DORNER®

AquaPruf® ULTIMATE

7400 Ultimate Series CE Curved Nose Bar Conveyors

Installation, Maintenance and Parts Manual

United States Department of Agriculture
USDA
Accepted Equipment

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851-649 Rev. B

CE

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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

NOTE

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

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 .

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	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 (LLL)	020 – 999 in 001 increments
Conveyor Length	508 mm (20”) – 25.4 m (999") in 25 mm (1") 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 (3 ft)
2 (Outfeed) = 914 mm (3 ft)
**** Stand positions will be determined by the factory.**

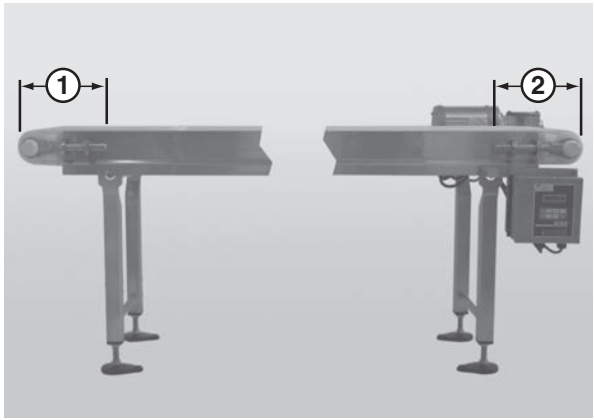
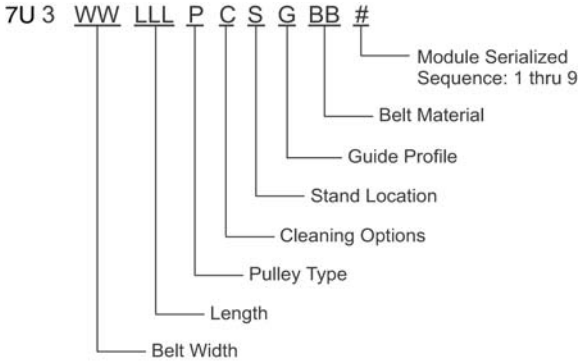


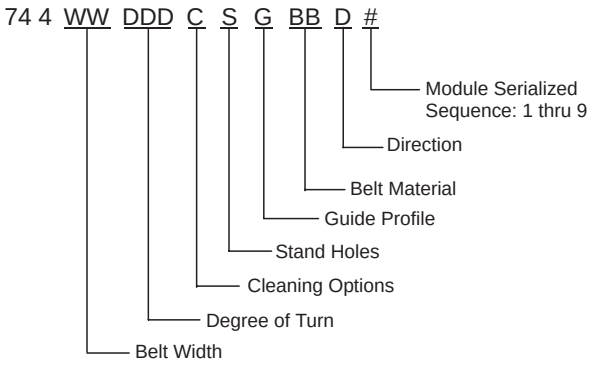
Figure 2

7400 Series Frame Section Numbers

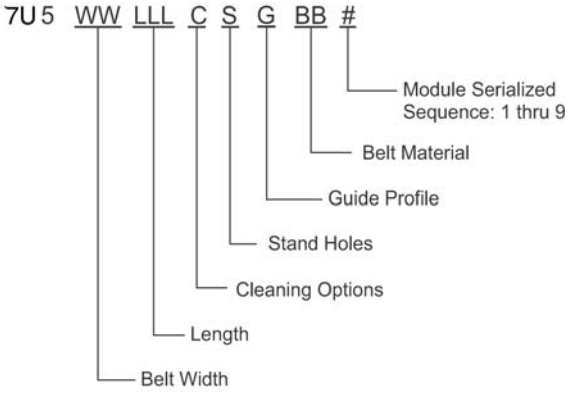
Straight Infeed / Idler Module



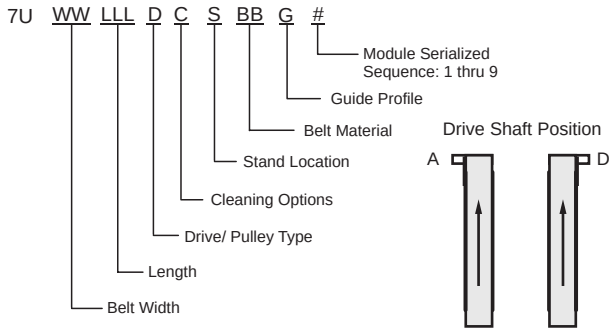
Curve Module



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.

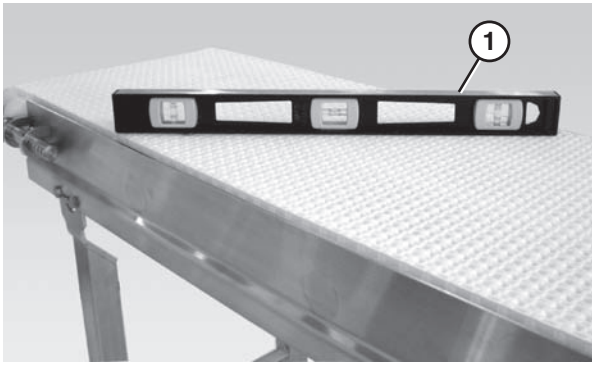


Figure 3

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 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)
7	O-ring (x8)

* For connections not supported by stands.

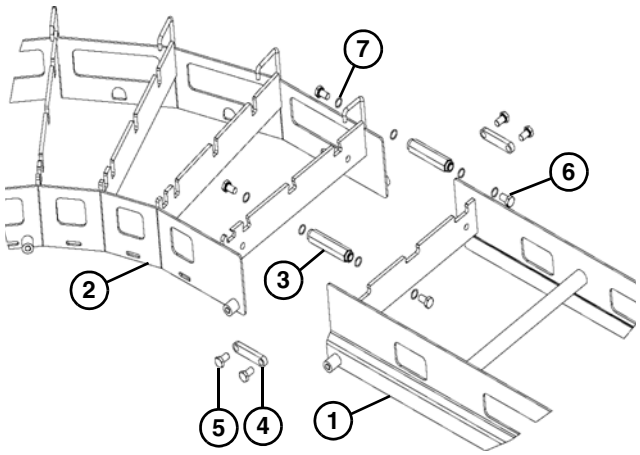


Figure 4

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

Figure 5

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

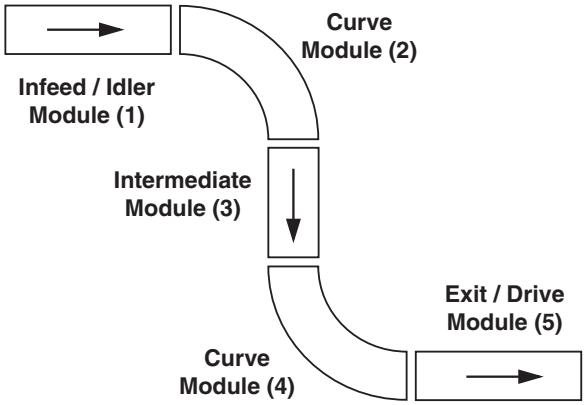


Figure 6

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)

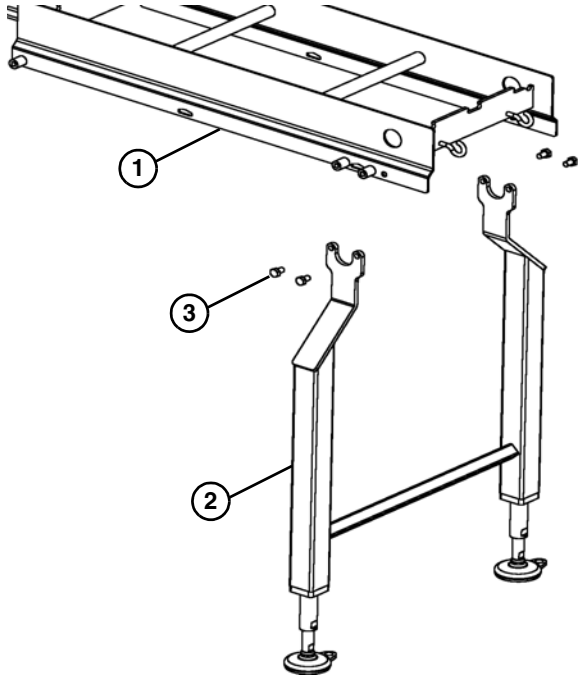


Figure 7

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

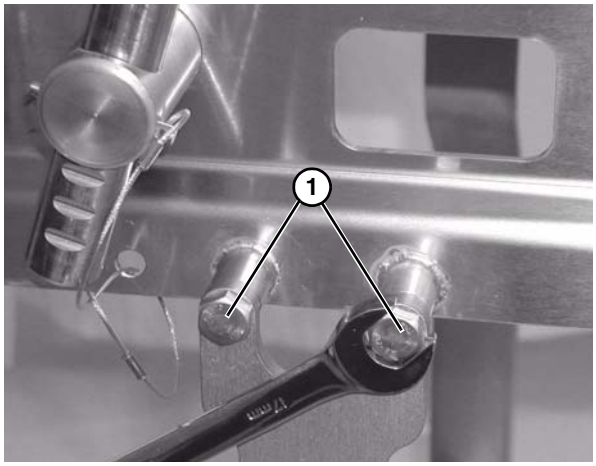


Figure 8

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

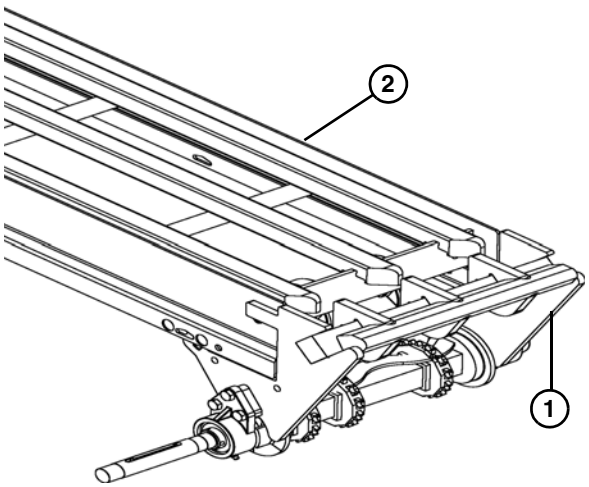


Figure 9

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

Nose Bar Tip Up Tail

Typical Nose Bar Tip Up Tail Components **(Figure 10)**.

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

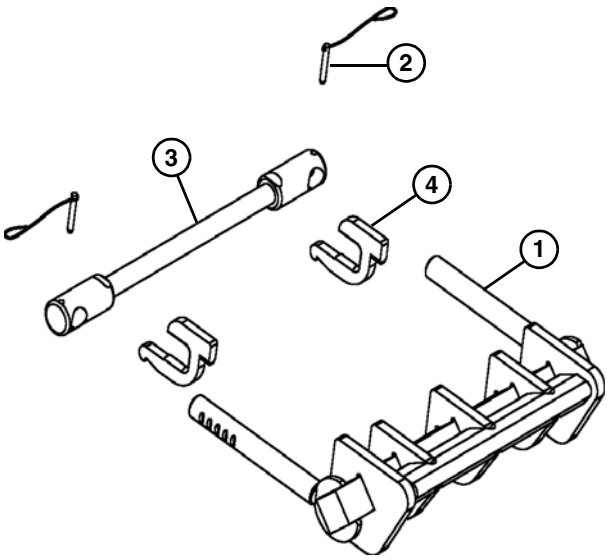


Figure 10

1. Slide the tip up shaft **(Figure 11, item 1)** through the designated slots in the frame.

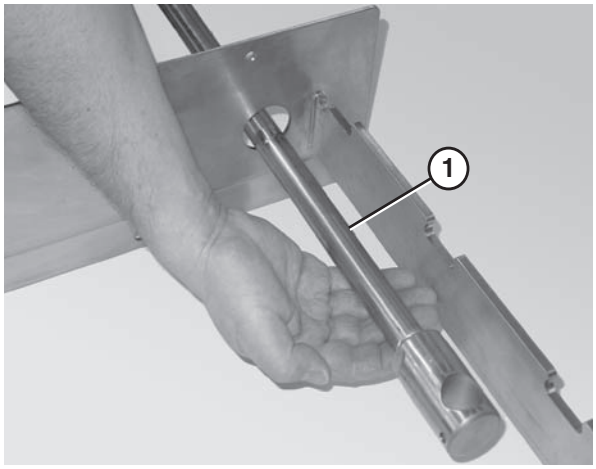


Figure 11

2. Attach the key stops **(Figure 12, item 1)** to the tip up shaft **(Figure 12, item 2)**. The rounded end of the key stop should face the tail.

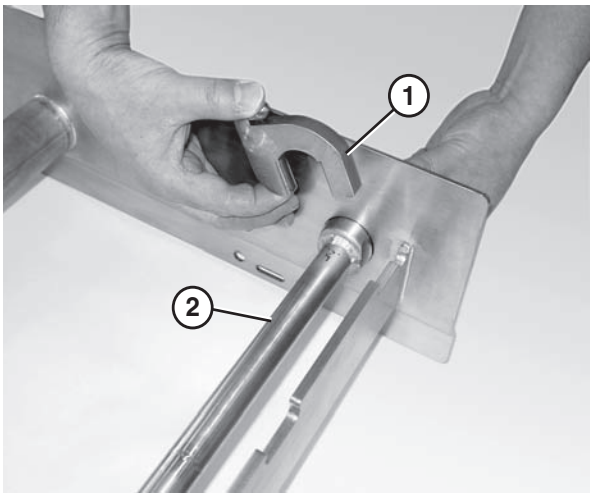


Figure 12

3. Attach the nose bar idler shaft hands **(Figure 13, item 1)** to the tip up shaft **(Figure 13, item 2)**.

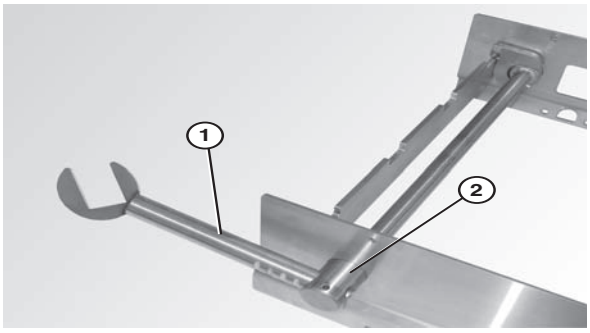


Figure 13

4. Attach the nose bar transfer post **(Figure 14, item 1)** to the nose bar idler shaft hands **(Figure 14, item 2)**.

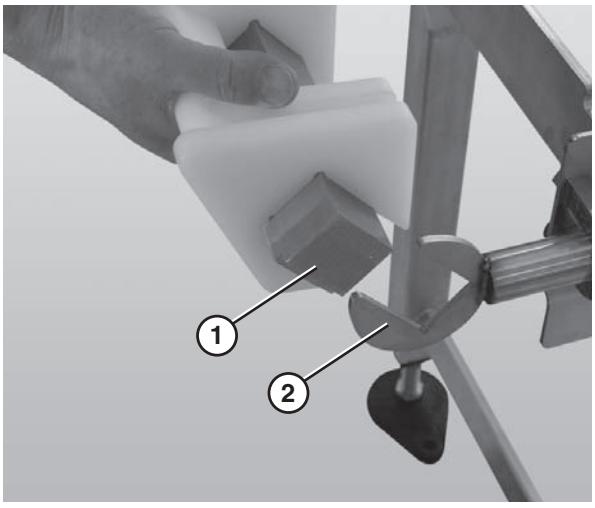


Figure 14

5. Ensure that the nose bar pucks **(Figure 15, item 1)** are in line with the conveyor frame **(Figure 15, item 2)**.

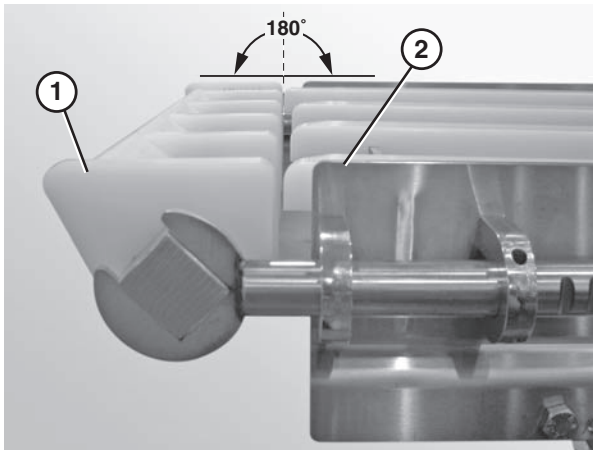


Figure 15

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)

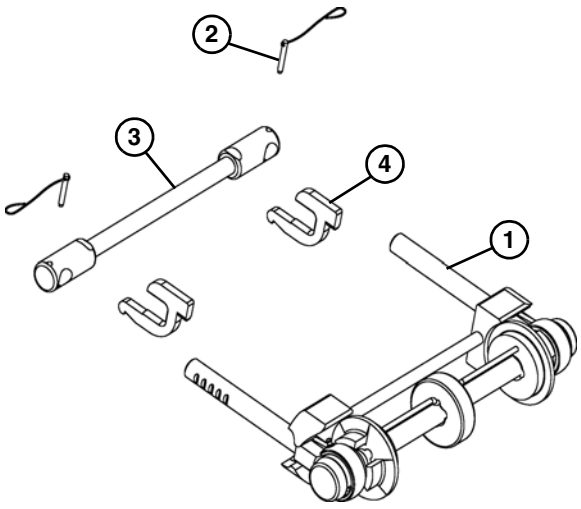


Figure 16

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

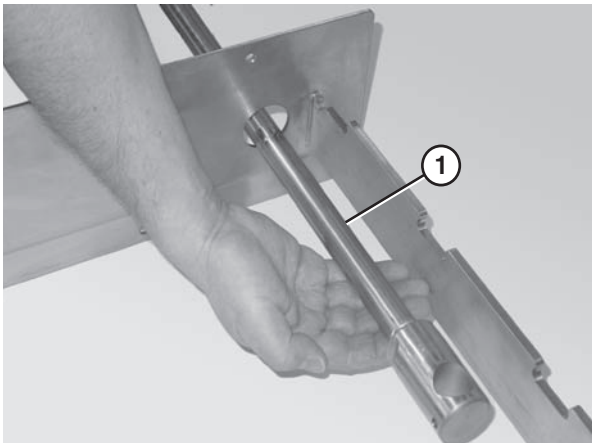


Figure 17

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.

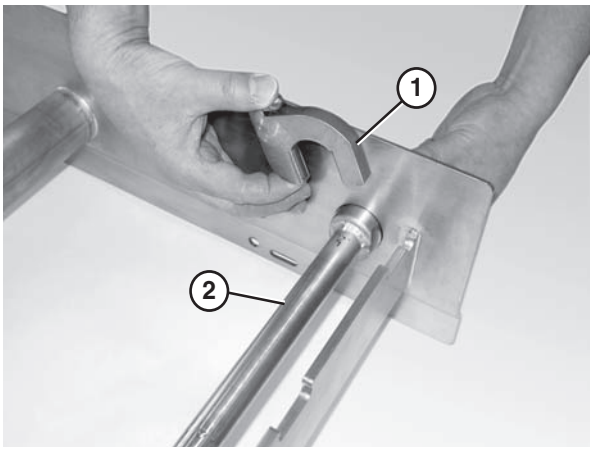


Figure 18

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

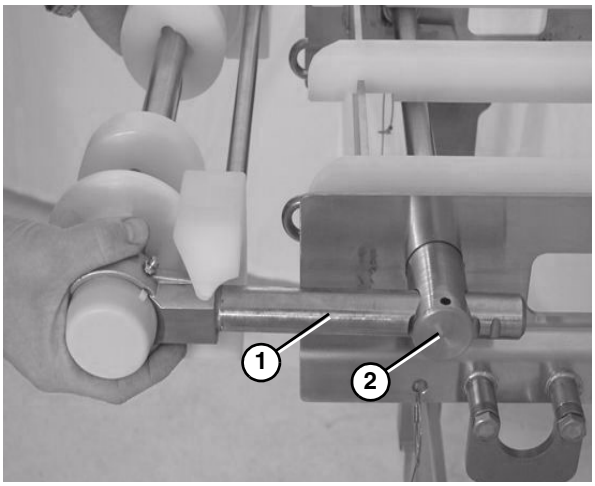


Figure 19

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

Lifter Installation

Typical Lifter Components **(Figure 20)**

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

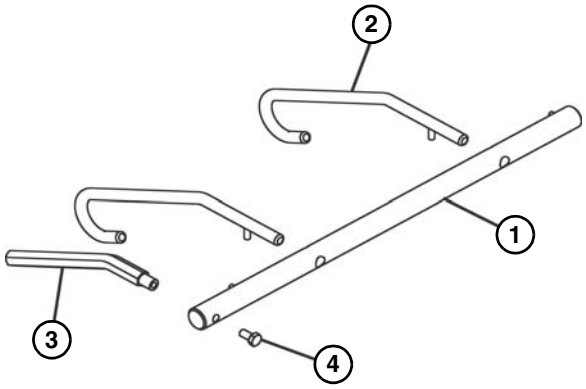


Figure 20

1. Slide the belt lift pivot bar **(Figure 21, item 1)** through the designated holes in the frame.

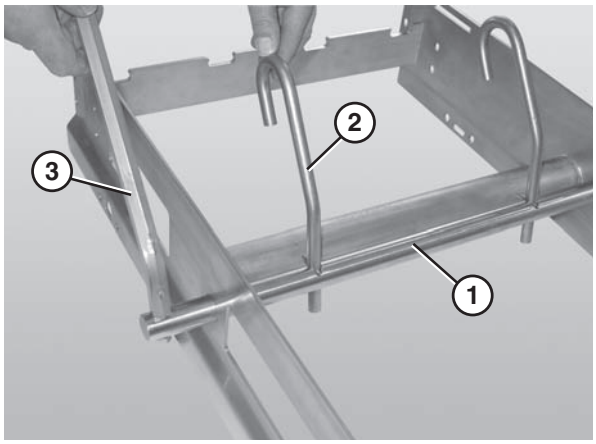


Figure 21

2. Attach the lifter bars **(Figure 21, item 2)** to the belt lift pivot bar **(Figure 21, 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 21, item 3)** to the belt lift pivot rod.

Wear Strip Installation

Straight Frame Sections

Typical Wear Strip Components **(Figure 22)**

1	Wear strip

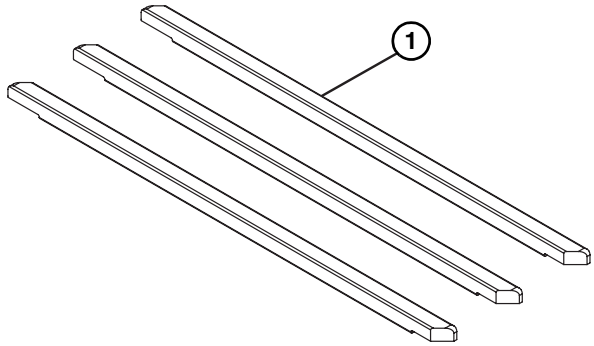


Figure 22

1. Position the wear strips **(Figure 23, item 1)** on the frame.

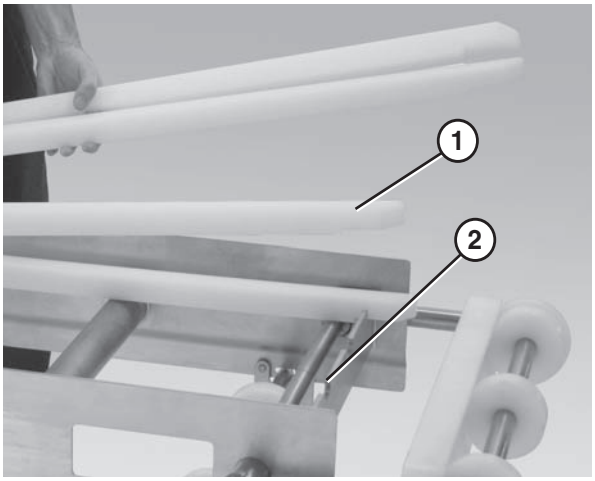


Figure 23

2. Make sure the wear strips are situated securely in the frame slots **(Figure 23, item 2)**.

Curved Frame Sections

Typical Curved Wear Strip Components **(Figure 24)**

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

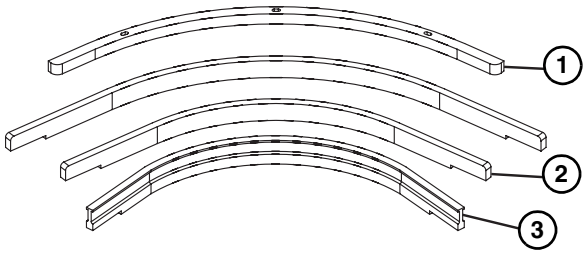


Figure 24

1. Insert the inside curve top wear strip **(Figure 25, item 1)** into the innermost slot **(Figure 25, item 2)** on the inside of the frame.

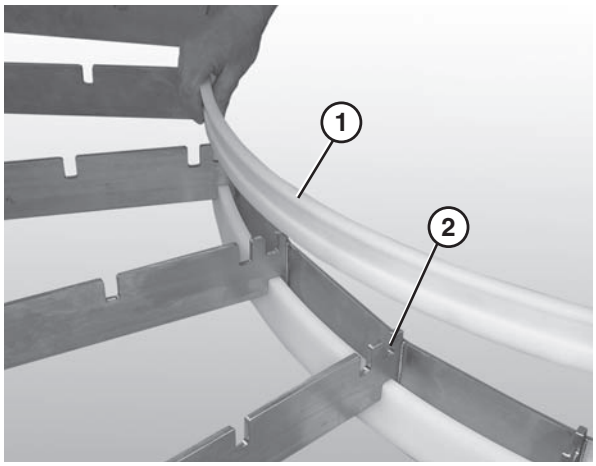


Figure 25

2. Attach the hold down wear strip **(Figure 26, item 1)** to the frame hooks **(Figure 26, item 2)** on the outside of the frame.

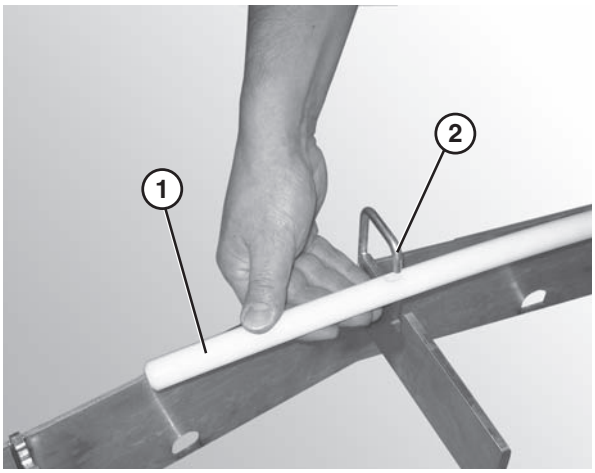


Figure 26

3. Insert the wear strips **(Figure 27, item 1)** into the appropriate slots in the frame **(Figure 27, item 2)**, starting with the shortest wear strip on the inside of the curved section and working outward to the longest.

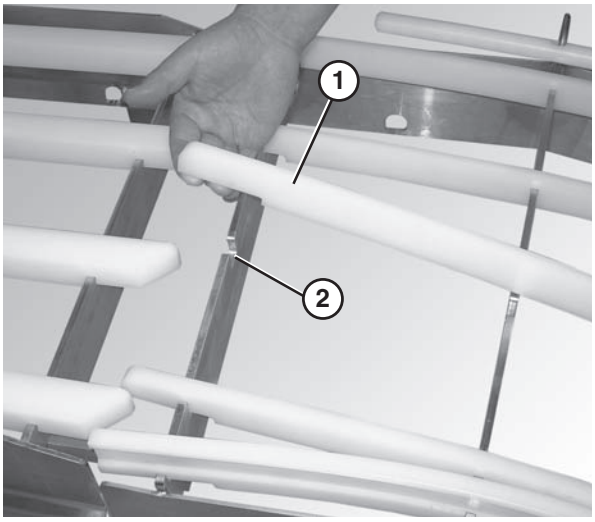


Figure 27

Belt Return Installation – Curved Frame Sections

Typical Curved Belt Return Components **(Figure 28)**

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

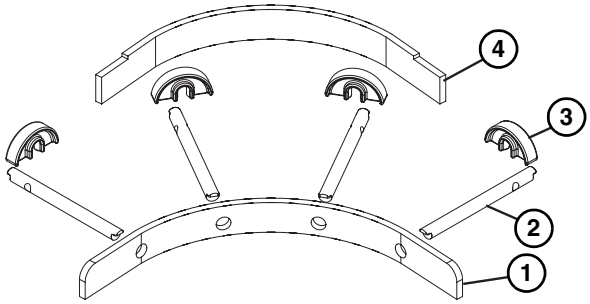


Figure 28

1. Insert the inside return bottom wear strip **(Figure 29, item 1)** into the slots **(Figure 29, item 2)** on the lower inside section of the frame (figure shown without the belt or wear strips).

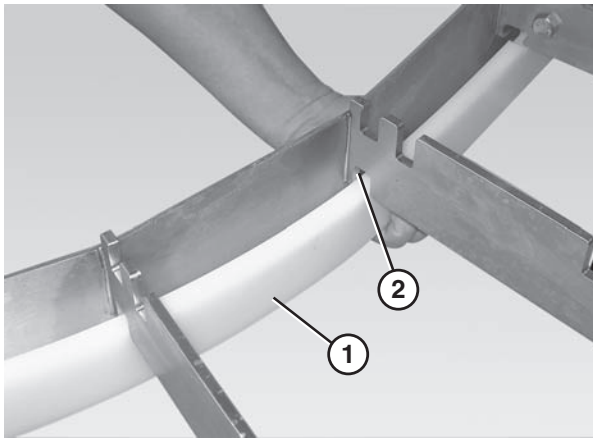


Figure 29

2. Attach the chain return shoes **(Figure 29, item 1)** to the curve return shafts **(Figure 29, item 2)**.

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

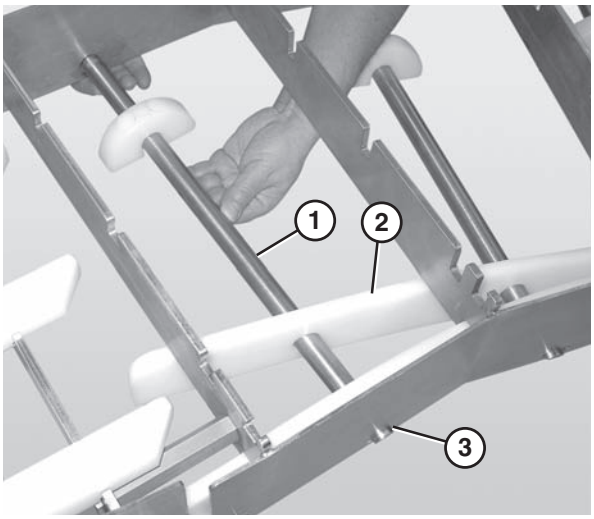


Figure 30

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

Belt Installation

Typical Belt Components **(Figure 31)**

1	Chain belt
2	Belt rod

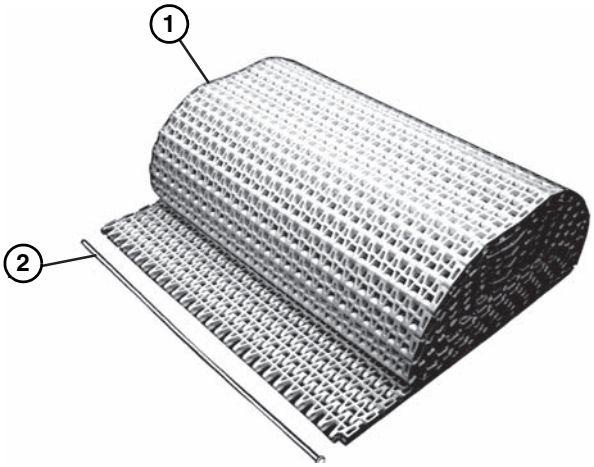


Figure 31

1. Position the belt on the conveyor frame **(Figure 32)**.

Figure 32

2. Wrap the belt around the conveyor, making sure the sprocket teeth have engaged the belt.
3. Bring the ends of the belt together **(Figure 33)**.

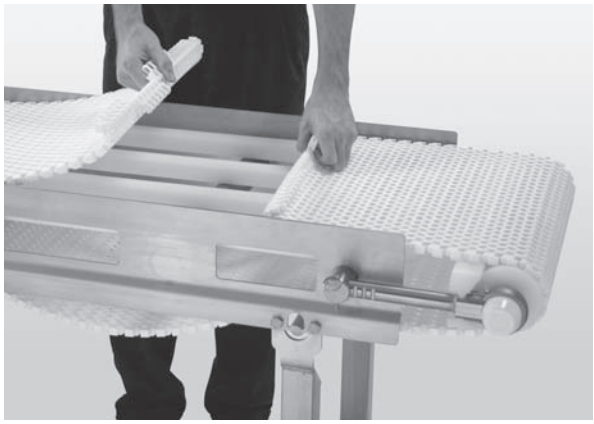


Figure 33

4. Insert the belt rod **(Figure 34, item 1)**.

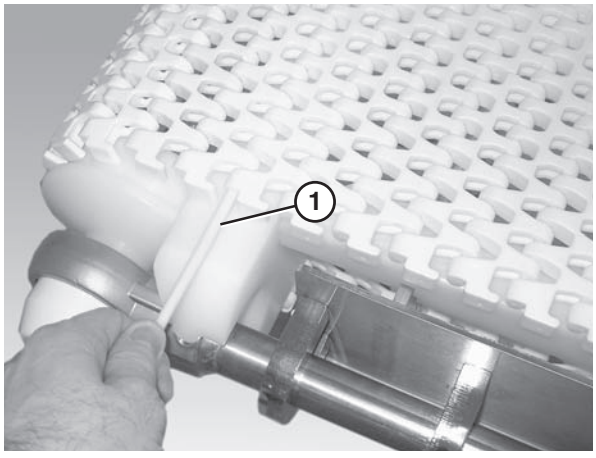


Figure 34

5. Push the belt rod in as far as possible.
6. Lightly tap the head of the rod with a hammer until it snaps into position.

7. Extend the tension end to remove excess slack in the belt **(Figure 35)**.

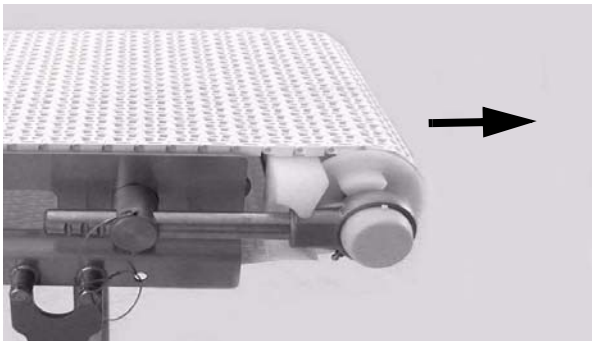


Figure 35

8. Insert the pull pins **(Figure 36, item 1)** on the tension end of the conveyor.

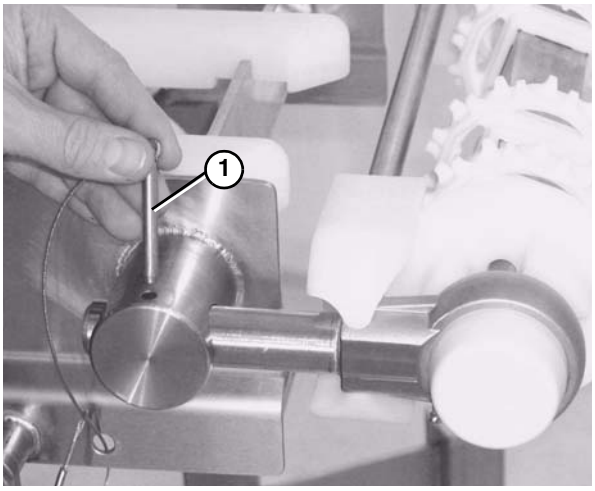


Figure 36

9. 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 18.

Belt Return Installation – Straight Frame Sections

Typical Belt Return Components **(Figure 37)**

1	Return shaft
2	Chain return shoe

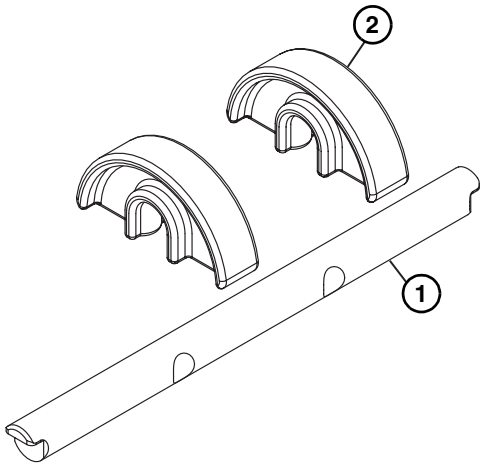


Figure 37

1. Attach the chain return shoes **(Figure 38, item 1)** to the return shaft **(Figure 38, item 2)**.

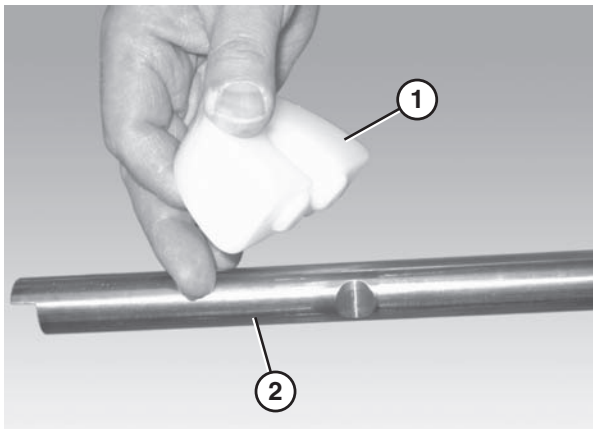


Figure 38

2. Slide the return shaft **(Figure 39, item 1)** up and through the large slot **(Figure 39, item 2)** in the frame (picture shown without the belt or wear strips).

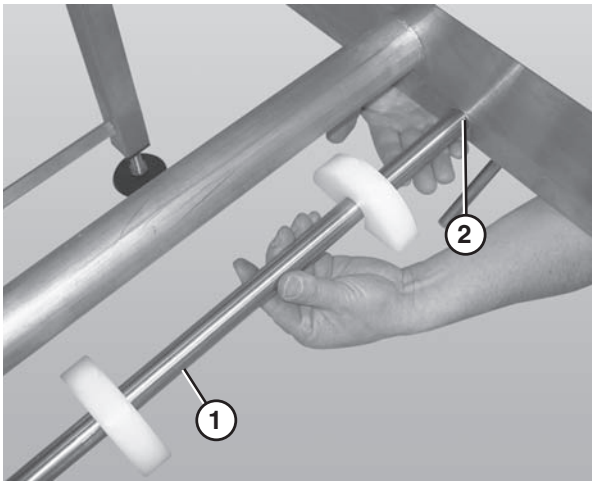


Figure 39

3. Push up on the return shaft **(Figure 39, 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 40)**. Belt sag should not exceed 102 mm. Follow steps 7 – 9 in the "Belt Installation" section on page 13 to remove slack from the belt.

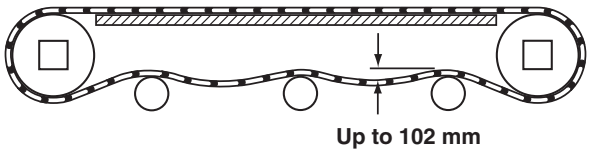


Figure 40

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 41, item 1)** that connect the guide **(Figure 41, item 2)** to the frame.

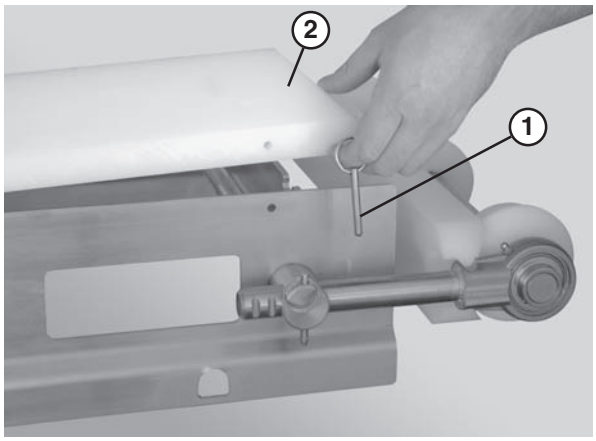


Figure 41

2. Remove the pull pin **(Figure 42, item 1)** on the tension end of the conveyor to release belt tension.

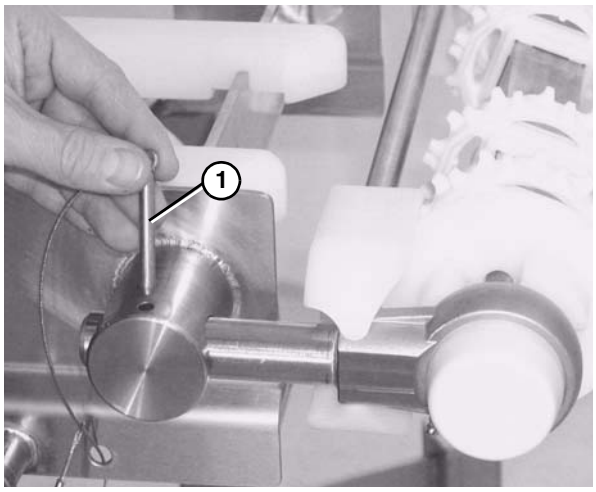


Figure 42

3. Lift up on the belt **(Figure 43)**.

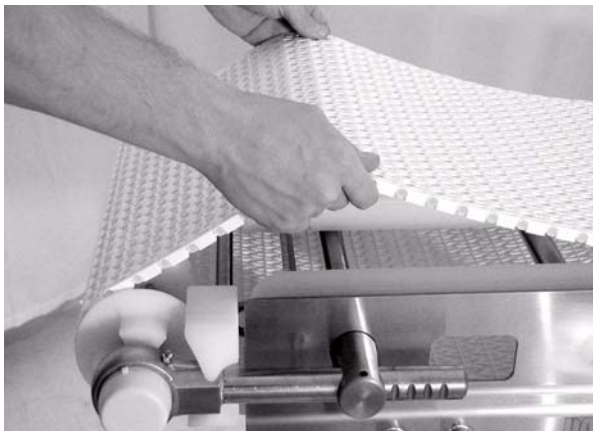


Figure 43

Conveyors with Tip Up Tails and Lifters

1. Remove the guides, if applicable, by removing the pull pins **(Figure 41, item 1)** that connect the guide **(Figure 41, item 2)** to the frame.
2. Use the lifter handle **(Figure 44, item 1)** to raise the lifters **(Figure 44, item 2)** and raise the tip up tail **(Figure 44, item 3)**.

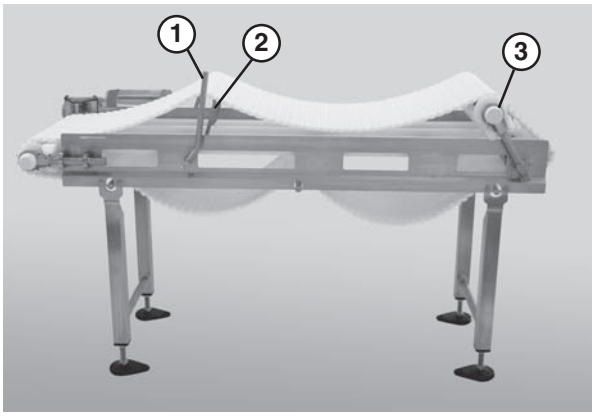


Figure 44

⚠ 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 18.
- Refer to “Sprocket and Puck Removal” on page 21.
- Refer to “Reassembling Tail Assembly” on page 25.

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

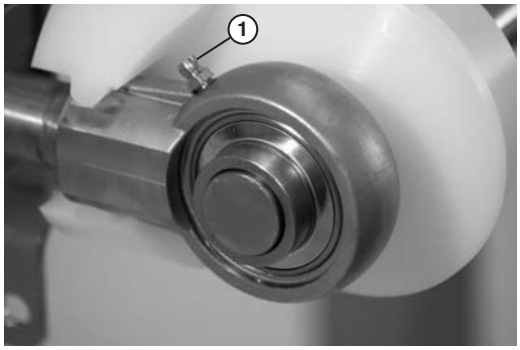


Figure 45

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

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

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 46, item 1)** that connect the guide **(Figure 46, item 2)** to the frame.

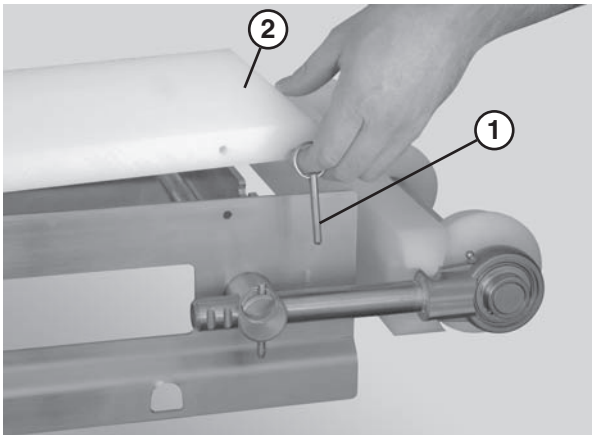


Figure 46

2. Remove the guide **(Figure 47, item 1)**.

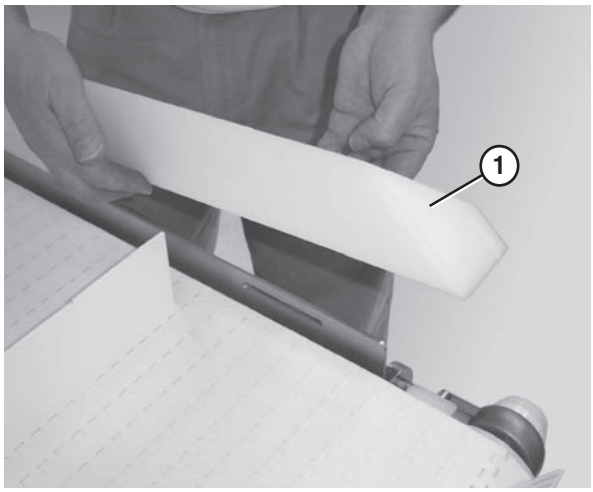


Figure 47

3. Follow the belt replacement procedures described in “Standard Belts” on page 18,or “Specialty Intralox 2400 Series Belts” on page 19.

Standard Belts

Replacing a Section of Belt

1. Remove the pull pins **(Figure 48, item 1)** on the tension end of the conveyor to release tension on the belt.

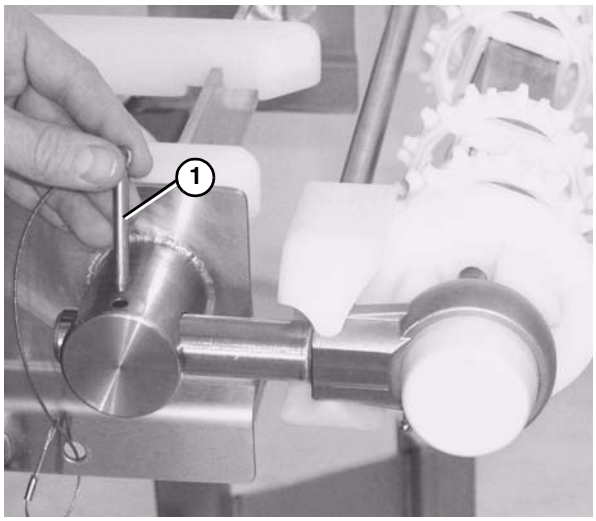


Figure 48

⚠ 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 49, 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 49, item 2)**.

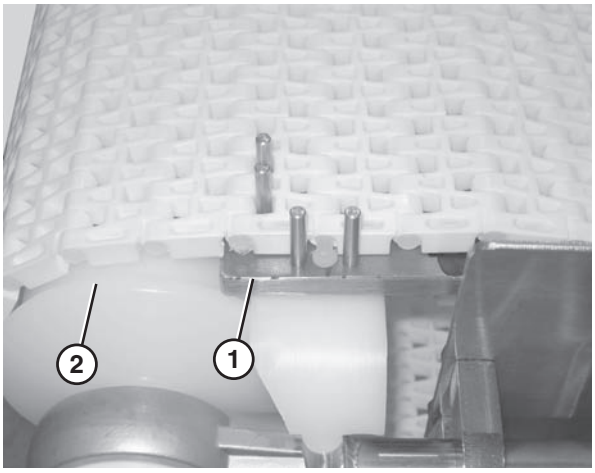


Figure 49

3. Use a punch and hammer to push the belt rod out by striking the rod end opposite the retaining head **(Figure 50)**.

Figure 50

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 51, item 1)** and sliding it through the large hole **(Figure 51, item 2)** in the frame.

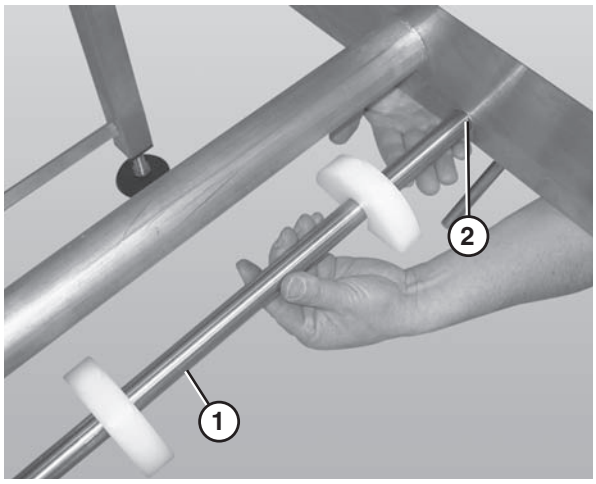


Figure 51

2. Lower the opposite end of the return shaft **(Figure 51, item 1)** and slide it out of the frame.
3. Follow steps 1 – 3 in "Standard Belts: Replacing a Section of Belt" on page 18.
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. Remove the pull pins **(Figure 52, item 1)** on the tension end of the conveyor to release tension on the belt.

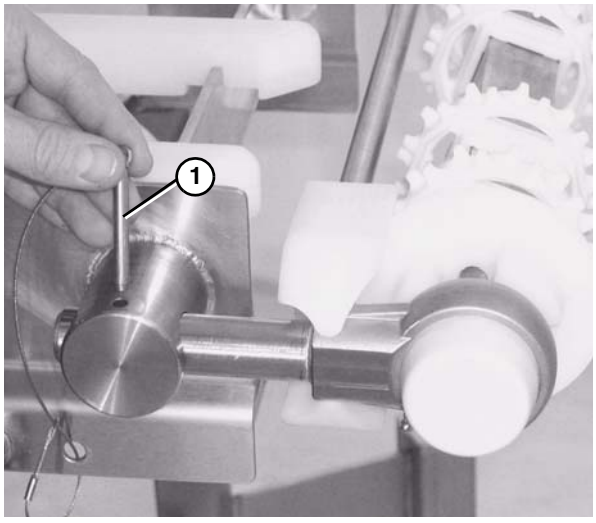


Figure 52

⚠ 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 53, item 1)**.

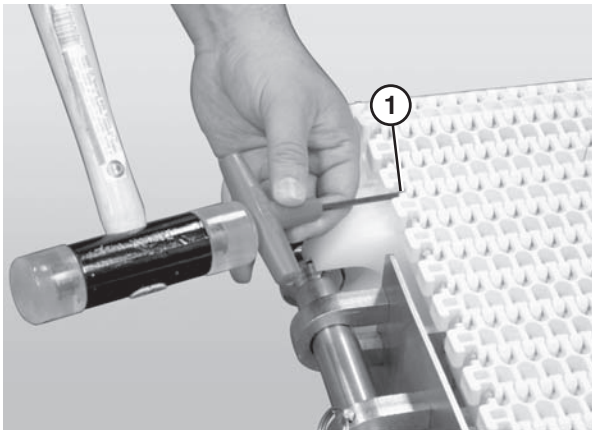


Figure 53

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 54, item 1)** and sliding it through the large hole **(Figure 54, item 2)** in the frame.

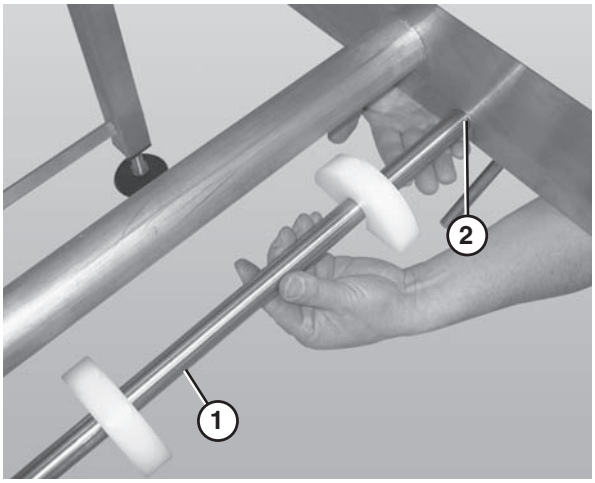


Figure 54

2. Lower the opposite end of the return shaft **(Figure 54, 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 18.
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 102 mm from the top of the returns.

1. Remove both pull pins **(Figure 55, item 1)** on the tension end of the conveyor.

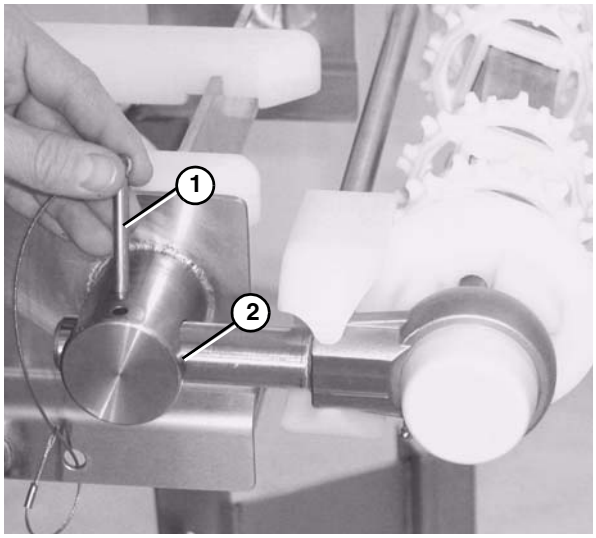


Figure 55

6. Extend the idler tail to the next groove **(Figure 55, item 2)** on the bearing shaft.

7. Continue extending the tension end until the belt is sufficiently tight **(Figure 56)**.

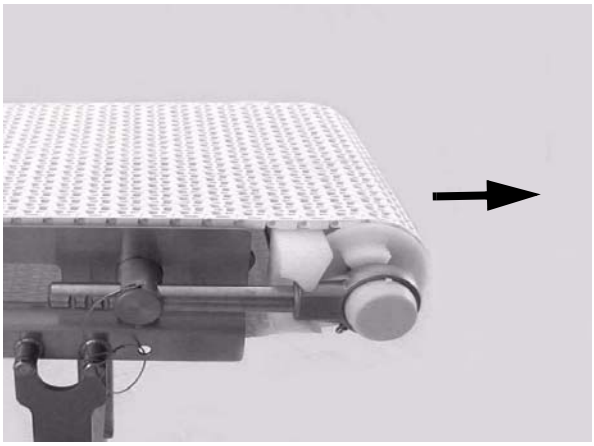


Figure 56

8. Reinsert the pull pins.
9. 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 18.

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 18.

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. Remove the plastic cap on the end of the motor and remove the socket head screw **(Figure 57, item 1)** and the bore plug **(Figure 57, item 2)**.

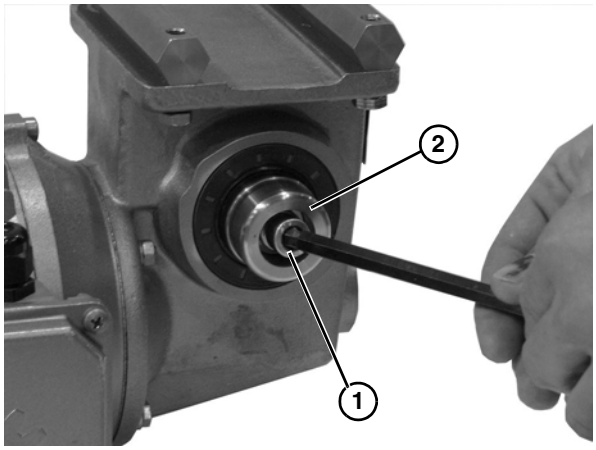


Figure 57

2. Remove the gearmotor assembly **(Figure 58, item 1)** from the gearhead mounting posts **(Figure 58, item 2)**.

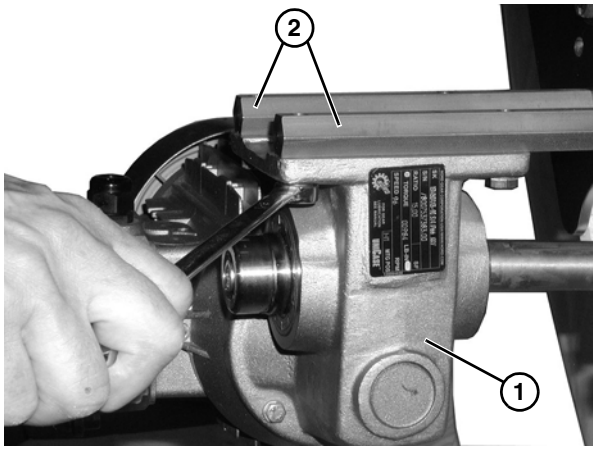


Figure 58

3. Slide the gearmotor assembly **(Figure 59, item 1)** off of the drive spindle **(Figure 59, item 2)**

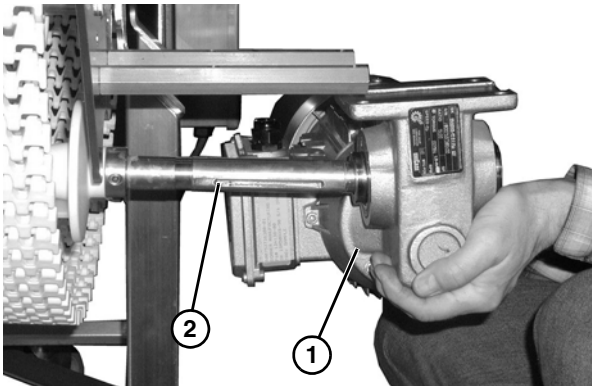


Figure 59

4. Remove the drive spindle key **(Figure 60, item 1)** from the drive spindle keyway **(Figure 60, item 2)**.

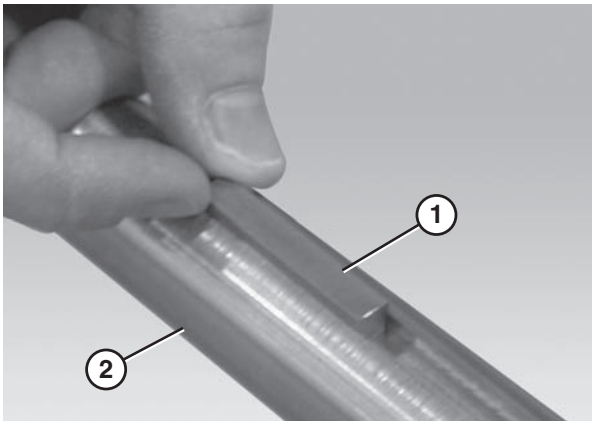


Figure 60

5. Remove the gear reducer mounting posts **(Figure 61, item 1)** from the nose bar side plate **(Figure 61, item 2)**.

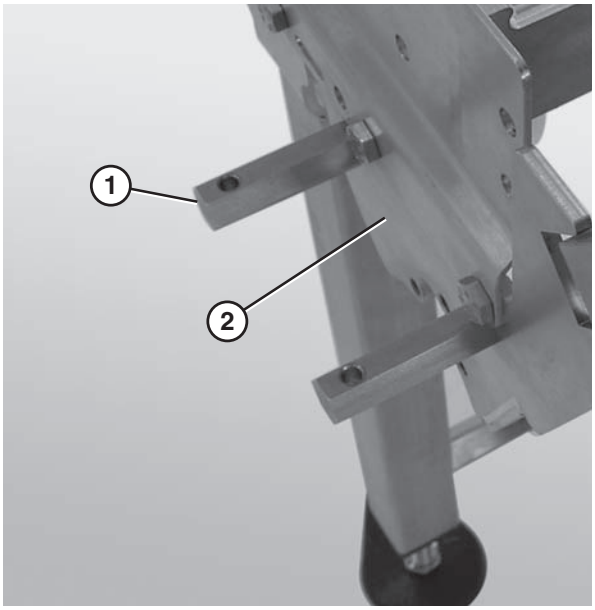


Figure 61

6. Remove the bearing cover and loosen the 3 hole flange **(Figure 62, item 1)** with bearing fasteners using a hex wrench **(Figure 62, item 2)**.

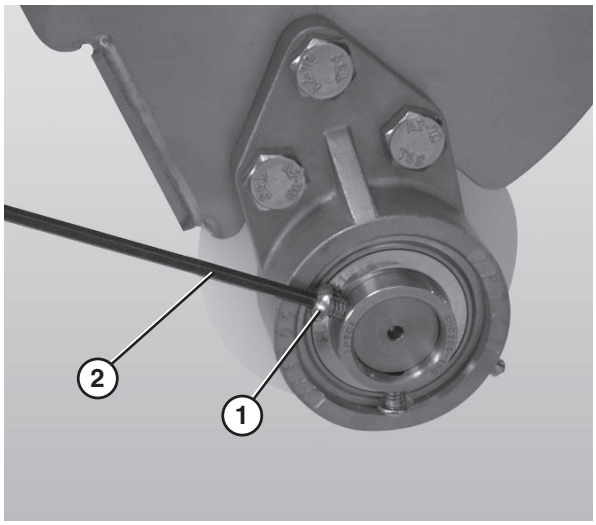


Figure 62

7. Disconnect the 3 hole flange bearing **(Figure 63, item 1)** from the nose bar drive weldment **(Figure 63, item 2)**.

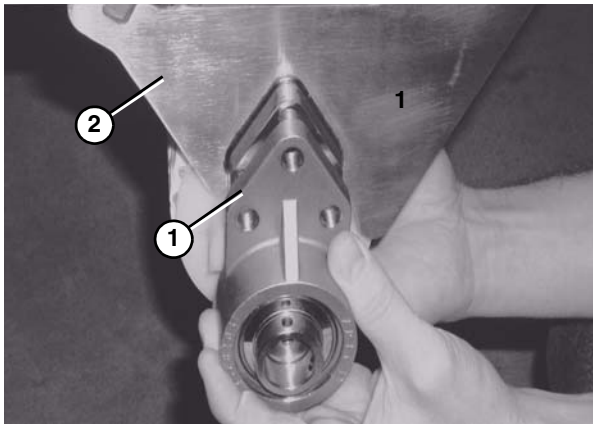


Figure 63

8. Lower the entire drive assembly.
9. Slide the 3 hole flange with bearing **(Figure 64, item 1)**, spacer **(Figure 64, item 3)**, O-Ring **(Figure 64, item 4)**, and flanged puck **(Figure 64, item 2)** off of the drive spindle.

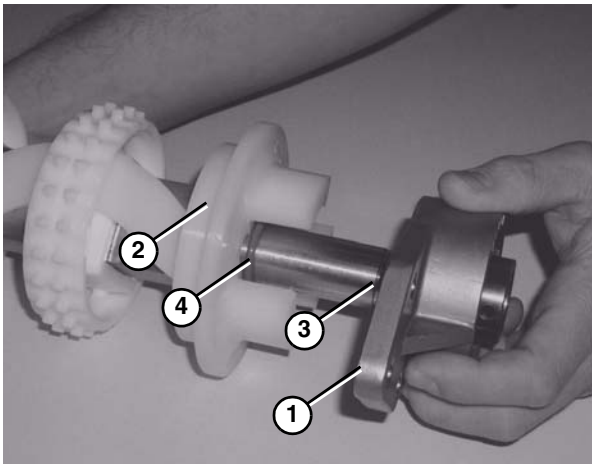


Figure 64

10. Slide the sprockets **(Figure 65, item 1)** and the sprocket alignment bar **(Figure 65, item 2)** off of the drive spindle **(Figure 65, item 3)**.

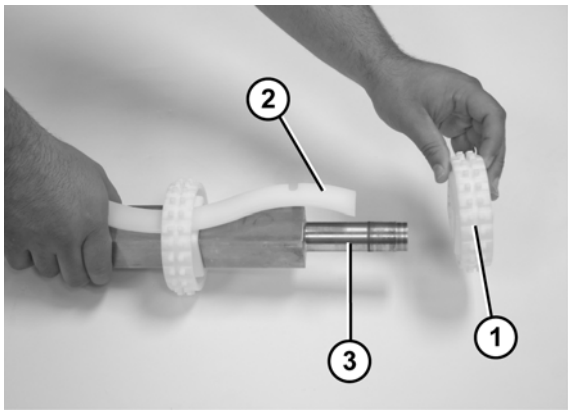


Figure 65

B - 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)**.

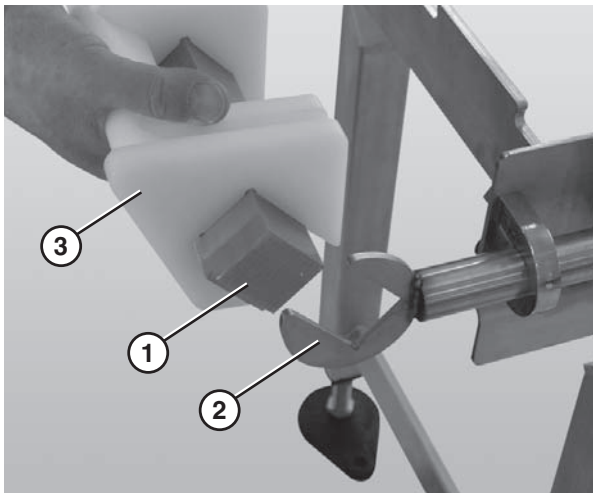


Figure 66

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

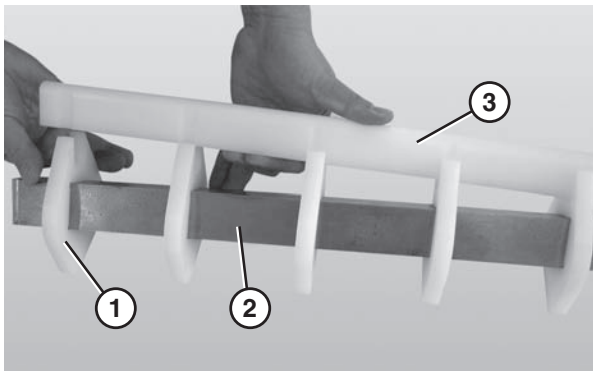


Figure 67

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

C - Idler Puck Removal

1. Remove the pull pins from take up blocks **(Figure 55)**.
2. Slide the idler tail assembly **(Figure 68, item 1)** out of the take up blocks **(Figure 68, item 2)**.

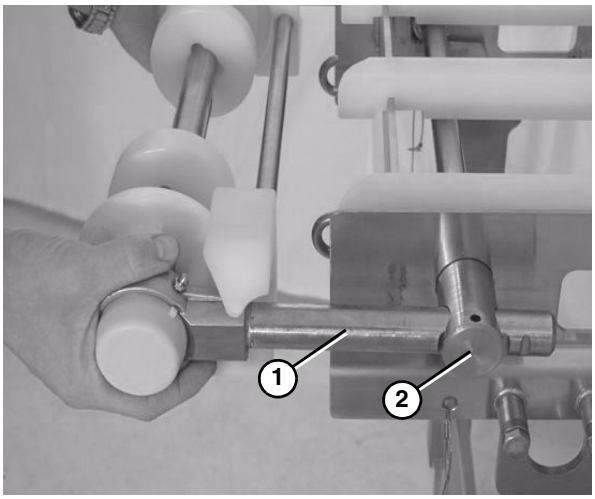


Figure 68

3. Remove the bearing cover **(Figure 69, item 1)**.

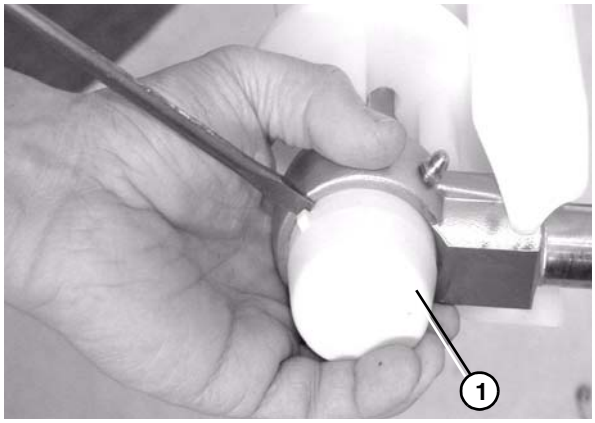


Figure 69

4. Use a hex wrench **(Figure 70, item 1)** to loosen the bearing shaft assembly fasteners **(Figure 70, item 2)**.

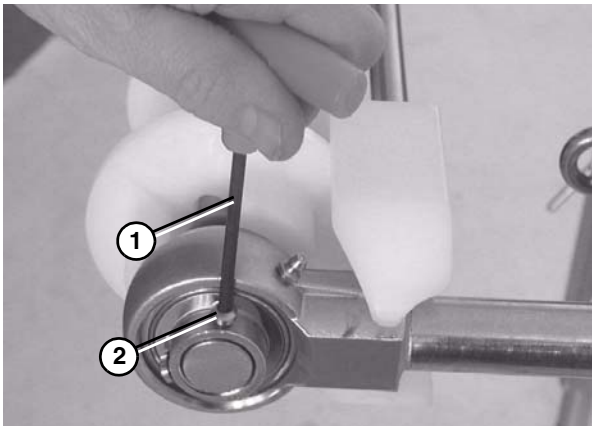


Figure 70

5. Slide off bearing shaft assembly **(Figure 71, item 1),** washer **(Figure 71, item 3)**, O-ring **(Figure 71, item 4)**, and flanged puck **(Figure 71, item 5)** off the idler shaft **(Figure 71, item 2)**.

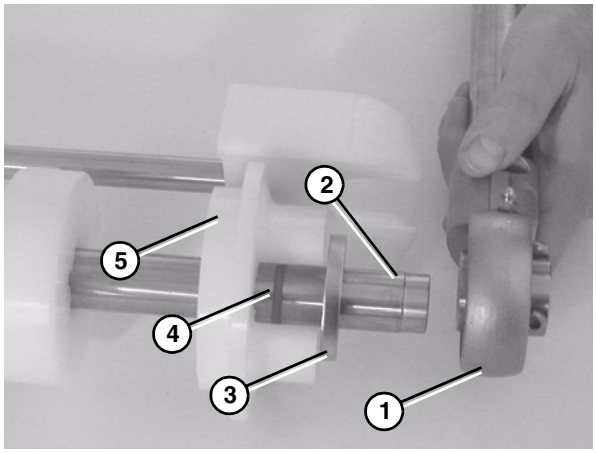


Figure 71

6. Remove the guard bar **(Figure 72, item 1)**.

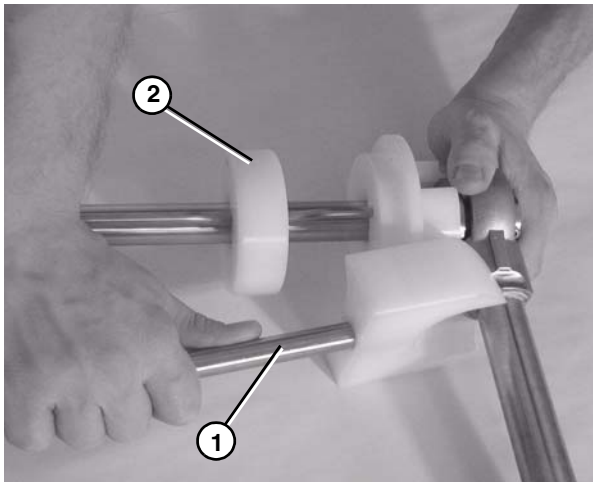


Figure 72

7. Remove the pucks **(Figure 72, item 2)**.

Reassembling Tail Assembly

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

Drive Tail Assembly

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

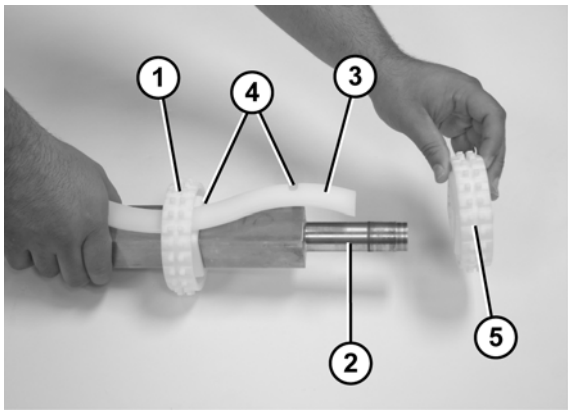


Figure 73

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.
4. Attach O-rings **(Figure 74, item 4)**, flanged pucks **(Figure 74, item 2)**, washer **(Figure 74, item 3)** and the 3 hole flange with bearing **(Figure 74, item 1)** to the drive spindle.

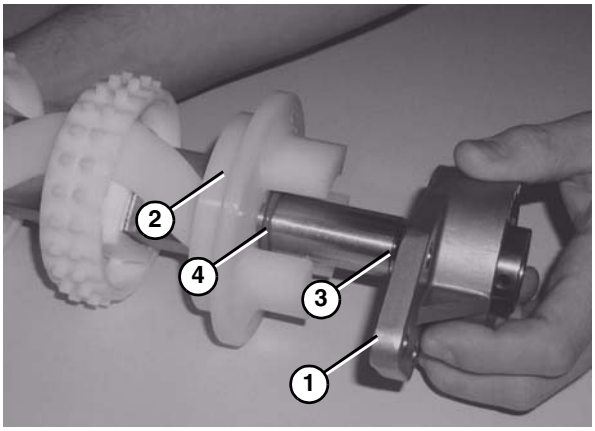


Figure 74

5. Tighten the 3 hole flange with bearing fasteners **(Figure 75, item 1)** using a hex wrench **(Figure 75, item 2)** to 6 N•m (54 in•lbs). Check after 24 hours of conveyor use.

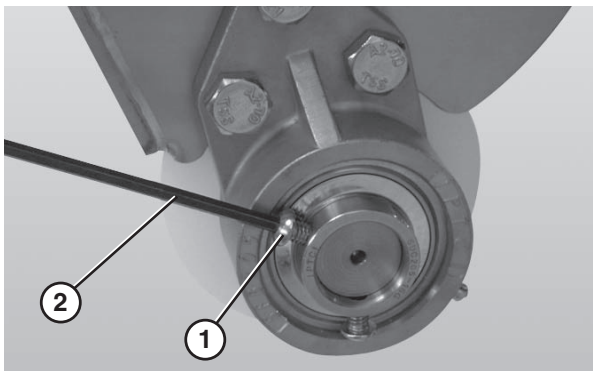


Figure 75

Nose Bar Tip Up Tail

1. Slide the nose bar pucks **(Figure 76, item 1)** onto the nose bar drive post **(Figure 76, item 2)**.

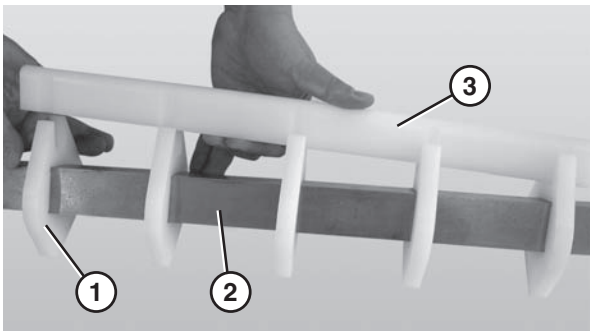


Figure 76

2. Attach the nose bar wear strip **(Figure 76, item 3)**.
3. Attach the nose bar tracking pucks **(Figure 77, item 1)** to the nose bar drive post **(Figure 77, item 2)**.

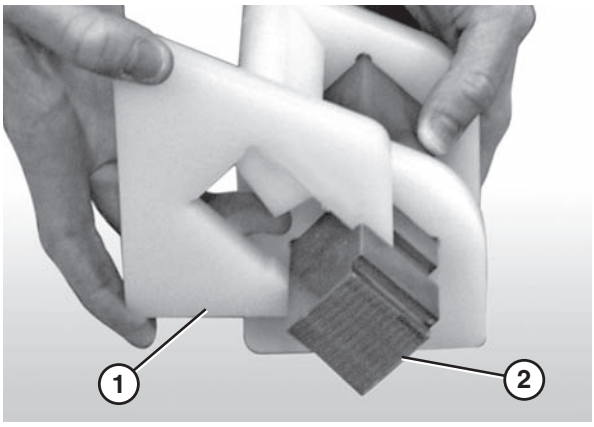


Figure 77

Tip Up Idler Tail

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

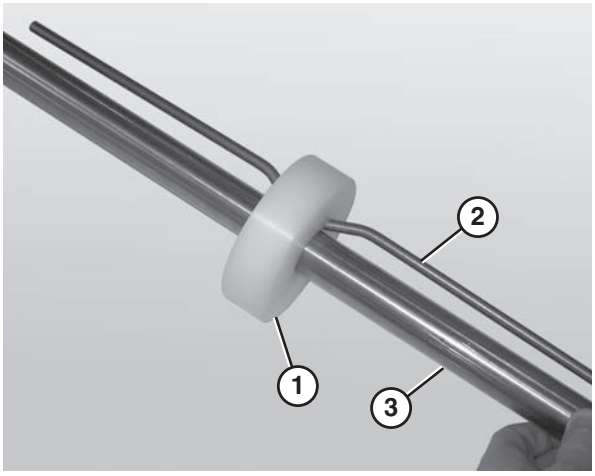


Figure 78

3. Attach the flanged pucks **(Figure 79, item 5)**, O-rings **(Figure 79, item 4)**, washers **(Figure 79, item 3)**, and bearing shaft assembly **(Figure 79, item 1)** off the idler shaft **(Figure 79, item 2)**.

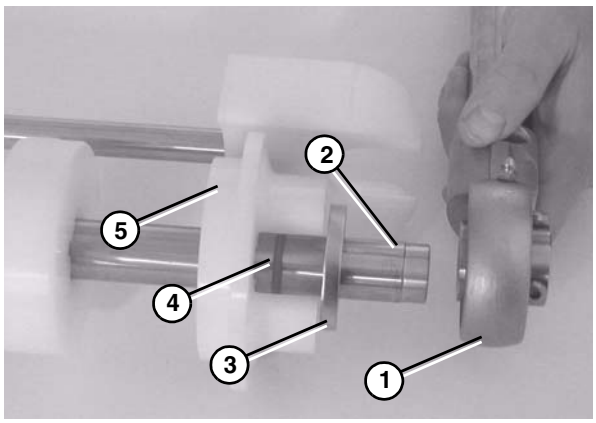


Figure 79

4. Attach the guard bar **(Figure 80, item 1)**.

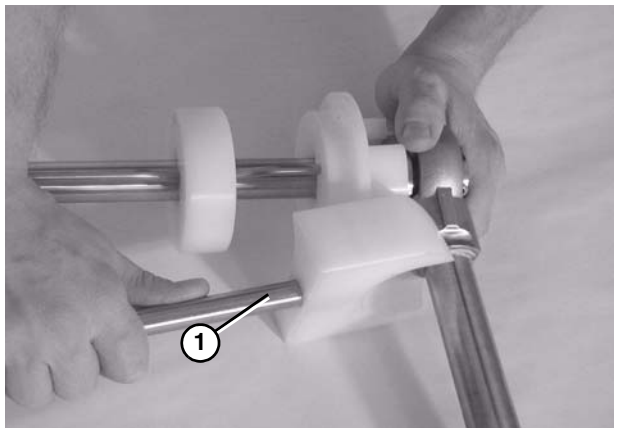


Figure 80

5. Use a hex wrench **(Figure 81, item 1)** to tighten the bearing shaft fasteners **(Figure 81, item 2)** to 6 N•m (54 in•lbs). Check after 24 hours of conveyor use.

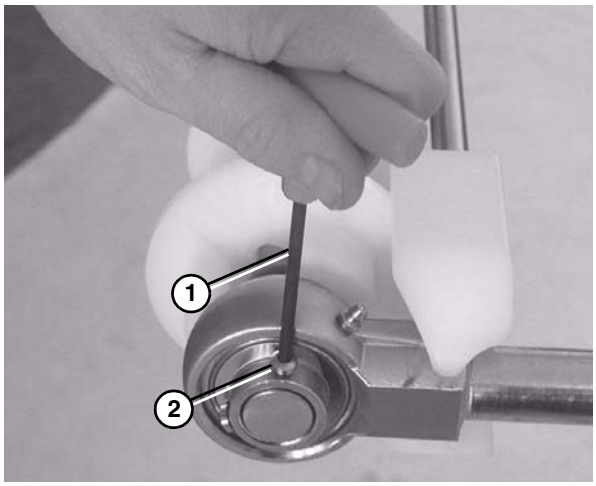


Figure 81

6. Attach the bearing covers. Reference **(Figure 69)**.

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 82)**.

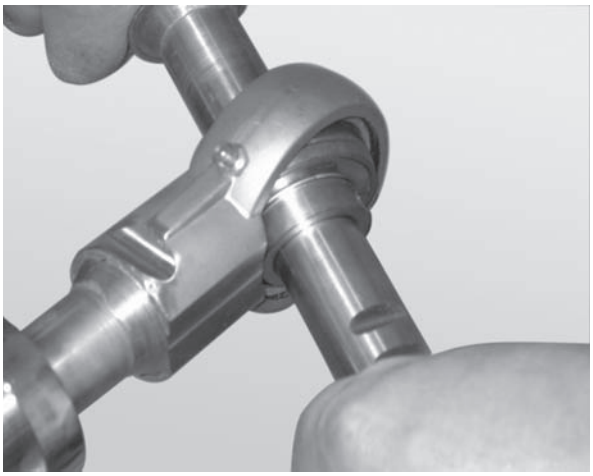


Figure 82

3. Apply lateral pressure to the rod until the bearing comes loose.
4. Remove the worn or damaged bearing **(Figure 83)**.

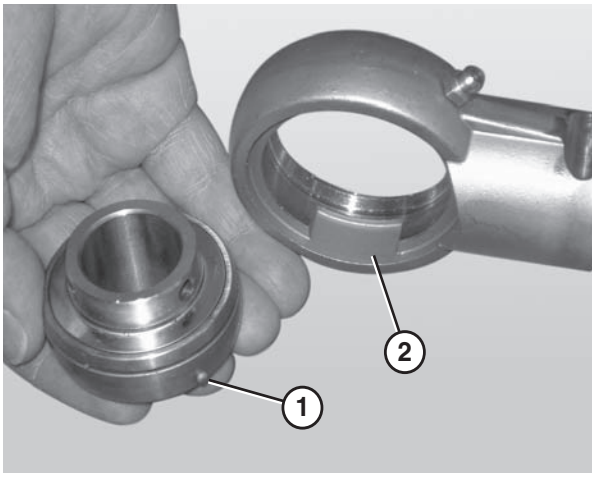


Figure 83

5. Replace the bearing.

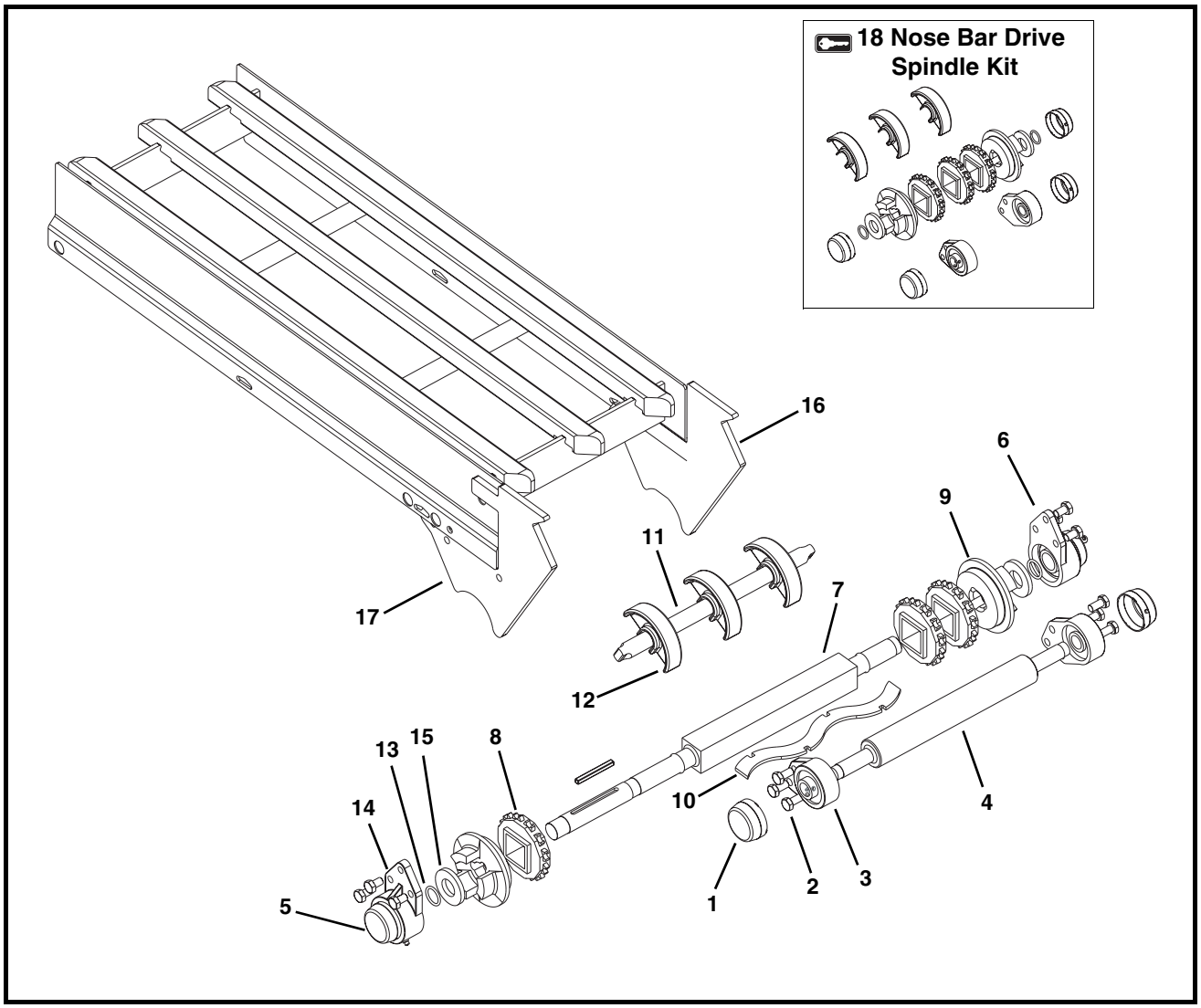
NOTE
*When inserting the new bearing, make sure the anti-rotation notch **(Figure 83, item 1)** on the bearing lines up with the groove inside the housing **(Figure 83, item 2)**.*

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.

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
7	5297WW	Drive Spindle for Standard Belt
	5299WW	Drive Spindle for Specialty Intralox Belt

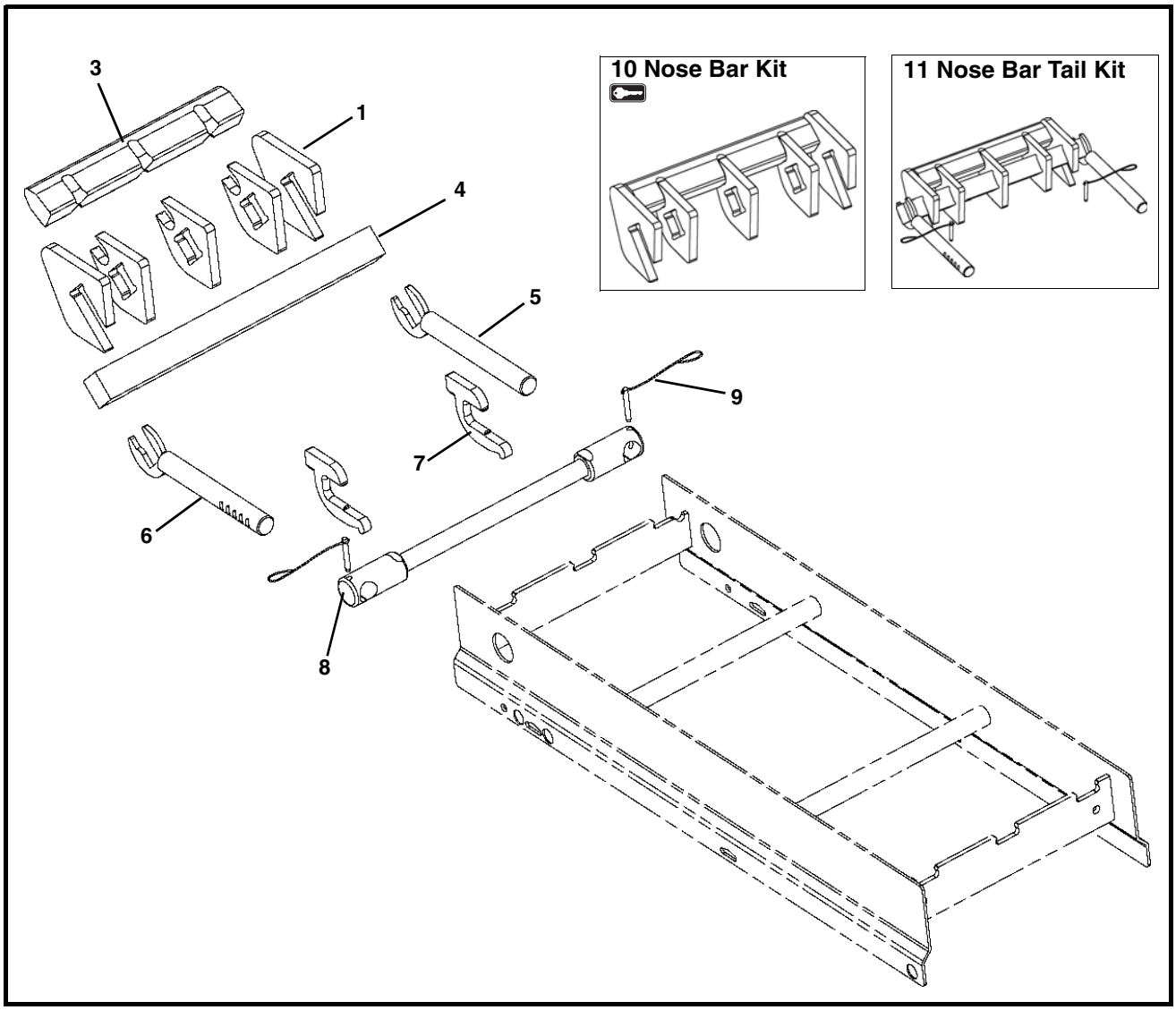
Item	Part Number	Description
8	807-1444	Sprocket for Standard 1.00" Pitch Belt
	807-1447	Sprocket for Specialty Intralox 1.00" Pitch Belt
9	517201	Flange Puck
10	5161WW	Sprocket Alignment Bar for Standard 1.00" Pitch Belt
	5165WW	Sprocket Alignment Bar for Specialty Intralox 1.00" Pitch Belt
11	5039WW	Return Shaft
12	500075	Chain Return Shoe

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

Service Parts

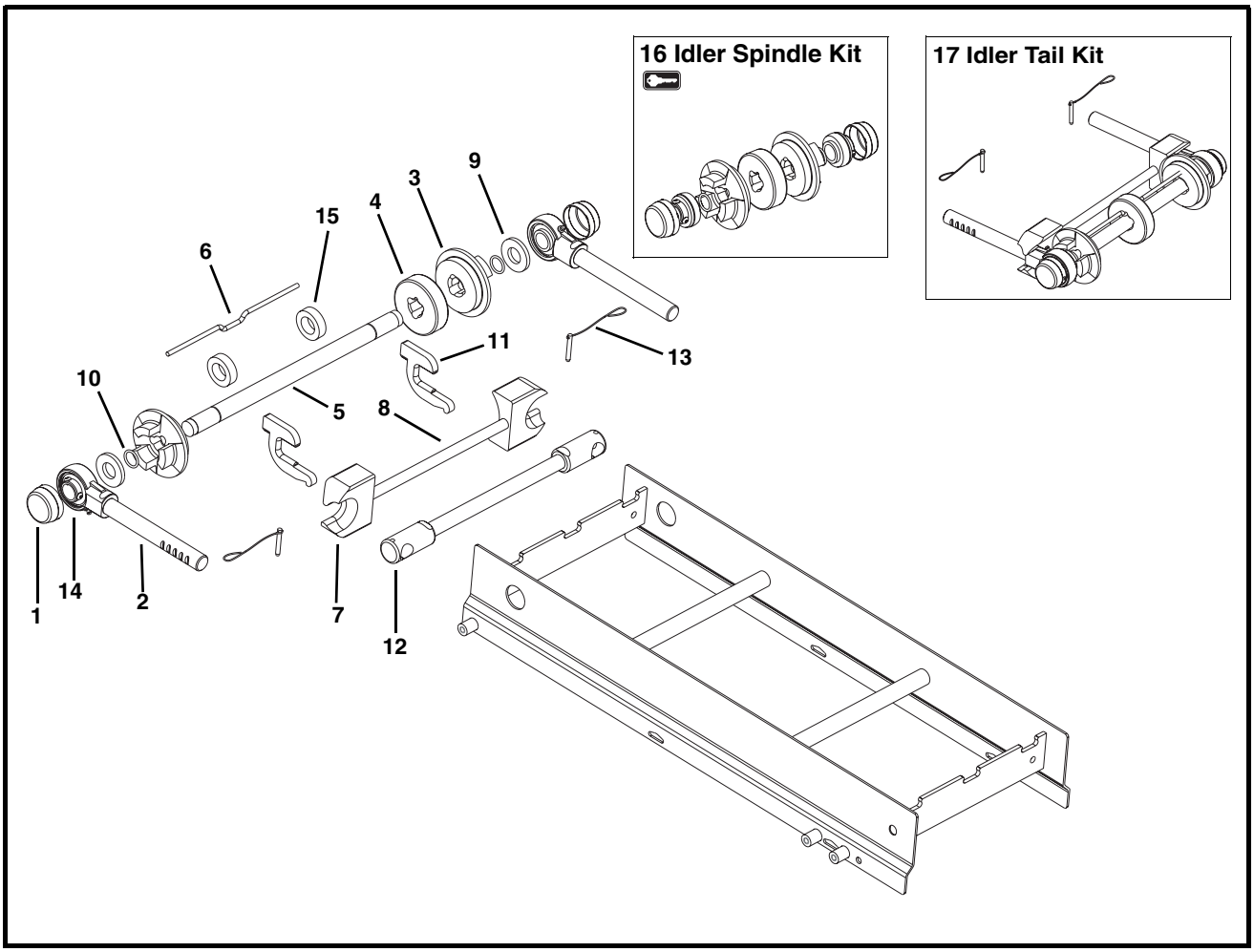
Nose Bar Tip Up Tension End



Item	Part Number	Description
1	500490	Nose Bar Tracking Puck
2	500278	Nose Bar Puck
3	5056WW	.5" Pitch Nose Bar Wear Strip
	5058WW	1" Pitch Nose Bar Wear Strip
4	5176WW	Nose Bar Transfer Post for Standard Belt
	5177WW	Nose Bar Transfer Post for Specialty Intralox Belt
5	500487	Nose Bar Idler Shaft Left Hand
6	500488	Nose Bar Idler Shaft Right Hand
7	501184	Key Stop
8	5182WW	Tip Up Shaft Assembly

Item	Part Number	Description
9	501676	Pin Assembly
10	74UNB5-WW	.5" Nose Bar Kit for Standard Belt (Includes Items 1 through 3)
	74UNB1-WW	1" Nose Bar Kit for Specialty Intralox Belt (Includes Items 1 through 3)
11	74UNBT5-WW	.5" Nose Bar Tail Kit for Standard Belt (Includes Items 1 through 6 and 9)
	74UNBT1-WW	1" Nose Bar Tail Kit for Standard Belt (Includes Items 1 through 6 and 9)
	74UNBT5S-WW	.5" Nose Bar Tail Kit for Specialty Intralox Belt (Includes Items 1 through 6 and 9)
	74UNBT1S-WW	1" Nose Bar Tail Kit for Specialty Intralox Belt (Includes Items 1 through 6 and 9)
WW = Conveyor width ref: 08 - 36 in 02 increments		

Tip Up Tension End

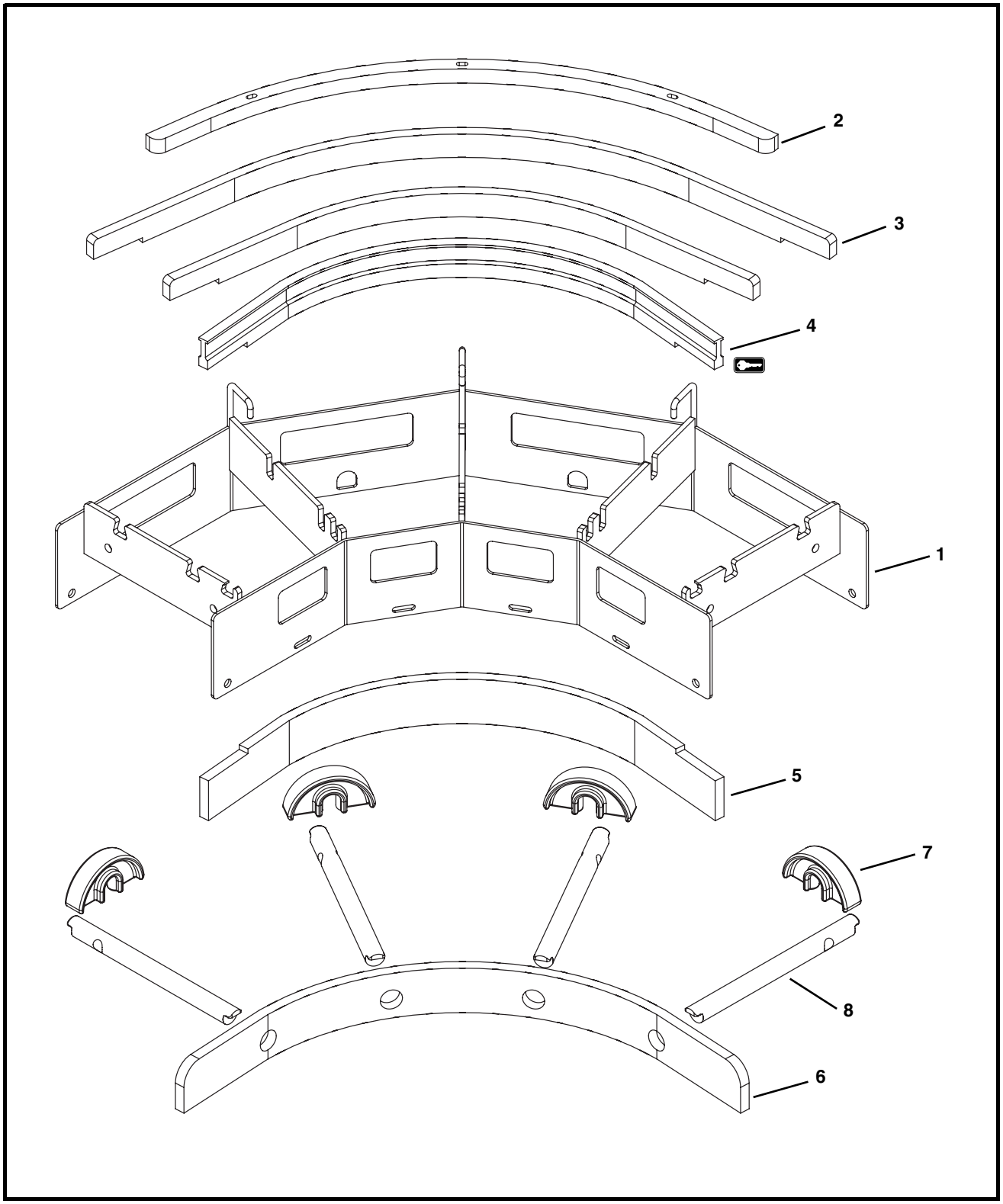


Item	Part Number	Description
1	807-1454	Bearing Cover
2	500079	Shaft Assembly with Bearing
3	5172WW	Flanged Puck, Idler Tail for Standard Belt
	5173WW	Flanged Puck, Idler Tail for Specialty Intralox Belt
4	501189	Idler Puck
5	5156WW	Idler Shaft
6	5157WW	Bent Retaining Bar for Standard Belt
	5167WW	Bent Retaining Bar for Specialty Intralox Belt
7	501188	Guard Bar
8	5154WW	Guard Bar Shaft
9	501381	Washer
10	807-1588	O-Ring

Item	Part Number	Description
11	501184	Key Stop
12	5182WW	Tip Up Shaft Assembly
13	501676	Pin Assembly
14	802-162	Bearing
15	501681	Idler Shaft Sleeve
16	74UI-WW	Idler Spindle Kit for Standard Belt (Includes Items 1, 3, 4, 10 and 14)
	74UIS-WW	Idler Spindle Kit for Specialty Intralox Belt (Includes Items 1, 3, 4, 10 and 14)
17	74UIT-WW	Idler Tail Kit for Standard Belt (Includes Items 1 through 10, 13 and 14)
	74UITS-WW	Idler Tail Kit for Specialty Intralox Belt (Includes Items 1 through 10, 13 and 14)
WW = Conveyor width ref: 08 - 36 in 02 increments		

Service Parts

Curve Conveyor Frame and Wear Strips

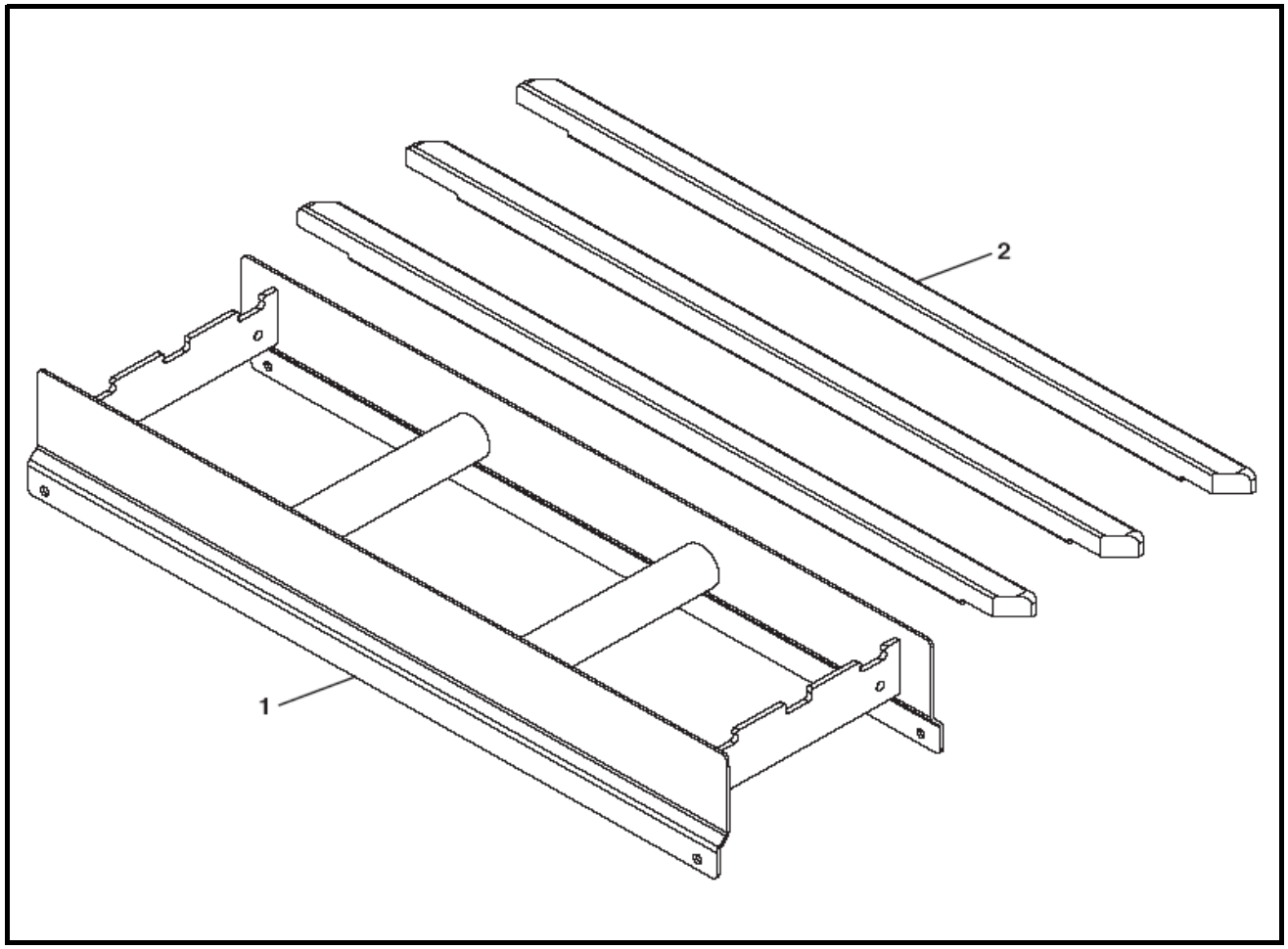


Item	Part Number	Description
1	------	Consult Factory for Frame Part Number
2	500189-LLLLL	Hold Down Wearstrip
3	500186-LLLLL	Curved Bed Rail Group
4	500187-LLLLL	Low Side Inside Curve Top Wearstrip
	500197-LLLLL	High Side Inside Curve Top Wearstrip
5	500188-LLLLL	Inside Return Bottom Wearstrip
6	500190-LLLLL	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

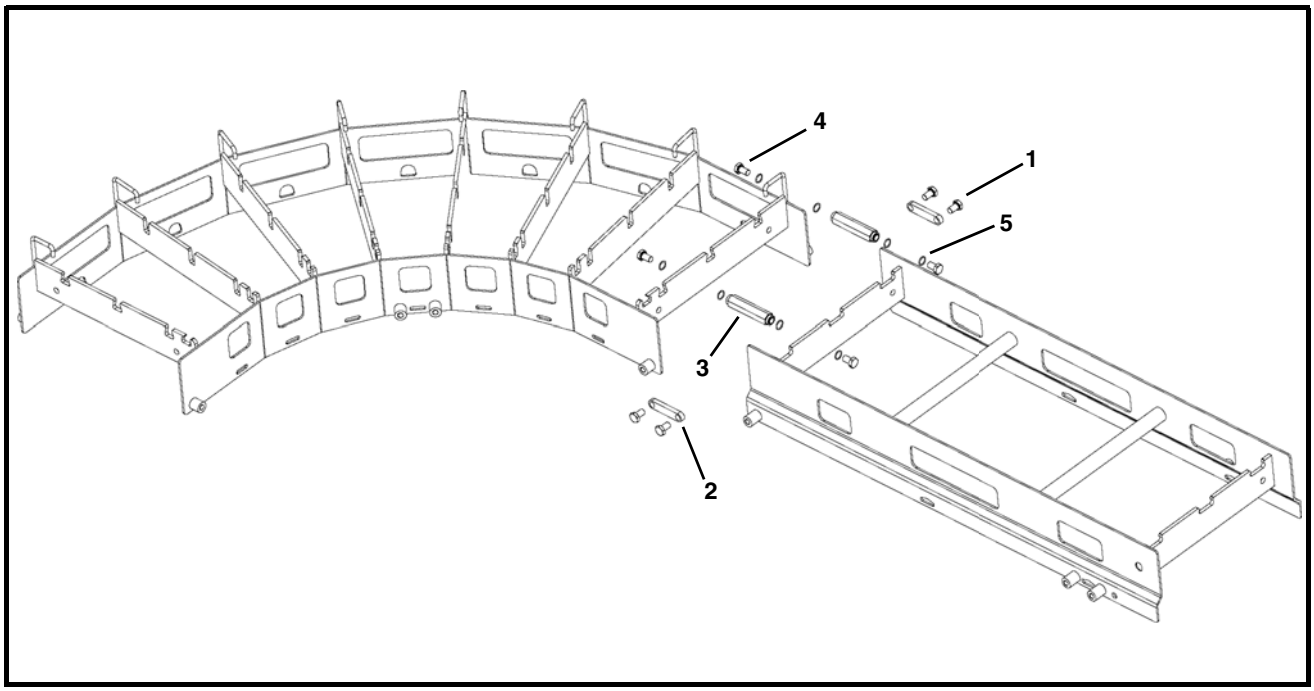
Straight Conveyor Frame and Wear Strips



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		

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

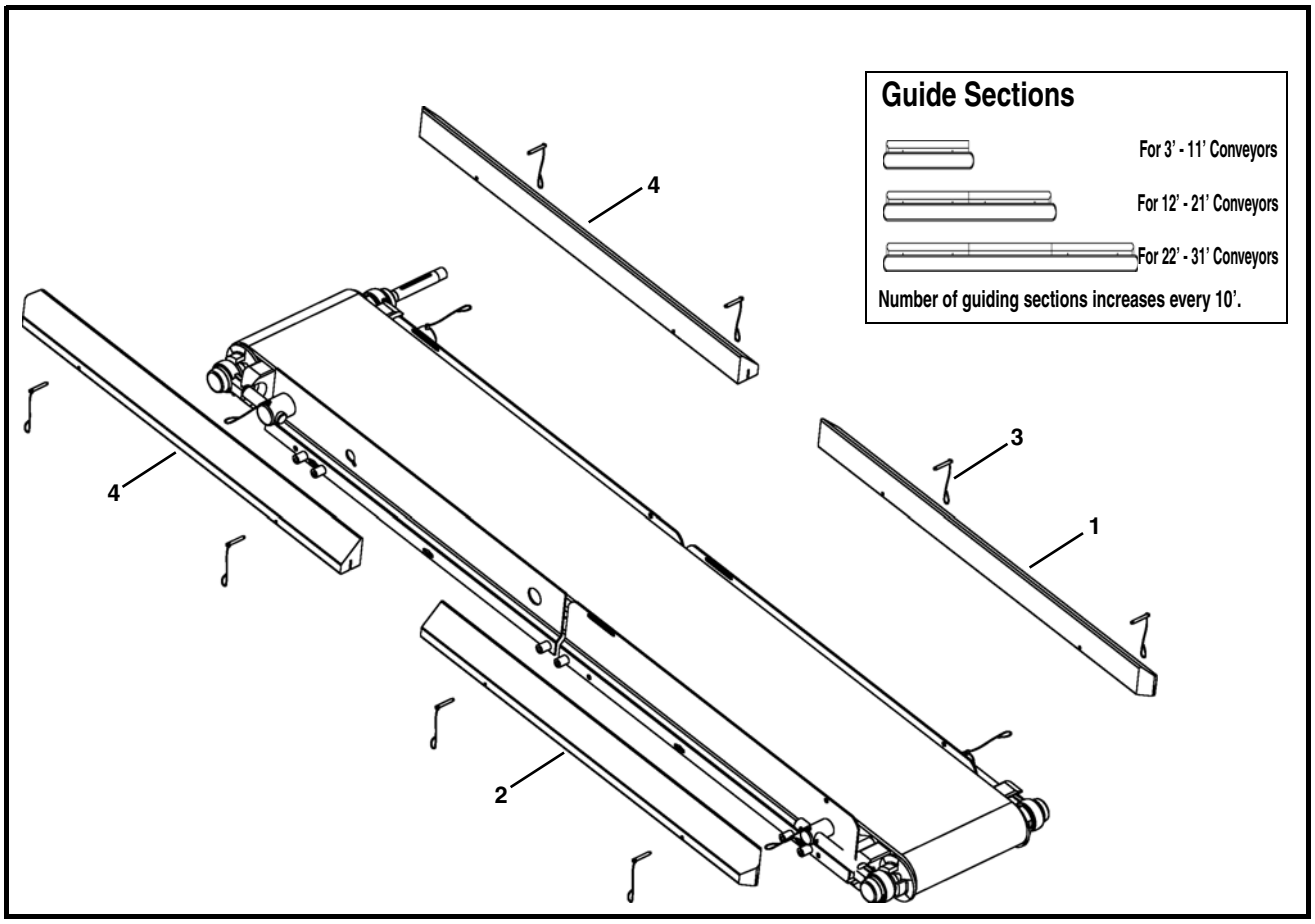


Item	Part Number	Description
1	961016MSS	Hex Head Cap Screw, M10-1.5x16 mm
2	501195	Flat Connector (Not Applicable if Stand Located at Connection)

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

Service Parts

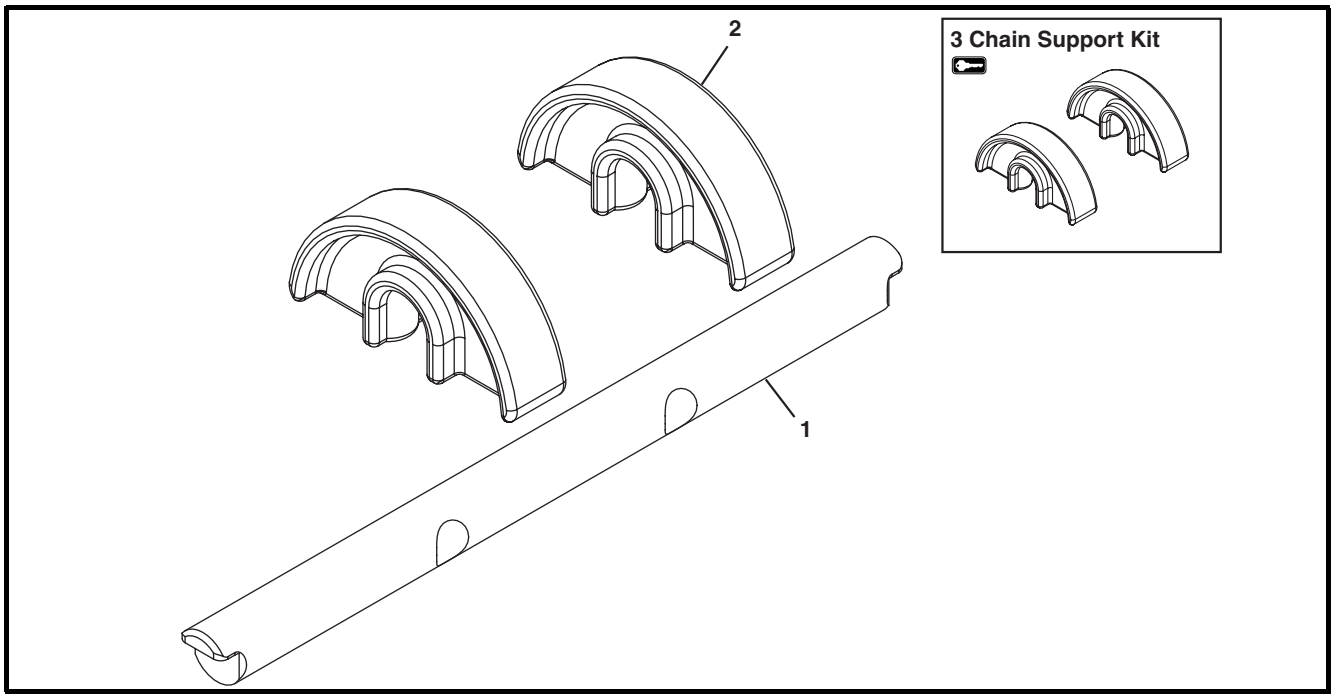
76 mm High Sides



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

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

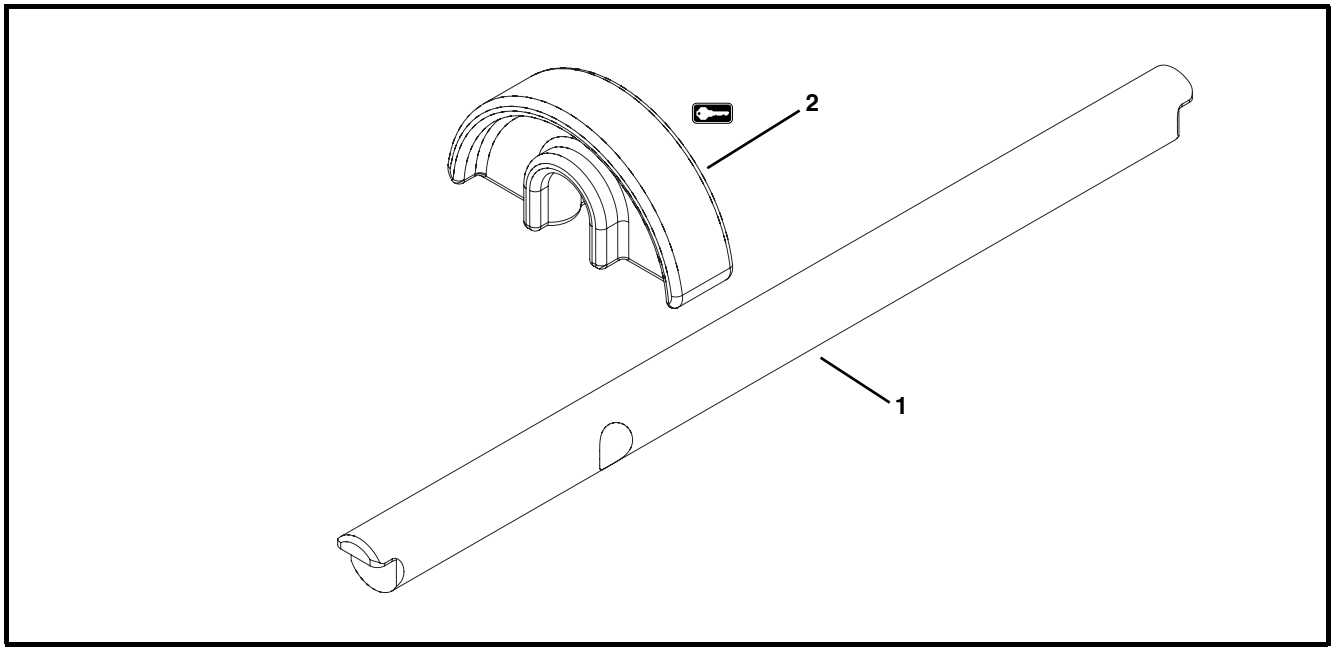
Straight Belt Return



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		

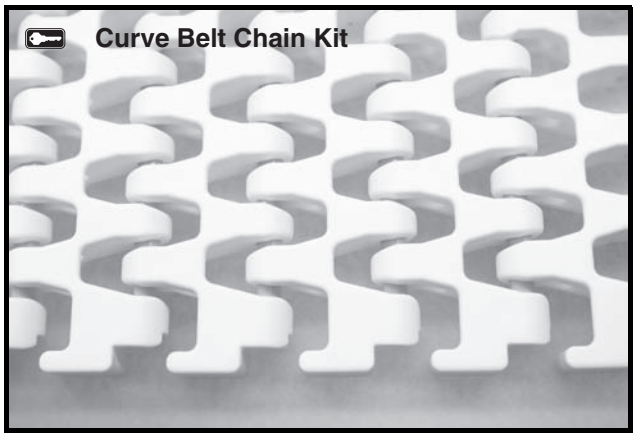
Curve Belt Return



Item	Part Number	Description
1	5033WW	Curve Return Shaft
2	500075	Chain Return Shoe
WW = Conveyor width ref: 08 - 36 in 02 increments		

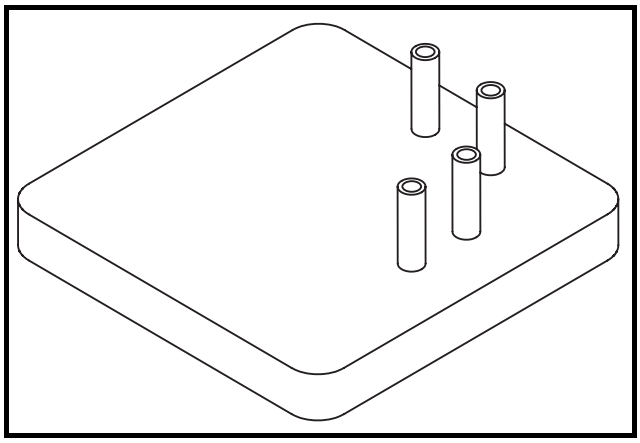
Service Parts

Curve Belt Chain Kit



Item	Part Number	Description
1	74BB-WW	Curve Belt Chain Kit (Includes 305 mm (1 ft) 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

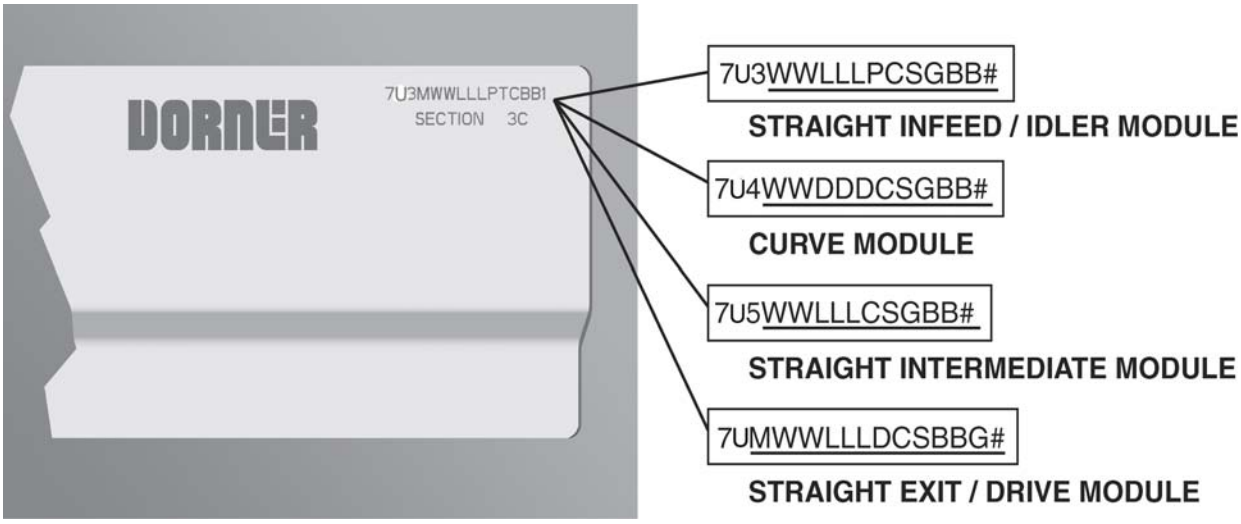


Figure 84

Curve Conveyor

Refer to your serial and model number plate **(Figure 84)**. 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: 7U32412015B1MR1

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: 7U5241807Z1MR3

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: 7UM2404817CMR15

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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