



7400 Series CE Curved End Drive Conveyors

Installation, Maintenance and Parts Manual



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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 AquaPruf conveyors are covered by Patent Numbers 7,207,435, 7,246,697, 7,383,944, additional patent pending applications, and corresponding patents in other countries.

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 .

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Warnings – General Safety

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

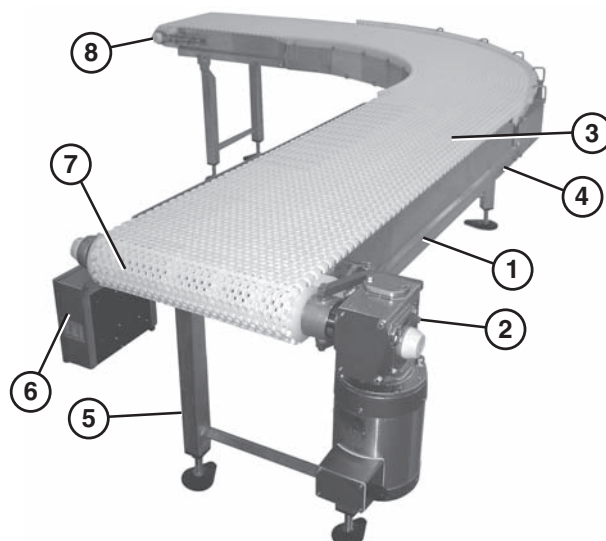


Figure 1

Specifications

Specifications

Conveyor Width Reference (<u>WW</u>)	08 – 36 in 02 increments
Maximum Conveyor Load	97 kg / m ² (20 lb / ft ²) with a maximum of 4882 kg / m ² (1000 lb / ft ²)
Belt Travel	305 mm (12") per revolution of pulley
Belt Take-up	51 mm (2")

Conveyor Length Reference (<u>LLL</u>)	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) = 914 mm

2 (Outfeed) = 914 mm

** Stand positions will be determined by the factory.

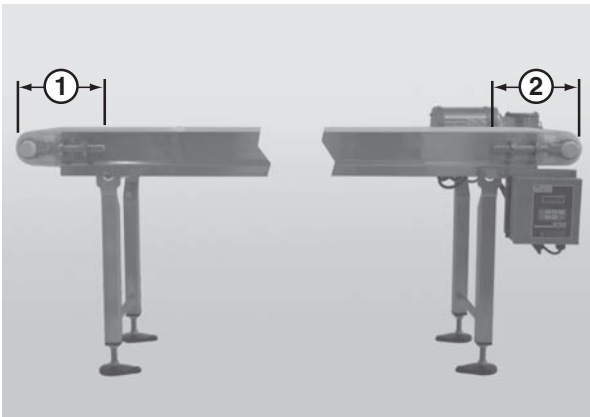
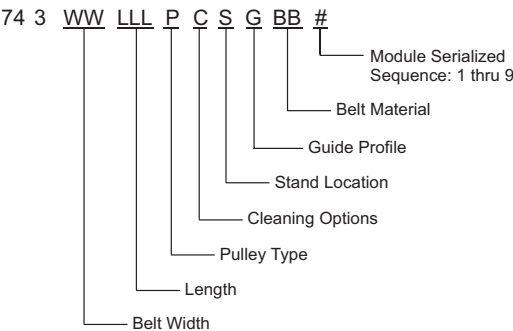


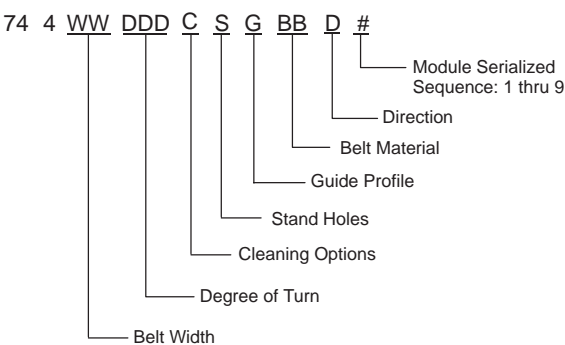
Figure 2

7400 Series Frame Section Numbers

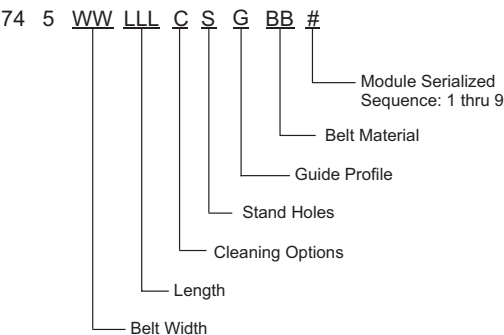
Straight Infeed Module / Idler Module



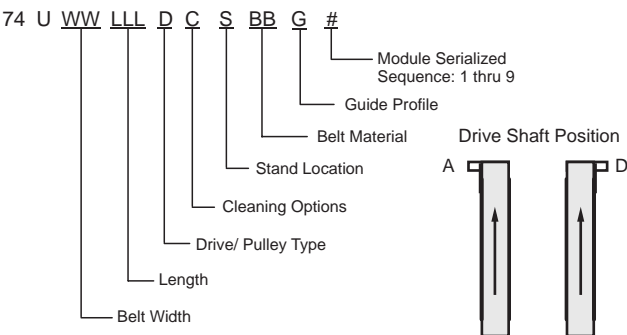
Curve Module



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.

⚠ CAUTION

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

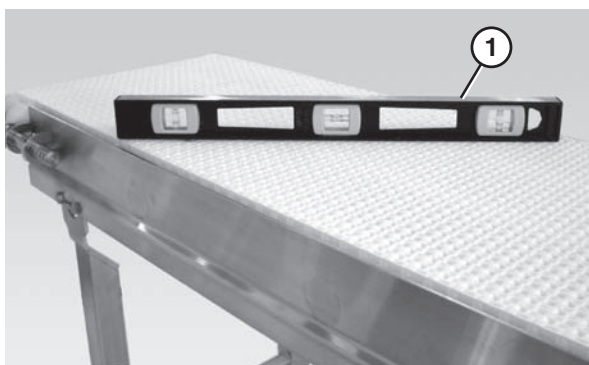


Figure 3

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 12.
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 12.
7. Attach the belt returns. Refer to “Belt Return Installation – Straight Frame Sections” on page 16.
8. Install the belt. Refer to “Belt Installation” on page 14.

9. Attach any guides / accessories. Refer to the “Service Parts” section starting on page 28.

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) |

* For connections not supported by stands.

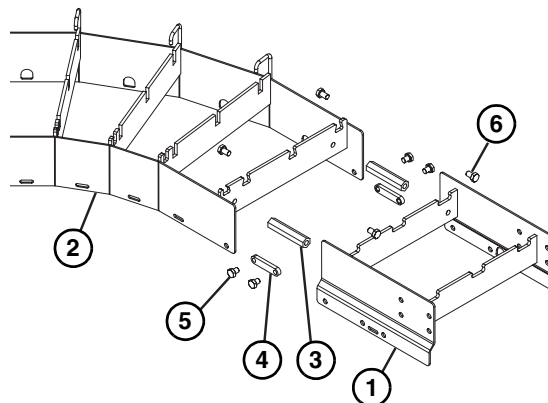


Figure 4

1. Locate the section number sequence etched on each section of frame (Figure 5, item 1).

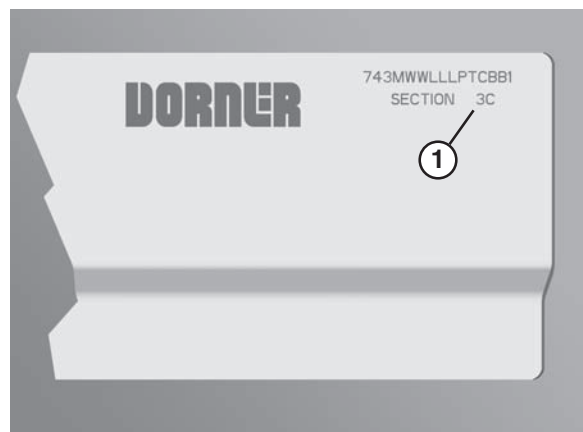


Figure 5

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

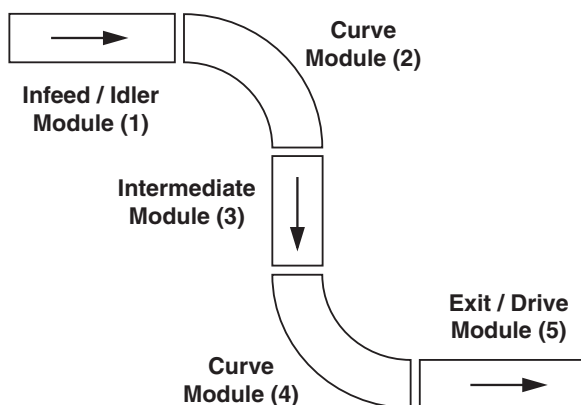


Figure 6

- Connect the frame sections by bolting the hex post connectors (**Figure 7, item 1**) to the cross member supports of each frame section.

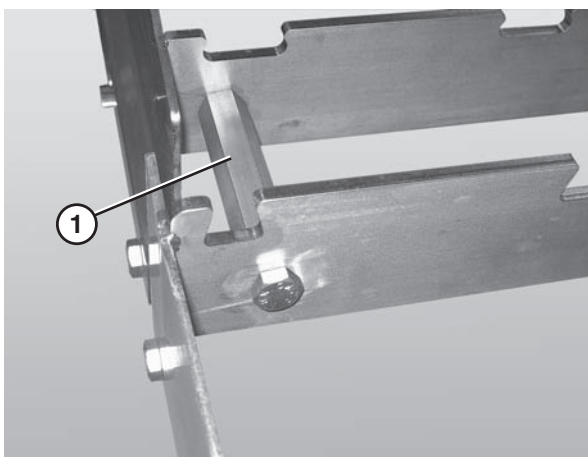


Figure 7

- Attach the flat connectors (**Figure 8, item 1**), if applicable, to the inside of the frame sections.

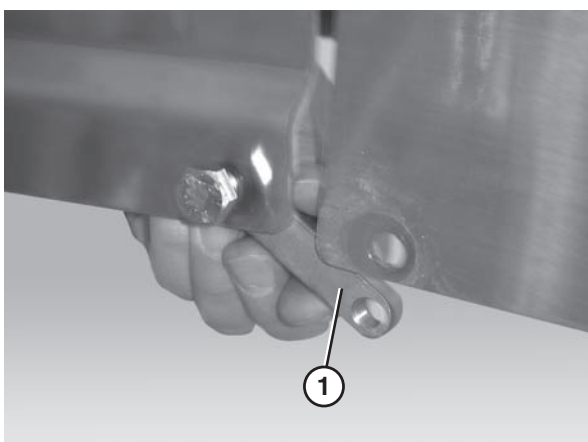


Figure 8

Stand Installation

Typical Stand Components (**Figure 9**)

1	Conveyor frame
2	Stand
3	M10 - 1.5 x 12 mm hex head cap screws (x4)

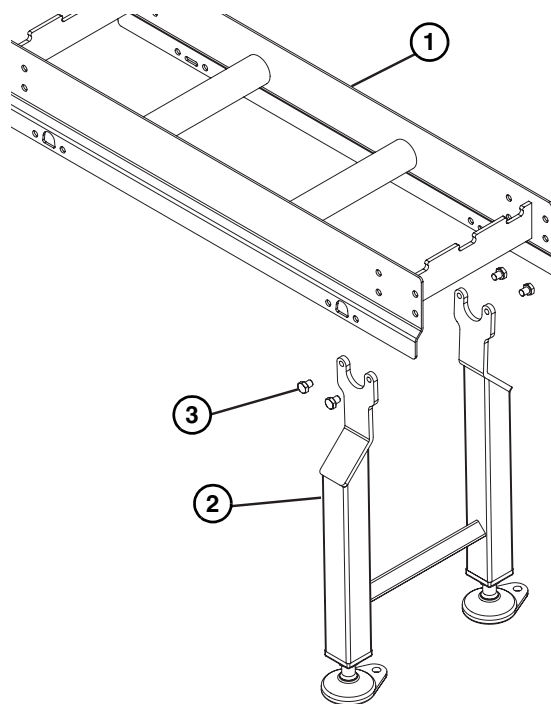


Figure 9

- Position the stands on a flat, level surface.
- Attach the stands to the frame (**Figure 10**).

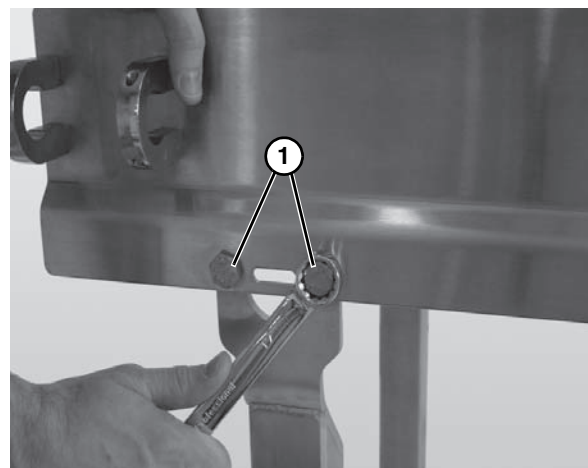


Figure 10

- Tighten hex screws (**Figure 10, item 1**).

Installation

Tail Assembly Installation

Drive Tail

Typical Drive Tail Components (Figure 11)

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

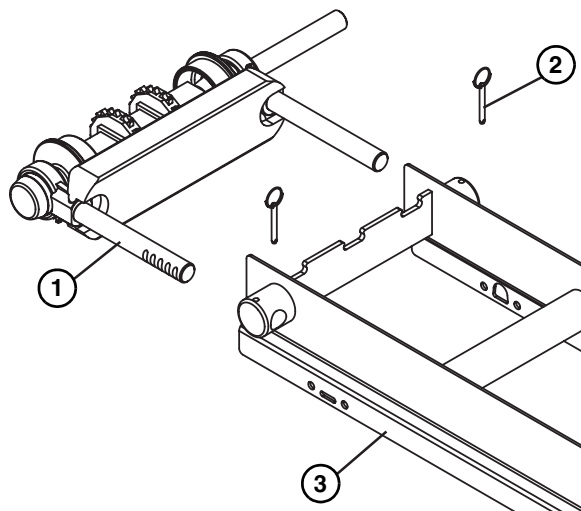


Figure 11

1. Slide the bearing shafts (Figure 12, item 1) into the take up blocks (Figure 12, item 2).

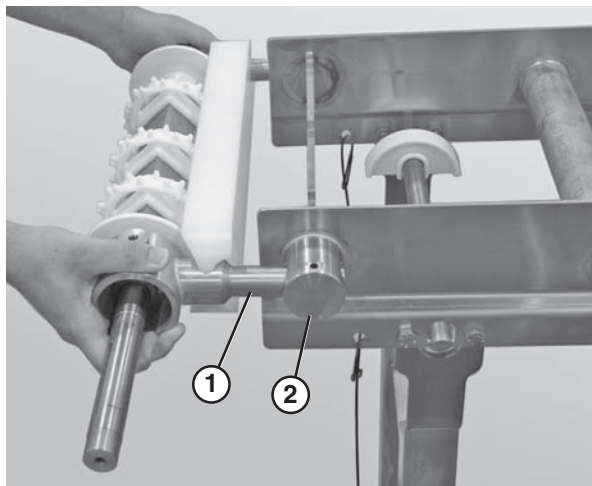


Figure 12

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

3. Insert the pull pins (Figure 13, item 1).

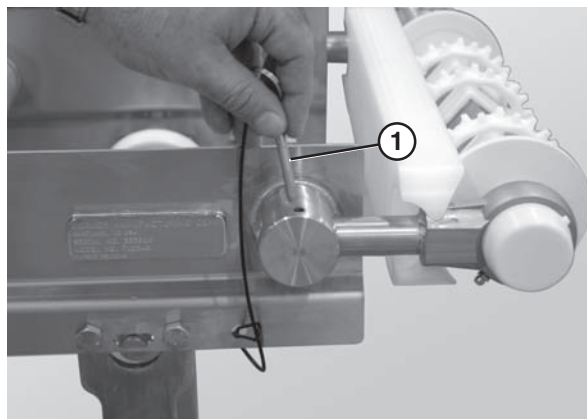


Figure 13

Idler Tail

Typical Idler Tail Components (Figure 14)

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

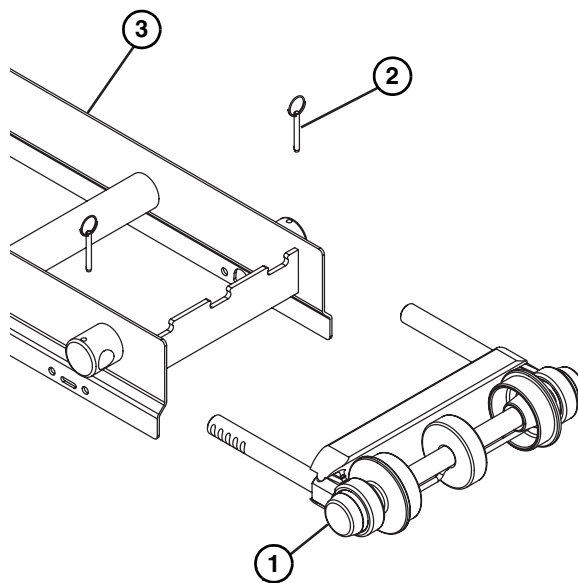


Figure 14

1. Slide the bearing shafts (**Figure 15, item 1**) into the take up blocks (**Figure 15, item 2**).

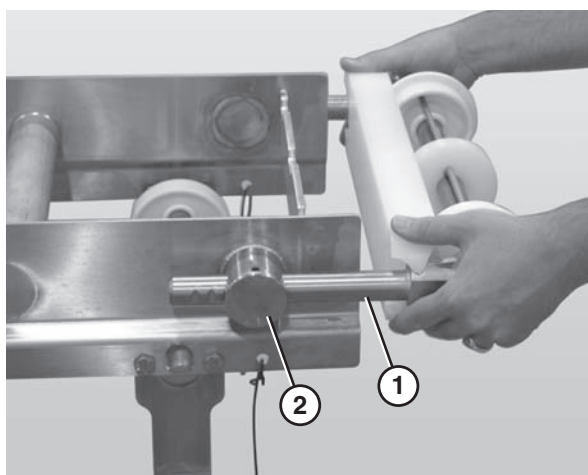


Figure 15

NOTE

Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

Tip Up Tail

Typical Tip Up Tail Components (**Figure 16**)

- | | |
|---|----------------------|
| 1 | Tip up tail assembly |
| 2 | Pull pin (x2) |
| 3 | Tip up shaft |
| 4 | Key stops (x2) |

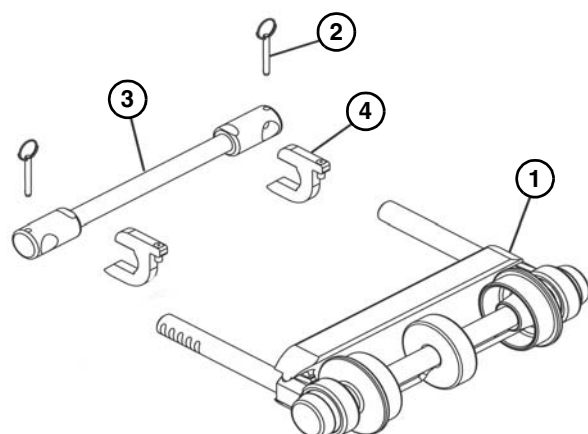


Figure 16

1. Slide the tip up shaft (**Figure 17, item 1**) through the designated slots in the frame.

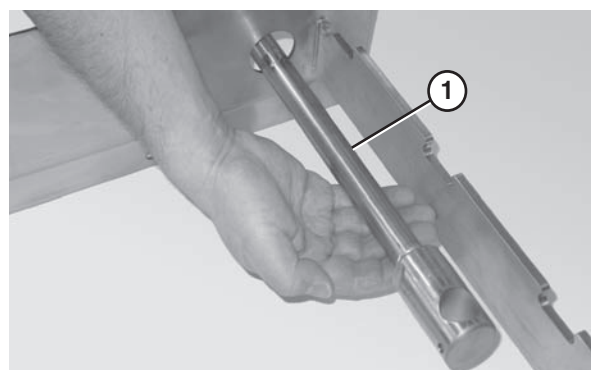


Figure 17

2. Attach the key stops (**Figure 18, item 1**) to the tip up shaft (**Figure 18, item 2**). The rounded end of the key stop should be facing the tail.

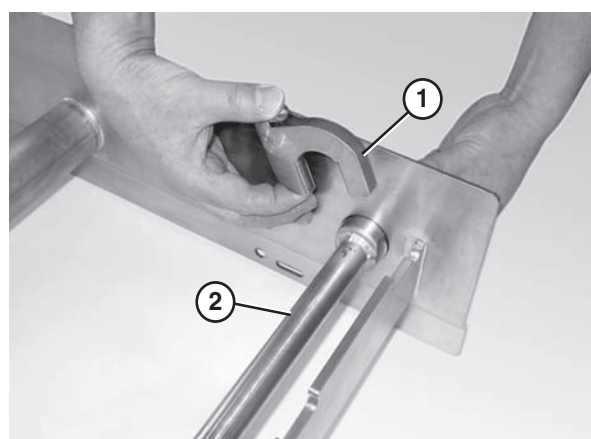


Figure 18

3. Slide the bearing shafts (**Figure 19, item 1**) into the holes in the tip up shaft (**Figure 19, item 2**).

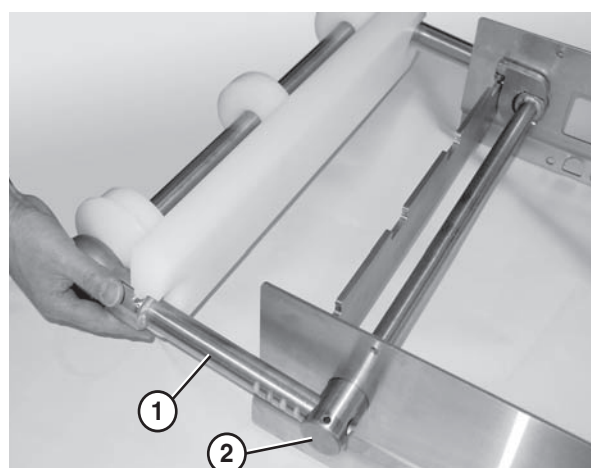


Figure 19

Installation

NOTE

Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

Nose Bar Idler Tail

Typical Nose Bar Idler Tail Components (Figure 20)

- | | |
|---|------------------------------|
| 1 | Nose bar idler tail assembly |
| 2 | Pull pin (x2) |
| 3 | Conveyor frame |

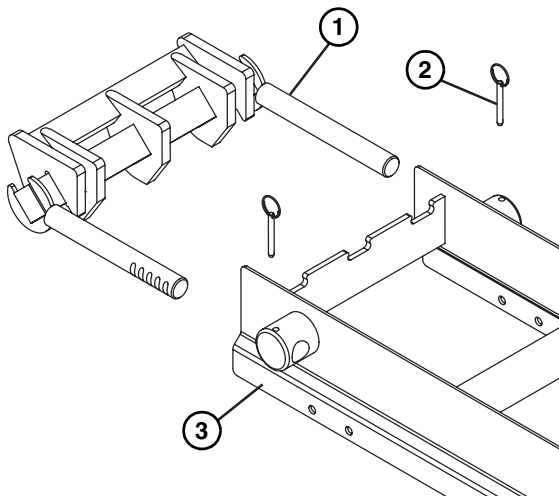


Figure 20

1. Slide the nose bar idler shaft hands (Figure 21, item 1) into the take up blocks (Figure 21, item 2).
2. Attach the nose bar transfer post (Figure 21, item 3) to the nose bar idler shaft hands.

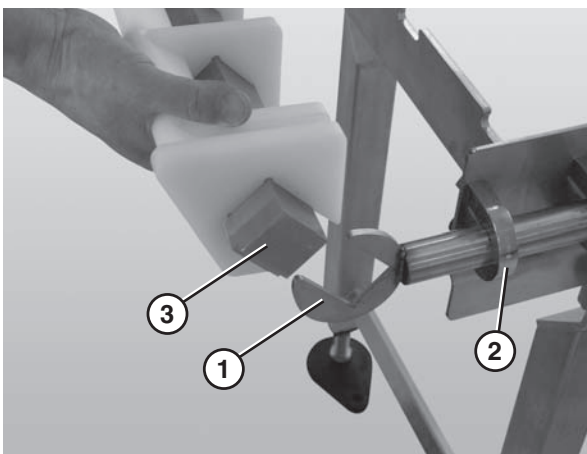


Figure 21

3. Ensure that the nose bar pucks (Figure 22, item 1) are in line with the conveyor frame (Figure 22, item 2).

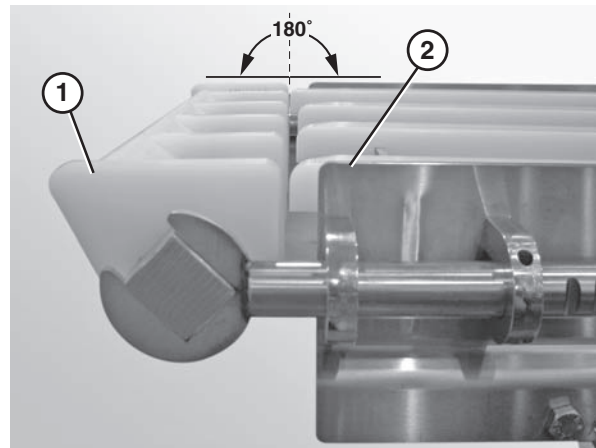


Figure 22

NOTE

Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

Nose Bar Tip Up Tail

Typical Nose Bar Tip Up Tail Components (Figure 23)

- | | |
|---|----------------------|
| 1 | Tip up tail assembly |
| 2 | Pull pin (x2) |
| 3 | Tip up shaft |
| 4 | Key stops (x2) |

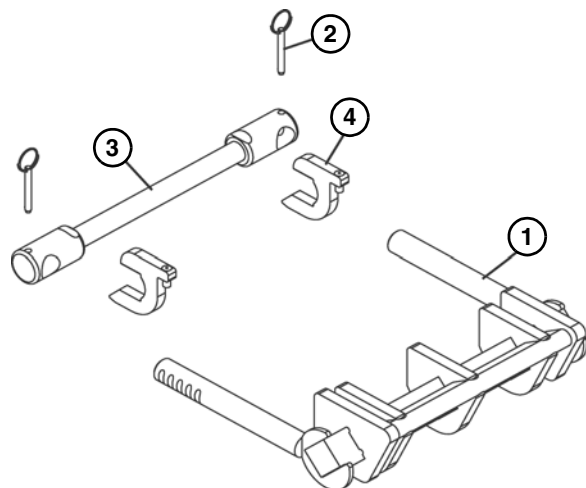


Figure 23

1. Slide the tip up shaft (**Figure 24, item 1**) through the designated slots in the frame.

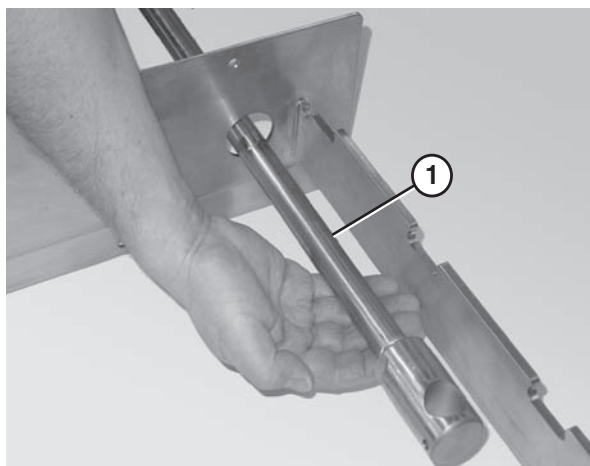


Figure 24

2. Attach the key stops (**Figure 25, item 1**) to the tip up shaft (**Figure 25, item 2**). The rounded end of the key stop should face the tail.

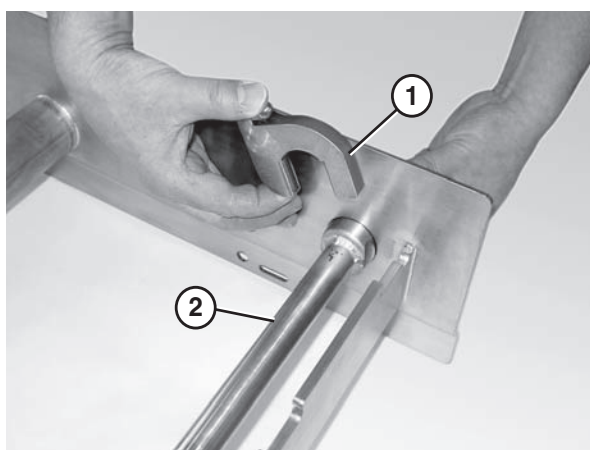


Figure 25

3. Attach nose bar idler shaft hands (**Figure 26, item 1**) to the tip up shaft (**Figure 26, item 2**).

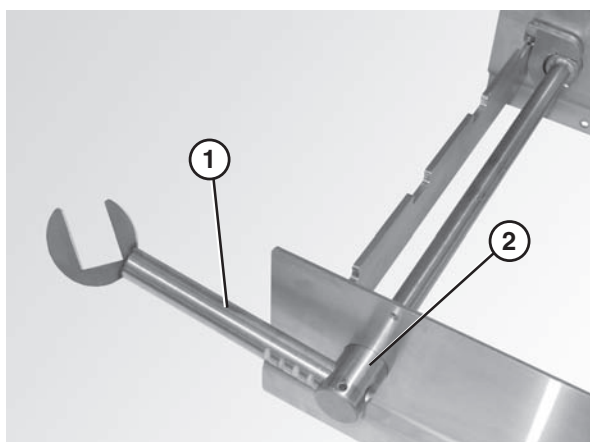


Figure 26

4. Attach the nose bar transfer post (**Figure 27, item 1**) to the nose bar idler shaft hands (**Figure 27, item 2**).

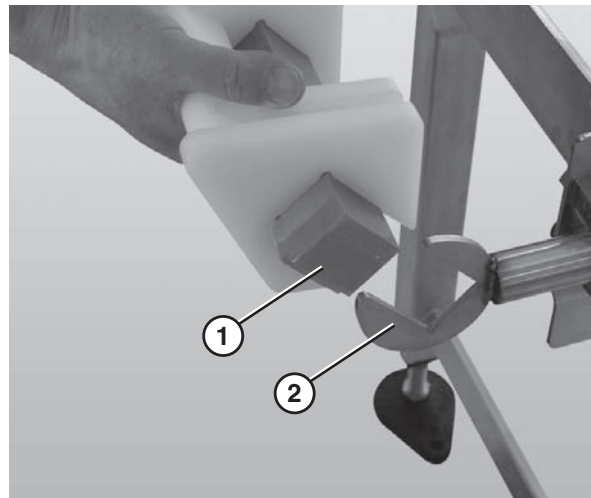


Figure 27

5. Ensure that the nose bar pucks (**Figure 28, item 1**) are in line with the conveyor frame (**Figure 28, item 2**).

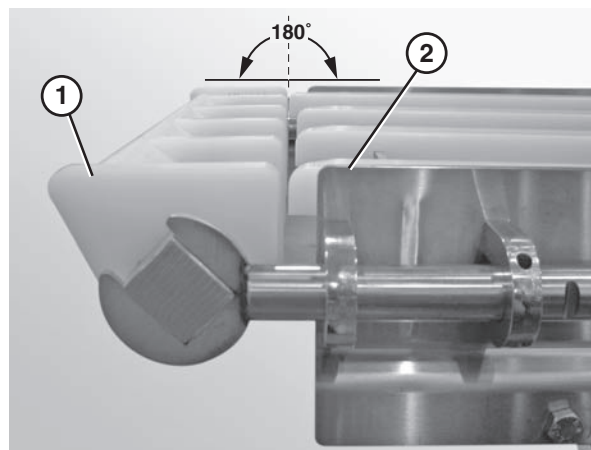


Figure 28

NOTE

Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

Installation

Lifter Installation

Typical Lifter Components (Figure 29)

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

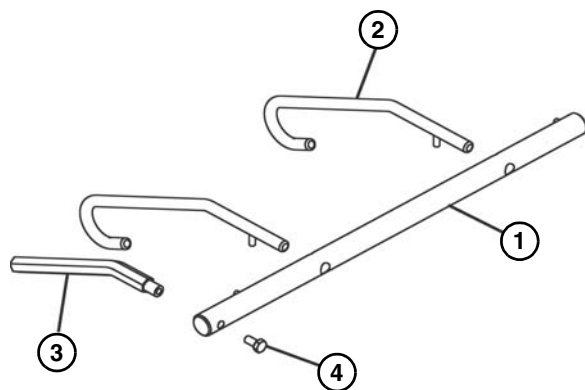


Figure 29

1. Slide the belt lift pivot bar (Figure 30, item 1) through the designated holes in the frame.

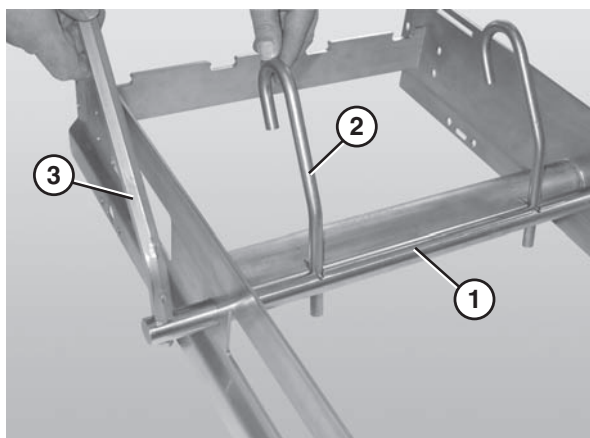


Figure 30

2. Attach the lifter bars (Figure 30, item 2) to the belt lift pivot bar (Figure 30, 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 30, item 3) to the belt lift pivot rod.

Wear Strip Installation

Straight Frame Sections

Typical Wear Strip Components (Figure 31)

1	Wear strip
---	------------

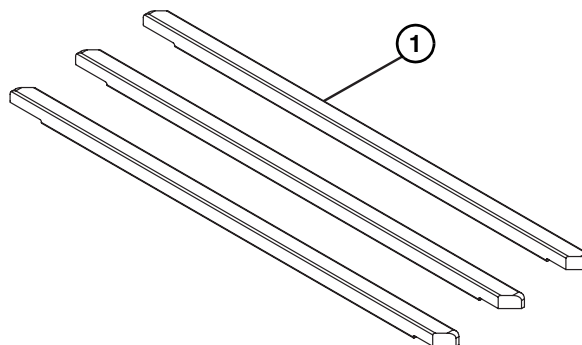


Figure 31

1. Position the wear strips (Figure 32, item 1) on the frame.

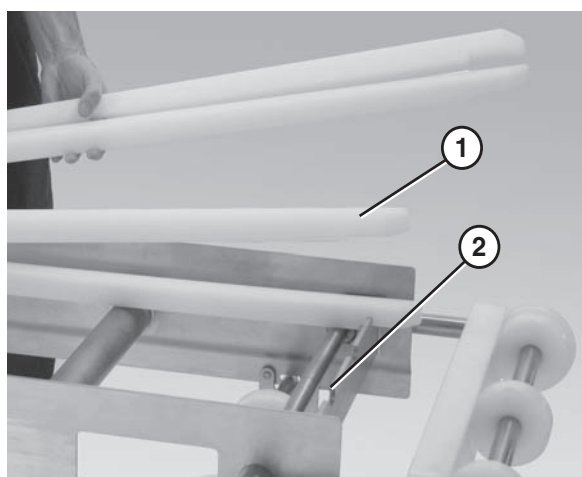


Figure 32

2. Make sure the wear strips are situated securely in the frame slots (Figure 32, item 2).

Curved Frame Sections

Typical Curved Wear Strip Components (Figure 33)

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



Figure 33

1. Insert the inside curve top wear strip (**Figure 34, item 1**) into the innermost slot (**Figure 34, item 2**) on the inside of the frame.

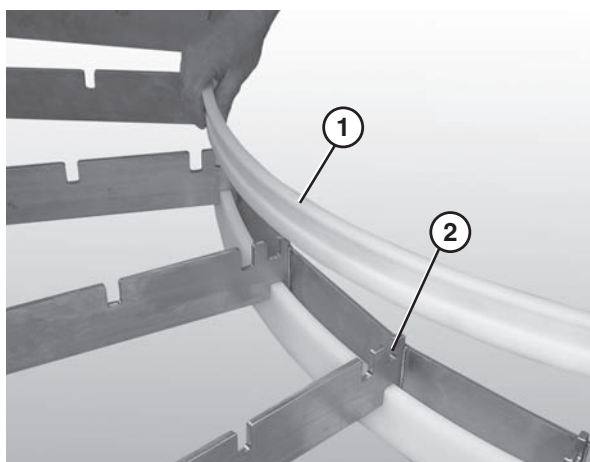


Figure 34

2. Attach the hold down wear strip (**Figure 35, item 1**) to the frame hooks (**Figure 35, item 2**) on the outside of the frame.

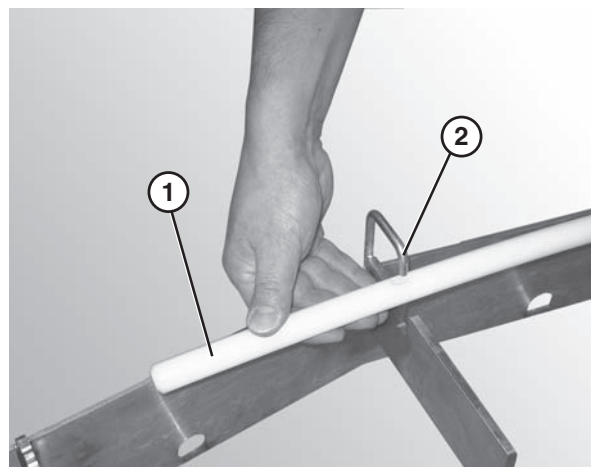


Figure 35

3. Insert the wear strips (**Figure 36, item 1**) into the appropriate slots in the frame (**Figure 36, item 2**), starting with the shortest wear strip on the inside of the curved section and working outward to the longest.

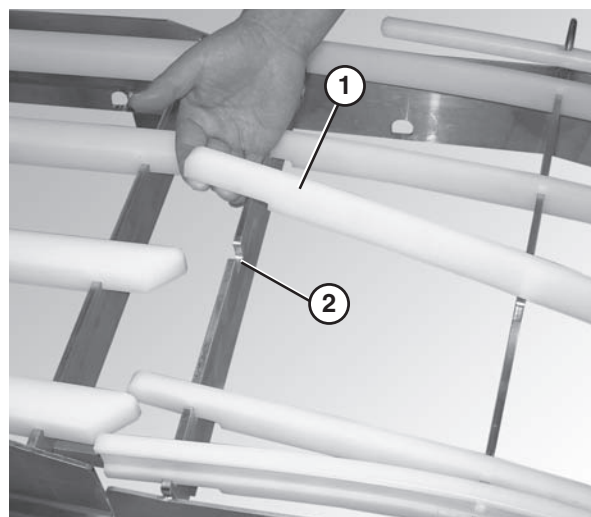


Figure 36

Installation

Belt Return Installation – Curved Frame Sections

Typical Curved Belt Return Components (Figure 37)

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

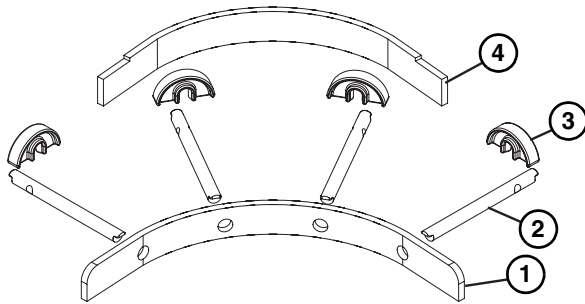


Figure 37

1. Insert the inside return bottom wear strip (Figure 38, item 1) into the slots (Figure 38, item 2) on the lower inside section of the frame (figure shown without the belt or wear strips).

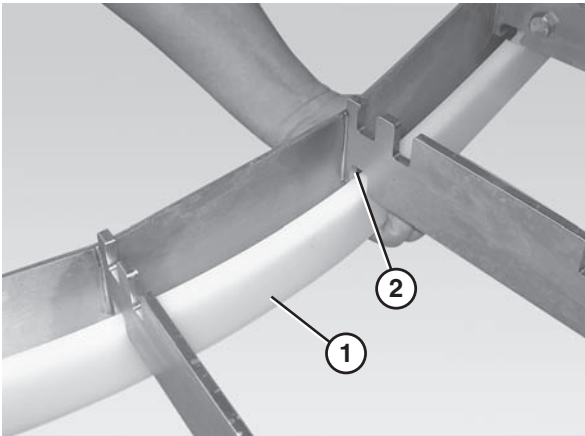


Figure 38

2. Attach the chain return shoes (Figure 38, item 1) to the curve return shafts (Figure 38, item 2).

3. Slide the long end of the curve return shaft (Figure 39, item 1) through the center hole in the return bottom wear strip (Figure 39, item 2).

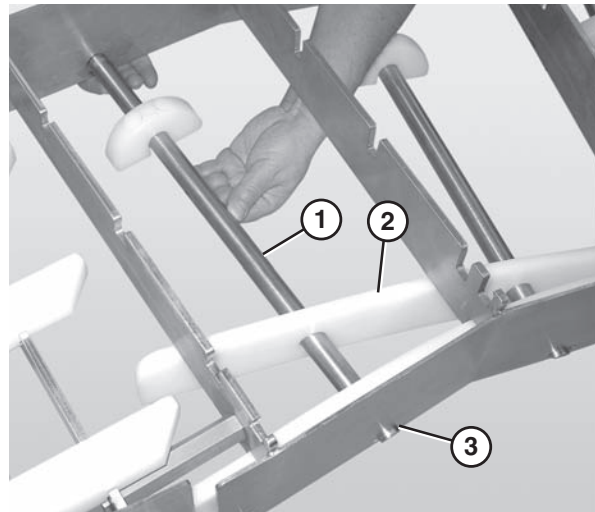


Figure 39

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 39, item 3).
6. Repeat steps 4 – 5 with the remaining returns.

Belt Installation

Typical Belt Components (Figure 40)

- | | |
|---|------------|
| 1 | Chain belt |
| 2 | Belt rod |

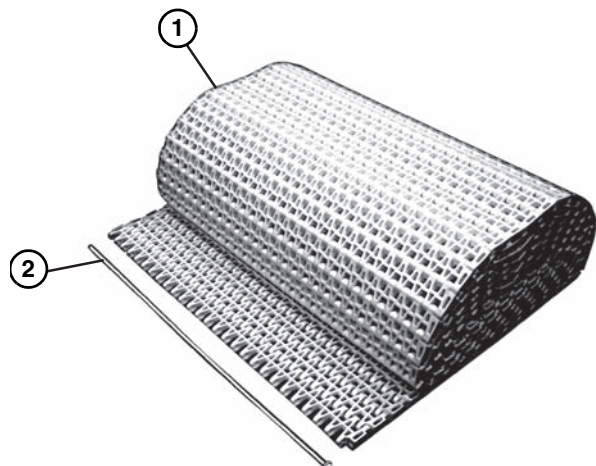


Figure 40

1. Position the belt on the conveyor frame (**Figure 42**).



Figure 41

NOTE

*Ensure the belt is running in the correct direction (**Figure 42**).*

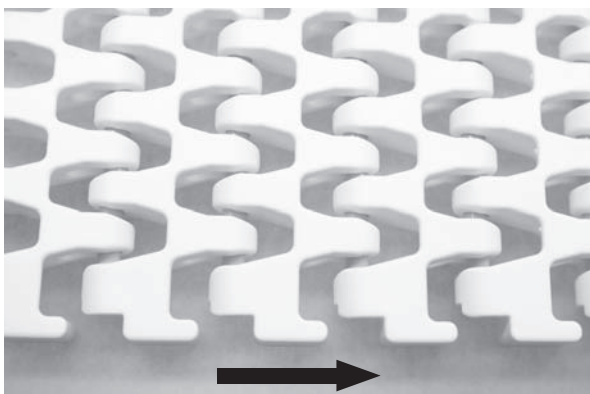


Figure 42

2. Wrap the belt around the conveyor, making sure the sprocket teeth have engaged the belt.
3. Feed the ends of the belt through the top and bottom of the curved frame sections.
4. Bring the ends of the belt together (**Figure 43**).



Figure 43

5. Insert the belt rod (**Figure 44**, item 1).

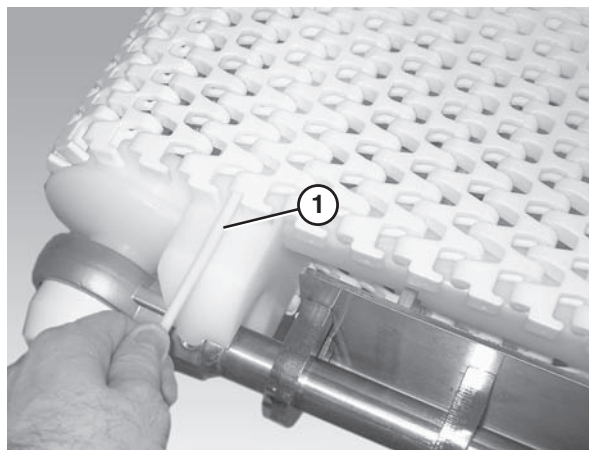


Figure 44

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. Extend the tension end to remove excess slack in the belt (**Figure 45**).



Figure 45

9. Insert the pull pins (**Figure 46**, item 1) on the tension end of the conveyor.

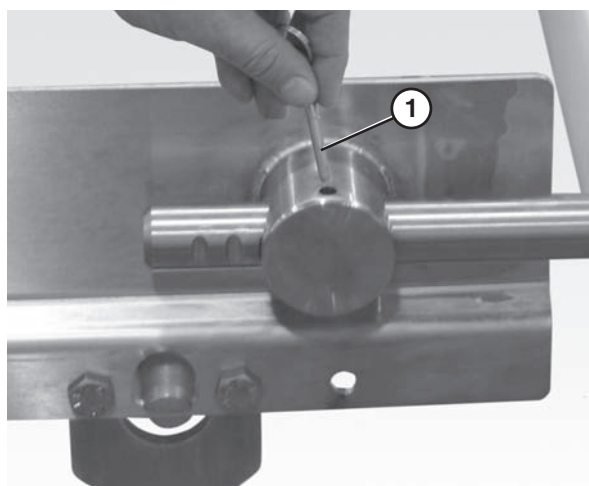


Figure 46

10. If no more travel is available, remove one or more belt links to take up the tension. Refer to "Standard Belts: Replacing a Section of Belt" on page 19.

Installation

Belt Return Installation – Straight Frame Sections

Typical Belt Return Components (Figure 47)

- | | |
|---|-------------------|
| 1 | Return shaft |
| 2 | Chain return shoe |

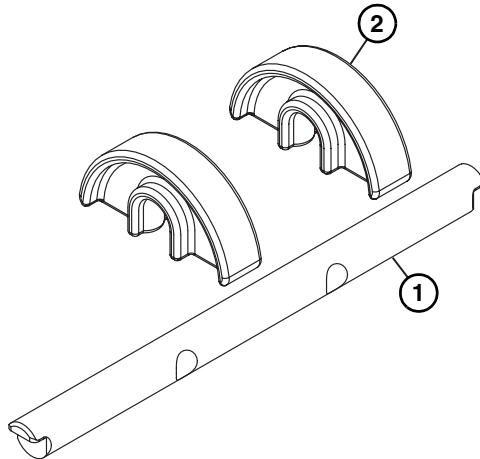


Figure 47

1. Attach the chain return shoes (Figure 48, item 1) to the return shaft (Figure 48, item 2).

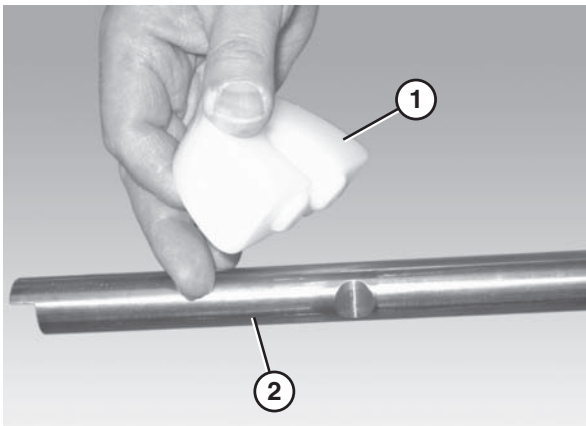


Figure 48

2. Slide the return shaft up (Figure 49, item 1) and through the large slot (Figure 49, item 2) in the frame (picture shown without the belt or wear strips).

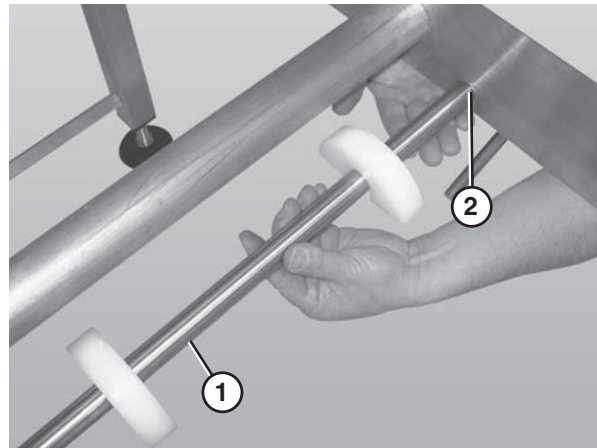


Figure 49

3. Push up on the return shaft (Figure 49, 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 50). Belt sag should not exceed 102 mm. Follow steps 7 – 9 in the “Belt Installation” section on page 14 to remove slack from the belt.

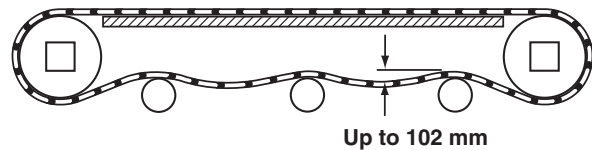


Figure 50

⚠ CAUTION

Belt sag should not exceed 102 mm from the top of the returns.

Preventive Maintenance and Adjustment

Required Tools

- 17 mm wrench (or adjustable wrench)
- 4 mm 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 28 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 51, item 1**) that connect the guide (**Figure 51, item 2**) to the frame.

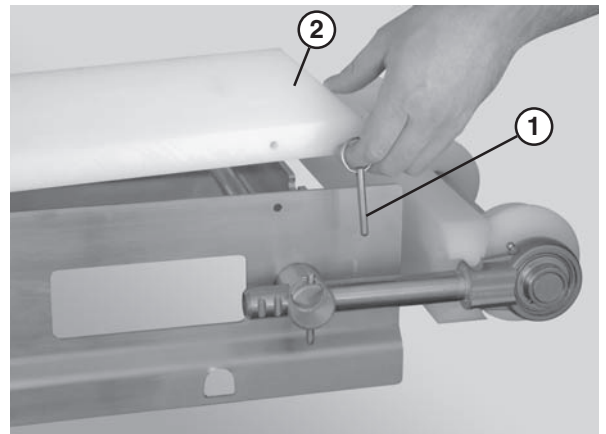


Figure 51

2. Remove the pull pin (**Figure 52, item 1**) on the tension end of the conveyor to release belt tension.

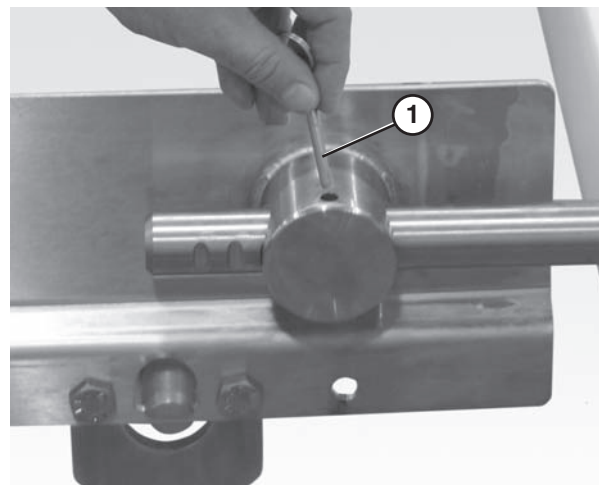


Figure 52

3. Lift up on the belt (**Figure 53**).

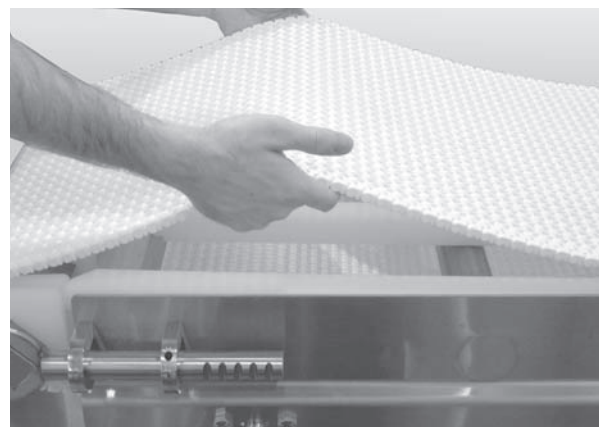


Figure 53

Conveyors with Tip Up Tails and Lifters

1. Remove the guides, if applicable, by removing the pull pins (**Figure 51, item 1**) that connect the guide (**Figure 51, item 2**) to the frame.

Preventative Maintenance and Adjustment

2. Use the lifter handle (Figure 54, item 1) to raise the lifters (Figure 54, item 2) and raise the tip up tail (Figure 54, item 3).

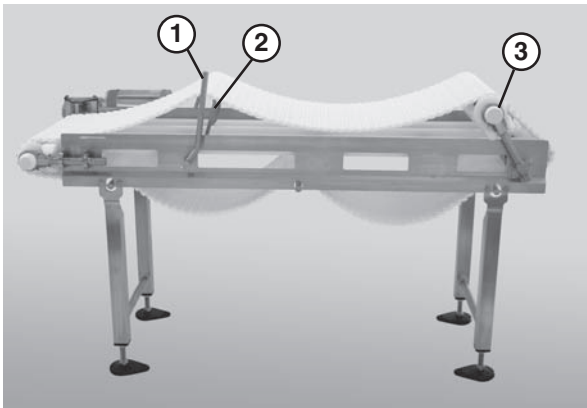


Figure 54



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 19.
- Refer to “Sprocket and Puck Removal” on page 22.
- Refer to “Reassembling Tail Assemblies” on page 24.

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 55, item 1) on the exterior of the bearing shaft assembly.

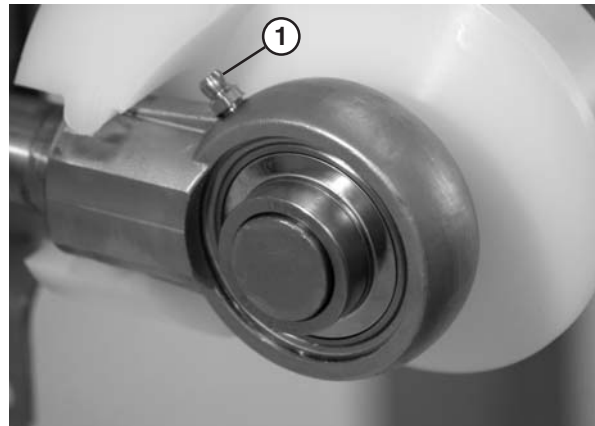


Figure 55

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 wearstrip and belt return installation instructions:

- Refer to “Wear Strip Installation” on page 12.
- Refer to “Belt Return Installation – Straight Frame Sections” on page 16.

Maintaining the Conveyor Belt

Troubleshooting

NOTE

Visit www.dorner.com for complete list of troubleshooting solutions.

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

Preventative Maintenance and Adjustment

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 56, item 1**) that connect the guide (**Figure 56, item 2**) to the frame.

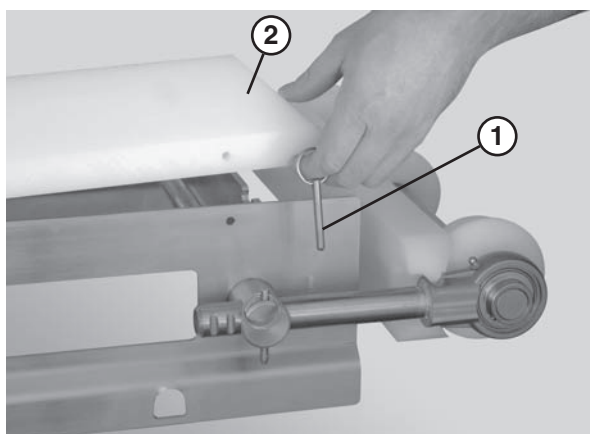


Figure 56

2. Remove the guide (**Figure 57, item 1**).

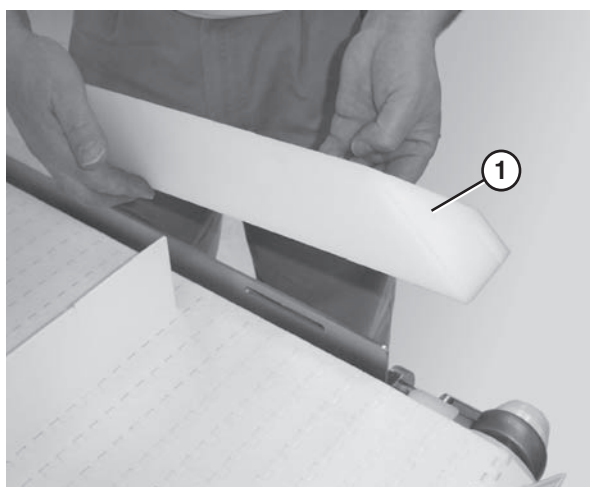


Figure 57

3. Follow the belt replacement procedures described in “Standard Belts” on page 19, or “Specialty Intralox 2400 Series Belts” on page 20.

Standard Belts

Replacing a Section of Belt

1. Remove the pull pins (**Figure 58, item 1**) on the tension end of the conveyor to release tension on the belt.

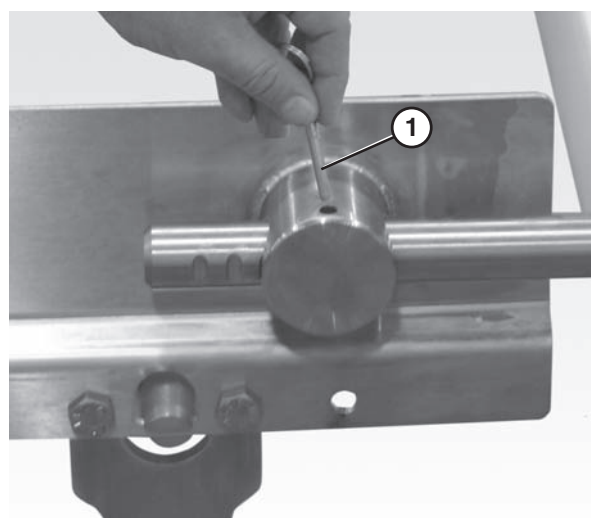


Figure 58

⚠ 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 59, 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 59, item 2**).

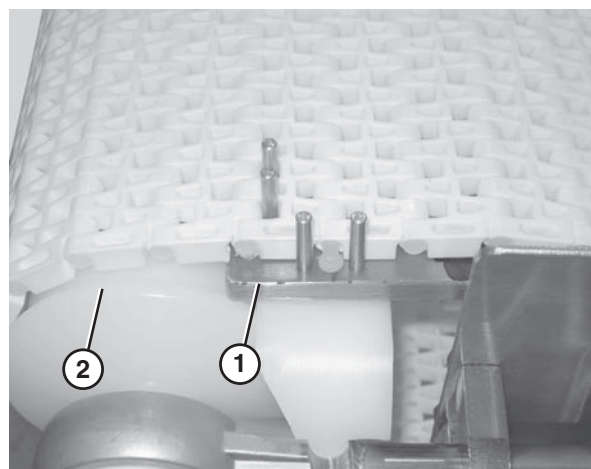


Figure 59

Preventative Maintenance and Adjustment

3. Use a punch and hammer to push the belt rod out by striking the rod end opposite the retaining head (Figure 60).



Figure 60

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 61, item 1) and sliding it through the large hole (Figure 61, item 2) in the frame.

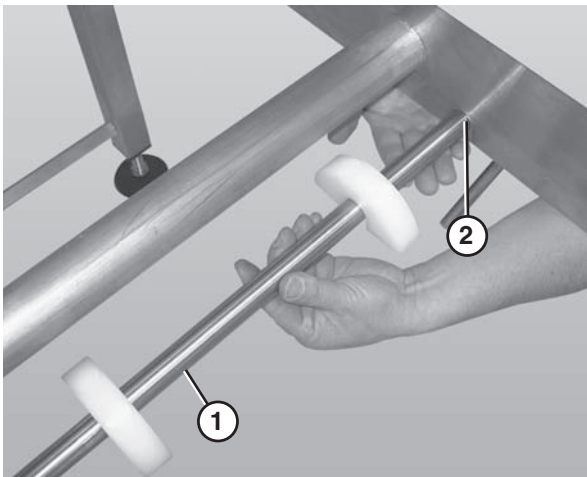


Figure 61

2. Lower the opposite end of the return shaft (Figure 61, item 1) and slide it out of the frame.
3. Follow steps 1 – 3 in "Standard Belts: Replacing a Section of Belt" on page 19.
4. Remove the belt.
5. Replace the damaged or worn belt. Refer to "Belt Installation" on page 14 and "Belt Return Installation" on page 16.

Specialty Intralox 2400 Series Belts

Replacing a Section of Belt

1. Remove the pull pins (Figure 58, item 1) on the tension end of the conveyor to release tension on the belt.

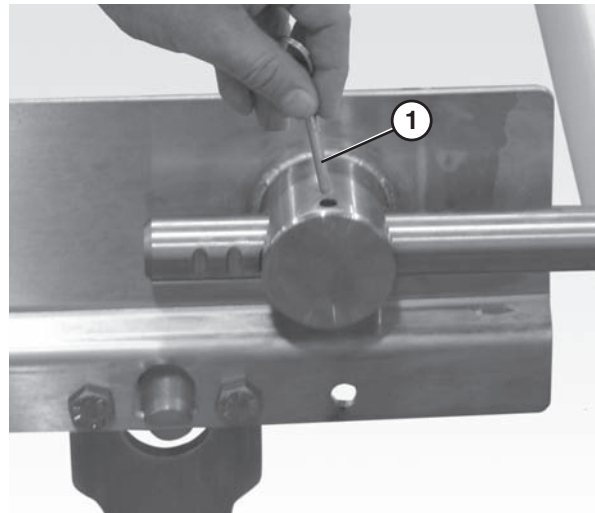


Figure 62

⚠ 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 63, item 1).

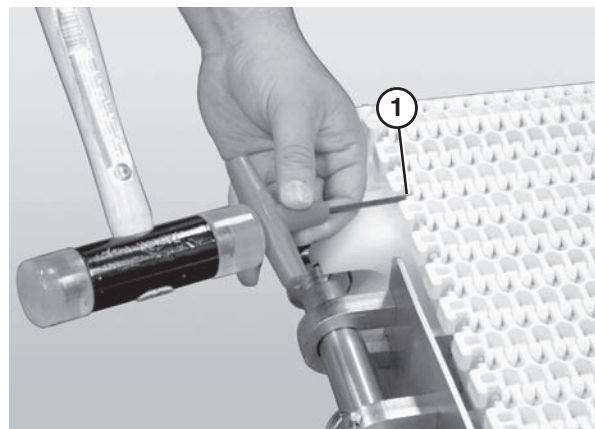


Figure 63

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.

Preventative Maintenance and Adjustment

Replacing the Entire Belt

1. Remove the belt returns by pushing up on the return shaft (**Figure 64, item 1**) and sliding it through the large hole (**Figure 64, item 2**) in the frame.

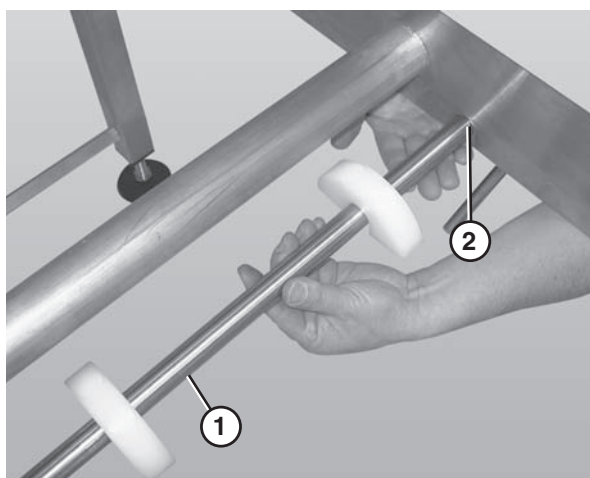





Figure 64

2. Lower the opposite end of the return shaft (**Figure 64, 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 19.
4. Remove the belt.
5. Replace the damaged or worn belt. Refer to "Belt Installation" on page 14 and "Belt Return Installation" on page 16.

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 102 mm from the top of the returns.

1. Remove both pull pins (**Figure 65, item 1**) on the tension end of the conveyor.

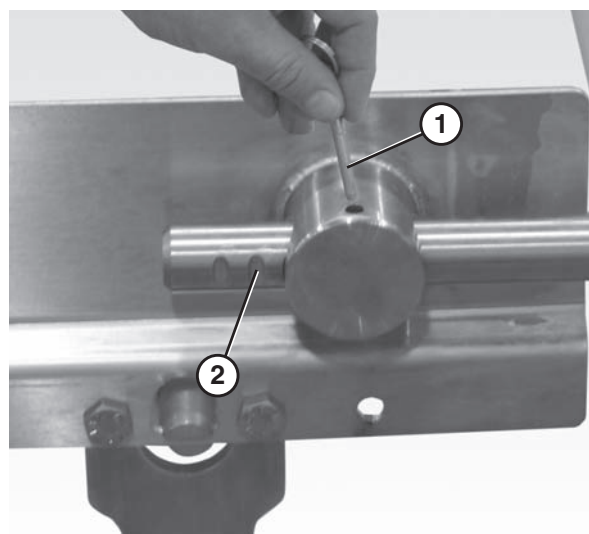


Figure 65

2. Extend the idler tail to the next groove (**Figure 65, item 2**) on the bearing shaft.
3. Continue extending the tension end until the belt is sufficiently tight (**Figure 66**).

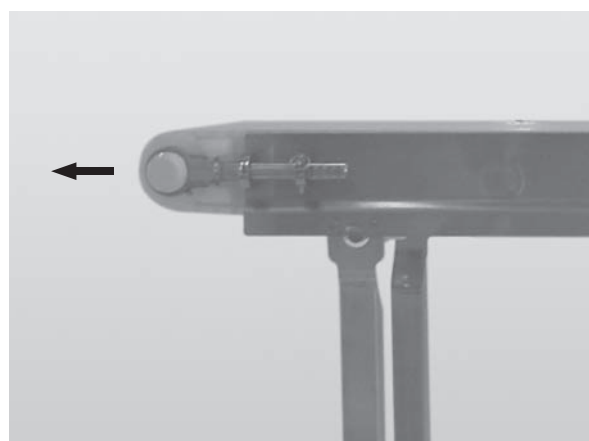


Figure 66

4. Reinsert the pull pins.
5. If no more travel is available, remove one or more belt links to take up the tension. Refer to "Replacing a Section of Belt" on page 19.

Preventative Maintenance and Adjustment

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” on page 19.
2. Remove the desired sprocket / puck by following these instructions:

- A - Drive Sprocket Removal
- B - 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. Remove the plastic cap on the end of the motor and remove the socket head screw (Figure 67, item 1) and the bore plug (Figure 67, item 2).

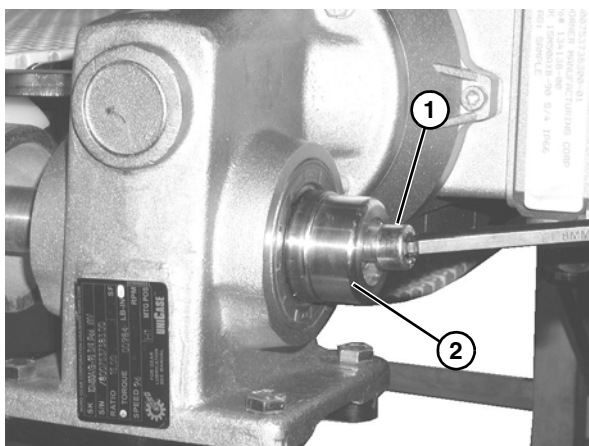


Figure 67

2. Remove the lower gearhead mounting bar (Figure 68, item 1) from the motor mounting bracket (Figure 68, item 2). Remove spacer (Figure 68, item 3).
3. Remove the upper gearhead mounting bar (Figure 68, item 4) from the motor mounting bracket (Figure 68, item 2).

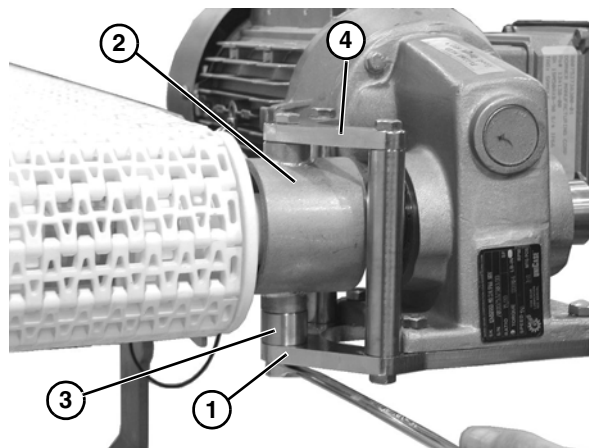


Figure 68

4. Slide the gearmotor (Figure 69, item 1) off of the drive spindle (Figure 69, item 2).

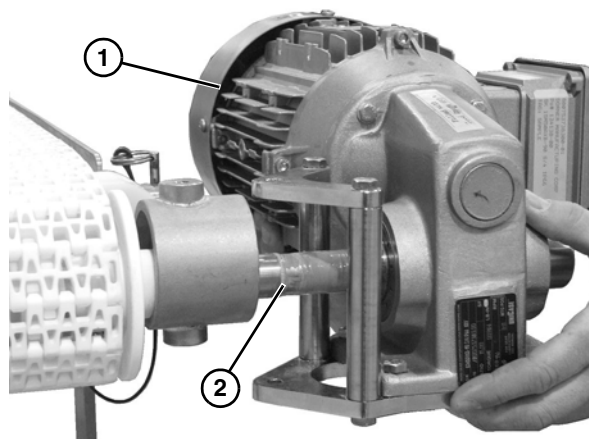


Figure 69

5. Remove the drive spindle key (Figure 70, item 1) from the drive spindle keyway (Figure 70, item 2).

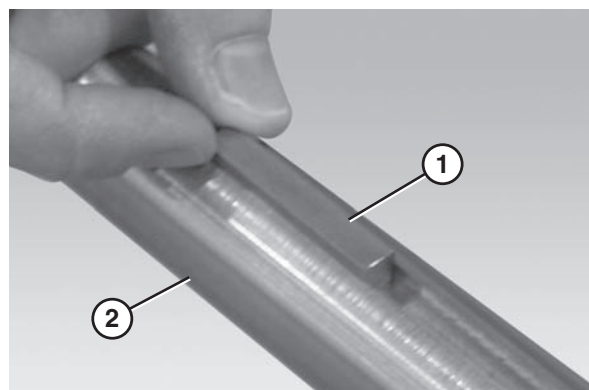


Figure 70

Preventative Maintenance and Adjustment

6. Remove the pull pin (**Figure 71, item 1**).

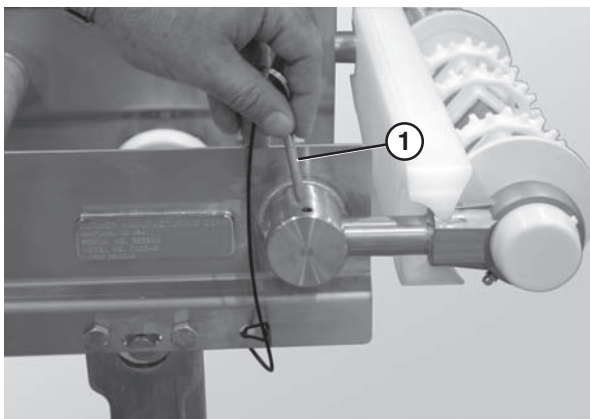


Figure 71

7. Slide the drive tail assembly out of the take up blocks (**Figure 72**).

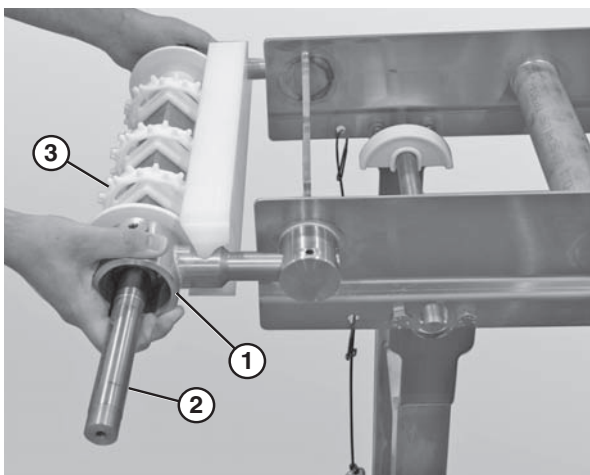


Figure 72

8. Slide the motor support bracket (**Figure 72, item 1**) off the drive spindle (**Figure 72, item 2**).
9. Remove the sprockets (**Figure 72, item 3**).

B - Idler Puck Removal

1. Remove the pull pins (**Figure 71, item 1**).

2. Slide the idler tail assembly (**Figure 73, item 1**) out of the take up blocks (**Figure 73, item 2**).

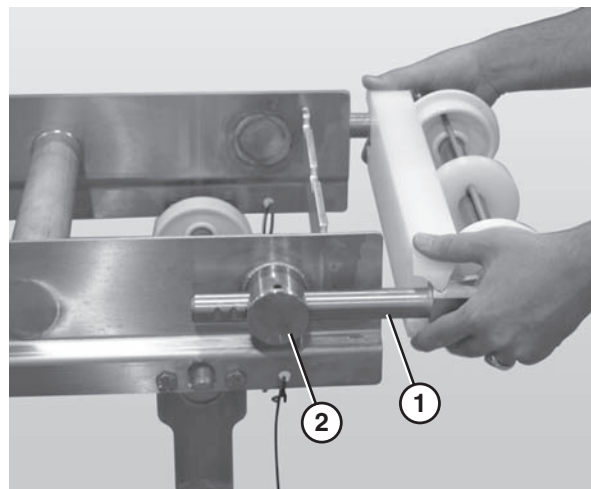


Figure 73

3. Remove the bearing cover (**Figure 74, item 1**).

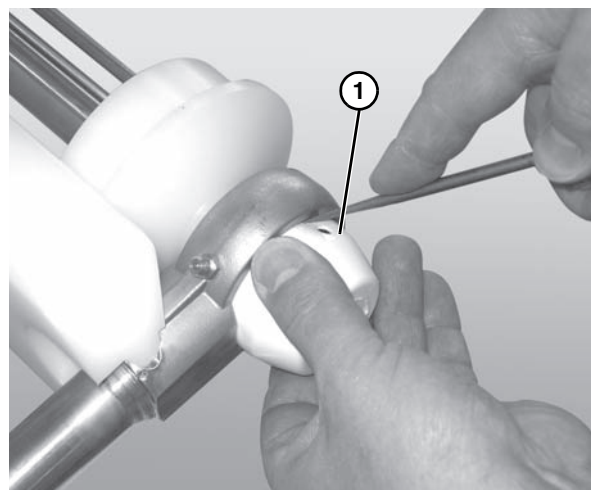


Figure 74

4. Use a hex wrench (**Figure 75, item 1**) to loosen the bearing shaft assembly fasteners (**Figure 75, item 2**).

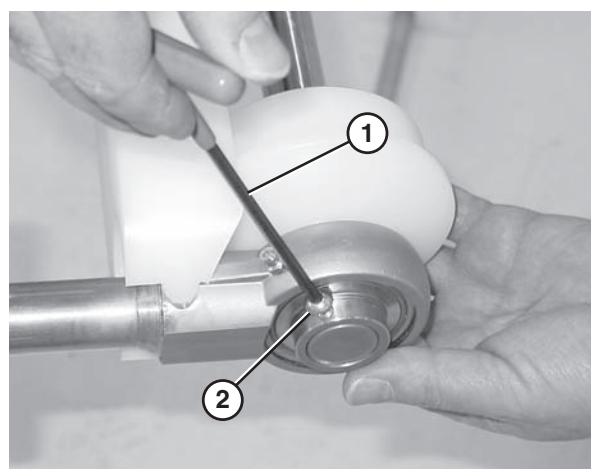


Figure 75

Preventative Maintenance and Adjustment

- Slide the bearing shaft assembly (**Figure 76, item 1**) off the idler shaft (**Figure 76, item 2**).

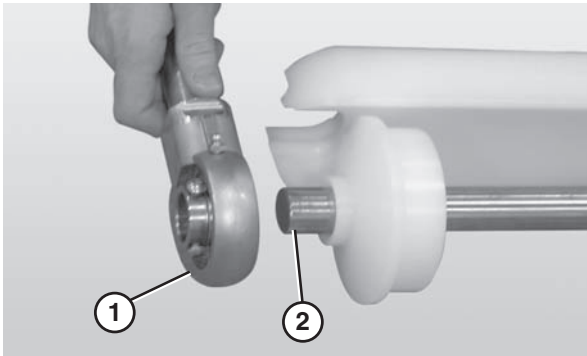


Figure 76

- Remove the guard bar (**Figure 77, item 1**).

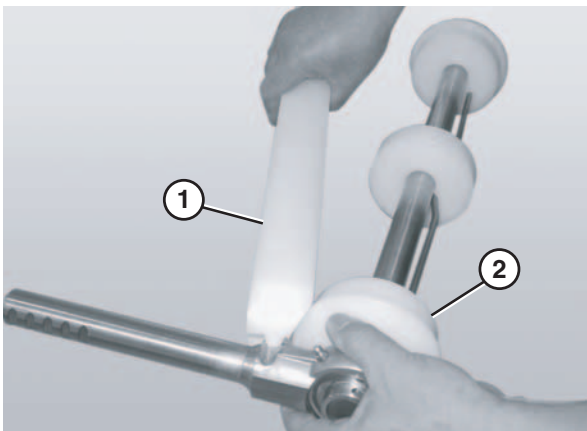


Figure 77

- Remove the pucks (**Figure 77, item 2**).

Reassembling Tail Assemblies

Refer to the "Service Parts" section starting on page 28 for complete diagrams and lists of all tail assembly components.

Idler Tail and Tip Up Tail

- Place the idler puck (**Figure 78, item 1**) at the center of the bent retaining bar (**Figure 78, item 2**).
- Slide the idler puck onto the idler shaft (**Figure 78, item 3**). Make sure to center the idler puck.

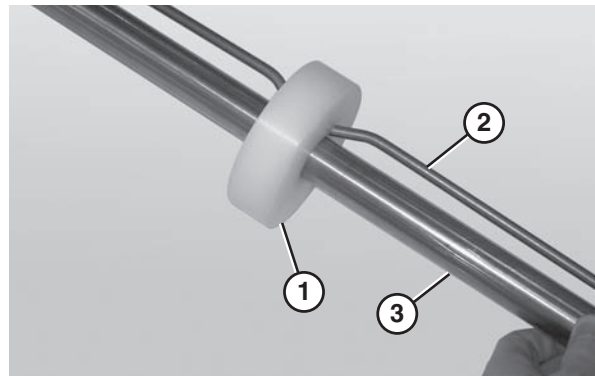


Figure 78

- Attach the flanged pucks (**Figure 79, item 2**) and bearing shaft assemblies to the idler shaft.
- Attach the guard bar (**Figure 79, item 1**).

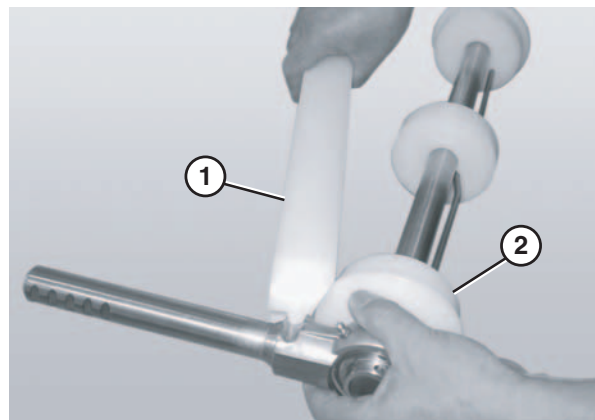


Figure 79

- Use a hex wrench (**Figure 80, item 1**) to tighten the bearing shaft fasteners (**Figure 80, item 2**) to 6 N•m. Check after 24 hours of conveyor use.

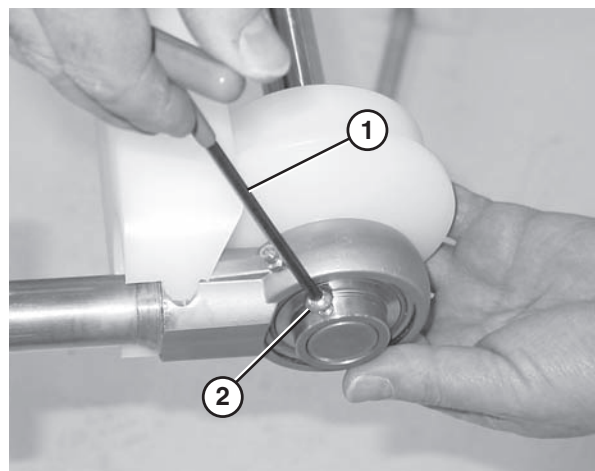


Figure 80

- Attach the bearing covers.

Preventative Maintenance and Adjustment

Drive Tail

1. Attach a flanged puck (**Figure 81, item 1**) and bearing shaft assembly (**Figure 81, item 2**) to the shorter end of the drive spindle.

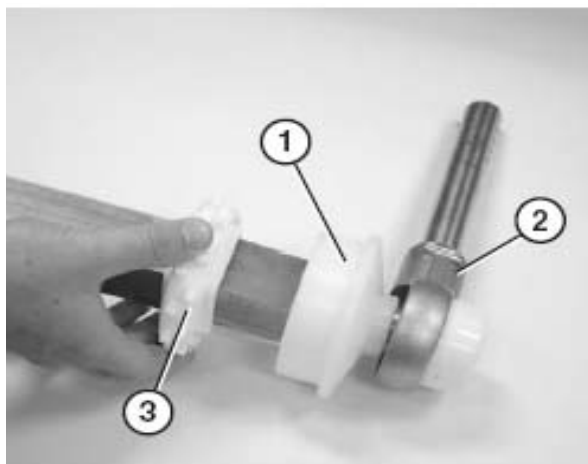


Figure 81

2. Slide the first sprocket (**Figure 81, item 3**) onto the drive spindle.
3. Insert the sprocket alignment bar (**Figure 82, item 1**) into the first sprocket (**Figure 82, item 2**) resting it up against the flanged puck (**Figure 82, item 3**). Position the first sprocket with the notch in the sprocket alignment bar.

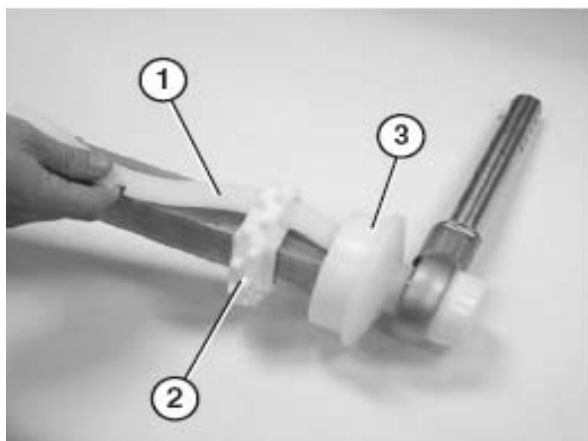


Figure 82

4. Install the remaining sprockets (**Figure 83, item 1**) making sure to position each sprocket with the next available notch (**Figure 83, item 2**) in the sprocket alignment bar.

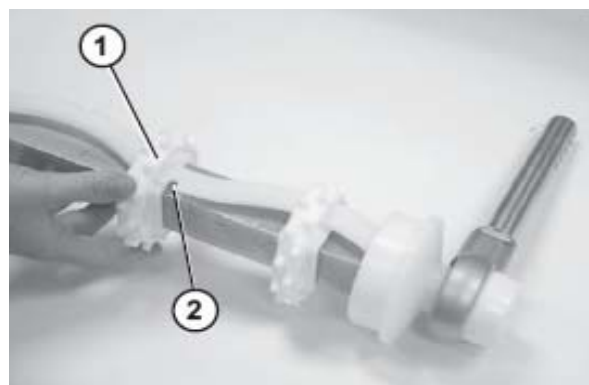


Figure 83

5. Slide the second flanged puck (**Figure 84, item 1**) and the retaining ring (**Figure 84, item 2**) onto the drive spindle.

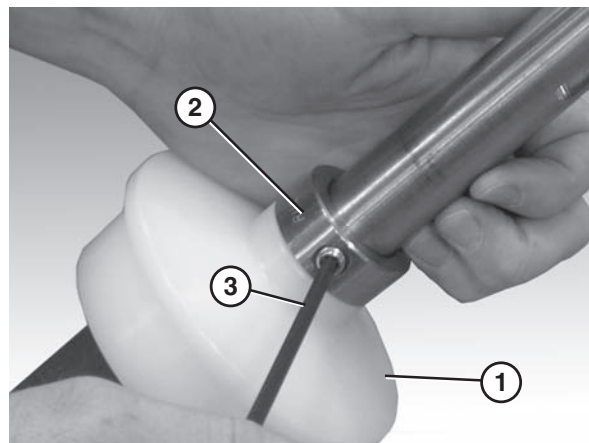


Figure 84

6. Tighten the retainer ring fastener (**Figure 84, item 3**) using a hex wrench.
7. Slide the second bearing shaft assembly, or the motor mount bracket (**Figure 85, item 1**), onto the longer end of the drive spindle (**Figure 85, item 2**).

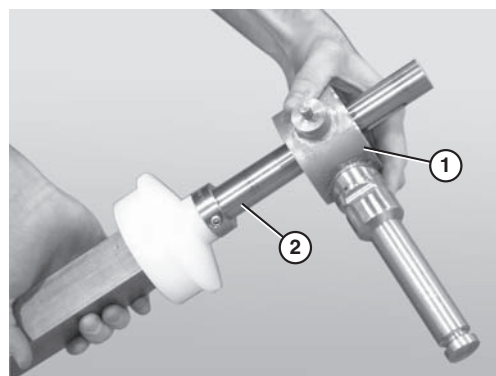


Figure 85

Preventative Maintenance and Adjustment

8. Attach the guard bar (**Figure 86, item 1**) to the bearing / motor mount bracket shafts (**Figure 86, item 2**).

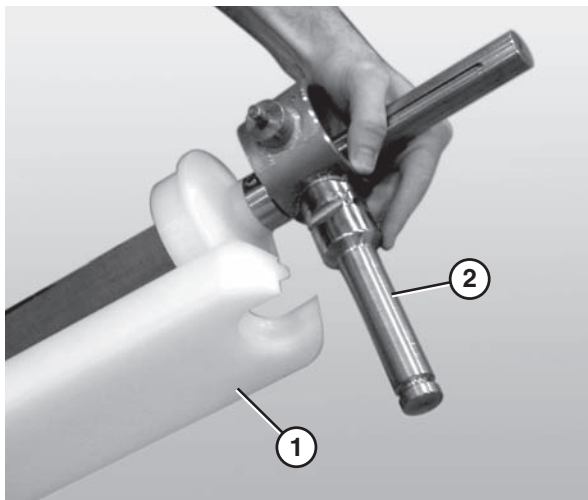


Figure 86

9. Use a hex wrench (**Figure 87, item 1**) to tighten the bearing shaft fasteners (**Figure 87, item 2**) to 6 N•m. Check after 24 hours of conveyor use.

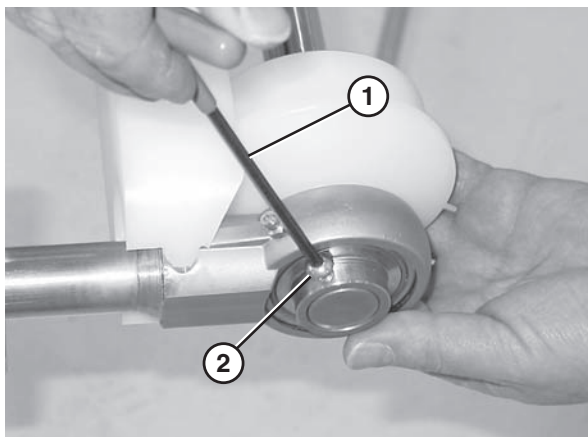


Figure 87

10. Attach the bearing covers.

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 88**).

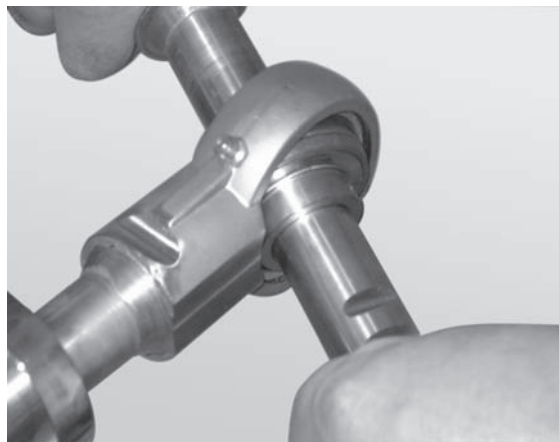


Figure 88

3. Apply lateral pressure to the rod until the bearing comes loose.
4. Remove the worn or damaged bearing (**Figure 89**).

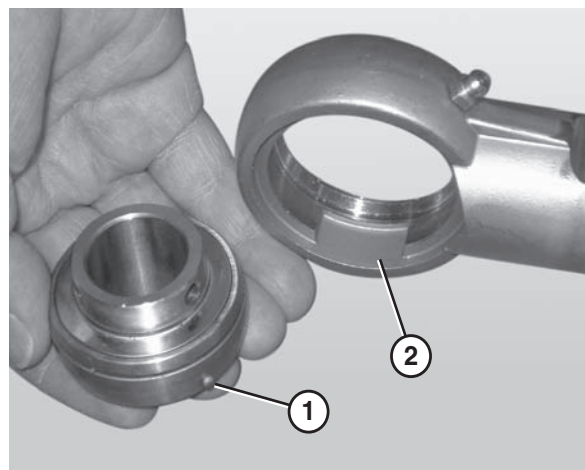


Figure 89

5. Replace the bearing.

NOTE

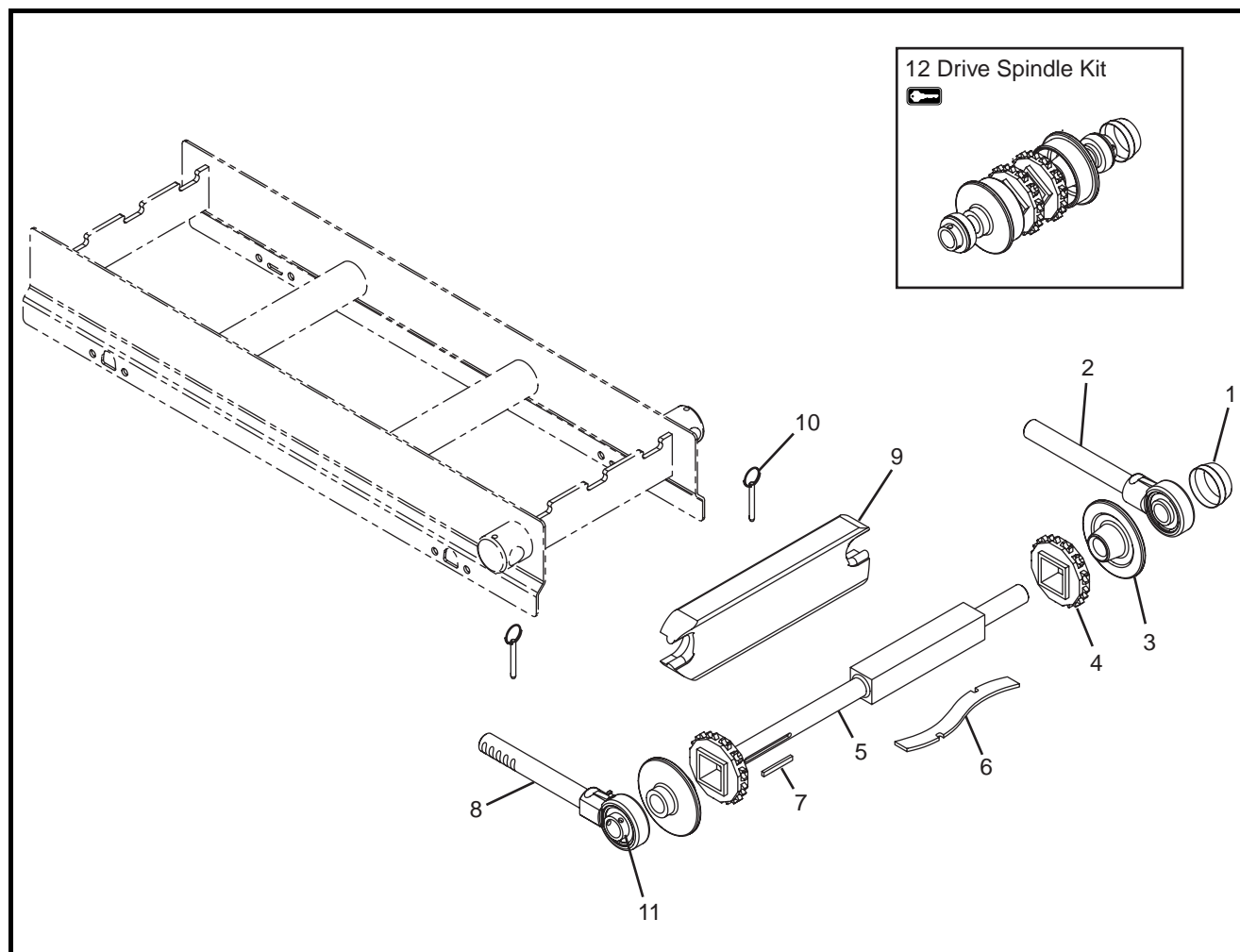
When inserting the new bearing, make sure the anti-rotation notch (**Figure 89, item 1**) on the bearing lines up with the groove inside the housing (**Figure 89, item 2**).

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.

Drive End Components



Item	Part Number	Description
1	807-1454	Bearing Cover
2	500078	Shaft Assembly with Bearing
3	5053WW	Flanged Puck, Drive Tail for Standard 1.00" Pitch Belt
	5071WW	Flanged Puck, Drive Tail for Specialty Intralox 1.00" Pitch Belt
4	807-1444	Sprocket for Standard 1.00" Pitch Belt
	807-1445	Sprocket for Specialty Intralox 1.00" Pitch Belt
5	5295WW	Drive Spindle for Standard 1.00" Pitch Belt
	5294WW	Drive Spindle for Specialty Intralox 1.00" Pitch Belt

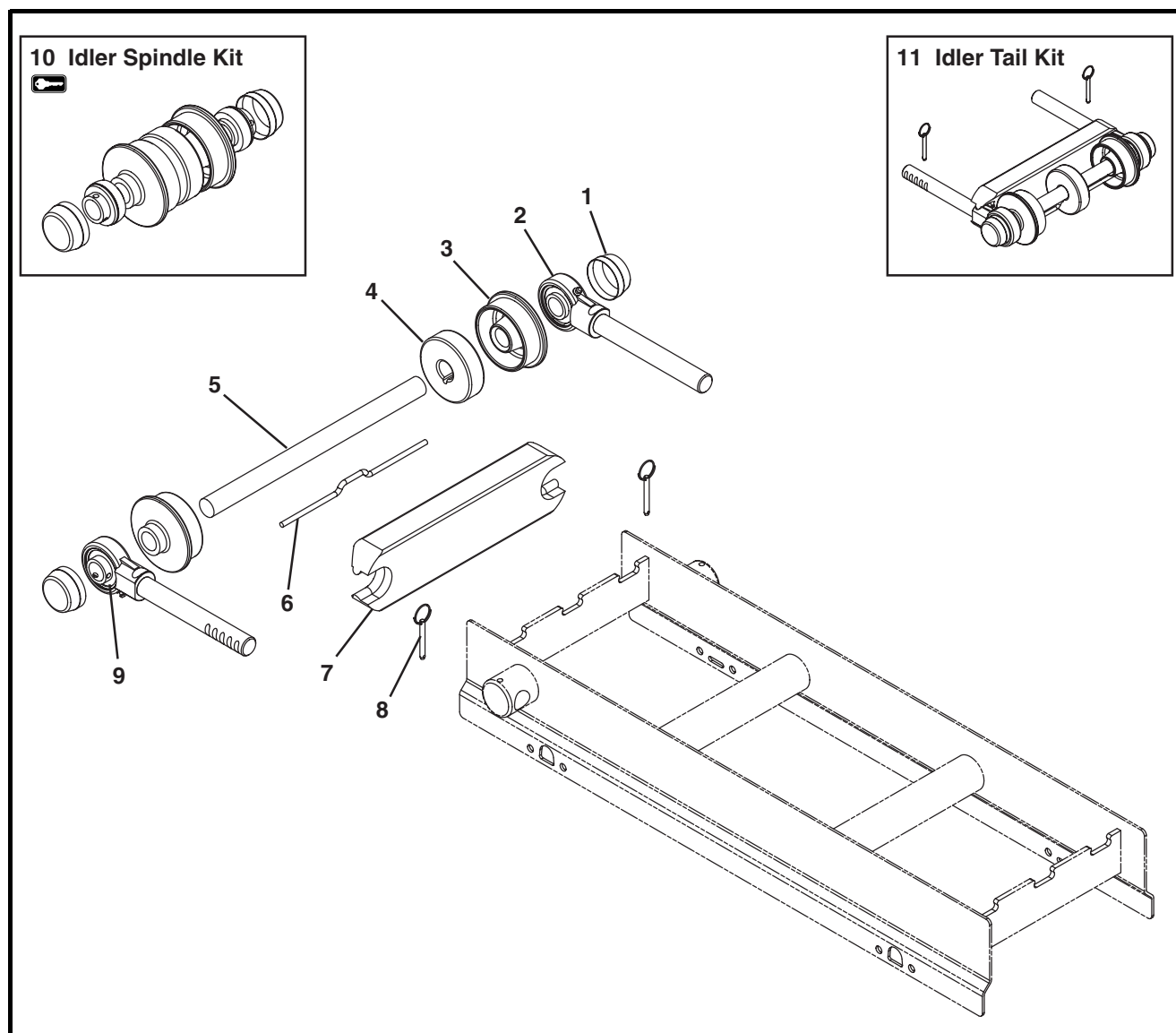
Item	Part Number	Description
6	5090WW	Sprocket Alignment Bar for Standard 1.00" Pitch Belt
	5089WW	Sprocket Alignment Bar for Specialty Intralox 1.00" Pitch Belt
7	912-111SS	Square Key .25x2.50"
8 *	500078	Shaft Assembly with Bearing
9	5009WW	Guard Bar
10	807-1424	Pull Pin
11	802-162	Bearing

Item	Part Number	Description
12 	74DD25- <u>WW</u>	Drive Spindle Kit when Conveyor is ordered with a Dorner Gearmotor Mounting Package for Standard 1.00" Pitch Belt (Includes Items 1, 3, 4 and 11)
	74DD24- <u>WW</u>	Drive Spindle Kit when Conveyor is ordered with a Dorner Gearmotor Mounting Package for Specialty Intralox 1.00" Pitch Belt (Includes Items 1, 3, 4 and 11)
	74DC25- <u>WW</u>	Drive Spindle Kit when Conveyor is ordered without a Dorner Gearmotor Mounting Package for Standard 1.00" Pitch Belt (Includes Items 1, 3, 4 and 11)
	74DC24- <u>WW</u>	Drive Spindle Kit when Conveyor is ordered without a Dorner Gearmotor Mounting Package for Specialty Intralox 1.00" Pitch Belt (Includes Items 1, 3, 4 and 11)
<u>WW</u> = Conveyor width ref: 08 - 36 in 02 increments		
* When the conveyor is ordered with a Dorner gearmotor mounting package the shaft assembly is replaced with a gearmotor mounting bracket.		

Sprocket (Item 4)	
Width	Quantity Required
203 mm	2
254 mm	3
305 mm	3
356 mm	4
406 mm	4
457 mm	5
508 mm	5
559 mm	6
610 mm	6
660 mm	7
711 mm	7
762 mm	8
813 mm	8
864 mm	9
914 mm	9

Service Parts

Tension End Components

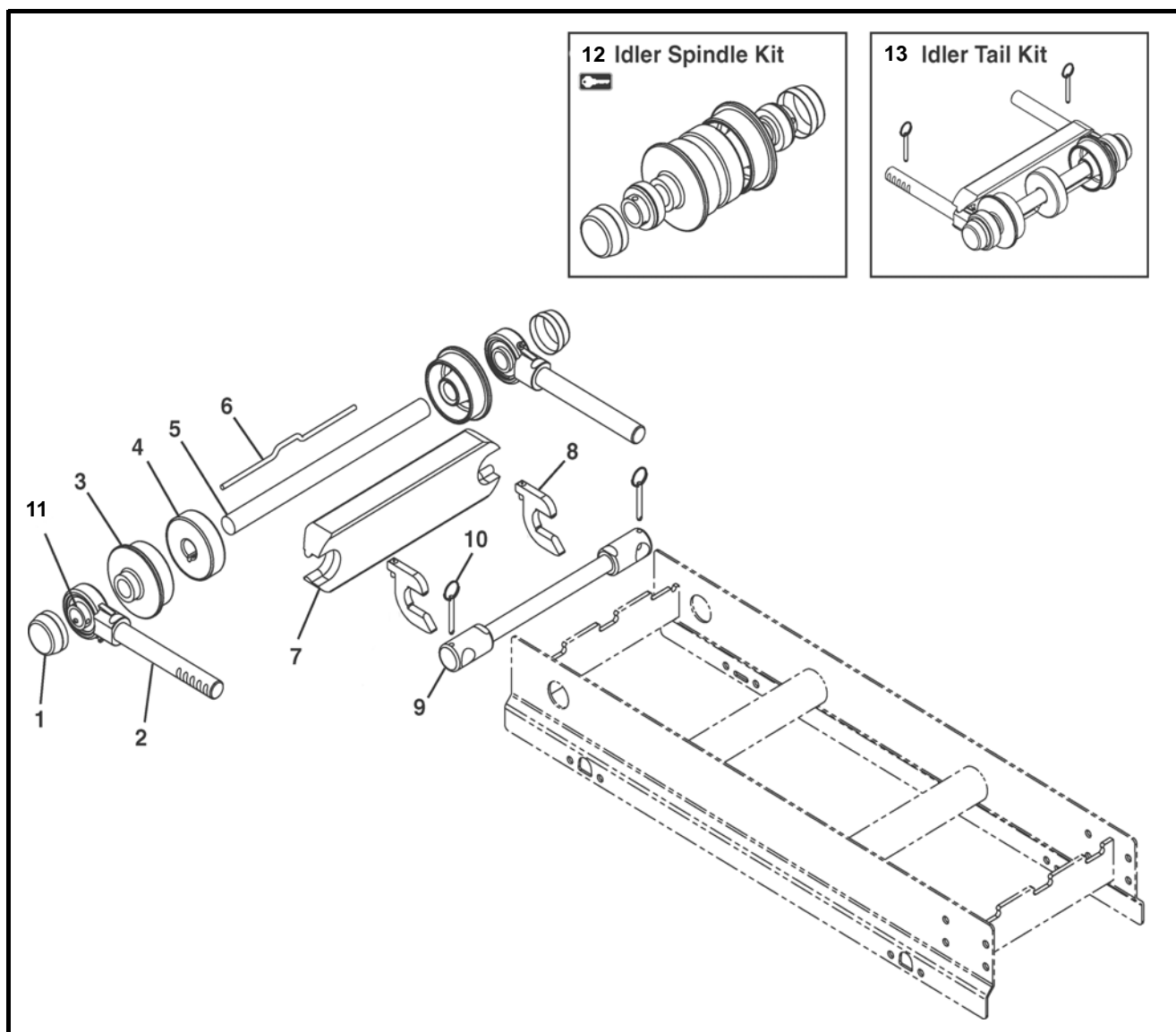


Item	Part Number	Description
1	807-1454	Bearing Cover
2	500079	Shaft Assembly with Bearing
3	5017 WW	Flanged Puck, Idler Tail for Standard Belt
	5072 WW	Flanged Puck, Idler Tail for Specialty Intralox Belt
4	500175	Idler Puck
5	5007 WW	Idler Shaft
6	5008 WW	Bent Retaining Bar for Standard Belt
	5073 WW	Bent Retaining Bar for Specialty Intralox Belt

Item	Part Number	Description
7	5009 WW	Guard Bar
8	807-1469	Pull Pin
9	802-162	Bearing
10	74I- WW	Idler Spindle Kit for Standard Belt (Includes Items 1, 3, 4 and 9)
	74IS- WW	Idler Spindle Kit for Specialty Intralox Belt (Includes Items 1, 3, 4 and 9)
11	74IT- WW	Idler Tail Kit for Standard Belt (Includes Items 1 through 8)
	74ITS- WW	Idler Tail Kit for Specialty Intralox Belt (Includes Items 1 through 8)

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

Tip Up Tension End



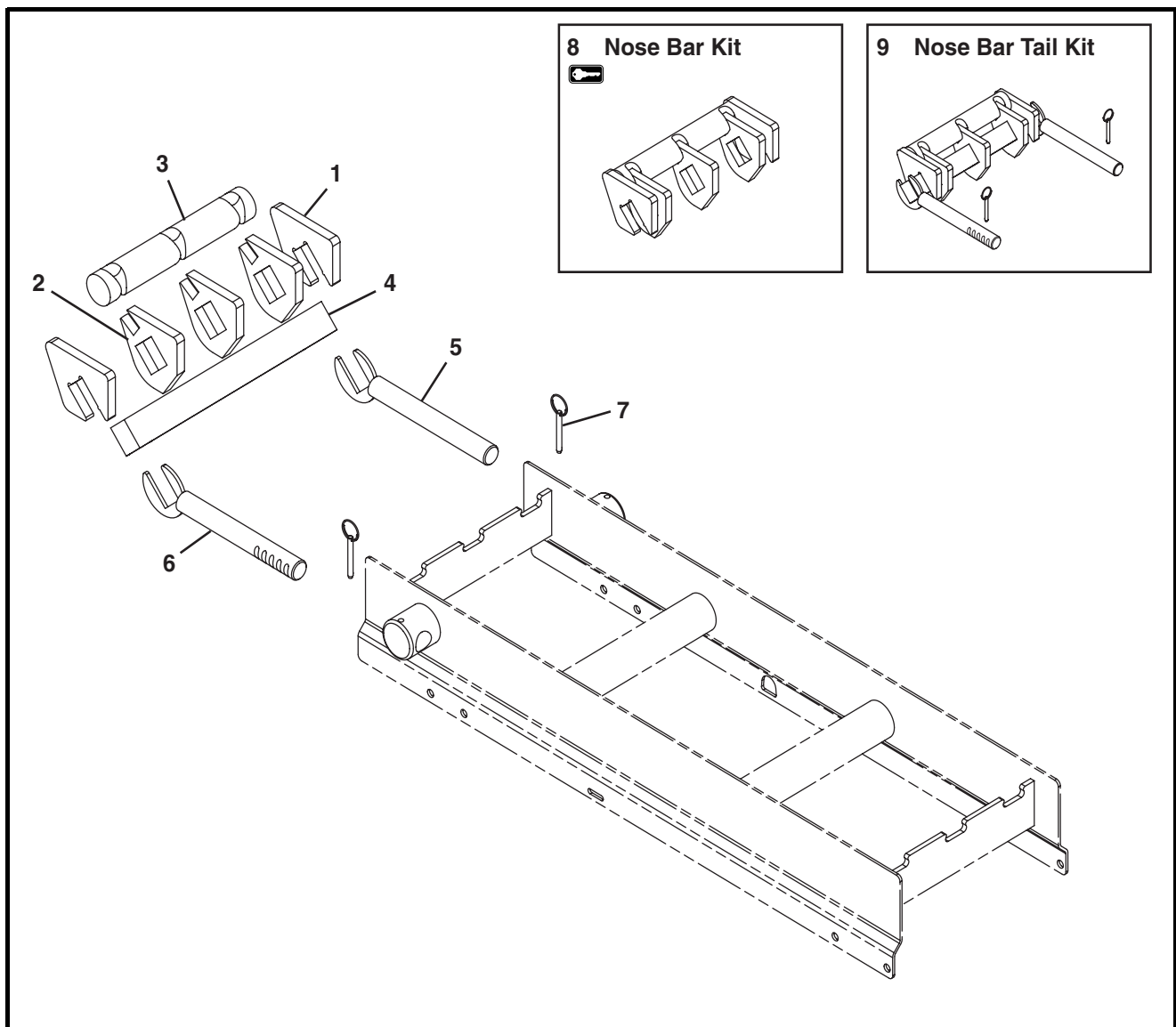
Item	Part Number	Description
1	807-1454	Bearing Cover
2	500079	Shaft Assembly with Bearing
3	5017 WW	Flanged Puck, Idler Tail for Standard Belt
	5072 WW	Flanged Puck, Idler Tail for Specialty Intralox Belt
4	500175	Idler Puck
5	5007 WW	Idler Shaft
6	5008 WW	Bent Retaining Bar for Standard Belt
	5073 WW	Bent Retaining Bar for Specialty Intralox Belt
7	5009 WW	Guard Bar
8	500675	Key Stop
9	5005 WW	Tip Up Shaft Assembly
10	807-1469	Pull Pin
11	802-162	Bearing

Item	Part Number	Description
12	74I- WW	Idler Spindle Kit for Standard Belt (Includes Items 1, 3, 4 and 11)
	74IS- WW	Idler Spindle Kit for Specialty Intralox Belt (Includes Items 1, 3, 4 and 11)
13	74IT- WW	Idler Tail Kit for Standard Belt (Includes Items 1 through 7 and 10)
	74ITS- WW	Idler Tail Kit for Specialty Intralox Belt (Includes Items 1 through 7 and 10)

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

Service Parts

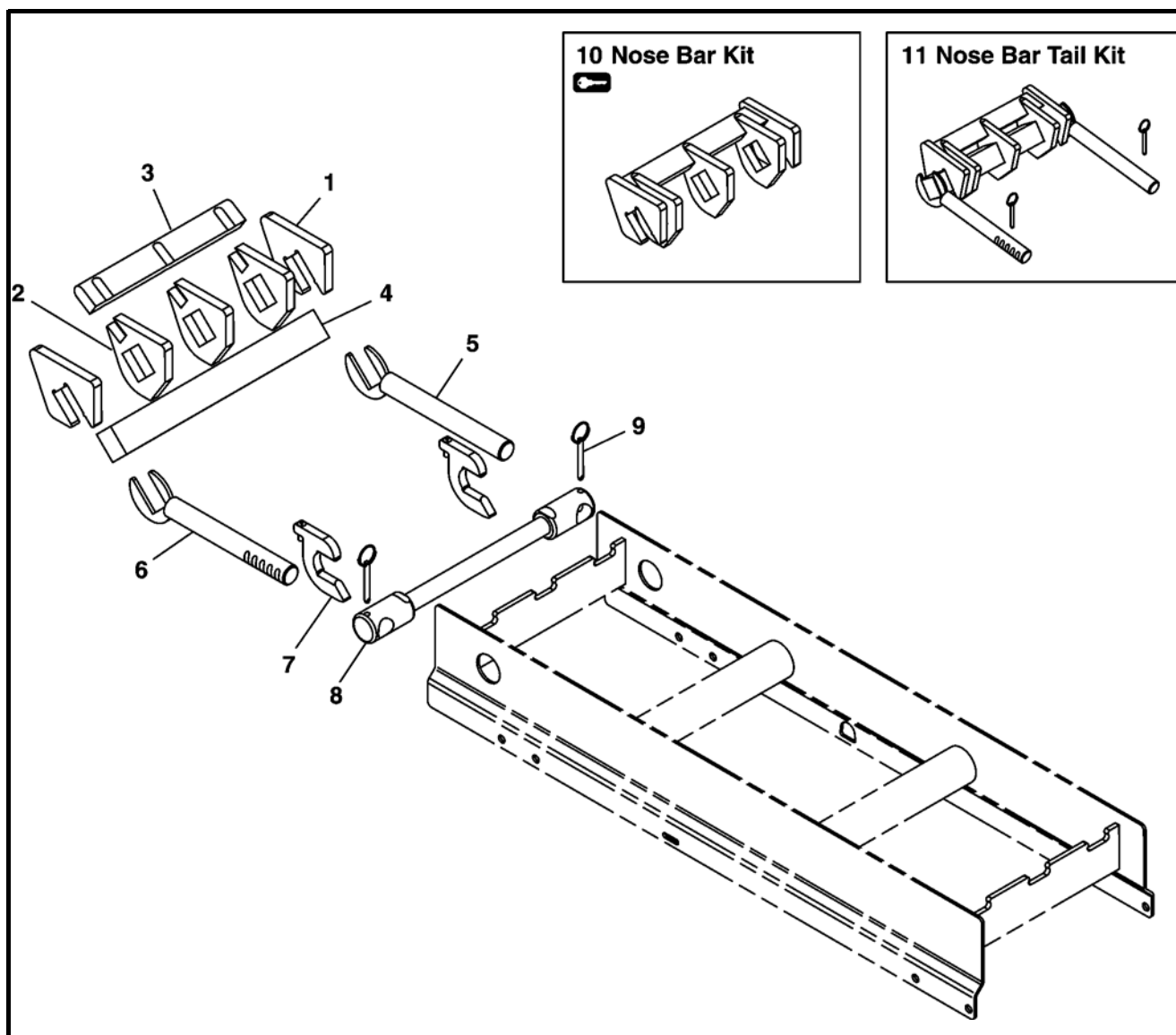
Nose Bar Tension End



Item	Part Number	Description
1	500490	Nose Bar Tracking Puck
2	500278	Nose Bar Puck
3	5058 WW	Nose Bar Wear Strip
4	5037 WW	Nose Bar Transfer Post
5	500487	Nose Bar Idler Shaft Left Hand
6	500488	Nose Bar Idler Shaft Right Hand

Item	Part Number	Description
7	807-1469	Pull Pin
8	74NB1- WW	Nose Bar Kit (Includes Items 1 through 3)
9	74NBT1- WW	Nose Bar Tail Kit (Includes Items 1 through 7)
WW = Conveyor width ref: 08 - 36 in 02 increments		

Nose Bar Tip Up Tension End



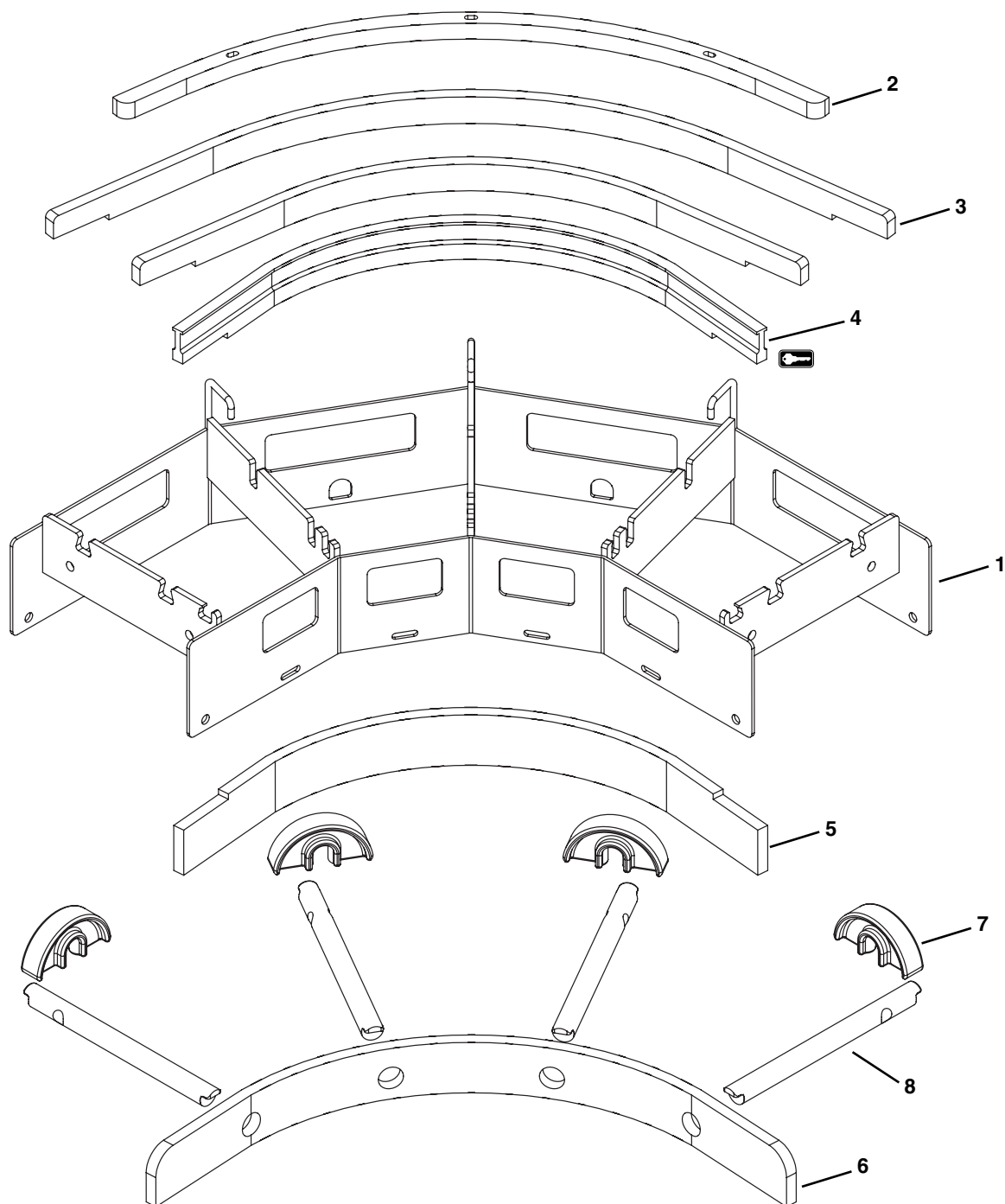
Item	Part Number	Description
1	500490	Nose Bar Tracking Puck
2	500278	Nose Bar Puck
3	5058 WW	Nose Bar Wear Strip
4	5037 WW	Nose Bar Transfer Post
5	500487	Nose Bar Idler Shaft Left Hand
6	500488	Nose Bar Idler Shaft Right Hand
7	500675	Key Stop

Item	Part Number	Description
8	5005 WW	Tip Up Shaft Assembly
9	807-1469	Pull Pin
10	74NB1- WW	Nose Bar Kit (Includes Items 1 through 3)
11	74NBT1- WW	Nose Bar Tail Kit (Includes Items 1 through 6 and 9)

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

Service Parts

Curve Conveyor Frame and Wear Strips

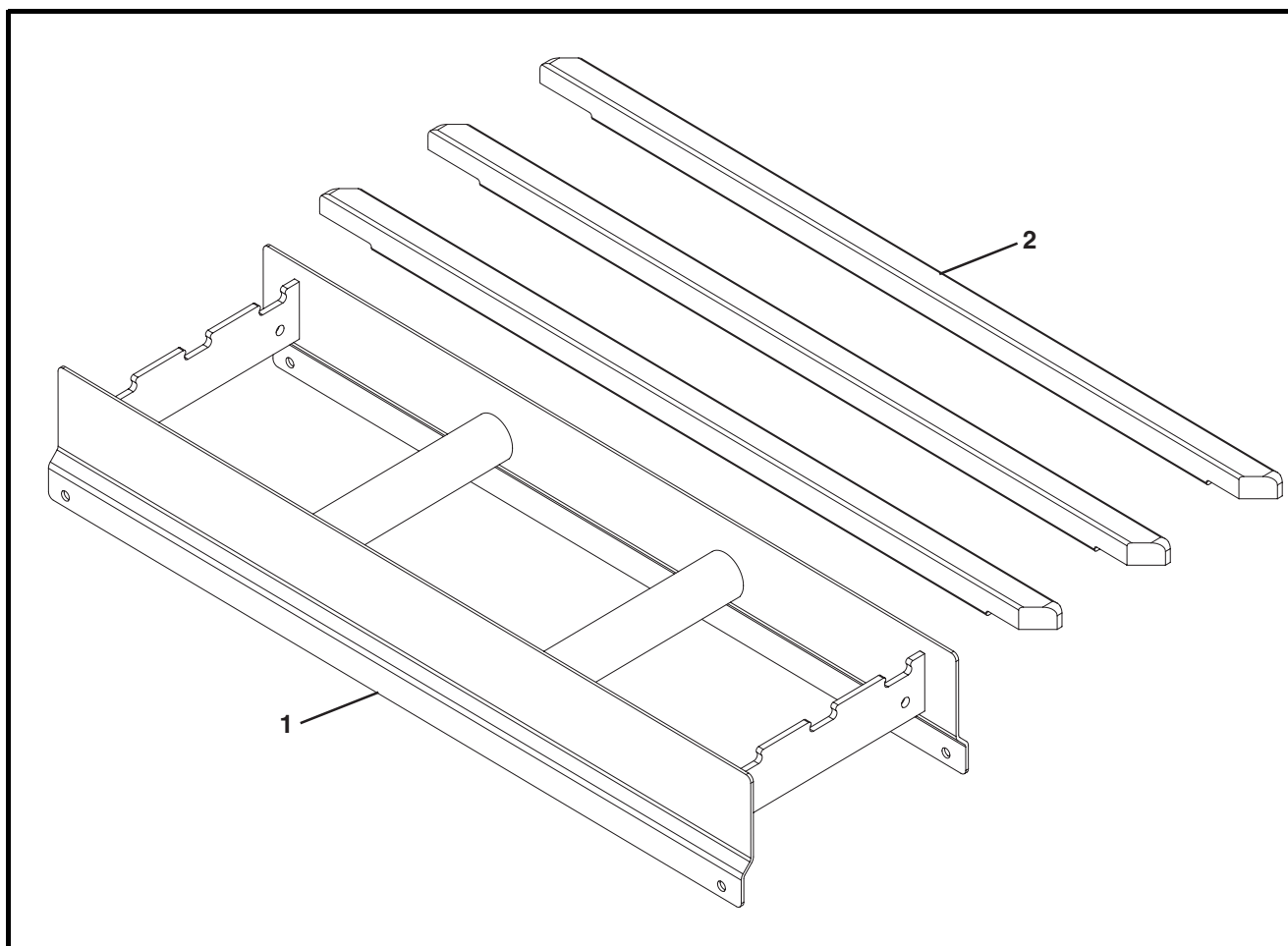


Item	Part Number	Description
1	-----	Consult Factory for Frame Part Number
2	500189- <u>LLLLL</u>	Hold Down Wearstrip
3	500186- <u>LLLLL</u>	Curved Bed Rail Group
4	500187- <u>LLLLL</u>	Low Side Inside Curve Top Wearstrip
	500197- <u>LLLLL</u>	High Side Inside Curve Top Wearstrip
5	500188- <u>LLLLL</u>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

Section Degree of Turn Chart				
		Conveyor Width (<u>WW</u>)		
		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

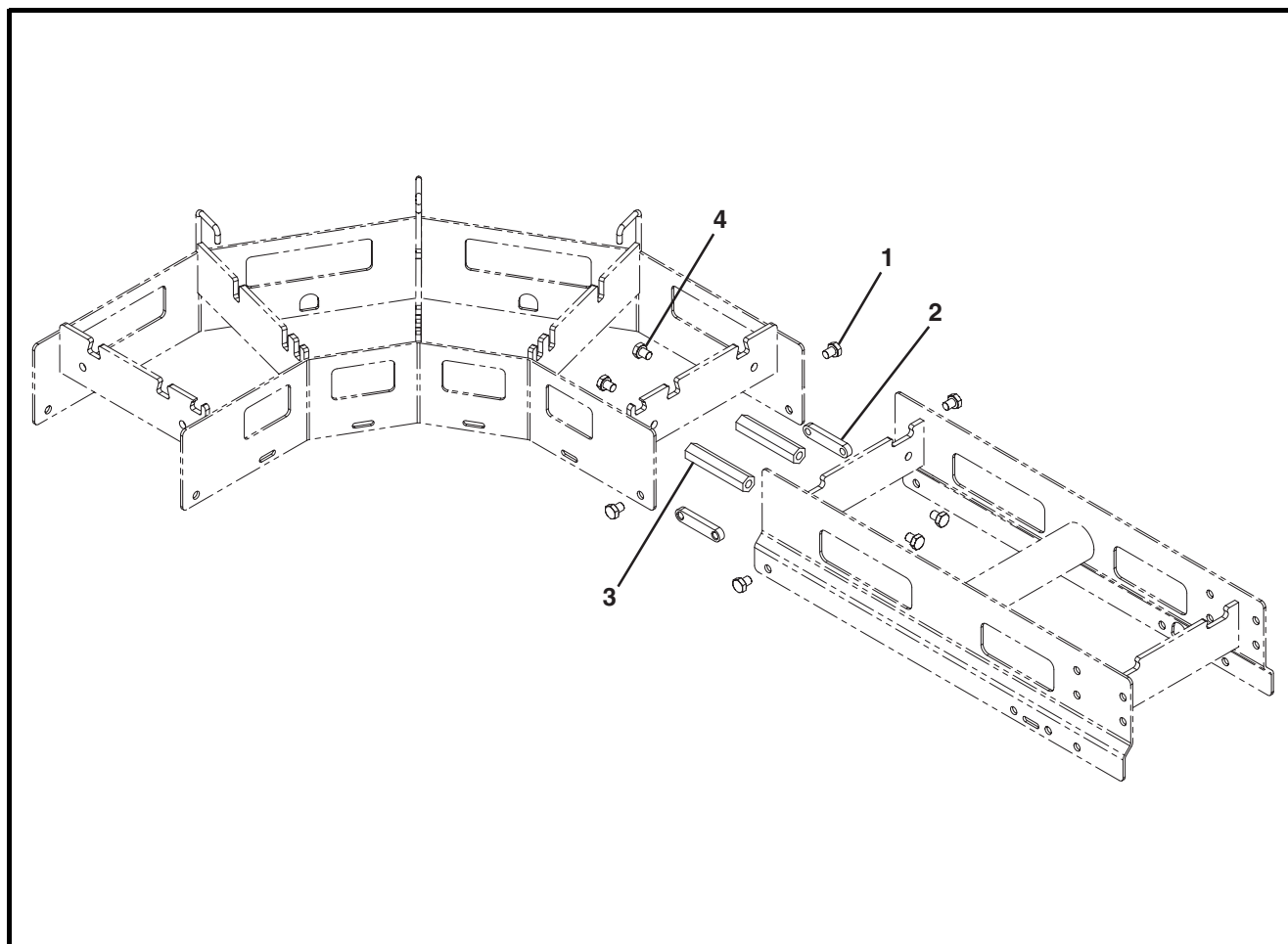


Item	Part Number	Description
1	-----	Consult Factory for Frame Part Number
2	501800-LLL	Straight Wear Strip (Refer to chart)

LLL = Conveyor length ref: 020 - 999 in 001 increments

		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
Conveyor Width (WW)	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

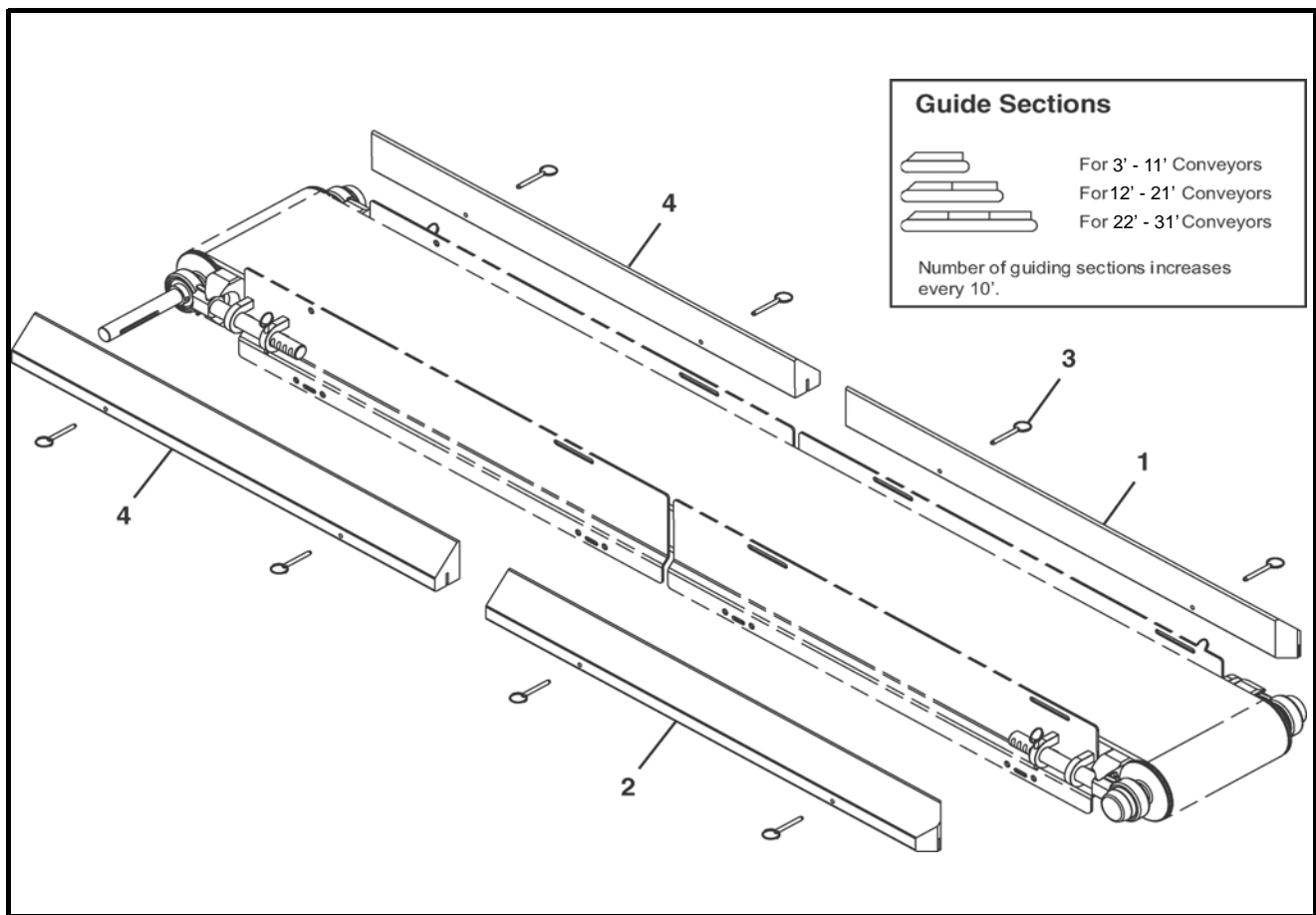


Item	Part Number	Description
1	961016MSS	Hex Head Cap Screw, M10-1.5x16 mm
2	500199	Flat Connector (Not Applicable if Stand Located at Connection)

Item	Part Number	Description
3	500193	Hex Post Connector
4	961016MSS	Hex Head Cap Screw, M10-1.5x16 mm

Service Parts

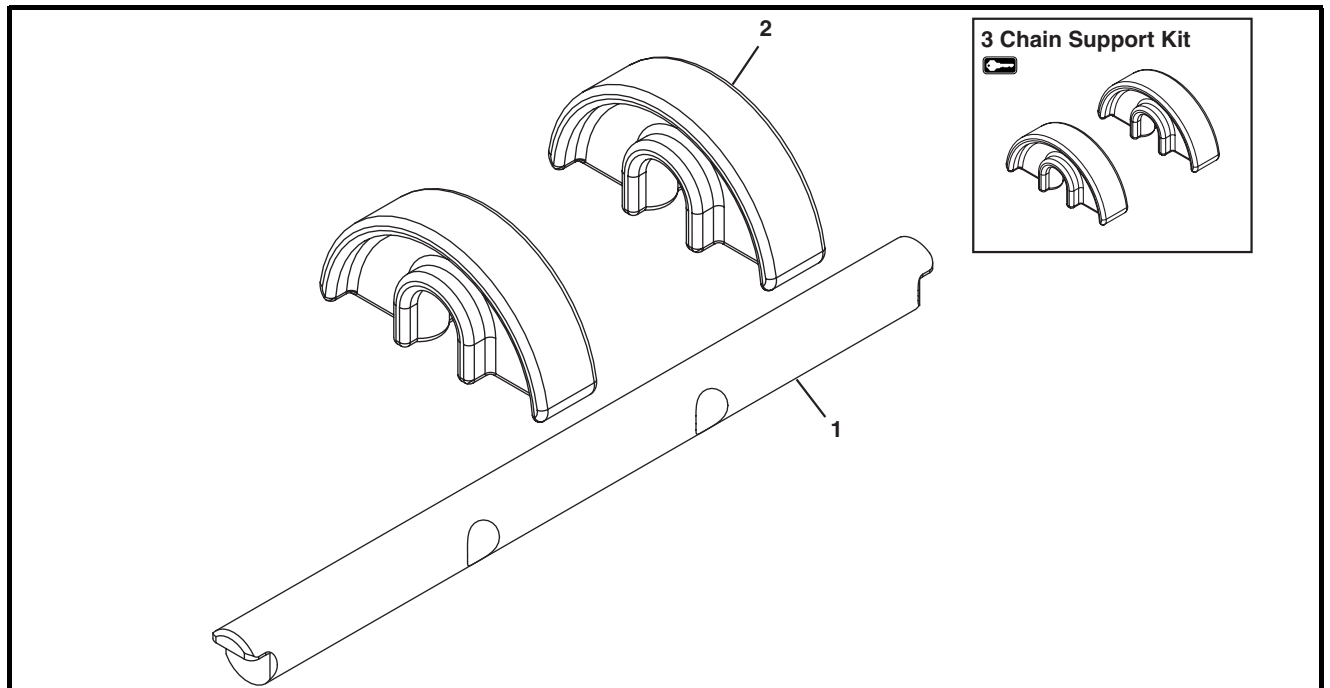
76 mm High Sides



Item	Part Number	Description
1	503501-LLLLL	Right Hand High Side Guide
2	503601-LLLLL	Left Hand High Side Guide
3	807-1553	Pull Pin

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		

Straight Belt Return

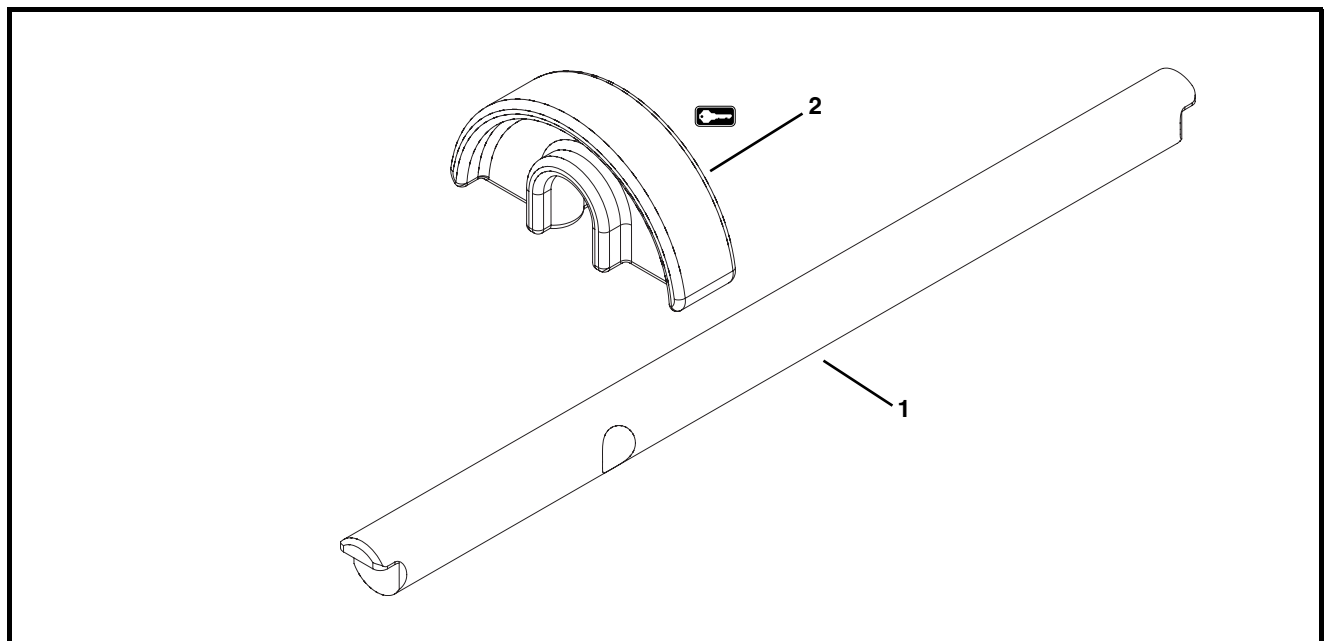


Item	Part Number	Description
1	5032 <u>WW</u>	Return Shaft
2	500075	Chain Return Shoe

Item	Part Number	Description
3	74R- <u>WW</u>	Chain Support Kit (Includes Item 2)

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

Curve Belt Return

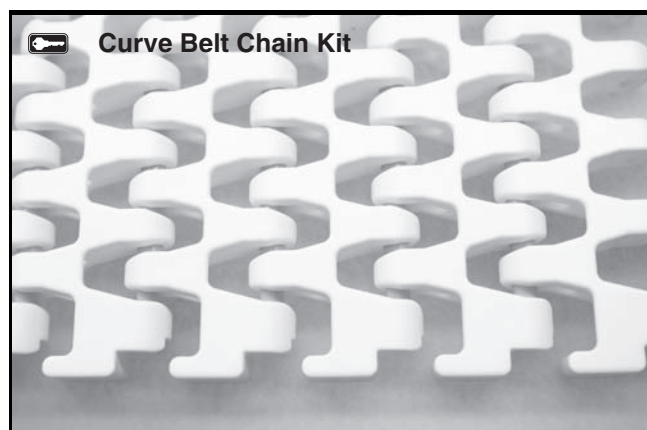



Item	Part Number	Description
1	5033 <u>WW</u>	Curve Return Shaft
2	500075	Chain Return Shoe

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

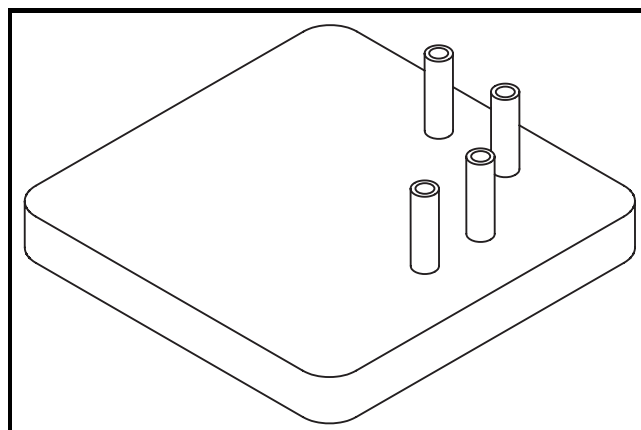
Service Parts

Curve Belt Chain Kit



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

Belt Removal Tool



Item	Part Number	Description
1	500581	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

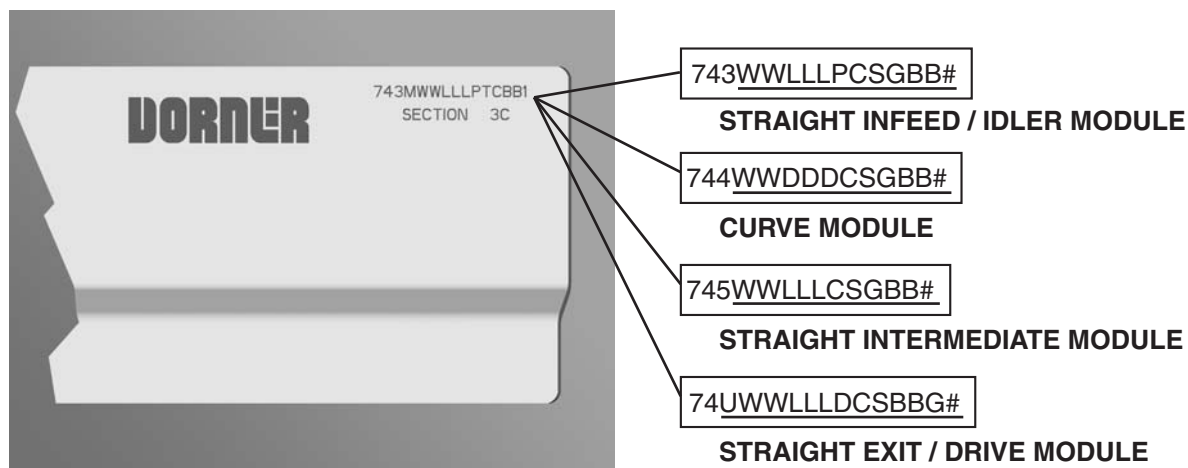


Figure 90

Curve Conveyor

Refer to your serial and model number plate (**Figure 90**). 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: 7432412015B1MR1

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: 745241807Z1MR3

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: 744240901Z1MR4

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

Straight Exit / Drive Module

Example: 74U2404817CMR15

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.

A representative will discuss action to be taken on the returned items and provide a Returned Goods Authorization number for reference.

There will be a return charge on all new undamaged items returned for credit where Dorner was not at fault. Dorner is not responsible for return freight on such items.

Conveyors and conveyor accessories

Standard catalog conveyors	30%
MPB Series, cleated and specialty belt conveyors	50%
7400 & 7600 Series conveyors	non-returnable items
Engineered special products	case by case
Drives and accessories	30%
Sanitary stand supports	non-returnable items

Parts

Standard stock parts	30%
MPB, cleated and specialty belts	non-returnable items

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 Technical Sales, Catalog Sales and Service Teams 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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