates:

- Excessive load on belt
- Worn sprockets or impacted dirt on drive pulley

Damage to belt links or rods indicate:

- Excessive load on belt
- Dirt impacted on sprockets
- Excessive or improper side loading
- Improperly positioned accessories

Conveyor Belt Replacement

⚠ WARNING

SEVERE HAZARD!

LOCK OUT POWER before removing guards or performing maintenance. Exposed moving parts can cause serious injury.

Conveyors with Guides

1. Remove the pull pins **(Figure 47, item 1)** that connect the guide **(Figure 47, item 2)** to the frame.

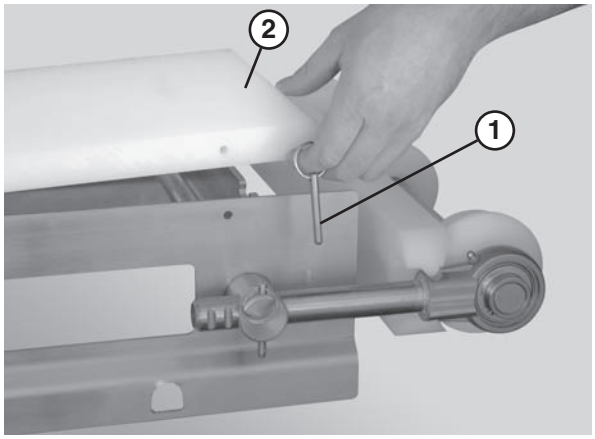


Figure 47

2. Remove the guide **(Figure 48, item 1)**.

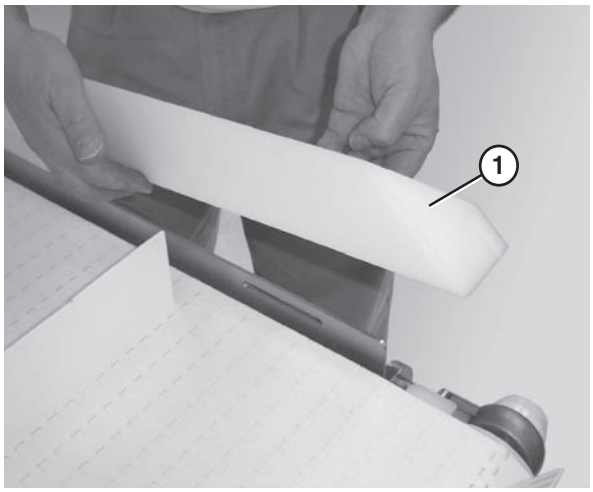


Figure 48

3. Follow the belt replacement procedures described in “Standard Belts” on page 17,or “Specialty Intralox 2400 Series Belts” on page 18.

Standard Belts

Replacing a Section of Belt

1. Tip up idler tail assembly **(Figure 49)**.

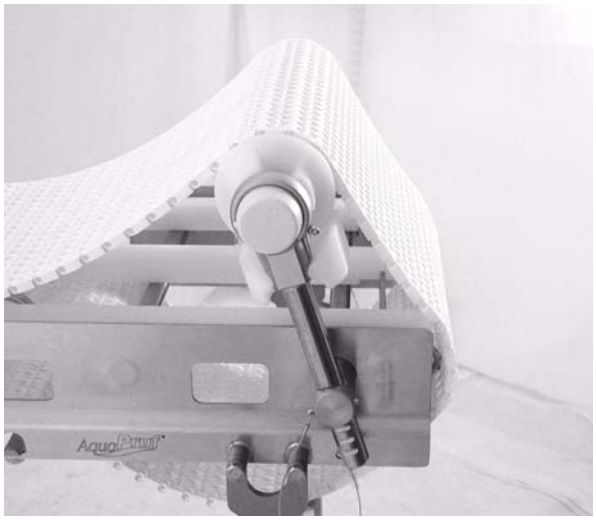


Figure 49

⚠ CAUTION

Secure the retaining head side of the belt prior to removing a belt rod in order to prevent damaging the belt.

2. Secure the retaining head side of the belt. Use the belt removal tool **(Figure 50, item 1)** for 1" pitch belts. For all other belts, position the section of belt so that it is braced by the flanged puck **(Figure 50, item 2)**.

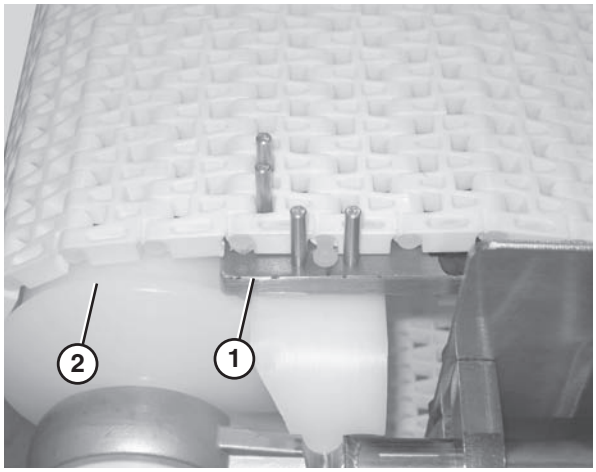


Figure 50

3. Use a punch and hammer to push the belt rod out by striking the rod end opposite the retaining head **(Figure 51)**.

Figure 51

4. Remove the belt rods on both sides of the section of belt being replaced.
5. Replace the old section with a new section of belt.

⚠ CAUTION

DO NOT reuse belt rods that are damaged or show signs of wear.

Replacing the Entire Belt

1. Remove the belt returns by pushing up on the return shaft **(Figure 52, item 1)** and sliding it through the large hole **(Figure 52, item 2)** in the frame.

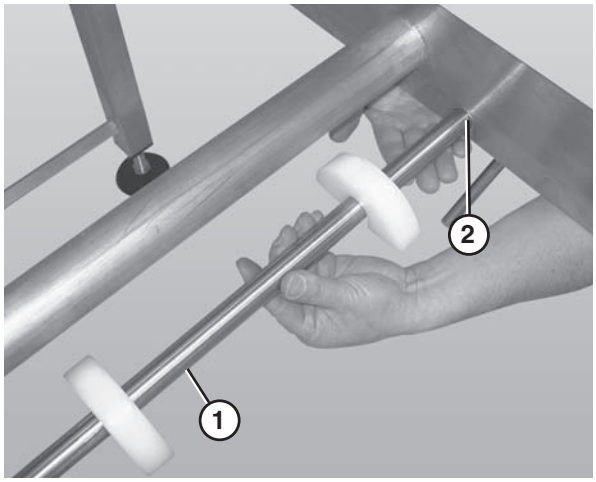


Figure 52

2. Lower the opposite end of the return shaft **(Figure 52, item 1)** and slide it out of the frame.
3. Follow steps 1 – 3 in "Standard Belts: Replacing a Section of Belt" on page 17.
4. Remove the belt.
5. Replace the damaged or worn belt. Refer to “Belt Installation” on page 13 and “Belt Return Installation” on page 14.

Specialty Intralox 2400 Series Belts

Replacing a Section of Belt

1. Tip up idler tail assembly **(Figure 53)**.

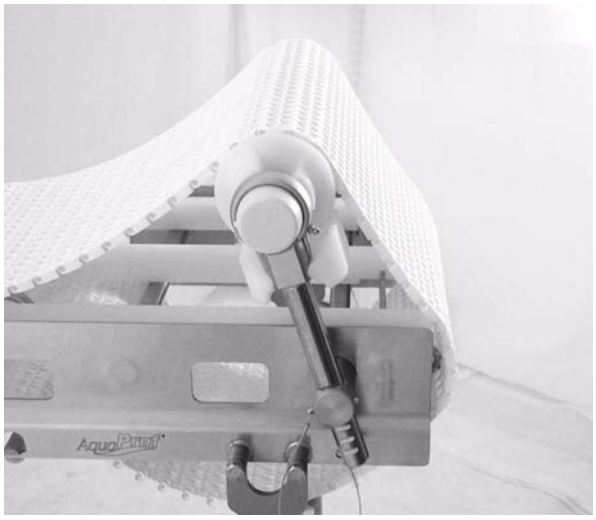


Figure 53

⚠ CAUTION

Secure the retaining head side of the belt prior to removing a belt rod in order to prevent damaging the belt.

2. Use a punch and hammer to push the belt rod out by striking the rod end opposite the retaining head **(Figure 54, item 1)**.

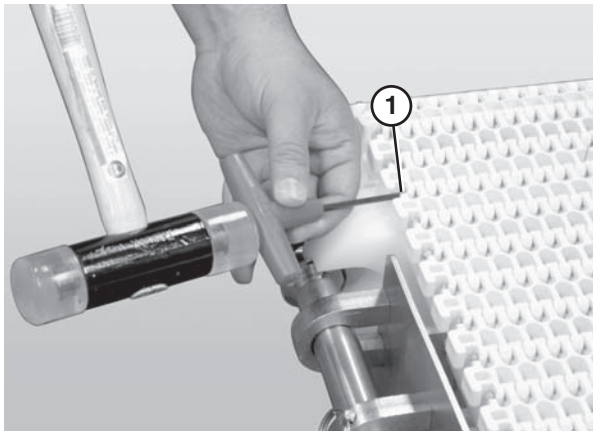


Figure 54

3. Remove the belt rods on both sides of the section of belt being replaced.
4. Replace the old section with a new section of belt.

⚠ CAUTION

DO NOT reuse belt rods that are damaged or show signs of wear.

Replacing the Entire Belt

1. Remove the belt returns by pushing up on the return shaft **(Figure 55, item 1)** and sliding it through the large hole **(Figure 55, item 2)** in the frame.

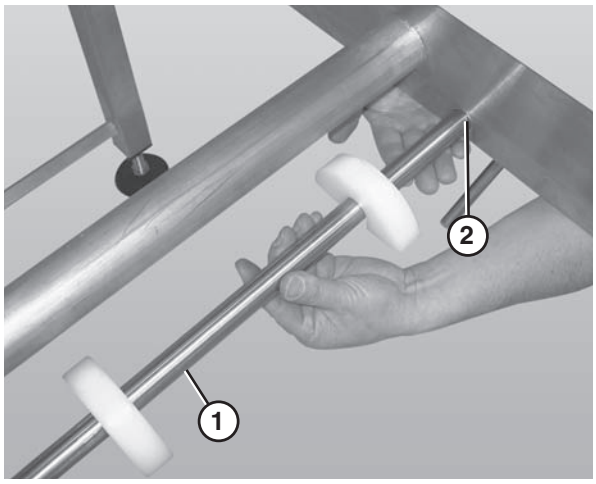


Figure 55

2. Lower the opposite end of the return shaft **(Figure 55, item 1)** and slide it out of the frame.
3. Follow steps 1 – 3 in "Specialty Intralox 2400 Series Belts: Replacing a Section of Belt" on page 17.
4. Remove the belt.
5. Replace the damaged or worn belt. Refer to “Belt Installation” on page 13 and “Belt Return Installation” on page 14.

Conveyor Belt Tensioning

⚠ WARNING

SEVERE HAZARD!

LOCK OUT POWER before removing guards or performing maintenance. Exposed moving parts can cause serious injury.

⚠ CAUTION

Belt sag should not exceed 4" (102 mm) from the top of the returns.

1. Check belt for proper sag. Refer to step 7 of “Belt Installation” on page 13.
2. If belt has excessive sag, remove one or more belt links to take up the tension. Refer to “Replacing a Section of Belt” on page 17.

Sprocket and Puck Removal

⚠ WARNING

SEVERE HAZARD!

LOCK OUT POWER before removing guards or performing maintenance. Exposed moving parts can cause serious injury.

1. Remove the conveyor belt to access the sprockets / pucks. Refer to “Conveyor Belt Replacement” starting on page 17.
2. Remove the desired sprocket / puck by following these instructions:

- A - Drive Sprocket Removal
- B - Nose Bar Puck Removal
- C - Idler Puck Removal

A - Drive Sprocket Removal

⚠ WARNING

PUNCTURE HAZARD!

Handle drive shaft keyway with care. It may be sharp and could puncture the skin, causing serious injury.

1. Loosen the fasteners **(Figure 56, item 1)** that connect the gearmotor to the drive spindle using a hex wrench **(Figure 56, item 2)**.

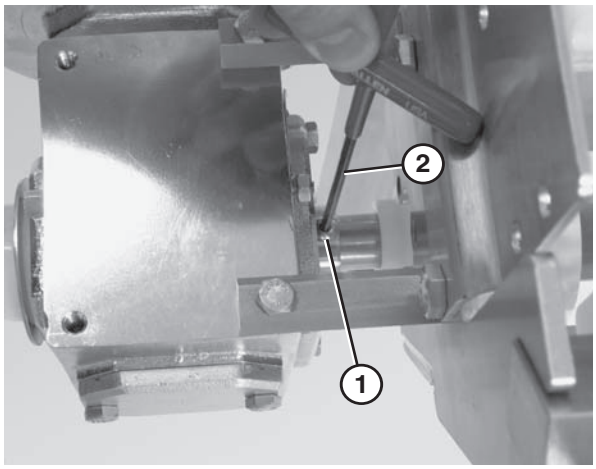


Figure 56

2. Remove the bolts that connect the motor to the drive assembly **(Figure 57)**.
3. Remove the motor **(Figure 57, item 1)** from the drive assembly **(Figure 57, item 2)**.

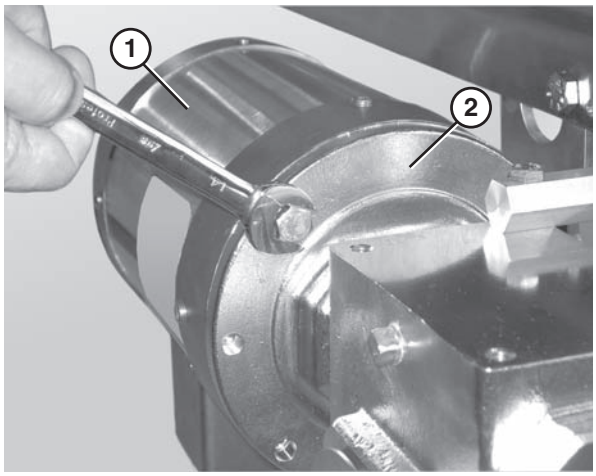


Figure 57

4. Unbolt the gear head and slide it off the drive spindle **(Figure 58)**.

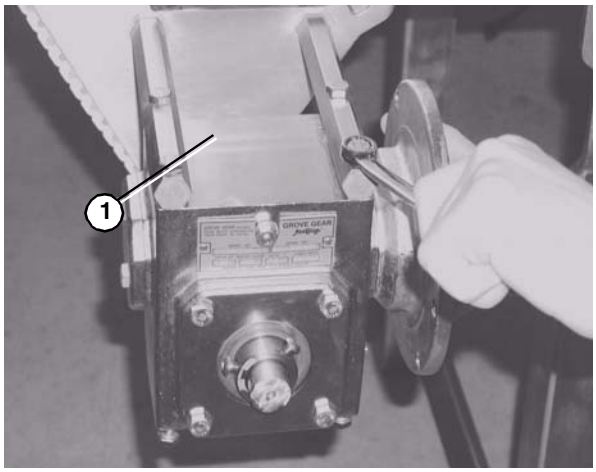


Figure 58

5. Remove the bearing cover.
6. Loosen the 3 hole flange **(Figure 59, item 1)** with bearing fasteners using a hex wrench **(Figure 59, item 2)**.

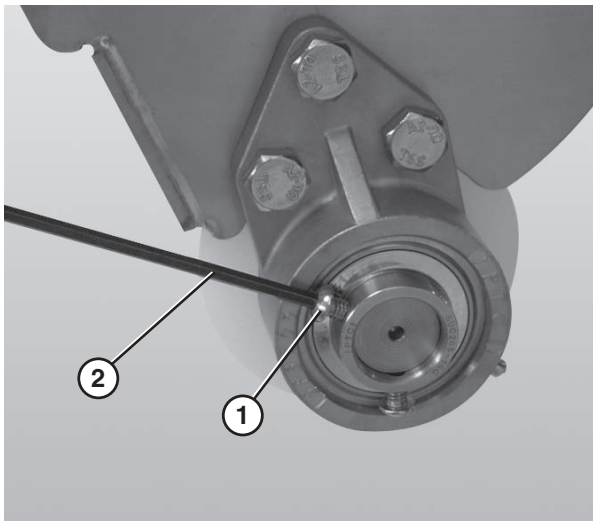


Figure 59

7. Disconnect the 3 hole flange bearing **(Figure 60, item 1)** from the nose bar drive weldment **(Figure 60, item 2)**.

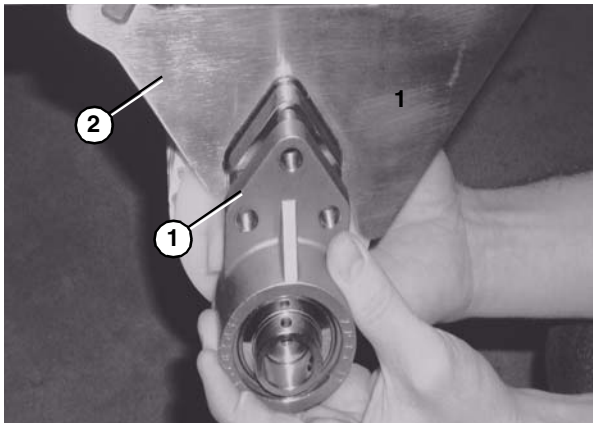


Figure 60

8. Lower the entire drive assembly.
9. Slide the 3 hole flange with bearing **(Figure 61, item 1)**, spacer **(Figure 61, item 3)**, O-Ring **(Figure 61, item 4)**, and flanged puck **(Figure 61, item 2)** off the drive spindle.

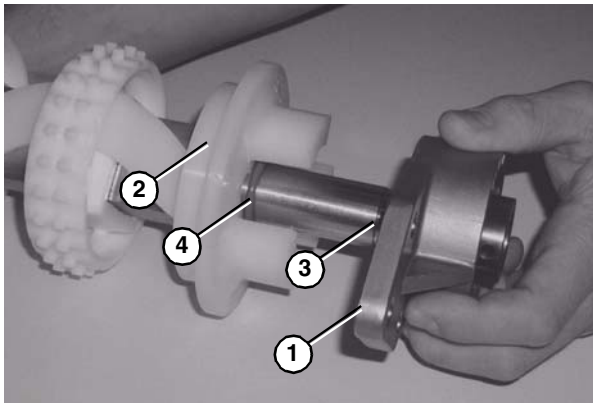


Figure 61

10. Slide the sprockets **(Figure 62, item 1)** and the sprocket alignment bar **(Figure 62, item 2)** off the drive spindle **(Figure 62, item 3)**.

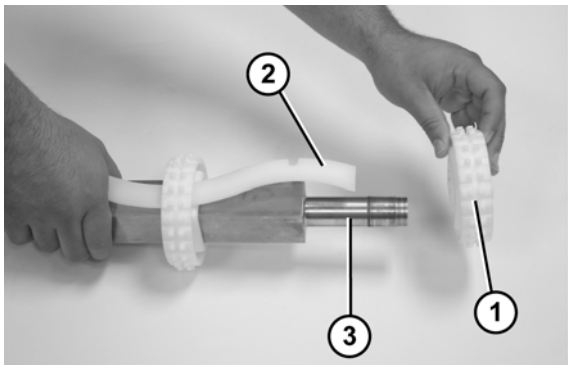


Figure 62

B - Idler Puck Removal

1. Remove the pull pins **(Figure 63, item 1)** from tip up hex shaft assembly **(Figure 63, item 2)**.

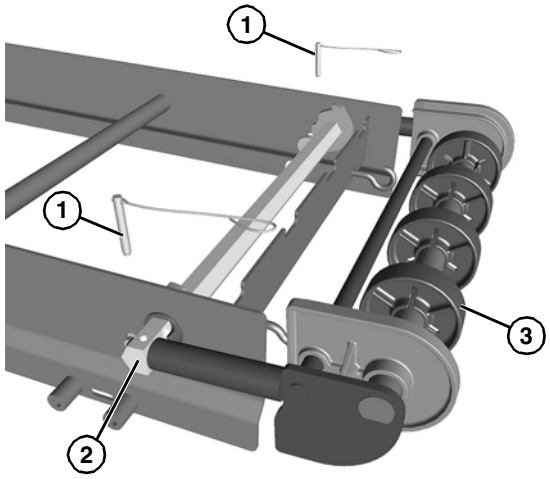


Figure 63

2. Slide the idler tail assembly **(Figure 63, item 3)** out of the tip up hex shaft assembly.
3. Remove the shaft assembly **(Figure 64, item 1)** from idler shaft **(Figure 64, item 2)** and pinch guard shaft **(Figure 64, item 3)**.

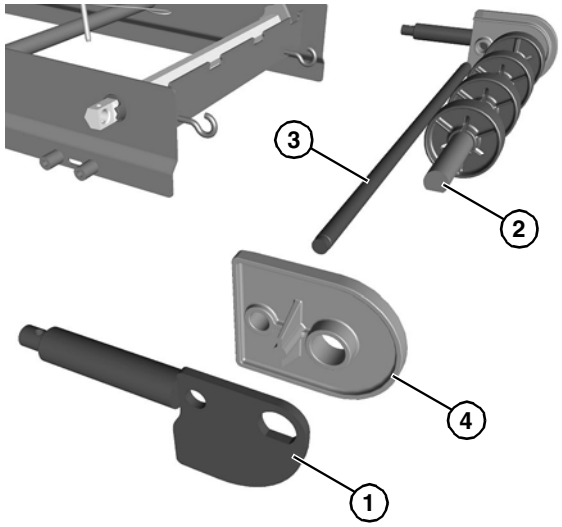


Figure 64

4. Remove tracking plate **(Figure 64, item 4)** from idler shaft and pinch guard shaft.
5. Remove pinch guard shaft **(Figure 64, item 2)**.

6. Slide the pucks **(Figure 65, item 1)** and alignment bar **(Figure 65, item 2)** off the idler shaft **(Figure 65, item 3)**.

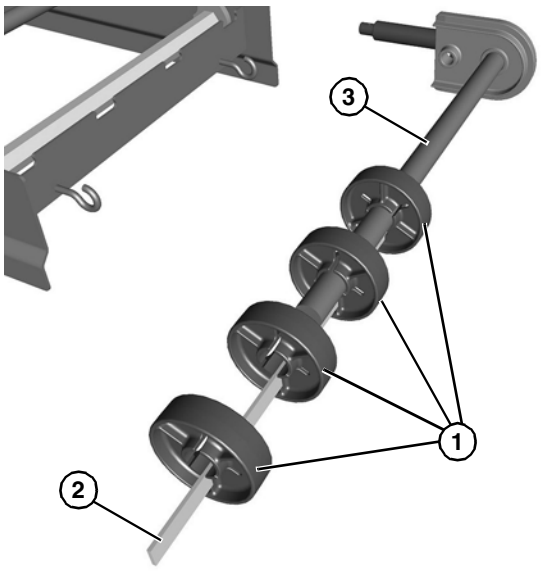


Figure 65

C - Nose Bar Puck Removal

1. Slide the nose bar drive or transfer post **(Figure 66, item 1)** out of the nose bar drive weldment or idler hands **(Figure 66, item 2)**.

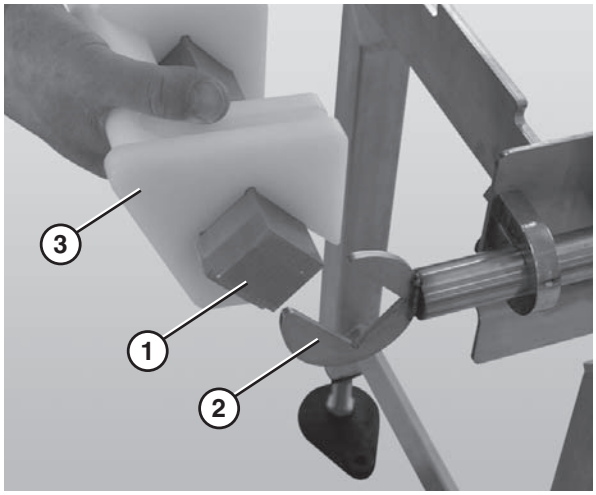


Figure 66

2. Remove the nose bar tracking pucks **(Figure 66, item 3)**, if applicable.
3. Remove the nose bar wear strip **(Figure 67, item 3)**.

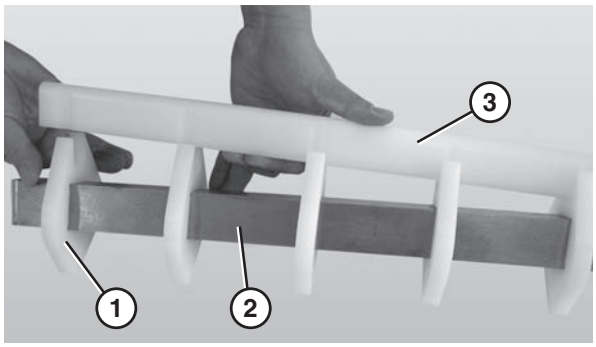


Figure 67

4. Slide the nose bar pucks **(Figure 67, item 1)** off the nose bar shaft **(Figure 67, item 2)**.

Reassembling Tail Assembly

Refer to the "Service Parts" section starting on page 26 for complete diagrams and lists of all tail assembly components.

Nose Bar Idler

1. Slide the nose bar pucks **(Figure 68, item 1)** onto the nose bar drive post **(Figure 68, item 2)**.

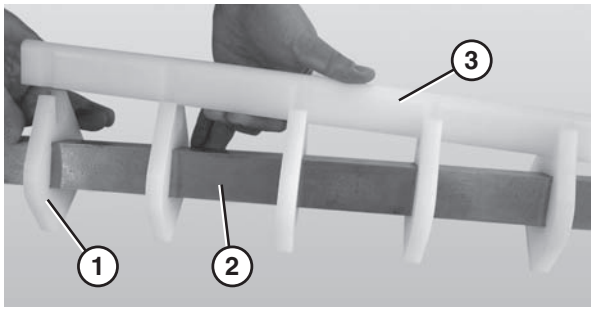


Figure 68

2. Attach the nose bar wear strip **(Figure 68, item 3)**.
3. Attach the nose bar tracking pucks **(Figure 69, item 1)** to the nose bar drive post **(Figure 69, item 2)**.

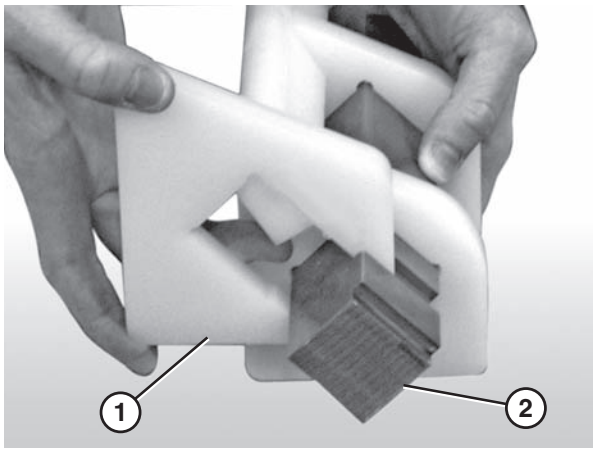


Figure 69

4. After all tracking pucks **(Figure 70, item 3)** are installed, slide the nose bar drive or transfer post **(Figure 70, item 1)** into of the nose bar drive weldment or idler hands **(Figure 70, item 2)**.

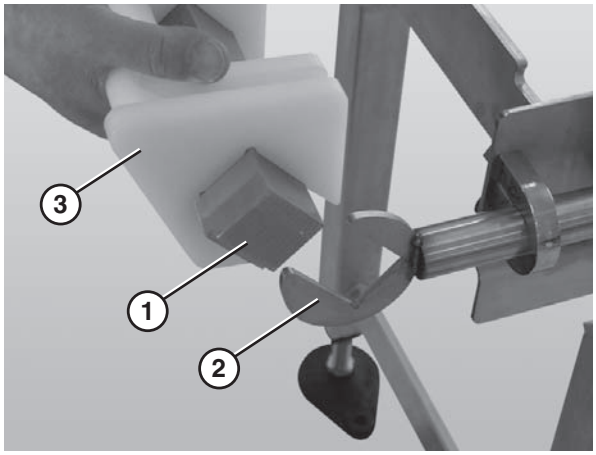


Figure 70

Idler Tail

1. Place the pucks **(Figure 71, item 1)** onto the alignment bar **(Figure 71, item 2)**, and install onto the idler shaft **(Figure 71, item 3)**.

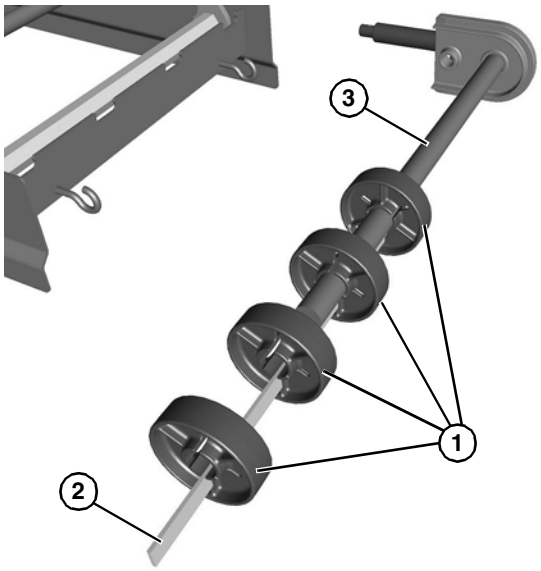


Figure 71

2. Slide all the idler pucks **(Figure 71, item 1)** along with alignment bar onto idler shaft **(Figure 71, item 3)**.

3. Install the tracking plate **(Figure 72, item 1)** to each side onto idler shaft **(Figure 72, item 2)** and pinch guard shaft **(Figure 72, item 3)**.

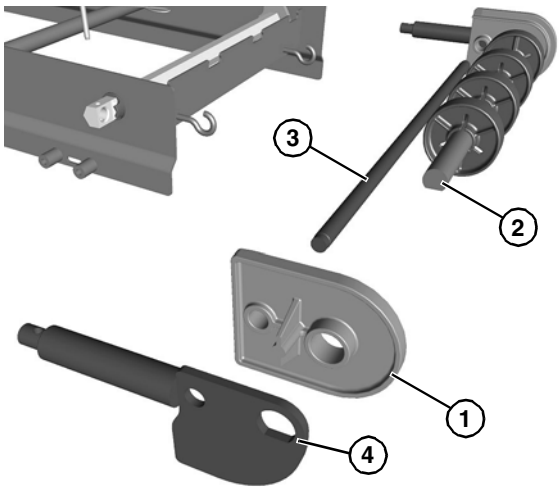


Figure 72

4. Install the shaft assembly **(Figure 72, item 4)**.

Drive Tail Assembly

1. Slide the first sprocket **(Figure 73, item 1)** onto the drive spindle **(Figure 73, item 2).**

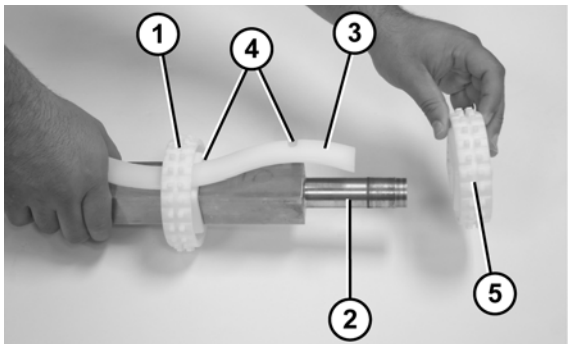


Figure 73

2. Insert the sprocket alignment bar **(Figure 73, item 3)** into the first sprocket and align the sprocket with the notch **(Figure 73, item 4)** in the sprocket alignment bar.
3. Slide the remaining sprockets **(Figure 73, item 5)** onto drive spindle and align each sprocket with the notches **(Figure 73, item 4)** in the sprocket alignment bar. Be sure that at least three sprockets **(Figure 74, item 1)** are positioned such that they are on alternate opposing locations on the alignment bar.

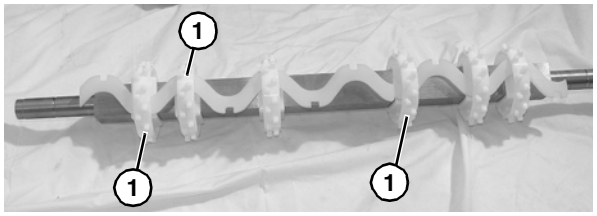


Figure 74

4. Attach O-rings **(Figure 75, item 4)**, flanged pucks **(Figure 75, item 2)**, washer **(Figure 75, item 3)** and the 3 hole flange with bearing **(Figure 75, item 1)** to the drive spindle.

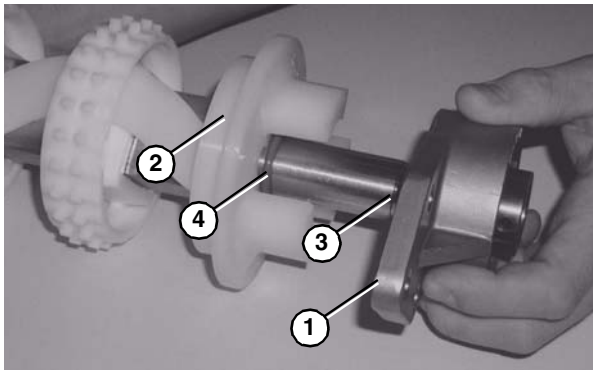


Figure 75

5. Tighten the 3 hole flange with bearing fasteners **(Figure 76, item 1)** using a hex wrench **(Figure 76, item 2)** to 54 in•lbs (6 N•m). Check after 24 hours of conveyor use.

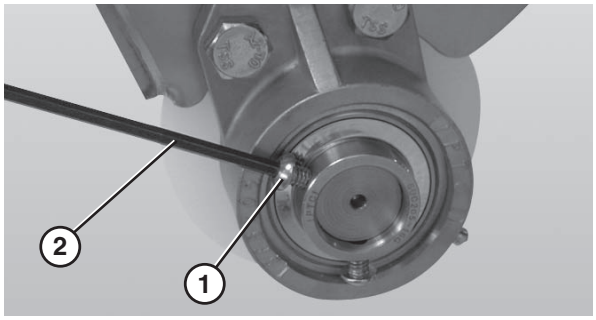


Figure 76

Bearing Replacement

1. Secure the bearing shaft in the take up blocks.
2. Insert the rod end of a second bearing shaft through the bearing **(Figure 77)**.

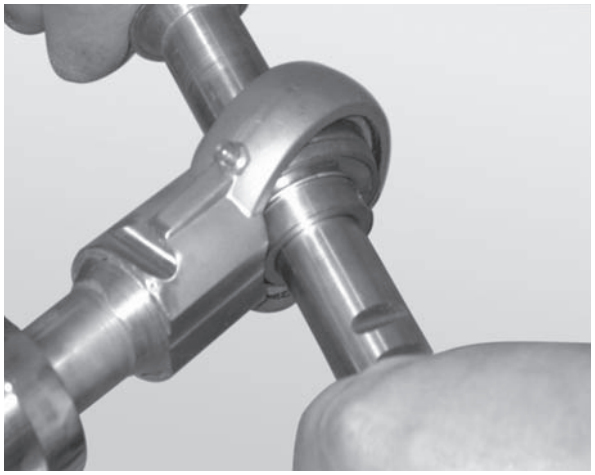


Figure 77

3. Apply lateral pressure to the rod until the bearing comes loose.
4. Remove the worn or damaged bearing **(Figure 78)**.

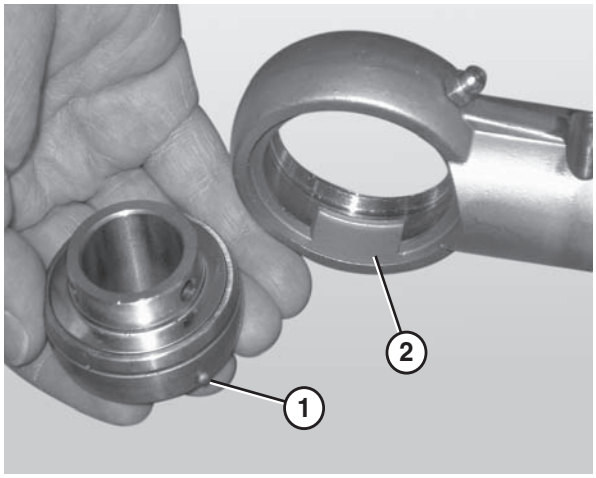


Figure 78

5. Replace the bearing.

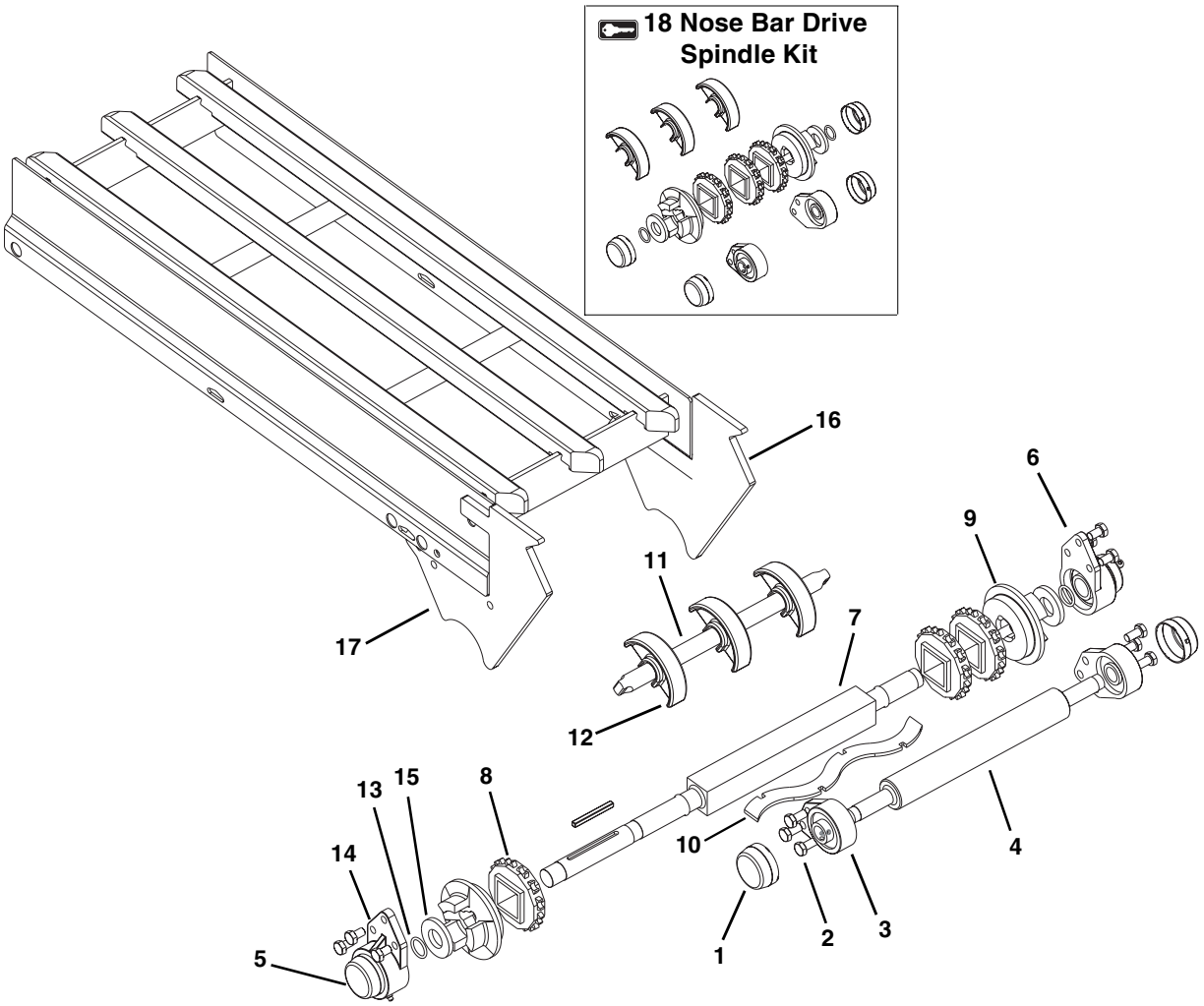
NOTE
*When inserting the new bearing, make sure the anti-rotation notch **(Figure 78, item 1)** on the bearing lines up with the groove inside the housing **(Figure 78, item 2)**.*

NOTES

Service Parts

NOTE
For replacement parts other than those shown in this section, contact an authorized Dorner Service Center or the factory. Key Service Parts and Kits are identified by the Performance Parts Kits logo . Dorner recommends keeping these parts on hand.

Nose Bar Drive End Components



Item	Part Number	Description
1	802-133	Bearing Cover
2	961016MSS	Hex Head Cap Screw M10-1.5x16mm
3	802-132	3 Hole Flange Bearing 20mm Bore
4	5181WW	Transfer Spindle
5	807-1454	Bearing Cover
6	500288	3 Hole Flange with Bearing

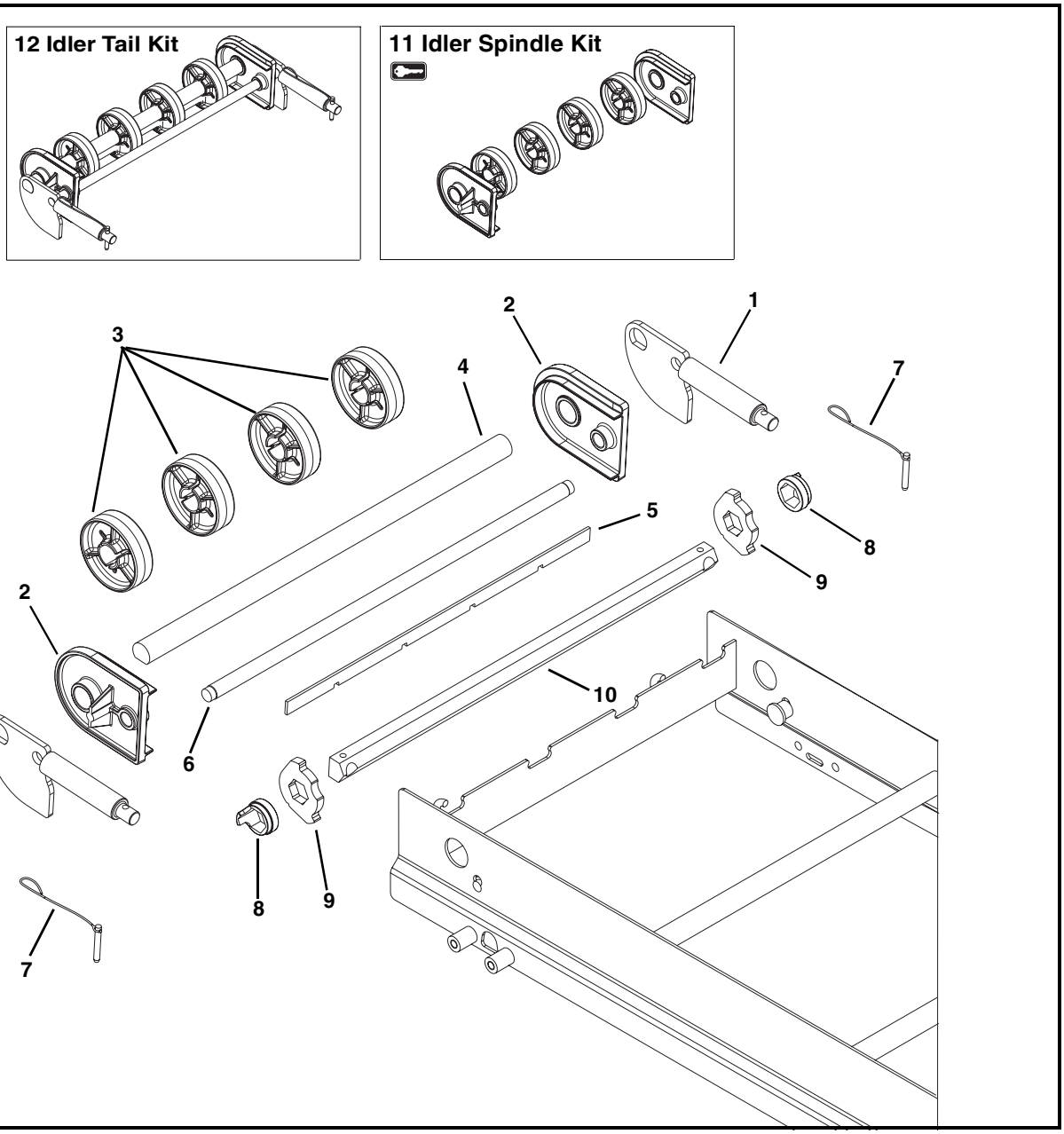
Item	Part Number	Description
7	5179WW	Drive Spindle for Standard Belt
	5180WW	Drive Spindle for Specialty Intralox Belt
	5297WW	CE Drive Spindle for Standard Belt
	5299WW	CE Drive Spindle for Specialty Intralox Belt

Item	Part Number	Description
8	807-1444	Sprocket for Standard 1.00" Pitch Belt
	807-1447	Sprocket for Specialty Intralox 1.00" Pitch Belt
9	517201	Flange Puck
10	5161WW	Sprocket Alignment Bar for Standard 1.00" Pitch Belt
	5165WW	Sprocket Alignment Bar for Specialty Intralox 1.00" Pitch Belt
11	5039WW	Return Shaft
12	500075	Chain Return Shoe
13	807-1588	O-Ring
14	802-163	Bearing
15	501381	Washer, Puck Standoff
16	501492	Nose Bar Side Plate (D Mount Position Only)
17	501394	Nose Bar Side Plate (A Mount Position Only)
18	74UNBDD25-WW	Nose Bar Drive Spindle Kit when Conveyor is ordered with a Dorner Gearmotor Mounting Package for Standard 1.00" Pitch Belt (Includes Items 1, 3, 5, 8, 9, 12, 13, and 15)
	74UNBDD24-WW	Nose Bar Drive Spindle Kit when Conveyor is ordered with a Dorner Gearmotor Mounting Package for Specialty Intralox 1.00" Pitch Belt (Includes Items 1, 3, 5, 8, 9, 12, 13, and 15)
	74UNBDC25-WW	Nose Bar Drive Spindle Kit when Conveyor is ordered without a Dorner Gearmotor Mounting Package for Standard 1.00" Pitch Belt (Includes Items 1, 3, 5, 8, 9, 12, 13, and 15)
	74UNBDC24-WW	Nose Bar Drive Spindle Kit when Conveyor is ordered without a Dorner Gearmotor Mounting Package for Specialty Intralox 1.00" Pitch Belt (Includes Items 1, 3, 5, 8, 9, 12, 13, and 15)
WW = Conveyor width ref: 08 - 36 in 02 increments		

Sprocket Quantity (Item 4)	
Width	Sprocket Quantity
8" (203mm)	2
10" (254mm)	3
12" (305mm)	3
14" (356mm)	4
16" (406mm)	4
18" (457mm)	5
20" (508mm)	5
22" (559mm)	6
24" (610mm)	6
26" (660mm)	7
28" (711mm)	7
30" (762mm)	8
32" (813mm)	8
34" (864mm)	9
36" (914mm)	9

Service Parts

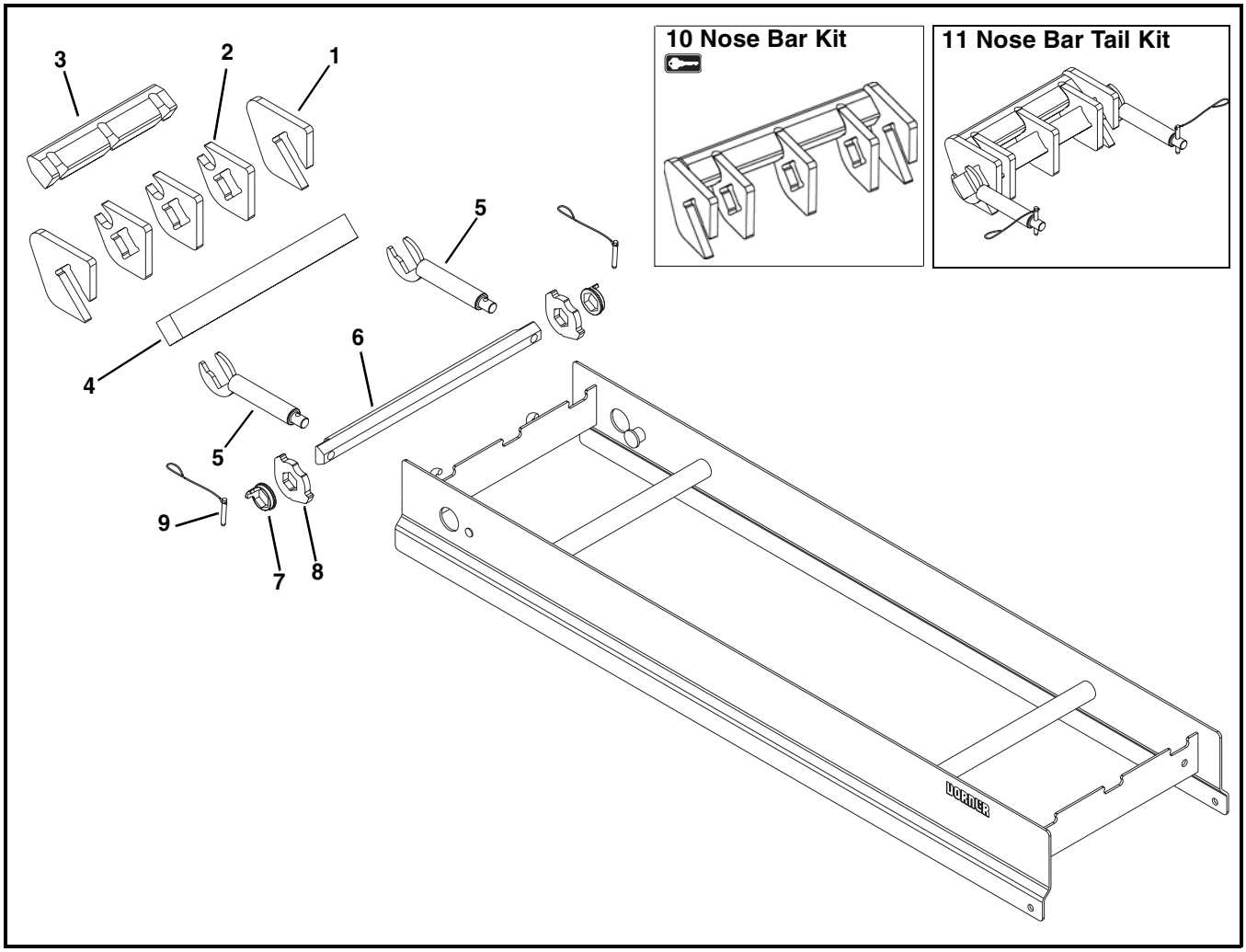
Tip Up Idler End



Item	Part Number	Description
1	506802	Idler Shaft Assembly
2	506327-WW	Tracking Plate for Standard Belt
	506332-WW	Tracking Plate for Specialty Intralox Belt
3	506297	Idler Puck
4	514374-WW	Idler Shaft
5	506313-WW	Alignment Bar for Standard Belt
	506314-WW	Alignment Bar, for Specialty Intralox Belt
6	506396-WW	Pinch Guard Shaft
7	501489	Pin Assembly

Item	Part Number	Description
8	514387	Tip Up Sleeve
9	506356	Stop Key
10	506391-WW	Hex Bar
11	74UIX-WW	Idler Spindle Kit for Standard Belt (Includes Items 2 and 3)
	74UISX-WW	Idler Spindle Kit for Specialty Intralox Belt (Includes Items 2 and 3)
12	74UITX-WW	Idler Tail Kit for Standard Belt (Includes Items 1 through 7)
	74UITSX-WW	Idler Tail Kit for Specialty Intralox Belt (Includes Items 1 through 7)
WW = Conveyor width ref: 06 - 36 in 02 increments		

Nose Bar Tip Up Idler End

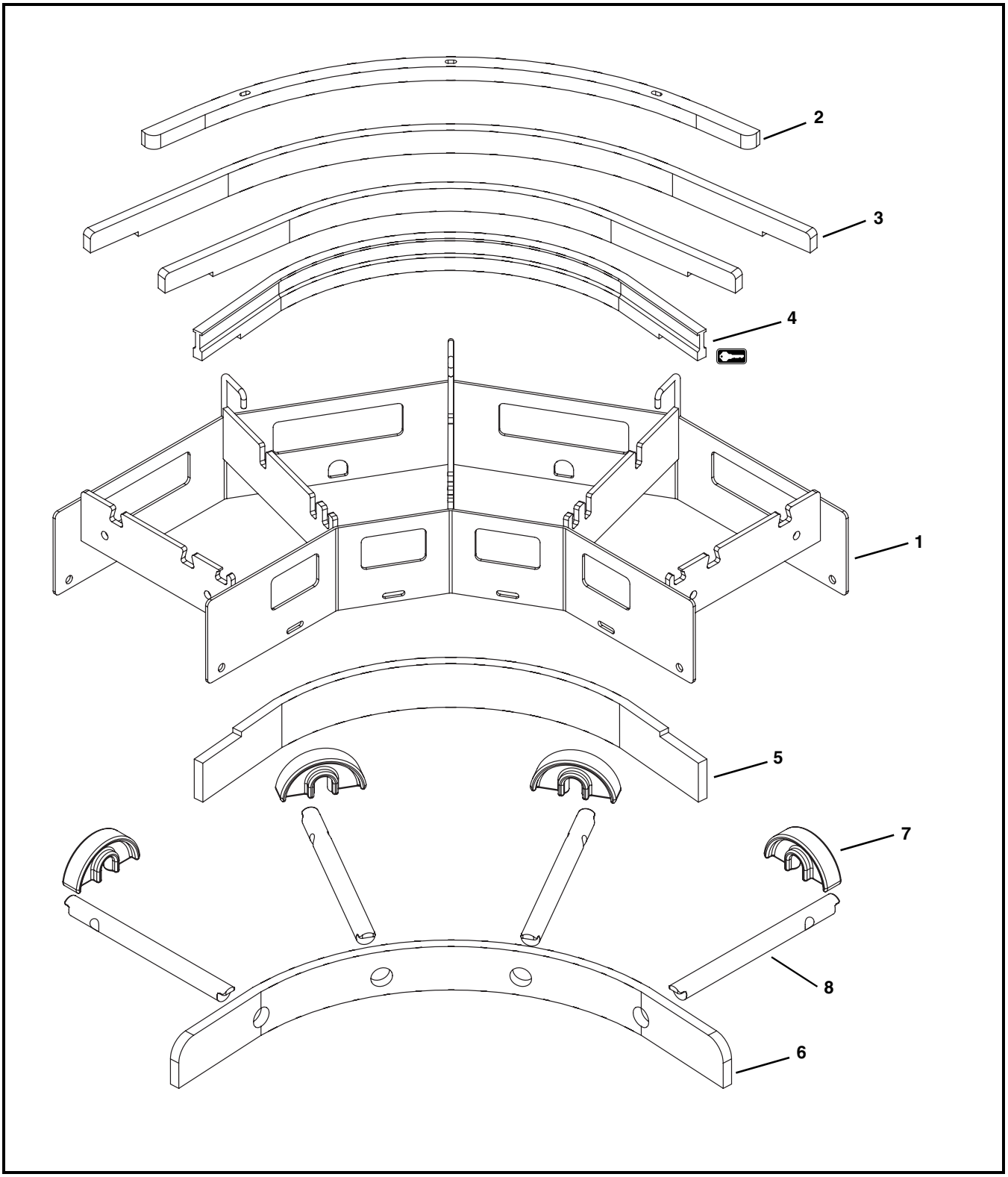


Item	Part Number	Description
1	500490	Nose Bar Tracking Puck
2	500278	Nose Bar Puck
3	5058WW	Wear Strip
4	5176WW	Nose Bar Transfer Post for Standard Belt
	5177WW	Nose Bar Transfer Post for Specialty Intralox Belt
5	509805	Nose Bar Idler Shaft
6	506391-WW	Hex Bar

Item	Part Number	Description
7	514387	Tip Up Sleeve
8	506356	Stop Key
9	501489	Pin Assembly
10	74UNB1X-WW	Nose Bar Kit (Includes Items 1 through 3)
11	74UNBT1X-WW	Nose Bar Tail Kit for Standard Belt (Includes Items 1 through 5 and 9)
	74UNBT1SX-WW	Nose Bar Tail Kit for Specialty Intralox Belt (Includes Items 1 through 5 and 9)
WW = Conveyor width ref: 06 - 36 in 02 increments		

Service Parts

Curve Conveyor Frame and Wear Strips

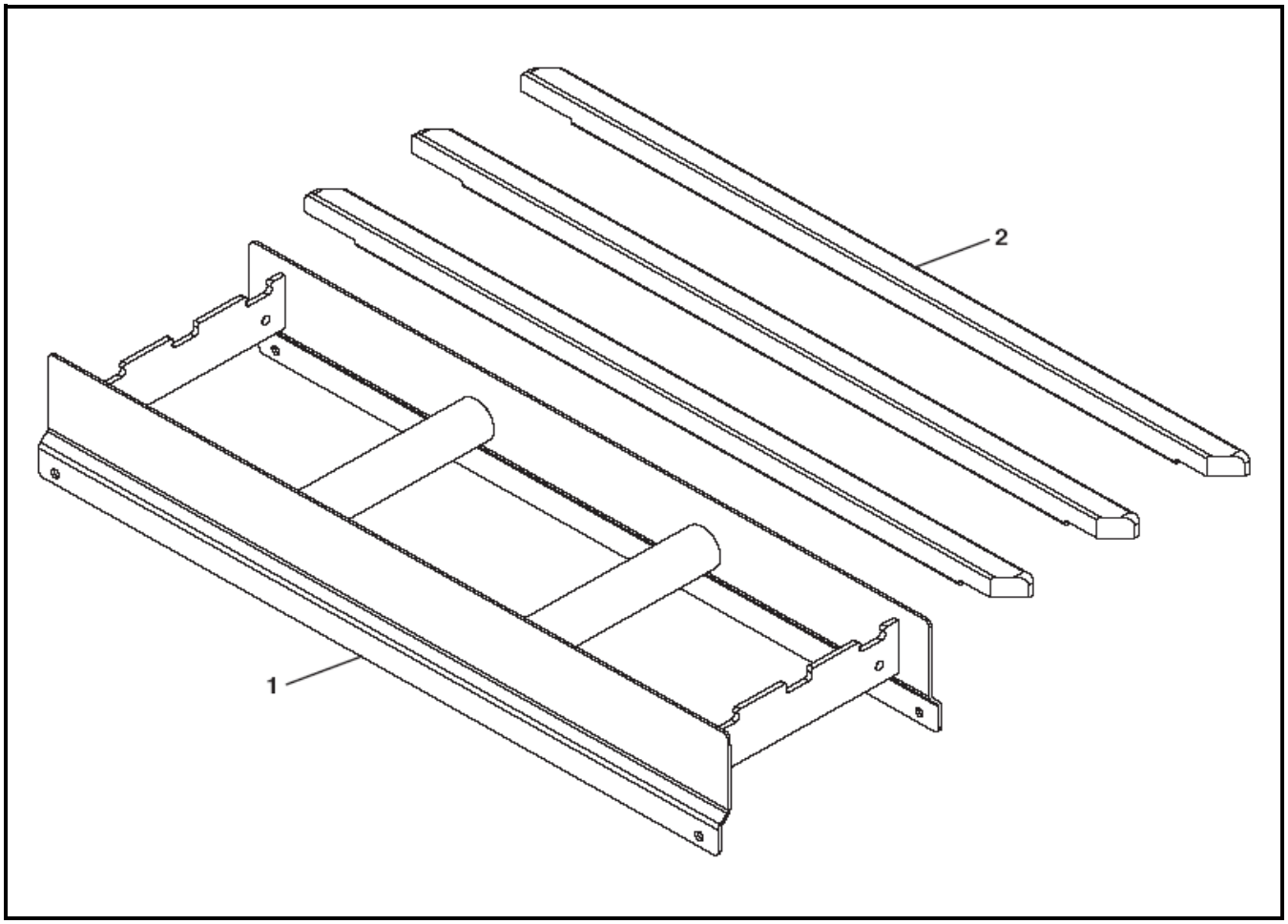


Item	Part Number	Description
1	------	Consult Factory for Frame Part Number
2	500189-LLLLL	Hold Down Wearstrip
3	500186-LLLLL	Curved Bed Rail Group
4	500187-LLLLL	Low Side Inside Curve Top Wearstrip
	500197-LLLLL	High Side Inside Curve Top Wearstrip
5	500188-LLLLL	Inside Return Bottom Wearstrip
6	500190-LLLLL	Return Bottom Wearstrip
7	500075	Chain Return
8	5033WW	Curve Return Shaft
LLLLL = Length in inches with 2 decimal places.		
Example: Length = 95.25" LLLLL = 09525		
WW = Conveyor width ref: 08 - 36 in 02 increments		

Section Degree of Turn Chart				
		Conveyor Width (WW)		
		08-10	12-24	26-36
Module Degree of Turn	**15**	N/A	15	15
	30	30	30	30
	45	N/A	45	45
	60	60	60	30 & 30
	75	N/A	75	45 & 30
	90	90	90	45 & 45
	105	N/A	60 & 45	45, 30 & 30
	120	60 & 60	60 & 60	45, 45 & 30
	135	N/A	75 & 60	45, 45 & 45
	150	90 & 60	75 & 75	45, 45, 30 & 30
	165	N/A	90 & 75	45, 45, 45 & 30
	180	90 & 90	90 & 90	45, 45, 45 & 45

Service Parts

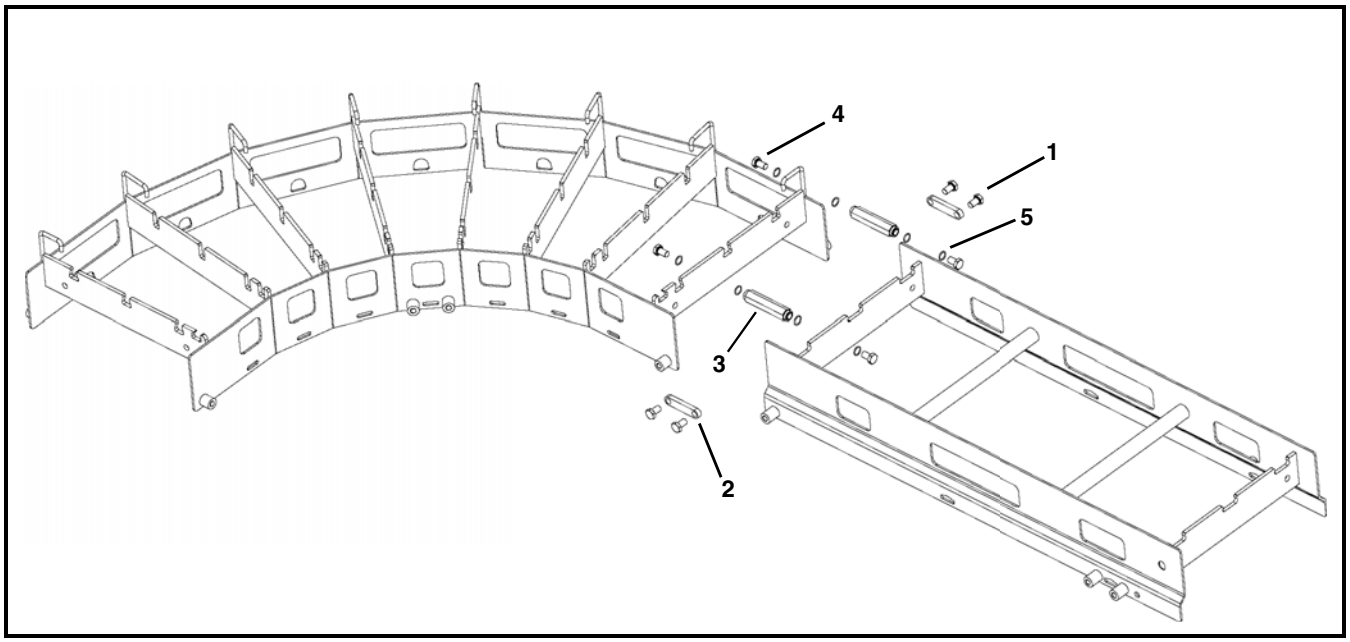
Straight Conveyor Frame and Wear Strips



Item	Part Number	Description
1	------	Consult Factory for Frame Part Number
2	501800-LLL	Straight Wear Strip (Refer to chart)
LLL = Conveyor length ref: 020 - 999 in 001 increments		
WW = Conveyor width ref: 08 - 36 in 02 increments		

Wear Strip Quantity (Item 2)								
		Conveyor Length (LLL)						
		020-132	133-252	253-372	373-492	493-612	613-732	733-852	853-999
Conveyor Width (WW)	08	2	4	6	8	10	12	14	16
	10	3	6	9	12	15	18	21	24
	12	3	6	9	12	15	18	21	24
	14	3	6	9	12	15	18	21	24
	16	4	8	12	16	20	24	28	32
	18	4	8	12	16	20	24	28	32
	20	5	10	15	20	25	30	35	40
	22	5	10	15	20	25	30	35	40
	24	5	10	15	20	25	30	35	40
	26	6	12	18	24	30	36	42	48
	28	6	12	18	24	30	36	42	48
	30	6	12	18	24	30	36	42	48
	32	7	14	21	28	35	42	49	56
	34	7	14	21	28	35	42	49	56
	36	8	16	24	32	40	48	56	64

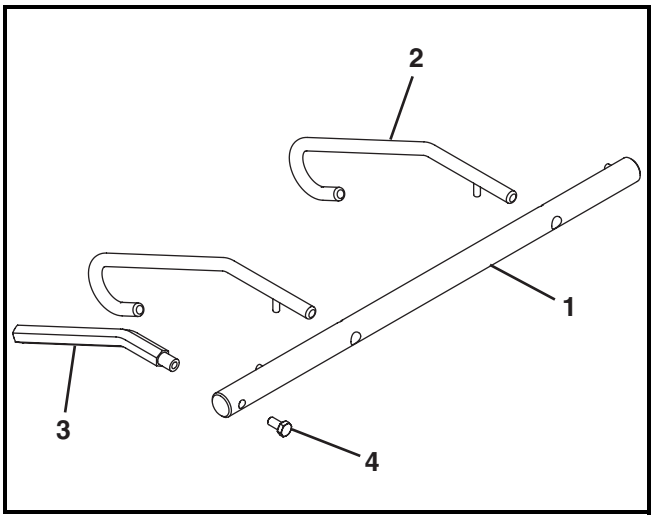
Conveyor Frame Connection



Item	Part Number	Description
1	961016MSS	Hex Head Cap Screw, M10-1.5x16 mm
2	501195	Flat Connector (Not Applicable if Stand Located at Connection)

Item	Part Number	Description
3	501190	Hex Post Connector
4	501494	Hex Head Cap Screw, M10-1.5x16mm
5	807-1616	O-Ring

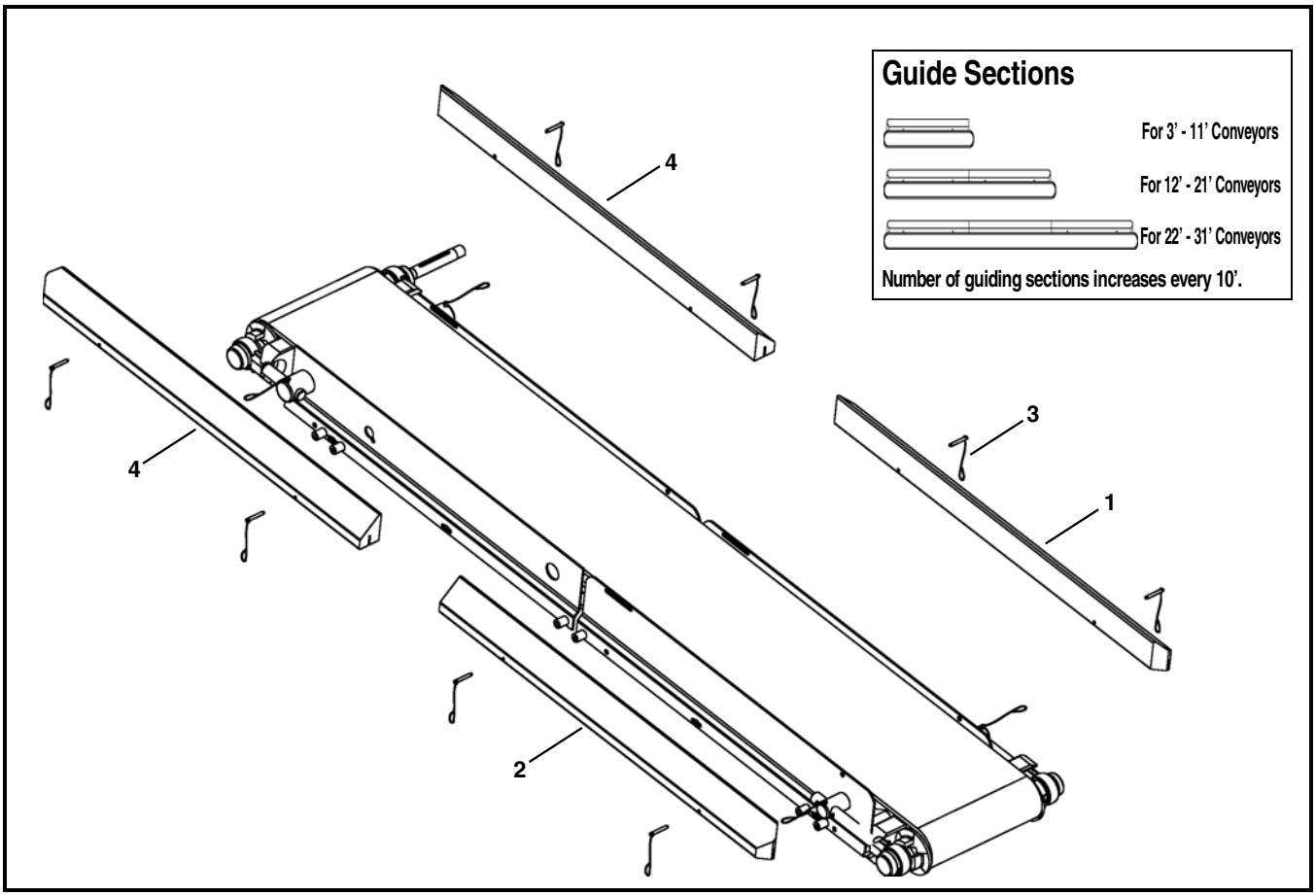
Lifters



Item	Part Number	Description
1	5054WW	Belt Lifter Shaft
2	501376	Belt Lifter
3	500491	Belt Lifter Handle
4	960812MSS	Hex Head Cap Screw, M8-1.25 x 12 mm
WW = Conveyor width ref: 06 - 60 in 02 increments		

Service Parts

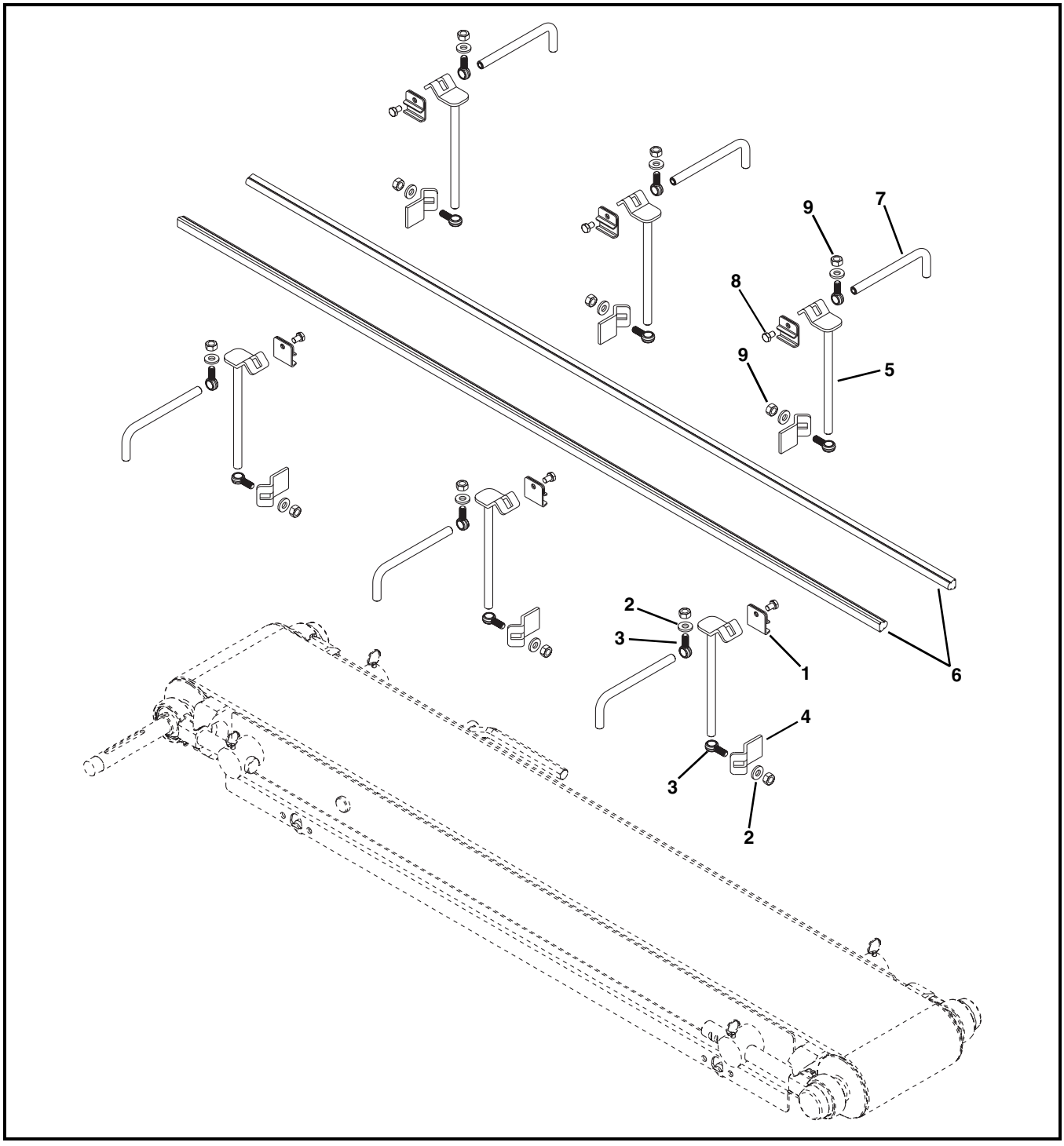
3" (76 mm) High Sides



Item	Part Number	Description
1	503501-LLLLL	Right Hand High Side Guide
2	503601-LLLLL	Left Hand High Side Guide
3	501676	Pin Assembly

Item	Part Number	Description
4	503401-LLLLL	Square End High Side Guide
LLLLL = Guide Length in inches with 2 decimal places.		
Example: Guide Length = 95.25" LLLLL = 09525		

Adjustable Guiding

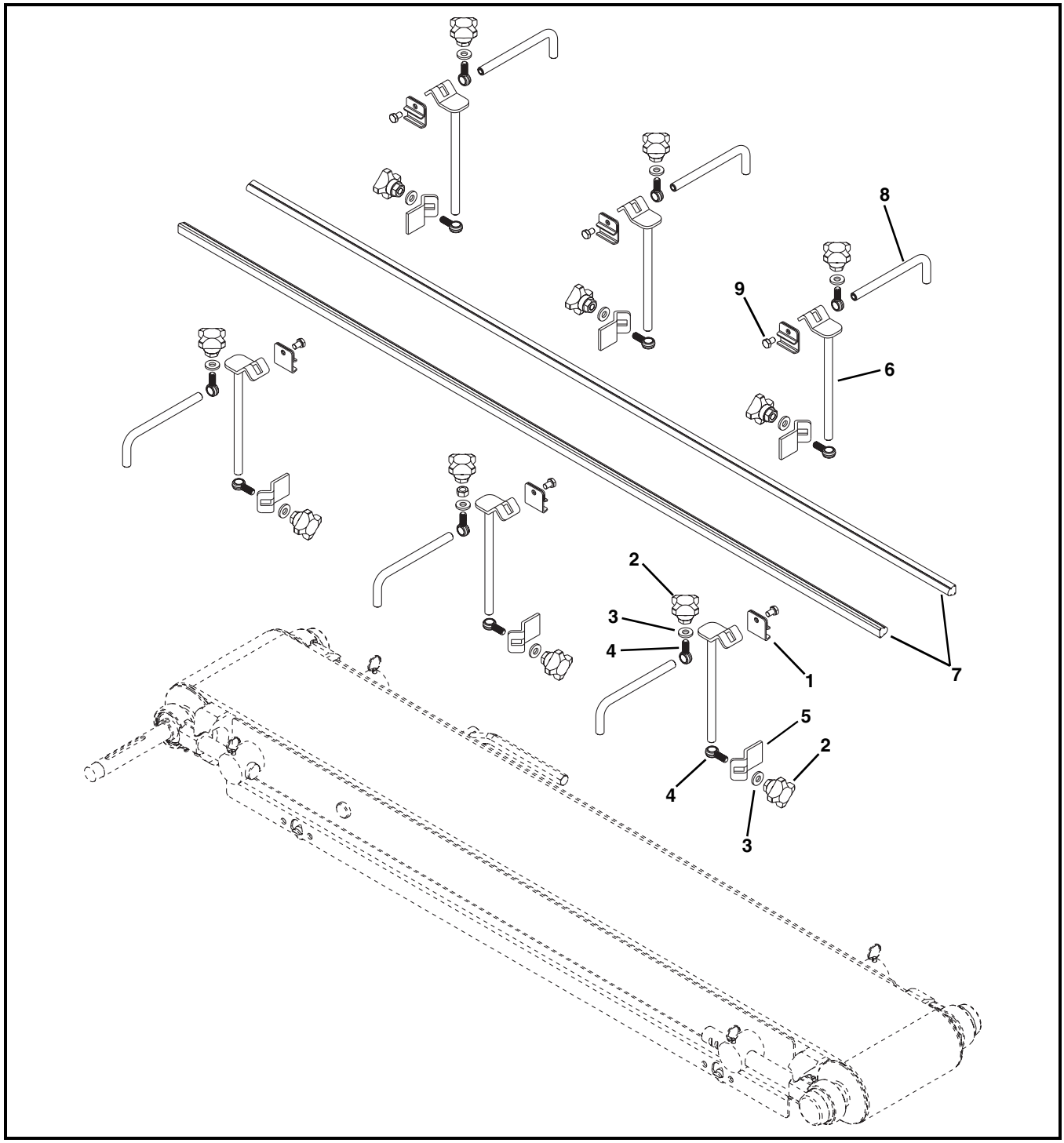


Item	Part Number	Description
1	807-015	Rail Clamp
2	807-1821	Washer
3	807-1994	Eye Bolt M10 x 1.50 mm
4	509875	Mounting Bracket
5	509876	Vertical Post Assembly
6	532167-LLLLL	Round Guide Rail

Item	Part Number	Description
7	532300	Guide Post
8	960812MSS	Hex Head Cap Screw, M8 - 1.25 x 12 mm
9	991001MSS	Hex Nut, M10 - 1.50 mm
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

Service Parts

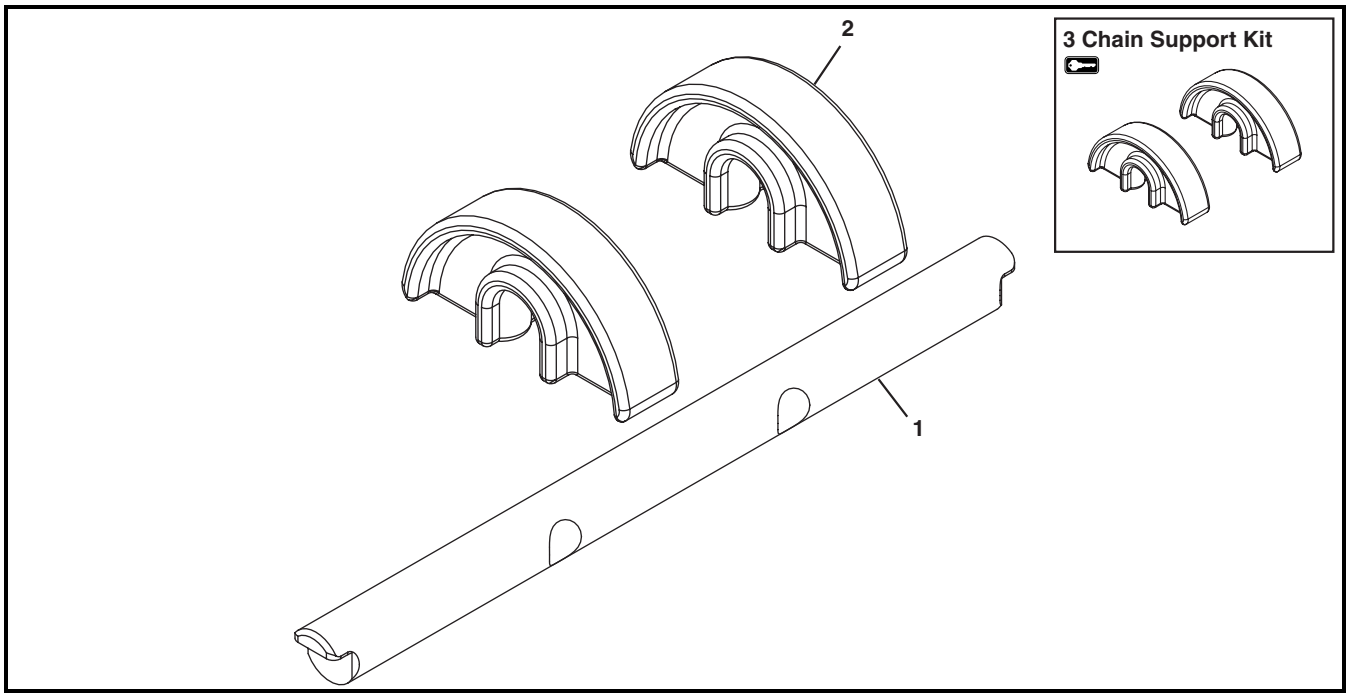
Tool-Less Adjustable Guiding



Item	Part Number	Description
1	807-015	Rail Clamp
2	807-1057	Handle
3	807-1821	Washer
4	807-1994	Eye Bolt M10 x 1.50 mm
5	509875	Mounting Bracket
6	509876	Vertical Post Assembly

Item	Part Number	Description
7	532167-LLLLL	Round Guide Rail
8	532300	Guide Post
9	960812MSS	Hex Head Cap Screw, M8 - 1.25 x 12 mm
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

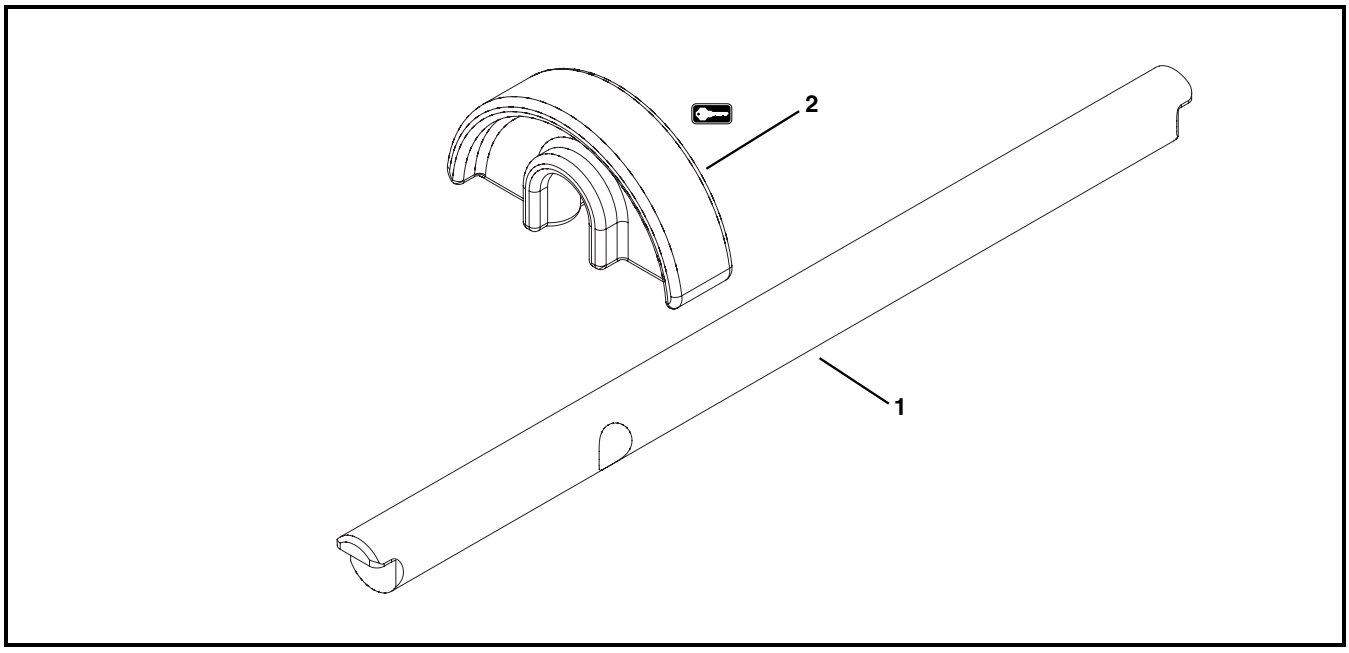
Straight Belt Return



Item	Part Number	Description
1	5032WW	Return Shaft
2	500075	Chain Return Shoe

Item	Part Number	Description
3	74R-WW	Chain Support Kit (Includes Item 2)
WW = Conveyor width ref: 08 - 36 in 02 increments		

Curve Belt Return

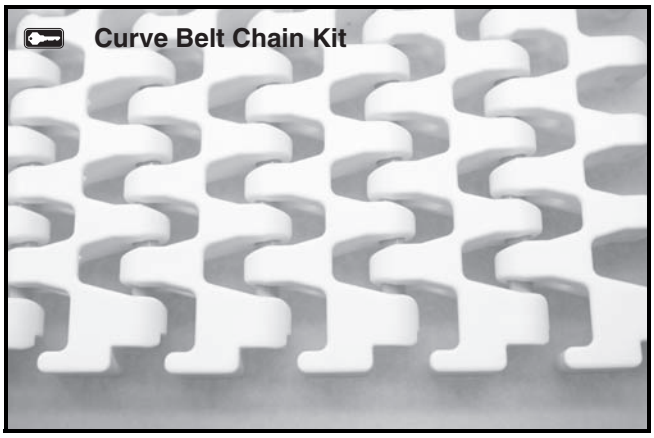


Item	Part Number	Description
1	5033WW	Curve Return Shaft

Item	Part Number	Description
2	500075	Chain Return Shoe
WW = Conveyor width ref: 08 - 36 in 02 increments		

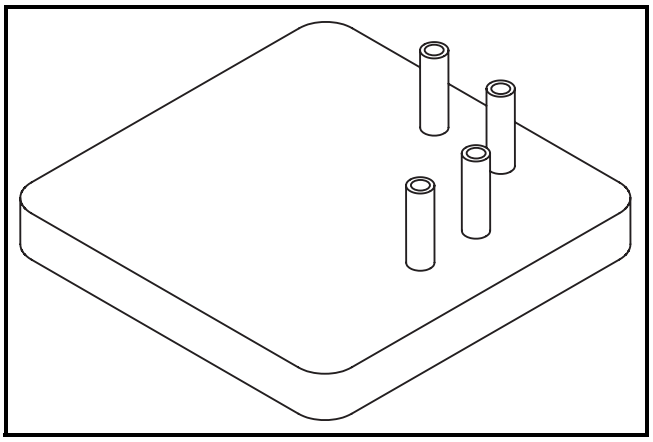
Service Parts

Curve Belt Chain Kit



Item	Part Number	Description
1	74BB-WW	Curve Belt Chain Kit (Includes 1 ft (305 mm) of flat belt chain and assembly pins)
BB = Chain Reference Number		
WW = Conveyor width ref: 08 - 36 in 02 increments		

Belt Removal Tool



Item	Part Number	Description
1	500582	Tool Rod Removal for 1" Pitch Flush Grid Belt
	500494	Tool Rod Removal for 1/2" Pitch Flush Grid Belt

Ordering a Replacement Chain

Determine the length of chain required for the conveyor and round up to the nearest foot length. Order the proper number of chain repair kits (1' long each) for your conveyor. Dorner will ship chain kits that are of a reasonable length fully assembled.

Example:

Overall chain length = 42' 5" (rounded up = 43')

Order: Qty (43) of 74BB-WW

BB = Chain reference number

WW = Conveyor width ref: 08 - 36 in 02 increments

Configuring a Conveyor Part Number

7U3WW-LLLPCSGBB#
STRAIGHT INFEED / IDLER MODULE

7U4WWDDDCSGBB#
CURVE MODULE

7U5WW-LLLCSGBB#
STRAIGHT INTERMEDIATE MODULE

7UMWW-LLLDCSBBG#
STRAIGHT EXIT / DRIVE MODULE

Figure 79

Curve Conveyor

Refer to your serial and model number plate (**Figure 79**). From the model number, determine conveyor width (WW), length (LLL), pulley type (P), stand location, cleaning options (C), stand holes (S), guide profile (G), belt material (BB), degree of turn (DDD), drive/pulley type (D) and module serialized sequence (#).

Straight Infeed / Idler Module
Example: 7U324-12015B1MR1

Straight Infeed/Idler module, 24" wide, 10' long, ready for Dorner support stands, first stand 12" from pulley end including standard idler pulley, frame cutouts, belt lifters, tip up idler pulley option, lowside profile and MR belt material.

Straight Intermediate Module
Example: 7U524-1807Z1MR3

Straight Intermediate module, 24" wide, 15' long, ready for Dorner support stands, including frame cutouts, belt lifters, lowside profile and MR belt material.

Curve Module
Example: 7U4240901Z1MR4

Curve module, 24" wide, 90°, ready for Dorner support stands, including frame cutouts and MR belt material.

Straight Exit / Drive Module
Example: 7UM24-04817CMR15

Straight Exit/Drive module, 24" wide, 4' long, ready for Dorner support stands, last stand mounted 18" from pulley end, and side drive mount in position D, including standard drive pulley, frame cutouts, belt lifters, lowside profile and MR belt material.

Return Policy

Returns must have prior written factory authorization or they will not be accepted. Items that are returned to Dorner without authorization will not be credited nor returned to the original sender. When calling for authorization, please have the following information ready for the Dorner factory representative or your local distributor:

1. Name and address of customer.
2. Dorner part number(s) of item(s) being returned.
3. Reason for return.
4. Customer's original order number used when ordering the item(s).
5. Dorner or distributor invoice number (if available, part serial number).

A representative will discuss action to be taken on the returned items and provide a Returned Goods Authorization (RMA) number for reference. RMA will automatically close 30 days after being issued. To get credit, items must be new and undamaged. There will be a return charge on all items returned for credit, where Dorner was not at fault. It is the customer's responsibility to prevent damage during return shipping. Damaged or modified items will not be accepted. The customer is responsible for return freight.

<table>
<tr><th></th><th colspan="8">Product Type</th></tr>
<tr><th></th><th colspan="7">Standard Products</th><th>Engineered to order parts</th></tr>
<tr><th>Product Line</th><th>Conveyors</th><th>Gearmotors & Mounting Packages</th><th>Support Stands</th><th>Accessories</th><th>Spare Parts (non-belt)</th><th>Spare Belts - Standard Flat Fabric</th><th>Spare Belts - Cleated & Specialty Fabric</th><th>Spare Belts - Plastic Chain</th><th>All equipment and parts</th></tr>
<tr><td>1100</td><td colspan="6" rowspan="14">30% return fee for all products except:
50% return fee for conveyors with modular belt, cleated belt or specialty belts</td><td colspan="2" rowspan="15">non-returnable</td><td rowspan="15">case-by-case</td></tr>
<tr><td>2200</td></tr>
<tr><td>2200 Modular Belt</td></tr>
<tr><td>2200 Precision Move</td></tr>
<tr><td>2300</td></tr>
<tr><td>2300 Modular Belt</td></tr>
<tr><td>3200</td></tr>
<tr><td>3200 LPZ</td></tr>
<tr><td>3200 Precision Move</td></tr>
<tr><td>4100</td></tr>
<tr><td>5200</td></tr>
<tr><td>5300</td></tr>
<tr><td>6200</td></tr>
<tr><td>Controls</td></tr>
<tr><td>7200 / 7300</td><td colspan="6">50% return fee for all products</td></tr>
<tr><td>7350</td><td colspan="8" rowspan="4">non-returnable</td></tr>
<tr><td>7360</td></tr>
<tr><td>7400</td></tr>
<tr><td>7600</td></tr>
</table>

Returns will not be accepted after 60 days from original invoice date. The return charge covers inspection, cleaning, disassembly, disposal and reissuing of components to inventory. If a replacement is needed prior to evaluation of returned item, a purchase order must be issued. Credit (if any) is issued only after return and evaluation is complete.

Dorner has representatives throughout the world. Contact Dorner for the name of your local representative. Our Customer Service Team will gladly help with your questions on Dorner products.

For a copy of Dorner's Warranty, contact factory, distributor, service center or visit our website at www.dorner.com.

For replacement parts, contact an authorized Dorner Service Center or the factory.

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851-671 Rev. D

Printed in U.S.A.