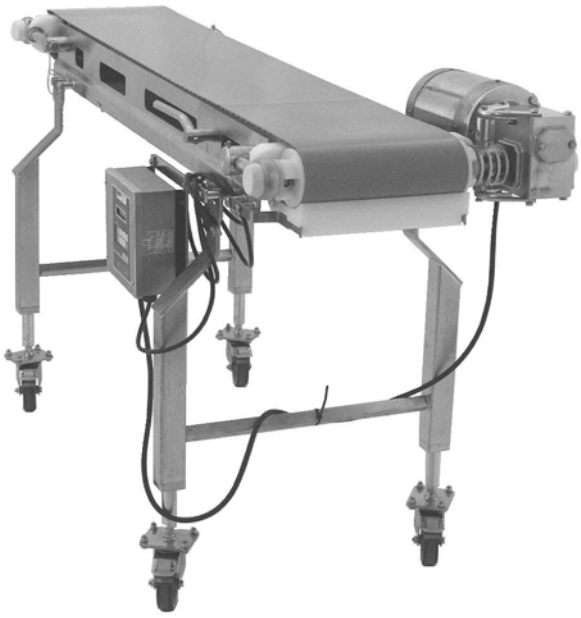
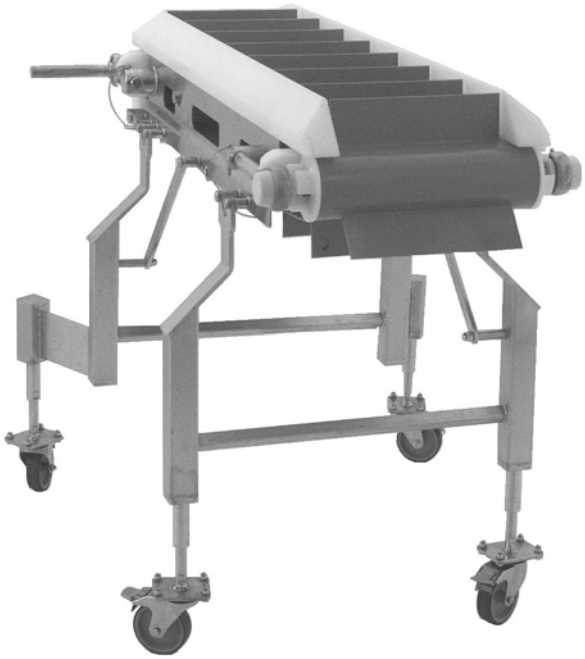
7600 Ultimate Series CE End Drive Conveyors

Installation, Maintenance and Parts Manual



Flat Belt Conveyor



Cleated Belt Conveyor

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851-651 Rev. C

Table of Contents

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.

NOTE

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

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

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

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

⚠ DANGER

SEVERE HAZARD!

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

⚠ DANGER

EXPLOSION HAZARD!

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

⚠ WARNING

CRUSH HAZARD!

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

⚠ WARNING

CRUSH HAZARD!

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

⚠ WARNING

SEVERE HAZARD!

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

⚠ WARNING

BURN HAZARD!

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

⚠ WARNING

PUNCTURE HAZARD!

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

⚠ WARNING

SEVERE HAZARD!

- **Dorner cannot control the physical installation and application of conveyors. Taking protective measures is the responsibility of the user.**
- **When conveyors are used in conjunction with other equipment or as part of a multiple conveyor system, CHECK FOR POTENTIAL PINCH POINTS and other mechanical hazards before system start-up.**
- **Failure to comply could result in serious injury.**

Product Description

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

Typical Components	
1	Conveyor
2	Belt (Flat Belt Shown)
3	Return
4	Support Stands
5	Drive End
6	Tension End

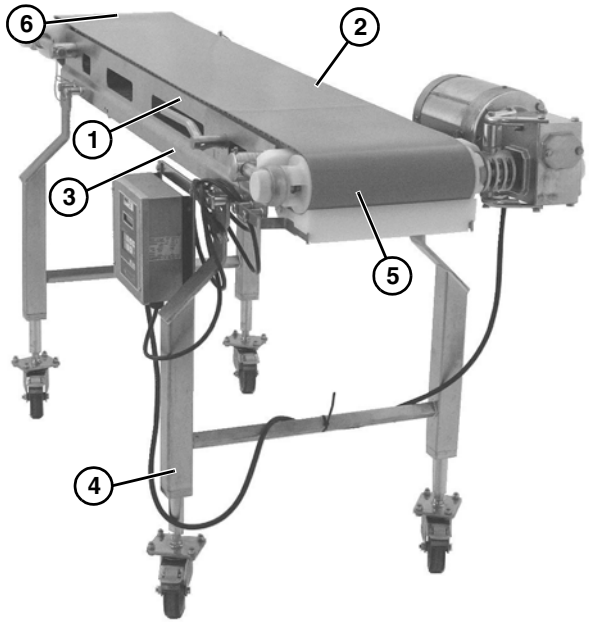
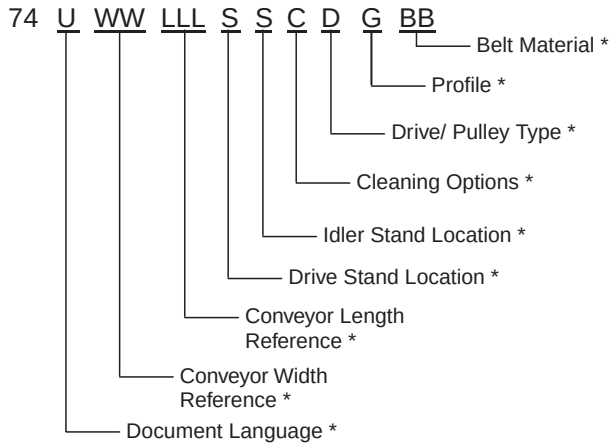
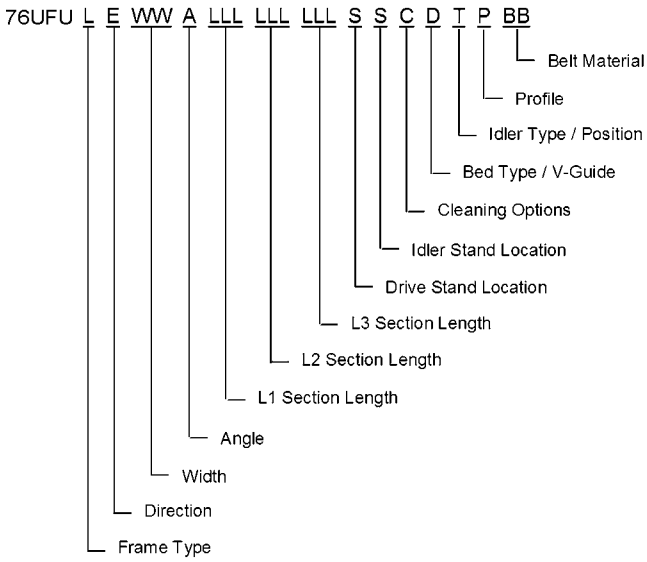


Figure 1

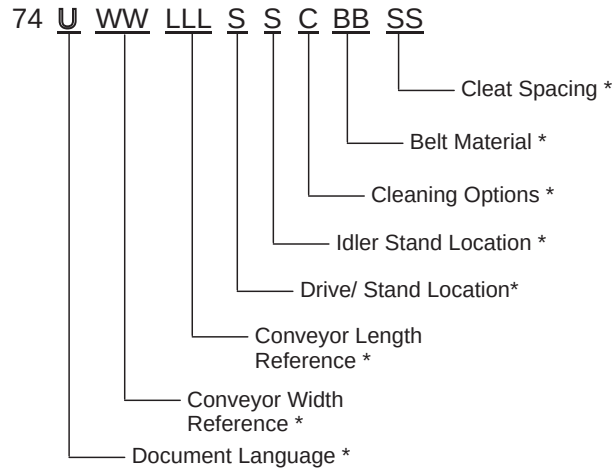
Flat Belt 7600
Ultimate Series Conveyor



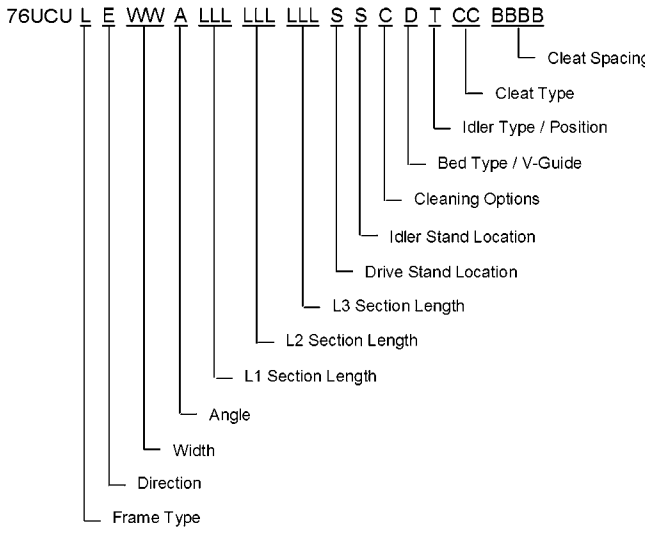
Flat Belt LPZ 7600
Ultimate Series Conveyor



Cleated Belt 7600
Ultimate Series Conveyor



Cleated Belt LPZ 7600
Ultimate Series Conveyor



Specifications

Conveyor Supports

Maximum Distances:

1 = 914 mm (3 ft)

2 = 2438 mm (8 ft)**

3 = 914 mm (3 ft)

**** For conveyors longer than 3.05 m (10 ft), install support at frame joint.**

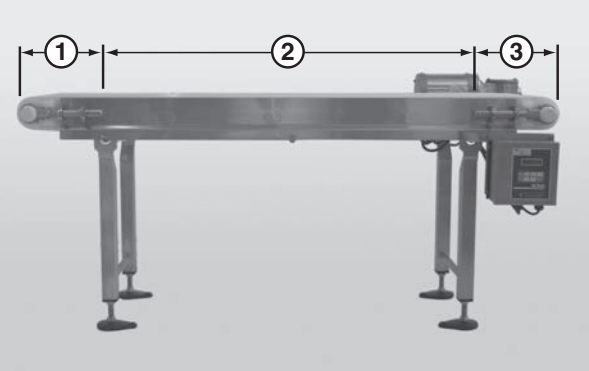


Figure 2

Specifications

Conveyor Width Reference (WW)	06 – 36 in 02 increments
Conveyor Belt Width	152 mm (6") – 914 mm (36") in 51 mm (2") 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
Maximum Belt Speed	71 m / minute (233 ft / minute)
Belt Take-up	51 mm (2")

Conveyor Length Reference (LLL)	036 – 999 in 001 increments
Conveyor Length	914 mm (36") – 25.4 m (999") in 25 mm (1") increments
LPZ Section Lengths (LLL)	024 – 252 in 001 increments
LPZ Section Length	610 mm (24") – 6401 mm (252") in 25 mm (1") increments
Total LPZ Conveyor Length	(L1 +L2 + L3) = Maximum 11.6 m (38') long conveyor

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*

⚠ 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. Assemble the conveyor (if required). Refer to "Conveyors Longer than 3353 mm (11 ft)" on page 7.
2. Install belt returns. Refer to "Belt Return Installation" on page 10.
3. Install limiter. Refer to "Limiter Installation" on page 11.
4. Attach guiding (if required). Refer to "Guide Installation" on page 12.
5. Attach stands. Refer to "Stand Installation" on page 13.
6. Install the gearmotor. Refer to "Drive Package Installation" on page 13.

Conveyors Longer than 3353 mm (11 ft)

Belt and Frame Sections

Typical Standard Belt **(Figure 4)**.

1	Belt

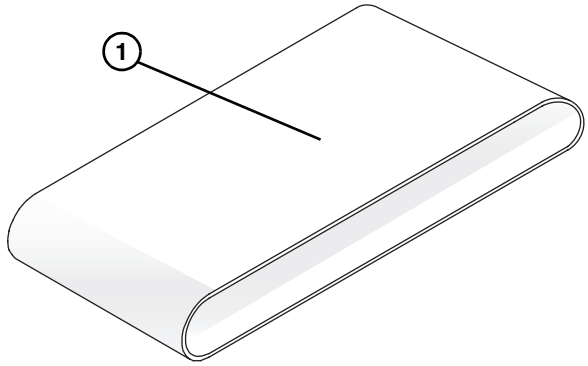


Figure 4

Typical Connection Components **(Figure 5)**.

1	Hex Head Cap Screws (x4)
2	Connector Hex Rods (x2)
3	Conveyor Frame
4	O-rings (x8)

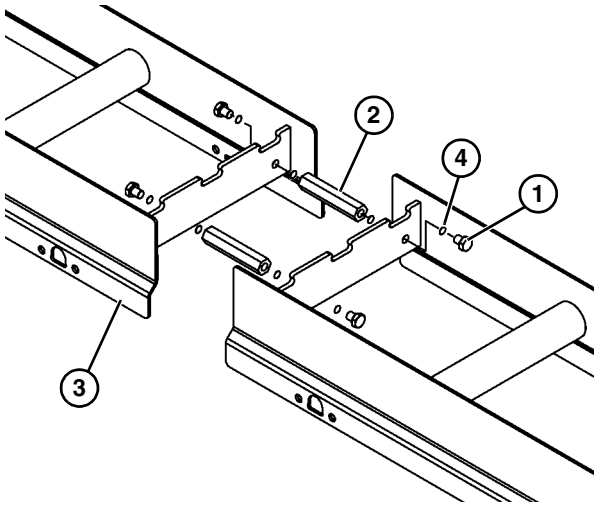


Figure 5

Installation

1. Locate the section number sequence etched on each section of frame **(Figure 6, item 1)**.

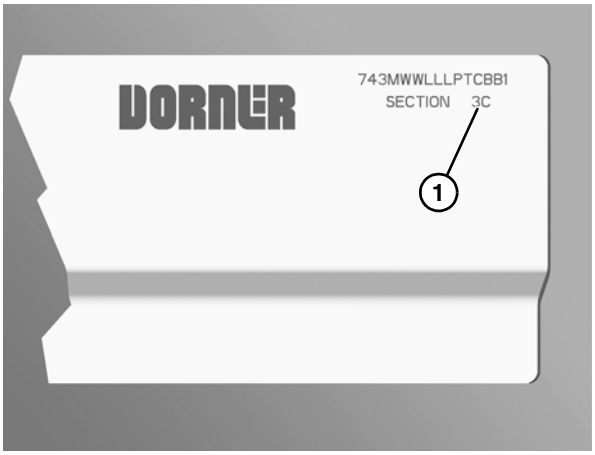


Figure 6

2. Position the frame sections in the correct order.

⚠ CAUTION

Avoid damage to O-rings. Be careful not to pinch or cut them.

3. Connect the frame sections by bolting the hex post connectors **(Figure 7, item 1)** between frame sections. Be sure O-rings are seated properly on hex post and hex screws prior to tightening of screws to avoid damage to O-rings.

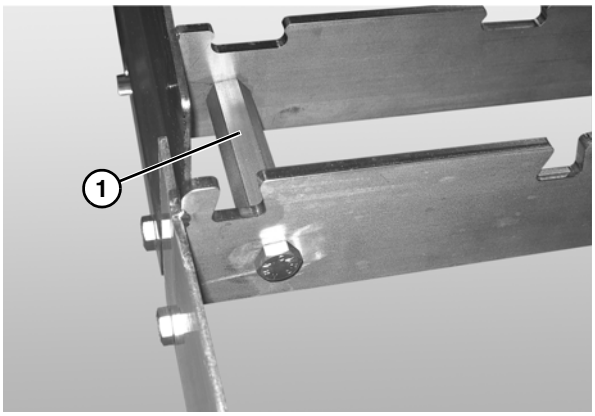


Figure 7

4. Place the idler tail **(Figure 8, item 1)** in the up position.

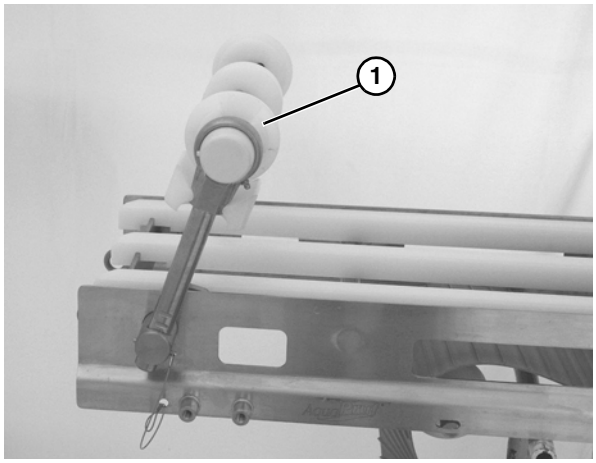


Figure 8

5. Slide the belt **(Figure 9, item 1)** on over the conveyor frame **(Figure 9, item 2)**.

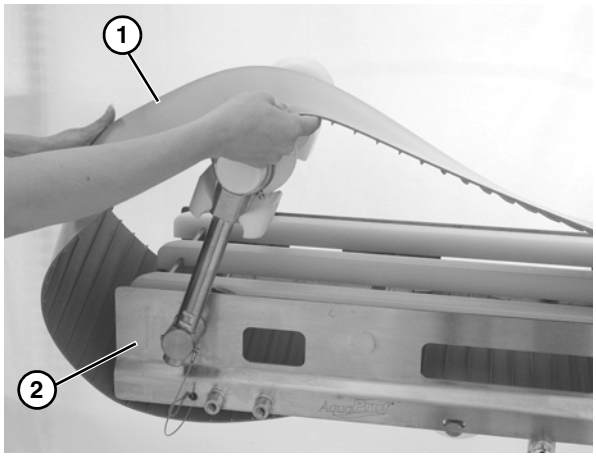


Figure 9

6. Align the sprockets **(Figure 10, item 1)** with the cogged drive teeth **(Figure 10, item 2)** on the inside of the belt.

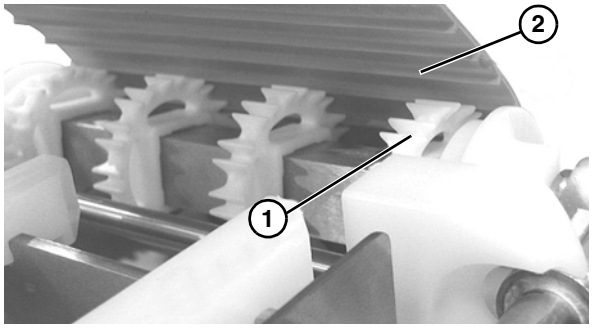


Figure 10

NOTE: The cogged drive teeth on the belt **(Figure 10, item 2)** should engage the deep grooves of the sprocket **(Figure 11, item 1)**.

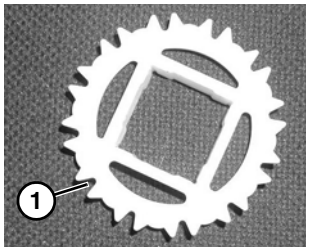


Figure 11

7. Place the idler tail in the down position, and extend the tension end to remove excess slack in the belt **(Figure 12)**.

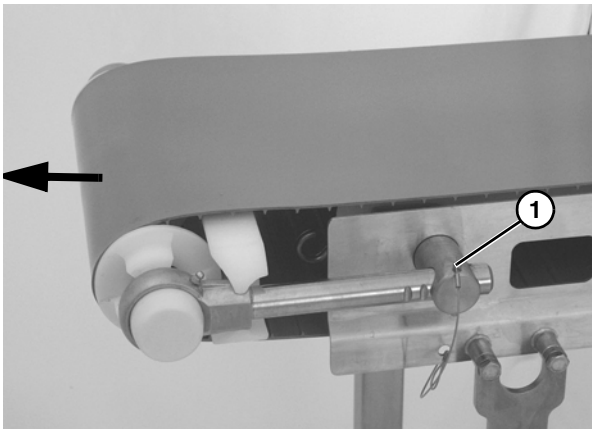


Figure 12

8. Insert the pull pins **(Figure 12, item 1)** on the tension end of the conveyor.

LPZ Conveyors

Knuckles

1. Attach upper knuckle **(Figure 13, item 1)** to frame **(Figure 13, item 2)** with hex rods **(Figure 13, item 3)** and bolts **(Figure 13, item 4)**.

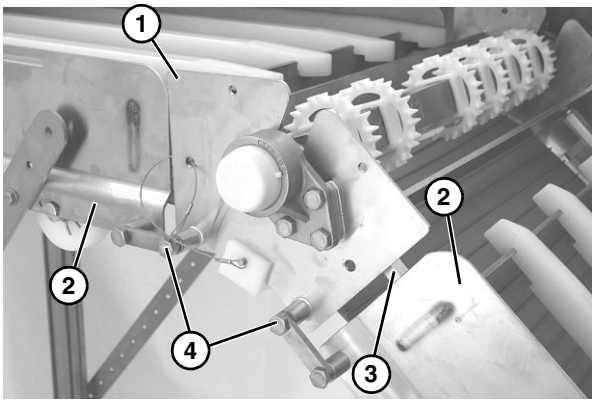


Figure 13

2. Attach lower knuckle **(Figure 14, item 1)** to frame **(Figure 14, item 2)** with hex rods and bolts **(Figure 14, item 3)**.

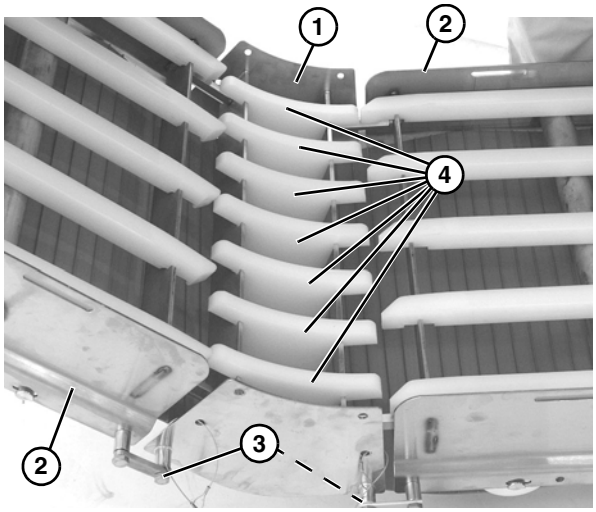


Figure 14

3. Install wear strips **(Figure 14, item 4)**.

Belt

NOTE: The cogged drive teeth on the belt should engage the deep grooves of the sprocket **(Figure 15, item 1)**.

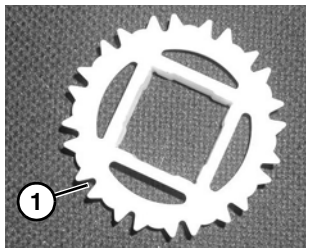


Figure 15

1. Slide belt **(Figure 16, item 1)** over knuckles and onto top and bottom of wear strips, while aligning the sprockets **(Figure 16, item 2)** with the cogged drive teeth on the inside of the belt.

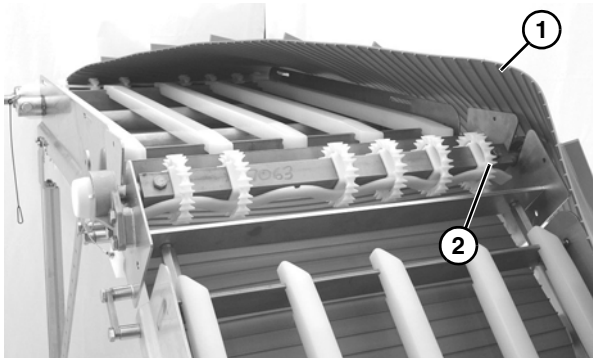


Figure 16

Guides

1. Install the return guide **(Figure 17, item 1**) and secure with push pin.
2. Slide the guides **(Figure 17, item 2)** and **(Figure 18, item 2)** onto the knuckle frame, and secure with two pull pins **(Figure 17, item 3)** and **(Figure 18, item 3)**.

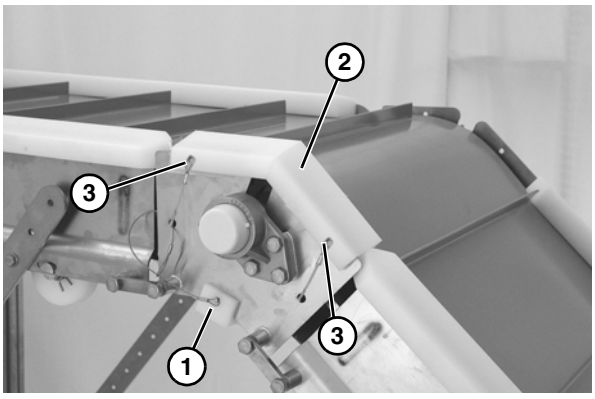


Figure 17 (Upper Knuckle)

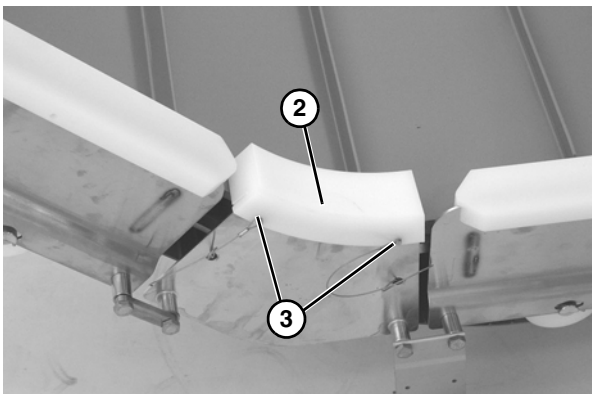


Figure 18 (Lower Knuckle)

3. Repeat for opposite side of conveyor.

All Conveyors

Belt Return Installation

Flat Belt

Typical Flat Belt Components **(Figure 19)**.

1	Flat belt returns

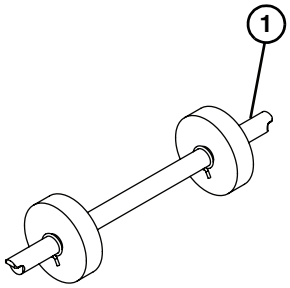


Figure 19

1. Slide the return shaft **(Figure 20, item 1)** up and through the large slot **(Figure 20, item 2)** in the frame.

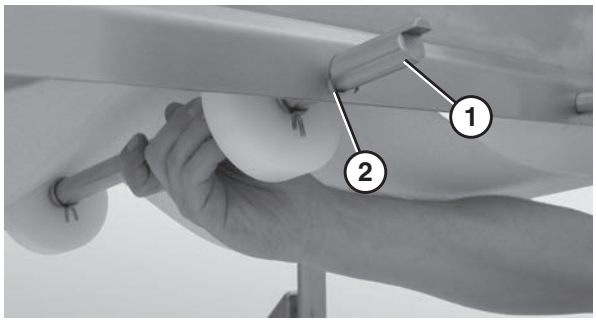


Figure 20

2. Push up on the return shaft **(Figure 21, item 1)** and slide the notched end of the shaft through the small slot **(Figure 21, item 2)** on the opposite side of the frame.

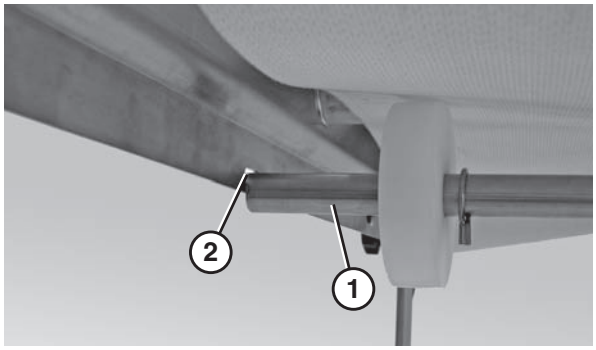


Figure 21

3. Repeat the procedure for all other belt returns.

Cleated Belt

Typical Cleated Belt Components **(Figure 22)**.

1	Cleated belt returns

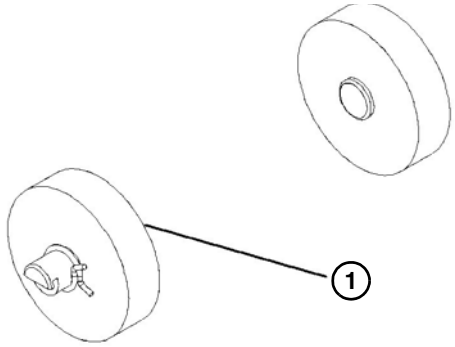


Figure 22

1. Insert the notched end of the return shaft **(Figure 23, item 1)** through the small hole **(Figure 23, item 2)** in the inside of the conveyor frame.

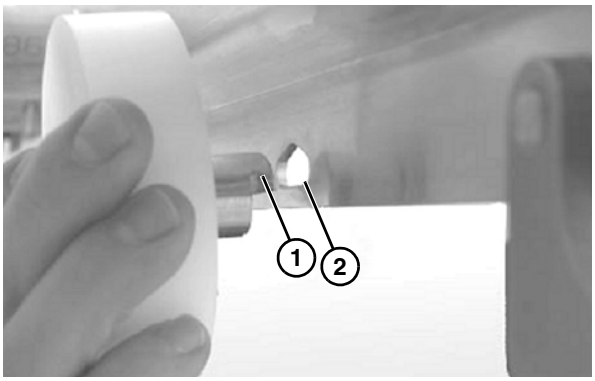


Figure 23

2. Repeat the procedure for all other belt returns.

Both Flat and Cleated Belts

1. Check belt sag by measuring from the top of the return **(Figure 24)**. Belt sag should not exceed 102 mm. Follow steps 7 – 9 in the "Belt Installation" section on page 7 to remove slack from the belt.

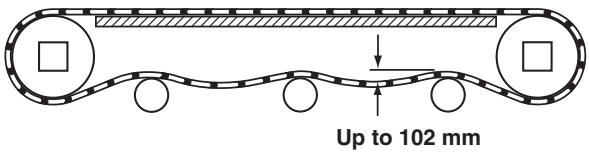


Figure 24

⚠ CAUTION

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

Limiter Installation

Flat Belt

Typical Flat Belt Limiter Components **(Figure 25)**.

1	Limiter
2	Limiter Support Plates (x2)
3	Hex Head Cap Screws (x4)

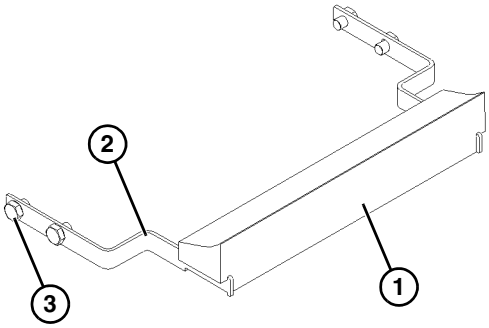


Figure 25

Cleated Belt

Typical Cleated Belt Limiter Components **(Figure 26)**.

1	Limiter (x2)
2	Limiter Support Plates (x2)
3	Hex Head Cap Screws (x4)

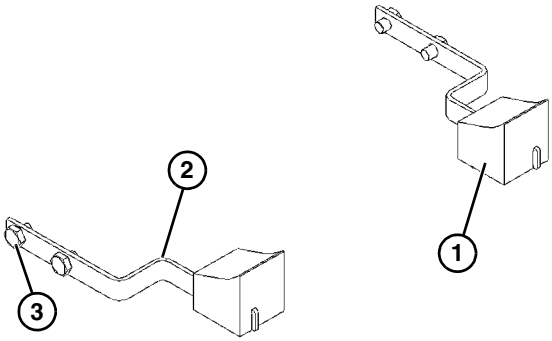


Figure 26

1. Loosely bolt limiter support plate **(Figure 27, item 1)** to conveyor frame stand off posts **(Figure 27, item 2)**. Repeat on opposite side.

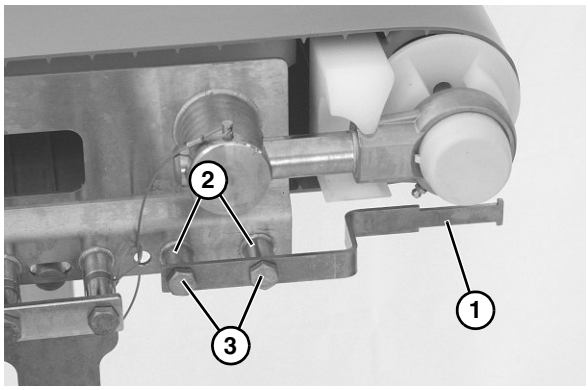


Figure 27

2. Insert limiter **(Figure 28, item 1)** or **(Figure 29, item 1)** between support plates **(Figure 28, item 2)** or **(Figure 29, item 2)**.

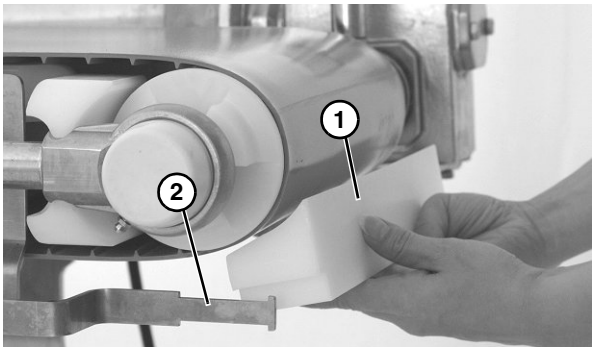


Figure 28 (Flat Belt)

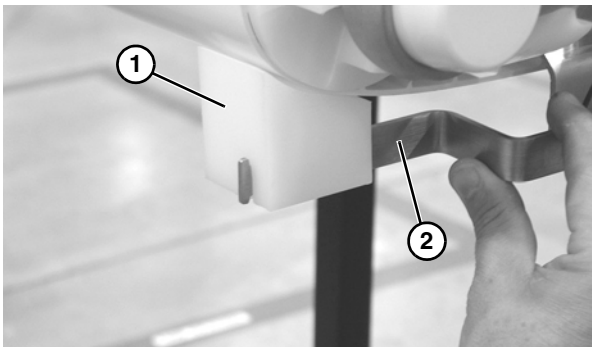


Figure 29 (Cleated Belt)

3. Adjust limiter to within 1/32” from belt, and tighten screws **(Figure 27, item 3)**.

Guide Installation

Typical Guide Components **(Figure 30)**.

1	Guide
2	Pull pin

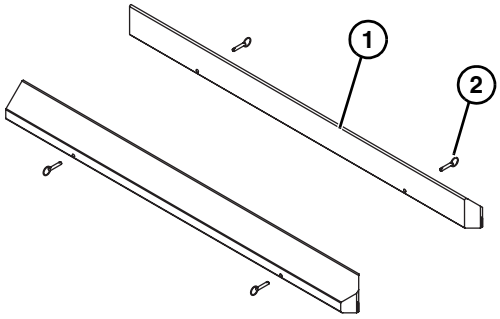


Figure 30

1. Position the guide **(Figure 31, item 1)** so that the flat surface is facing the belt and then slide the guide onto the frame rail **(Figure 31, item 2)**.

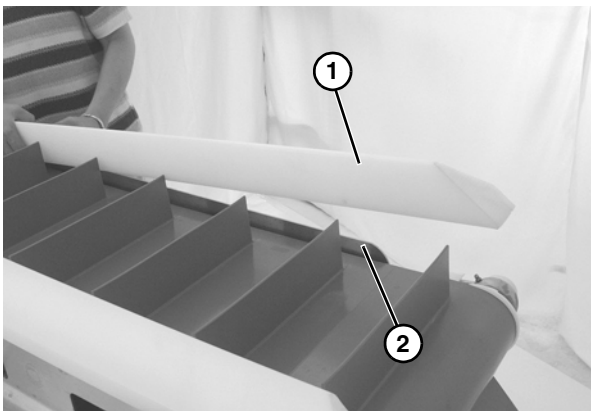


Figure 31

2. Line up the guide holes with the holes in the frame.
3. Insert the pull pins **(Figure 32, item 1)** into the holes in the guide **(Figure 32, item 2)**.

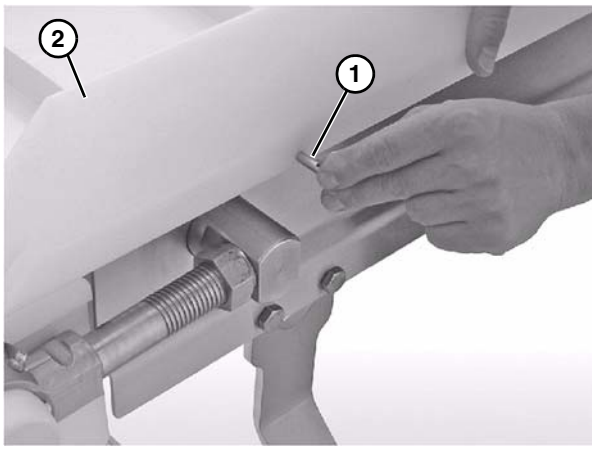


Figure 32

Stand Installation

Typical Stand Components **(Figure 33)**.

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

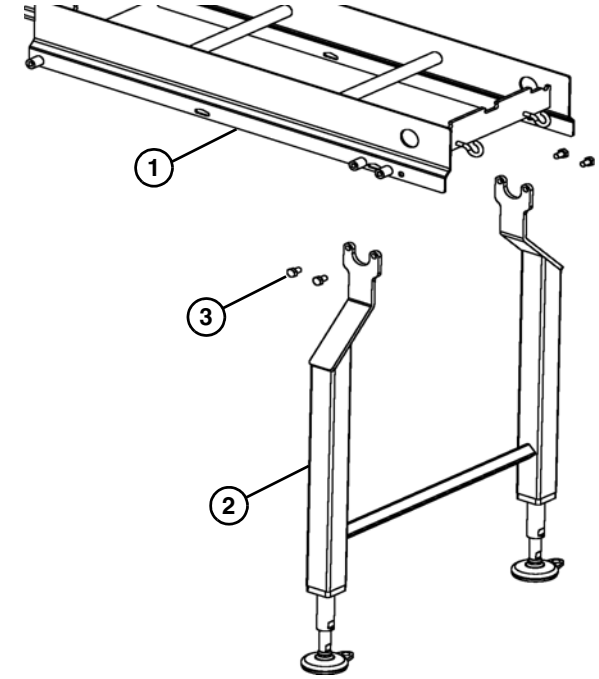


Figure 33

1. Position the stands on a flat, level surface.
2. Attach the stands to the frame **(Figure 34)**.

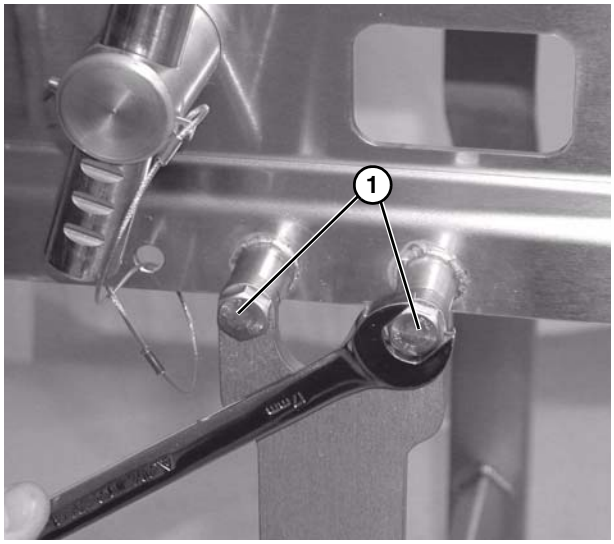


Figure 34

3. Tighten hex screws **(Figure 34, item 1)**.

Drive Package Installation

Typical Motor Components **(Figure 35)**.

1	End drive package
2	Motor

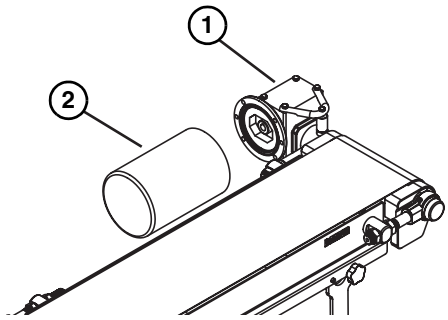


Figure 35

1. Attach the motor **(Figure 36, item 1)** to the gear reducer **(Figure 36, item 2)**.

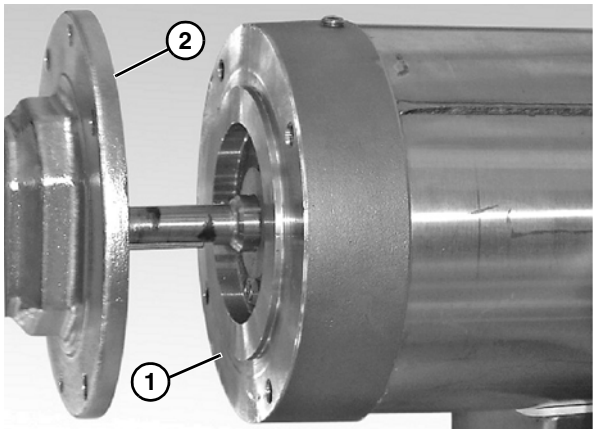


Figure 36

For detailed assembly instructions, refer to the "7600 Series Center Drive Packages Installation, Maintenance and Parts Manual."

Belt Tensioning

- Do not tension the conveyor belt.
- Conveyors are shipped at proper tension.
- Over tensioning of the conveyor will cause the conveyor to run improperly.
- Some belt sag **(Figure 37, item 1)** is required for proper operation.

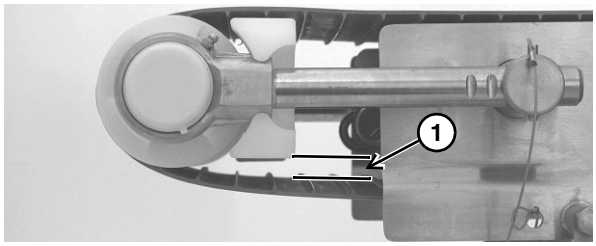


Figure 37

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 26 for recommendations.
- Replace any worn or damaged parts.

Cleaning

NOTE

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

⚠ CAUTION

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

Routine Cleaning

⚠ WARNING

SEVERE HAZARD!

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

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

Standard Conveyors

1. Remove the guides, if applicable, by removing the pull pins **(Figure 38, item 1)** that connect the guide **(Figure 38, item 2)** to the frame.

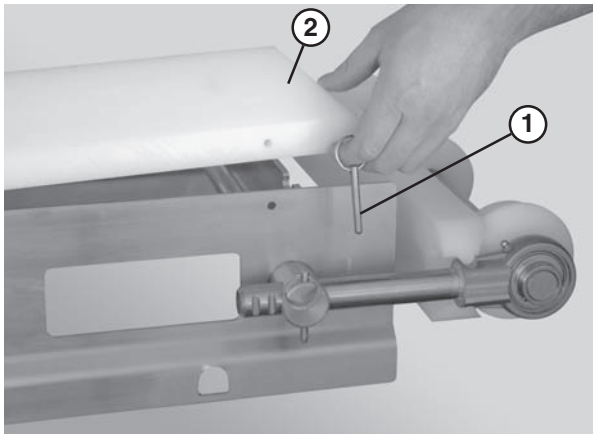


Figure 38

2. Tip up idler tail assembly **(Figure 39)**.

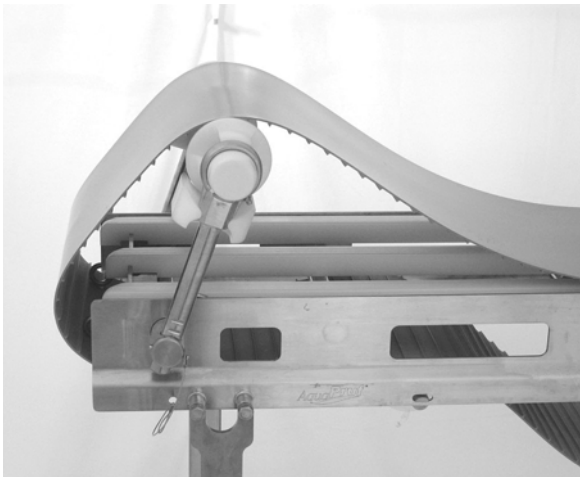


Figure 39

3. Lift up on the belt **(Figure 40)**.

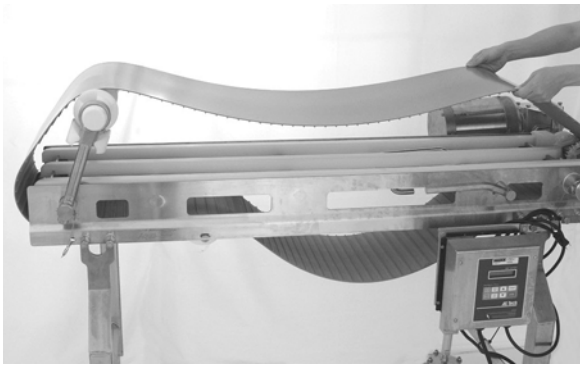


Figure 40

Conveyors with Lifters

1. Remove the guides, if applicable, by removing the pull pins **(Figure 38, item 1)** that connect the guide **(Figure 38, item 2)** to the frame.

2. Use the lifter handle **(Figure 41, item 1)** to raise the lifters **(Figure 41, item 2)** and raise the tip up tail **(Figure 41, item 3)**.

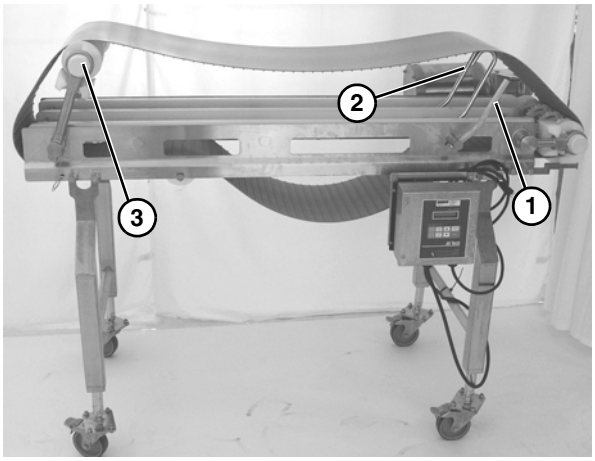


Figure 41

⚠ 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 16.
- Refer to “Sprocket and Puck Removal” on page 18.
- Refer to “Reassembling Tail Assemblies” on page 21.

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

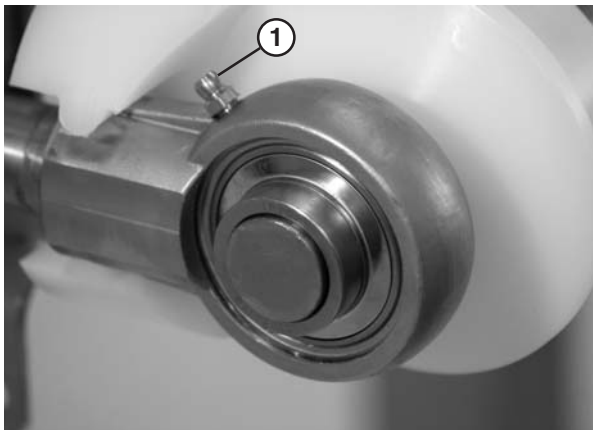


Figure 42

2. On LPZ knuckles, add grease to grease fitting **(Figure 43, item 1)**.

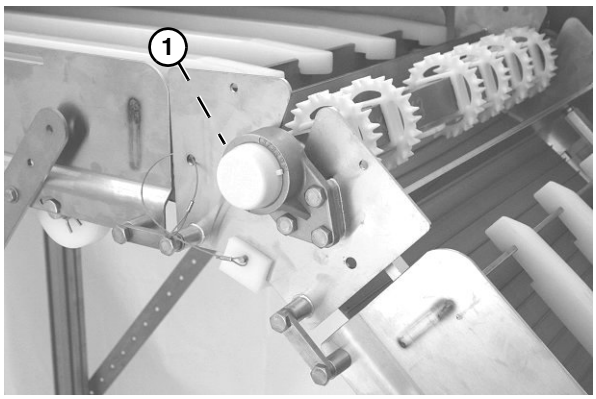


Figure 43

3. Replace the bearings if they become worn.

Wearstrips and Belt Returns

Replace the wearstrips and belt returns if they become worn.

For wearstrip and belt return installation instructions:

- For wearstrips, replace as needed, making sure wear strips are situated securely in the frame slots.
- For belt returns, Refer to “Belt Return Installation” on page 10.

Preventive Maintenance and Adjustment

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 44, item 1)** that connect the guides **(Figure 44, item 2)** to the frame.

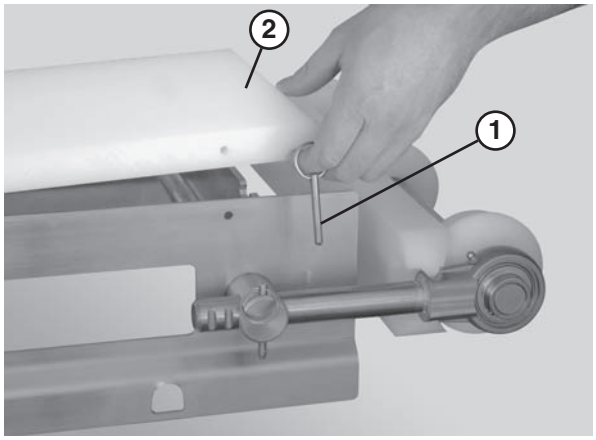


Figure 44

2. Remove the guides **(Figure 45, item 1)**.

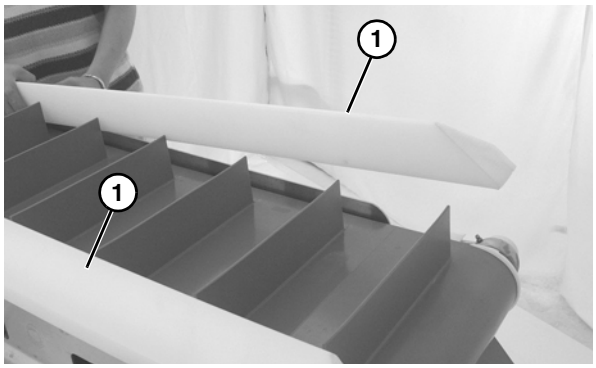


Figure 45

3. Follow the belt replacement procedures described in “Standard Belts” on page 16”.

Standard Belts

1. Place the idler tail assembly in the UP position **(Figure 46)**.

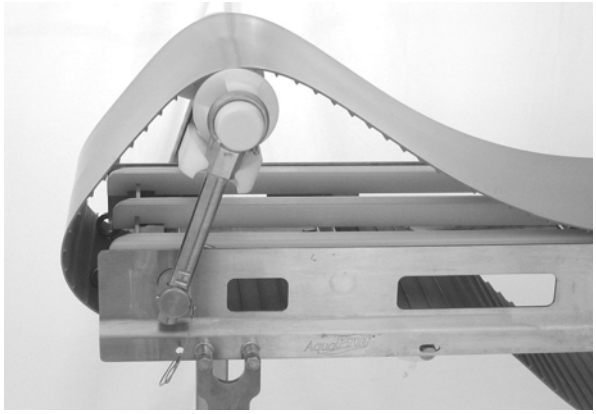


Figure 46

⚠ WARNING

SEVERE HAZARD!

- **ONLY DISCONNECT ONE PIVOT BRACKET AT A TIME AND ONLY IF THE STANDS ARE BOLTED TO THE FLOOR.**
- **Disconnecting more than one pivot bracket at a time or not bolting stands to the floor can cause the conveyor to tip and may result in serious injury.**

2. Lower the quick release arm **(Figure 47, item 1)** on one of the stands. *Note: if the conveyor is not equipped with Quick Release (QR Type) stands, it will be necessary to remove the entire stand.* For detailed instructions, refer to the "Sanitary Support Stands Installation, Maintenance and Parts Manual."

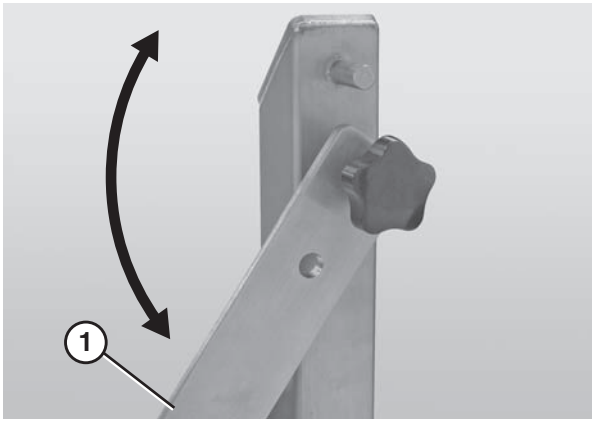


Figure 47

3. Slide the old belt **(Figure 48, item 1)** off the conveyor frame **(Figure 48, item 2)**.

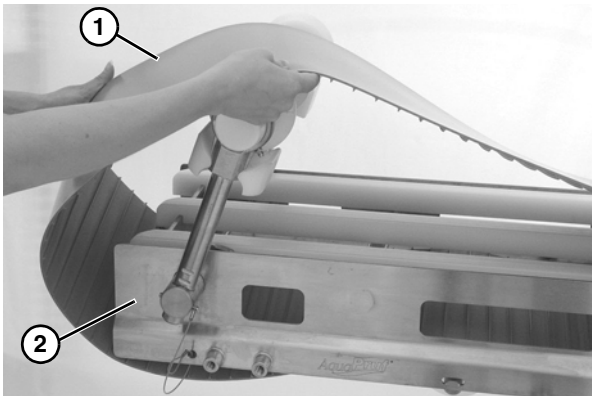


Figure 48

4. Secure the quick release arm on the stand and repeat steps 2 and 3 until the entire belt is off the conveyor.
5. Remove the belt returns by pushing up on the return shaft **(Figure 49, item 1)** and sliding it through the large hole **(Figure 49, item 2)** in the frame.

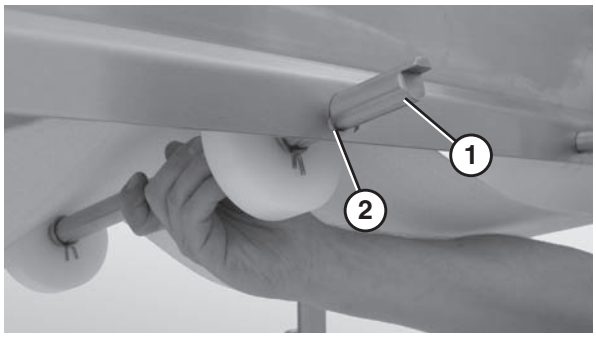


Figure 49

6. Lower the opposite end of the return shaft **(Figure 49, item 1)** and slide it out of the frame.
7. Remove the belt.
8. Replace the damaged or worn belt. Refer to "Belt Installation" on "Belt and Frame Sections" on page 7 and "Belt Return Installation" "Belt Return Installation" on page 10.

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. If there appears to be too much belt sag, place tip up idler tail in the down position **(Figure 50, item 1)**.

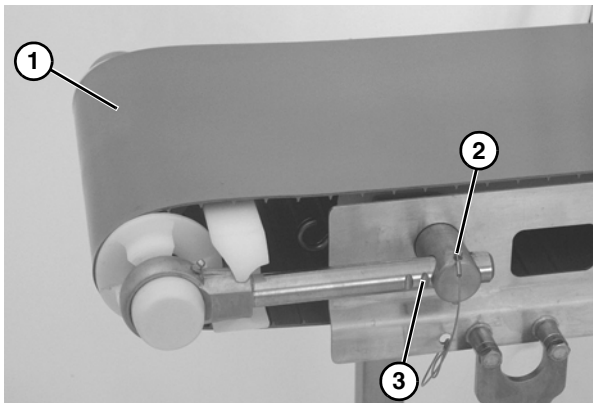


Figure 50

2. Remove both pull pins **(Figure 50, item 2)**, and extend the idler tail to the next groove **(Figure 50, item 3)** on the bearing shaft.
3. Continue extending the tension end until the belt is sufficiently tight **(Figure 50)**.
4. Reinsert the pull pins.

- Do not tension the conveyor belt.
- Conveyors are shipped at proper tension.
- Over tensioning of the conveyor will cause the conveyor to run improperly.
- Some belt sag **(Figure 51, item 1)** is required for proper operation.

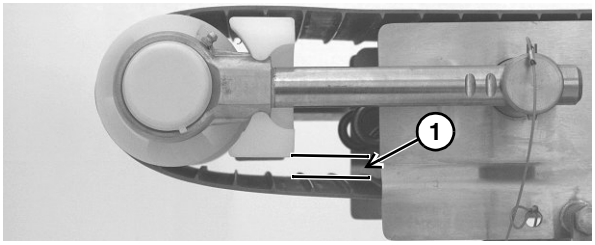


Figure 51

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 16.
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 52, item 1)** and the bore plug **(Figure 52, item 2).**

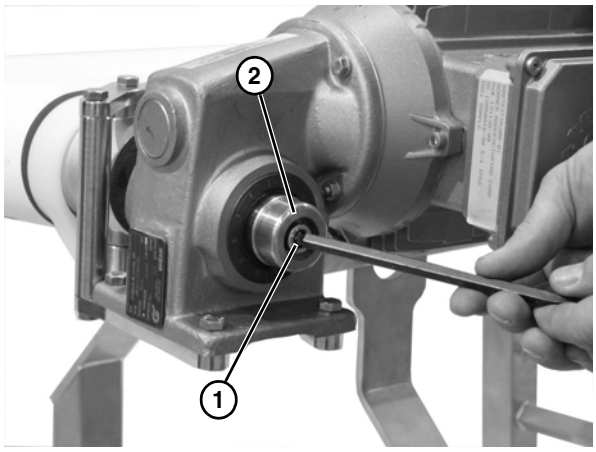


Figure 52

2. Remove the bottom gearhead mounting bar **(Figure 53, item 1)** from the motor mounting bracket **(Figure 53, item 2).** Remove spacer **(Figure 53, item 3)**.

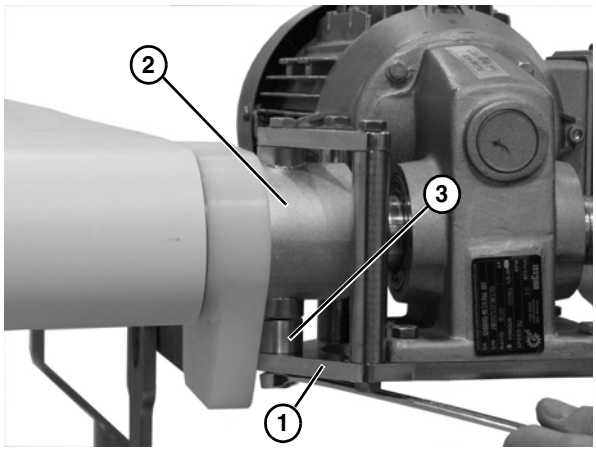


Figure 53

3. Remove the top gearhead mounting bar **(Figure 54, item 1)** from the motor mounting bracket **(Figure 54, item 2)**.

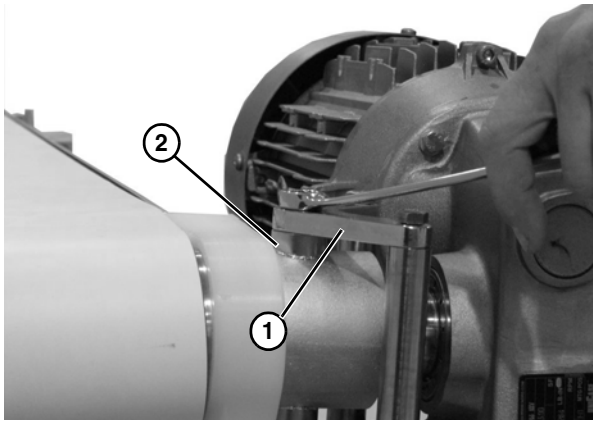


Figure 54

4. Slide the gearmotor assembly **(Figure 55, item 1)** off of the drive spindle **(Figure 55, item 2)**.

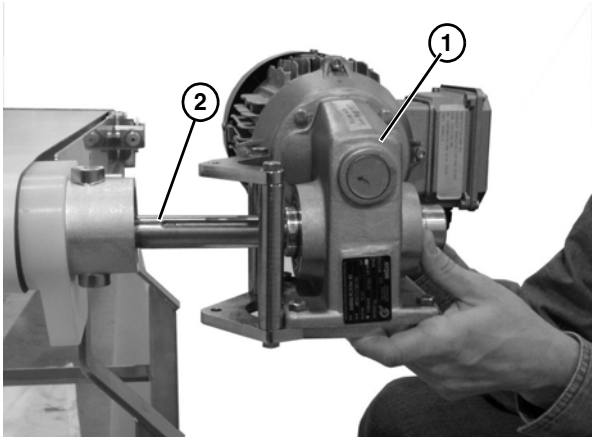


Figure 55

5. Remove the drive spindle key **(Figure 56, item 1)** from the drive spindle keyway **(Figure 56, item 2)**.

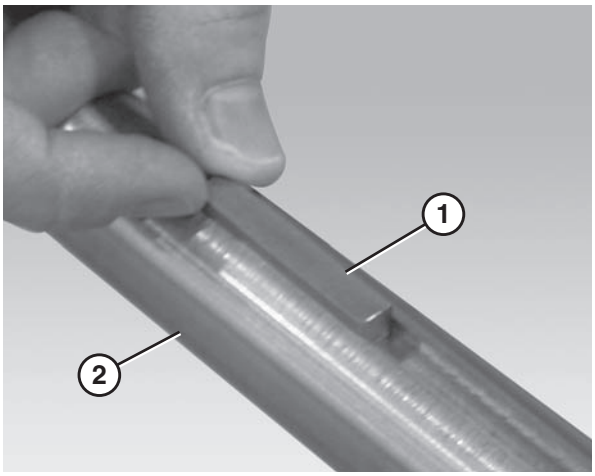


Figure 56

6. Remove the pull pin **(Figure 57, item 1)**.

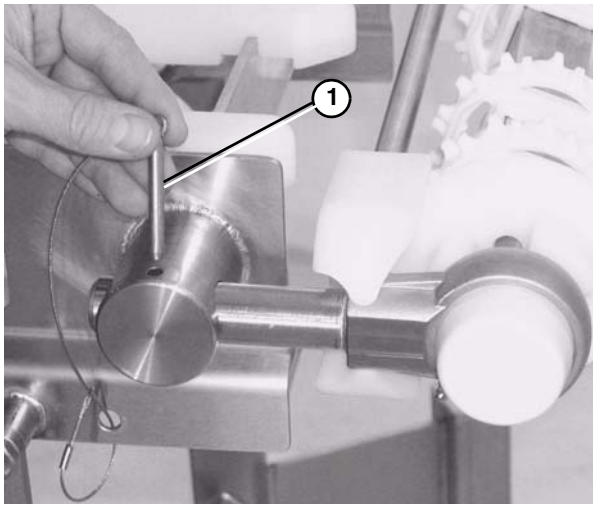


Figure 57

7. Slide the drive tail assembly out of the take up blocks **(Figure 58)**.

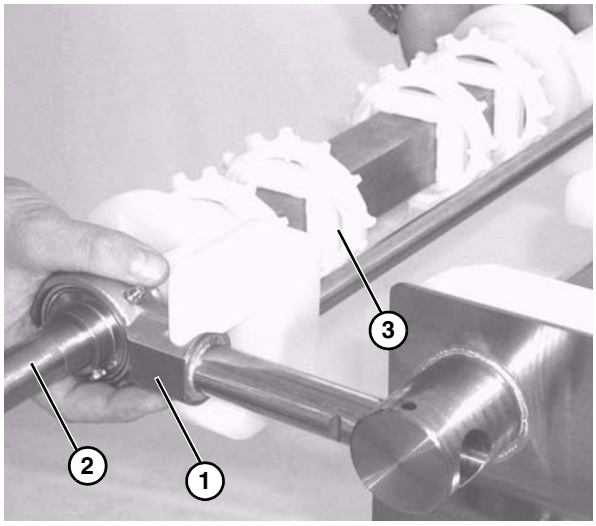


Figure 58

8. Slide the motor support bracket **(Figure 58, item 1)** off the drive spindle **(Figure 58, item 2)**.
9. Remove the sprockets **(Figure 58, item 3)**.

B - Idler Puck Removal

1. Remove the pull pins from take up blocks **(Figure 57)**.
2. Slide the idler tail assembly **(Figure 59, item 1)** out of the take up blocks **(Figure 59, item 2)**.

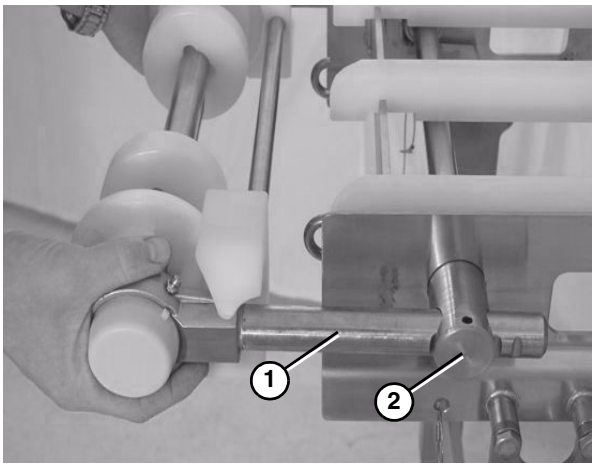


Figure 59

3. Remove the bearing cover **(Figure 60, item 1)**.

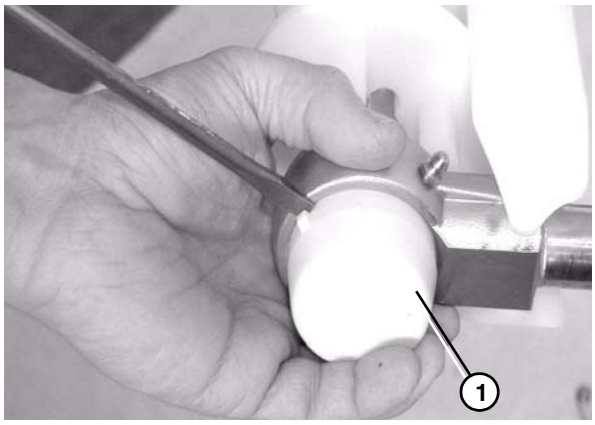


Figure 60

4. Use a hex wrench **(Figure 61, item 1)** to loosen the bearing shaft assembly fasteners **(Figure 61, item 2)**.

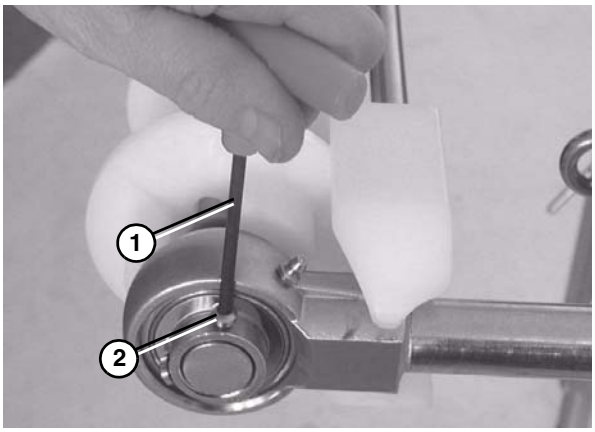


Figure 61

5. Slide the bearing shaft assembly **(Figure 62, item 1)** washer off **(Figure 62, item 3)**, O-ring **(Figure 62, item 4)**, and flanged puck **(Figure 62, item 5)** off the idler shaft **(Figure 62, item 2)**.

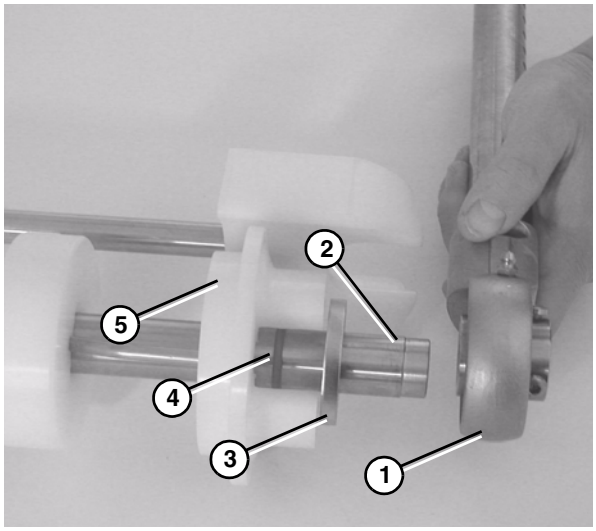


Figure 62

6. Remove the guard bar **(Figure 63, item 1)**.

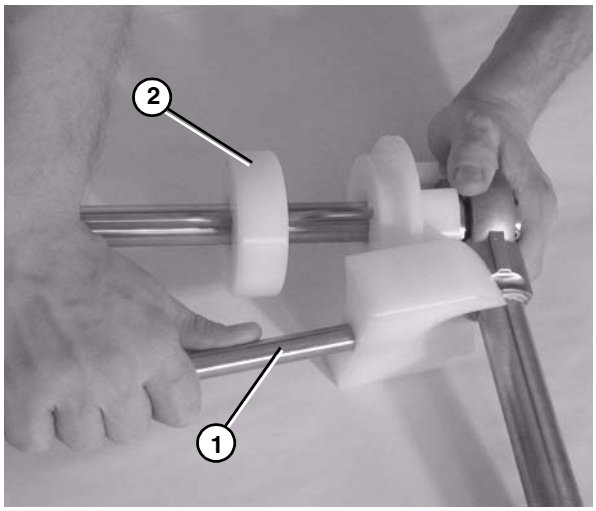


Figure 63

7. Remove the pucks **(Figure 63, item 2)**.

Reassembling Tail Assemblies

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

Tip Up Idler Tail

1. Place the idler puck **(Figure 64, item 1)** at the center of the bent retaining bar **(Figure 64, item 2)**.
2. Slide the idler puck onto the idler shaft **(Figure 64, item 3)**. Make sure to center the idler puck.

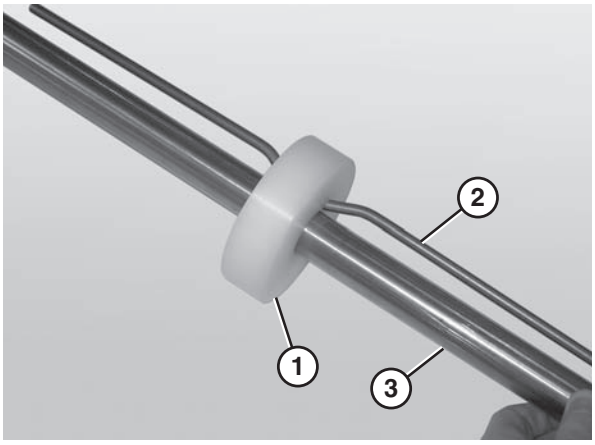


Figure 64

3. Attach the flanged pucks **(Figure 65, item 5)**, the O-rings **(Figure 65, item 4)**, the washers **(Figure 65, item 3)** and the bearing shaft assemblies **(Figure 65, item 1)** onto the idler shaft **(Figure 65, item 2)**.

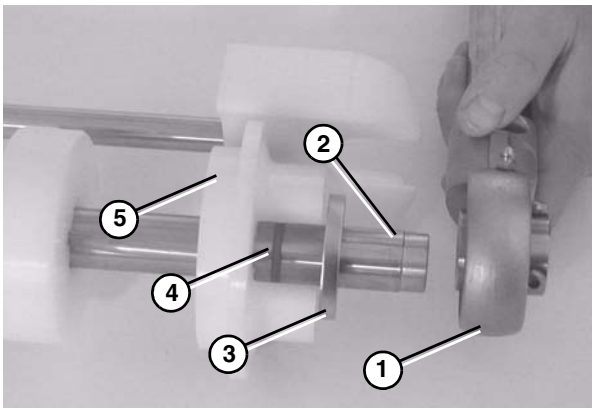


Figure 65

4. Attach the guard bar **(Figure 66, item 1)**.

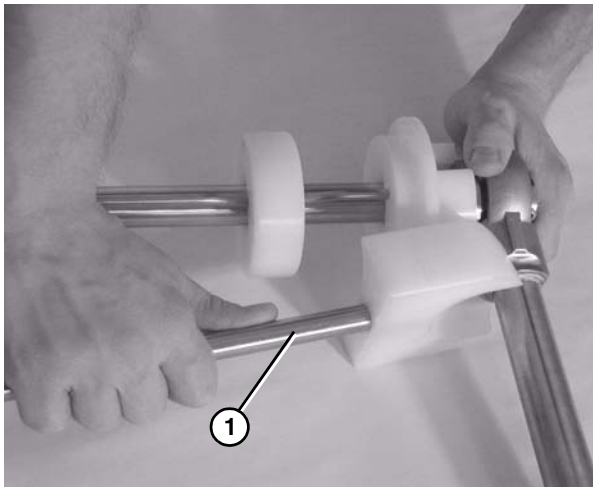


Figure 66

5. Use a hex wrench **(Figure 67, item 1)** to tighten the bearing shaft fasteners **(Figure 67, item 2)** to 6 N•m (54 in•lbs). Check after 24 hours of conveyor use.

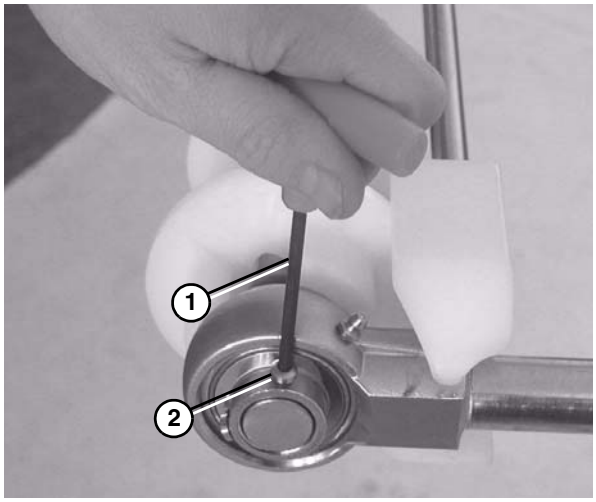


Figure 67

6. Attach the bearing covers. Reference **(Figure 60)**.

Drive Tail

1. Attach a flanged puck **(Figure 68, item 1)**, an O-ring **(Figure 68, item 4)**, a washer **(Figure 68, item 5)** and a bearing shaft assembly **(Figure 68, item 2)** to the supporter end of the drive spindle.

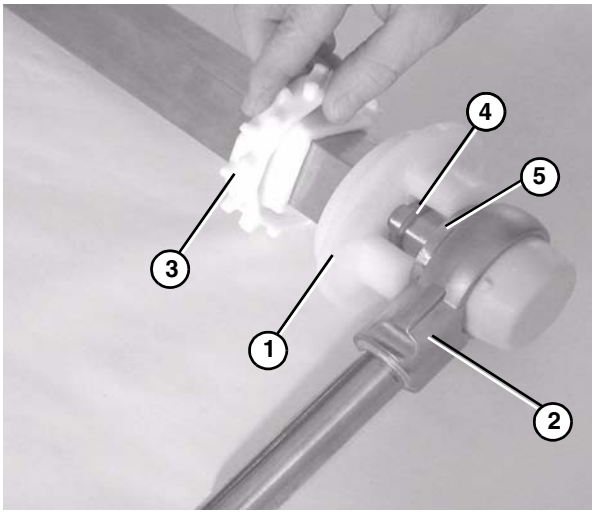


Figure 68

2. Slide the first sprocket **(Figure 68, item 3)** onto the drive spindle.
3. Insert the sprocket alignment bar **(Figure 69, item 1)** into the first sprocket **(Figure 69, item 2)** resting it up against the flanged puck **(Figure 69, item 3)**. Position the first sprocket with the notch in the sprocket alignment bar.

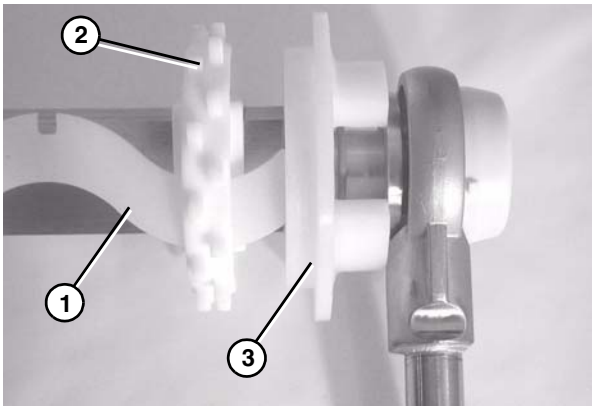


Figure 69

4. Install the remaining sprockets **(Figure 70, item 1)** making sure to position each sprocket with the next available notch **(Figure 70, item 2)** in the sprocket alignment bar.

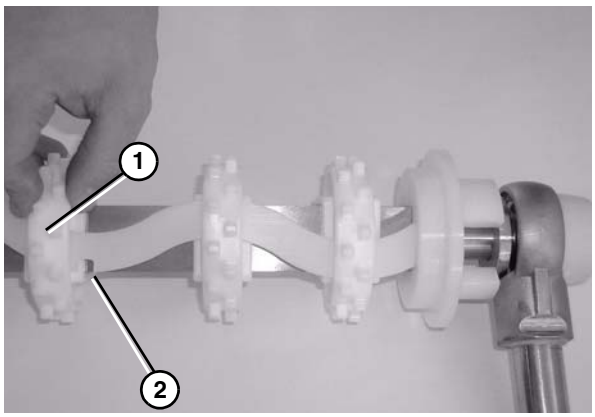


Figure 70

5. Install a flanged puck **(Figure 71, item 2)** onto spindle shaft. Install O-ring **(Figure 71, item 1)** onto spindle in groove provided.

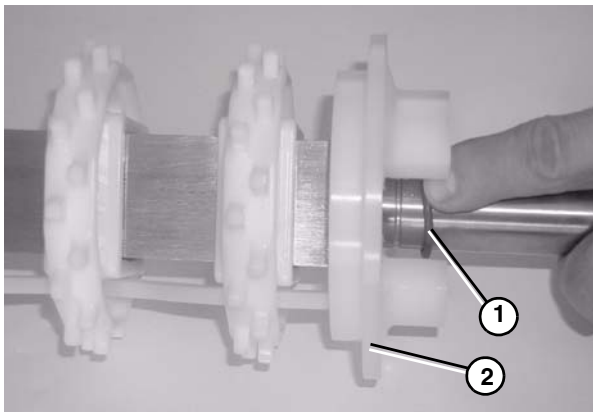


Figure 71

6. Install washer **(Figure 72, item 1)** onto spindle shaft.

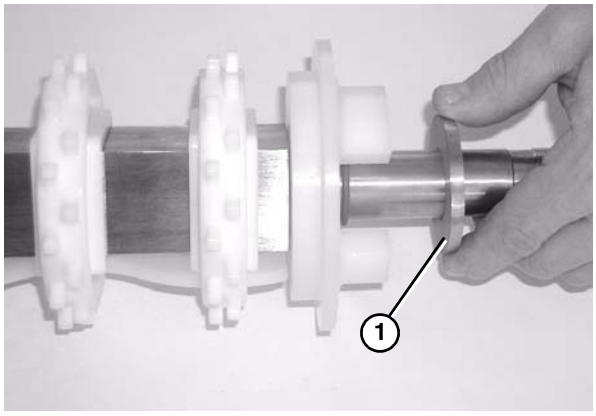


Figure 72

7. Slide the retaining ring **(Figure 73, item 1)** onto the drive spindle. Leave a slight gap between ring and washer to allow flanged puck to spin freely.

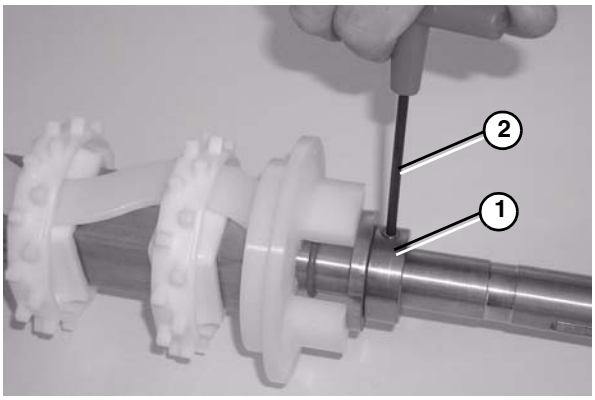


Figure 73

8. Tighten the retainer ring fastener using a hex wrench **(Figure 73, item 2)**.
9. Slide the second bearing shaft assembly, or the motor mount bracket **(Figure 74, item 1)**, onto the longer end of the drive spindle **(Figure 74, item 2)**.

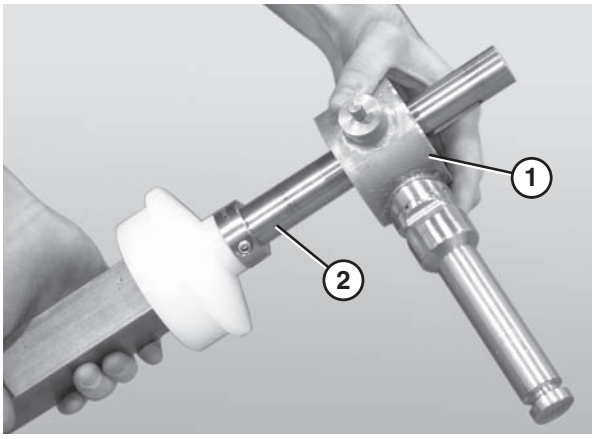


Figure 74

10. Attach the guard bar **(Figure 75, item 1)** to the bearing / motor mount bracket shafts **(Figure 75, item 2)**.

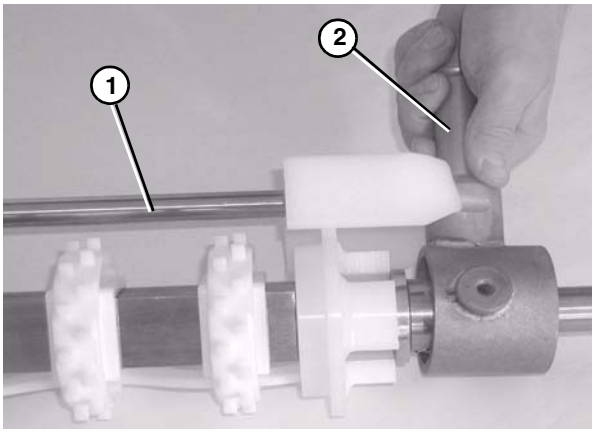


Figure 75

11. Use a hex wrench **(Figure 76, item 1)** to tighten the bearing shaft fasteners **(Figure 76, item 2)** to 54 in•lbs (6 N•m). Check after 24 hours of conveyor use.

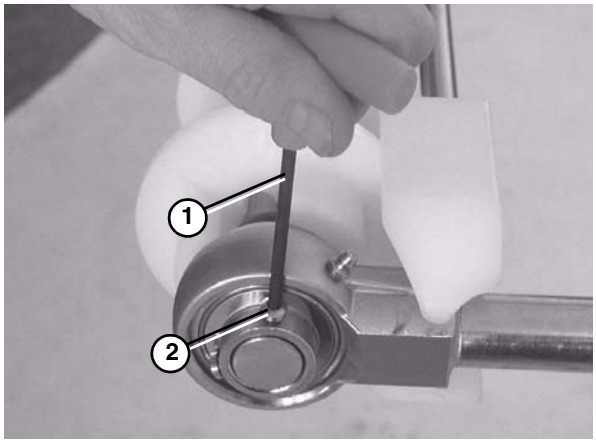


Figure 76

12. 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 77)**.

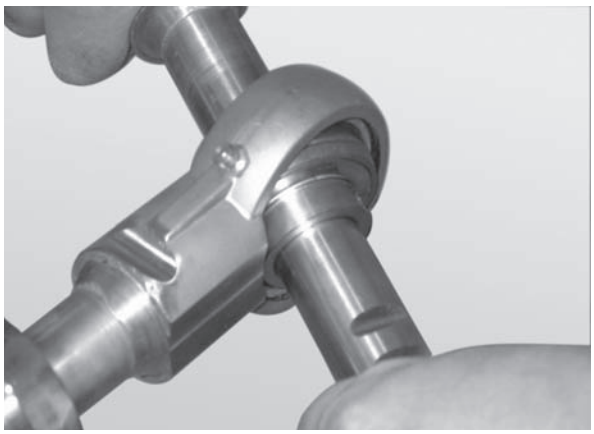


Figure 77

3. Apply lateral pressure to the rod until the bearing comes loose.

4. Remove the worn or damaged bearing **(Figure 78)**.

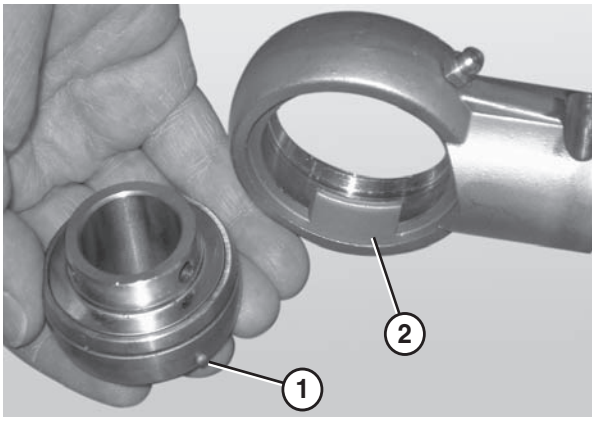


Figure 78

5. Replace the bearing.

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

LPZ Knuckles

Wearstrips and Belt Returns

Replace the wearstrips and belt returns if they become worn.

For wearstrip and belt return installation instructions:

- For wearstrips, replace as needed, making sure wear strips are situated securely in the frame slots.
- For belt returns, Refer to “Belt Return Installation” on page 10.

Removal

1. Remove three bolts **(Figure 79, item 1)** on each side, and remove spindle assembly **(Figure 79, item 2)** from knuckle.

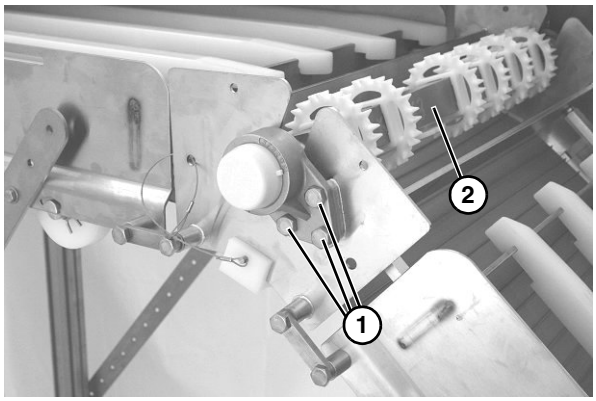


Figure 79

2. Remove the bearing cover **(Figure 80, item 1)**.

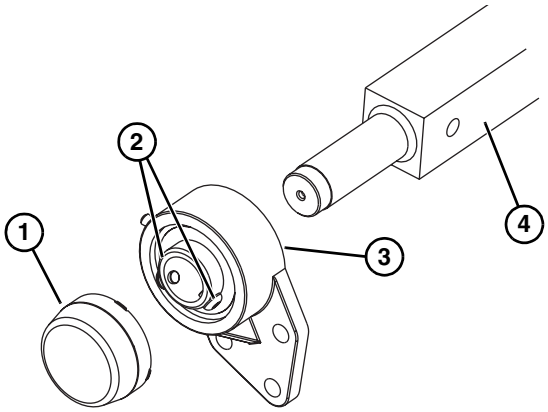


Figure 80

3. Use a hex wrench to loosen the bearing shaft assembly fasteners **(Figure 80, item 2)**.
4. Slide the bearing flange assembly **(Figure 80, item 3)**, off the spindle shaft end **(Figure 80, item 4)**.

5. Remove bolt **(Figure 81, item 1)**, to slide sprockets **(Figure 81, item 2)** from spindle shaft and sprocket alignment bar **(Figure 81, item 3)**.

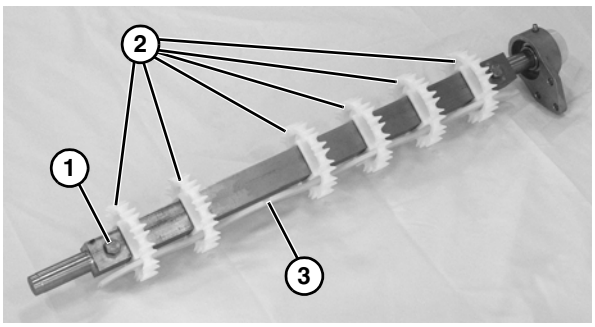


Figure 81

Installation

1. Slide the first sprocket **(Figure 82, item 1)** onto the spindle shaft.

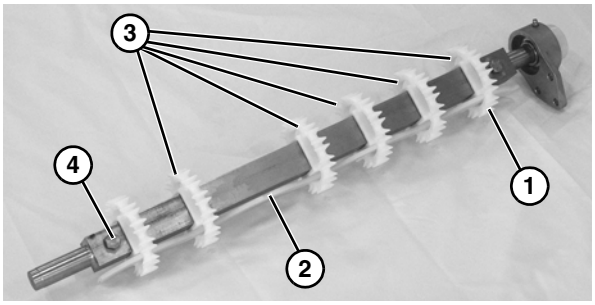


Figure 82

2. Insert the sprocket alignment bar **(Figure 82, item 2)** into the first sprocket **(Figure 82, item 1)**. Position the first sprocket with the notch in the sprocket alignment bar.
3. Install the remaining sprockets **(Figure 82, item 3)** making sure to position each sprocket with the next available notch in the sprocket alignment bar.
4. Secure sprockets in place with bolt **(Figure 82, item 4)**.
5. Slide the bearing flange assembly **(Figure 83, item 1)**, onto the spindle shaft end **(Figure 83, item 2)**.

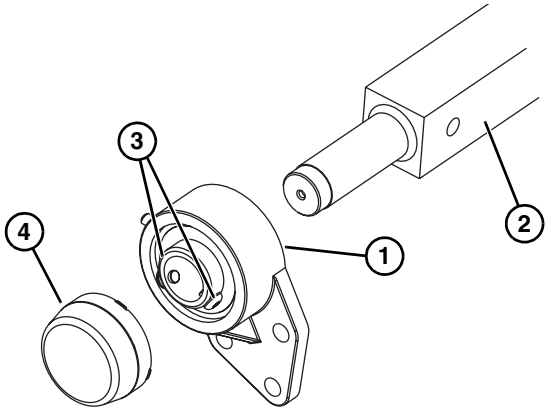


Figure 83

6. Use a hex wrench to tighten the bearing shaft assembly fasteners **(Figure 83, item 3)**.
7. Install the bearing cover **(Figure 83, item 4)**.
8. Insert spindle assembly **(Figure 84, item 1)** onto knuckle, and attach with three bolts **(Figure 84, item 2)**.

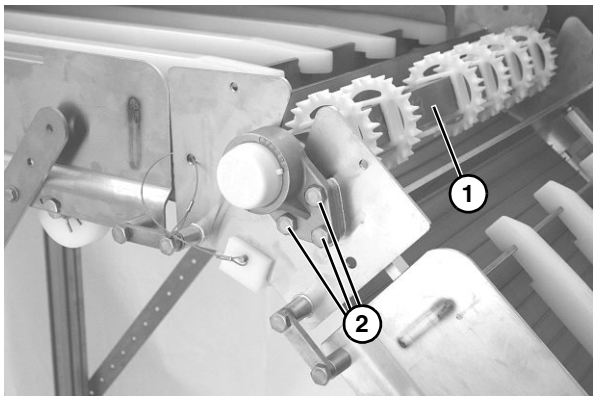
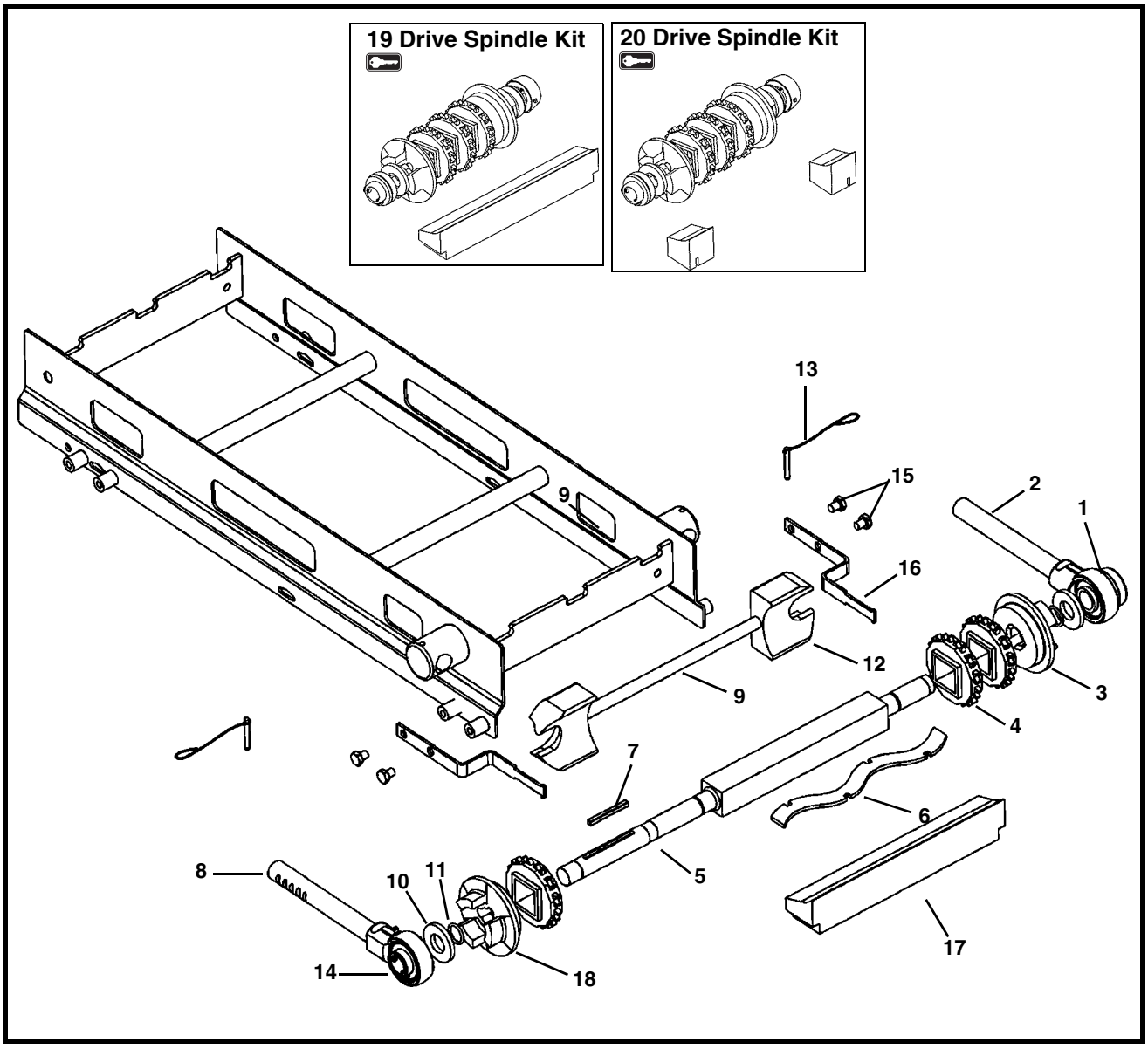


Figure 84

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

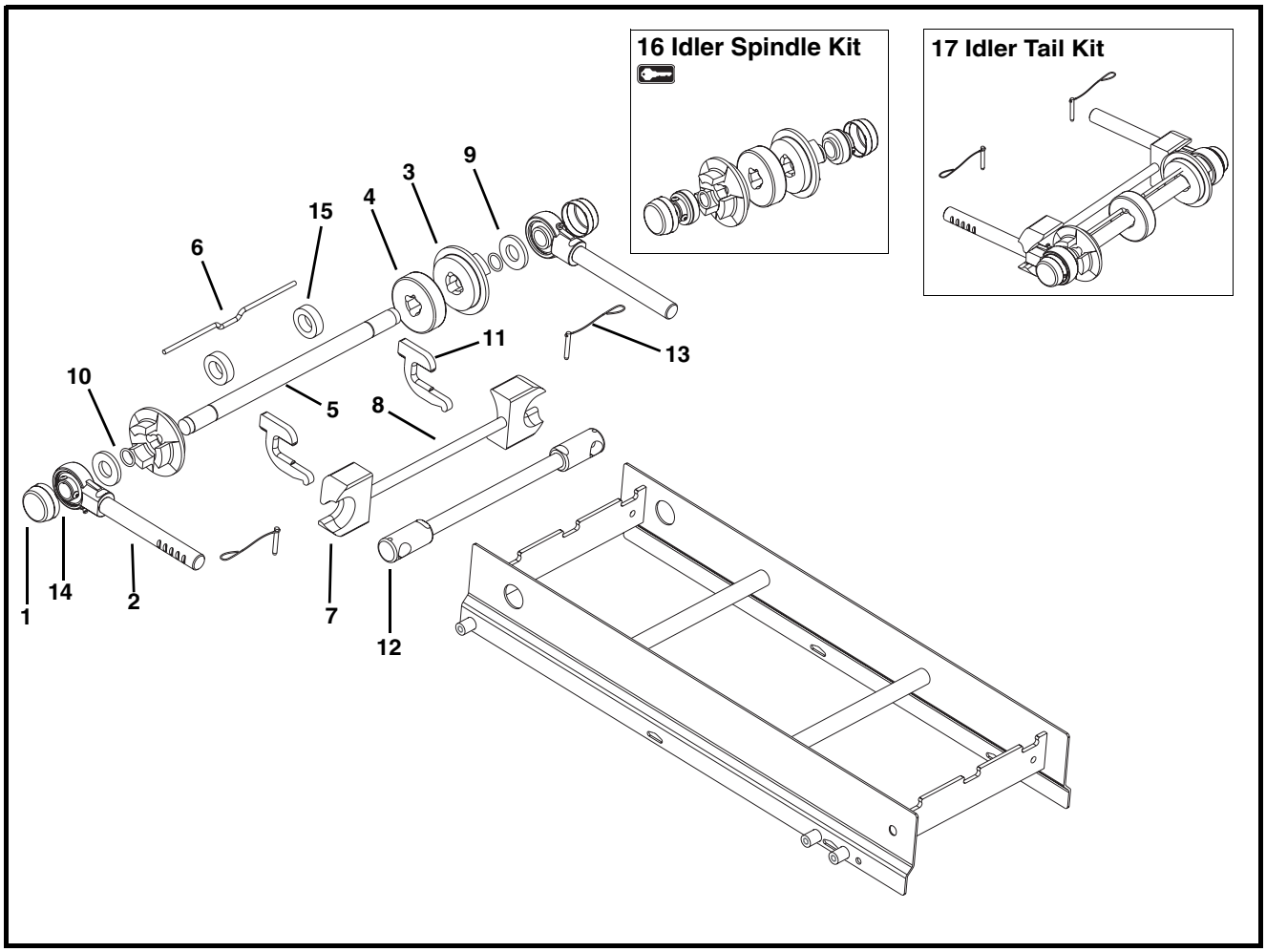


Item	Part Number	Description
1	807-1454	Bearing Cover
2	500078	Shaft Assembly with Bearing
3	501486	Flanged Puck
4	807-1445	Sprocket
5	5293WW	Drive Spindle
6	5208WW	Sprocket Alignment Bar
7	912-111SS	Square Key .25 x 2.50"
8 *	500078	Shaft Assembly with Bearing
9	5154WW	Pinch Guard Shaft
10	501381	Washer
11	807-1588	O-Ring
12	501583	Pinch Guard
13	501489	Pin Assembly
14	802-162	Bearing
15	961012MSS	Hex Head Cap Screw, M10 x 12 mm
16	501485	Limiter Support Arm
17	5209WW	Limiter for Flat Belt Conveyors
	520901	Limiter, Left Hand for Cleated Belt Conveyors
	520902	Limiter, Right Hand for Cleated Belt Conveyors
18	501487	Flanged Puck, Drive End
19	76DDU12-WW	Drive Spindle Kit, for Flat Belt Conveyor when Conveyor is ordered with a Dorner Gearmotor Mounting Package (Includes Items 1, 3, 4, 10, 11, 14, 17 and 18)
	76DDCU12-WW	Drive Spindle Kit, for Flat Belt Conveyor when Conveyor is ordered without a Dorner Gearmotor Mounting Package (Includes Items 1, 3, 4, 10, 11, 14, 17 and 18)
20	76DDUC12-WW	Drive Spindle Kit, for Cleated Belt Conveyor when Conveyor is ordered with a Dorner Gearmotor Mounting Package (Includes Items 1, 3, 4, 10, 11, 14, 17 and 18)
	76DCUC12-WW	Drive Spindle Kit, for Cleated Belt Conveyor when Conveyor is ordered without a Dorner Gearmotor Mounting Package (Includes Items 1, 3, 4, 10, 11, 14, 17 and 18)
WW = Conveyor width ref: 06 - 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 Quantity (Item 4)	
Width	Sprocket Quantity
152 mm (6")	2
203 mm (8")	2
254 mm (10")	3
305 mm (12")	4
356 mm (14")	4
406 mm (16")	5
457 mm (18")	5
508 mm (20")	6
559 mm (22")	6
610 mm (24")	6
660 mm (26")	7
711 mm (28")	8
762 mm (30")	8
813 mm (32")	8
864 mm (34")	9
914 mm (36")	10

Service Parts

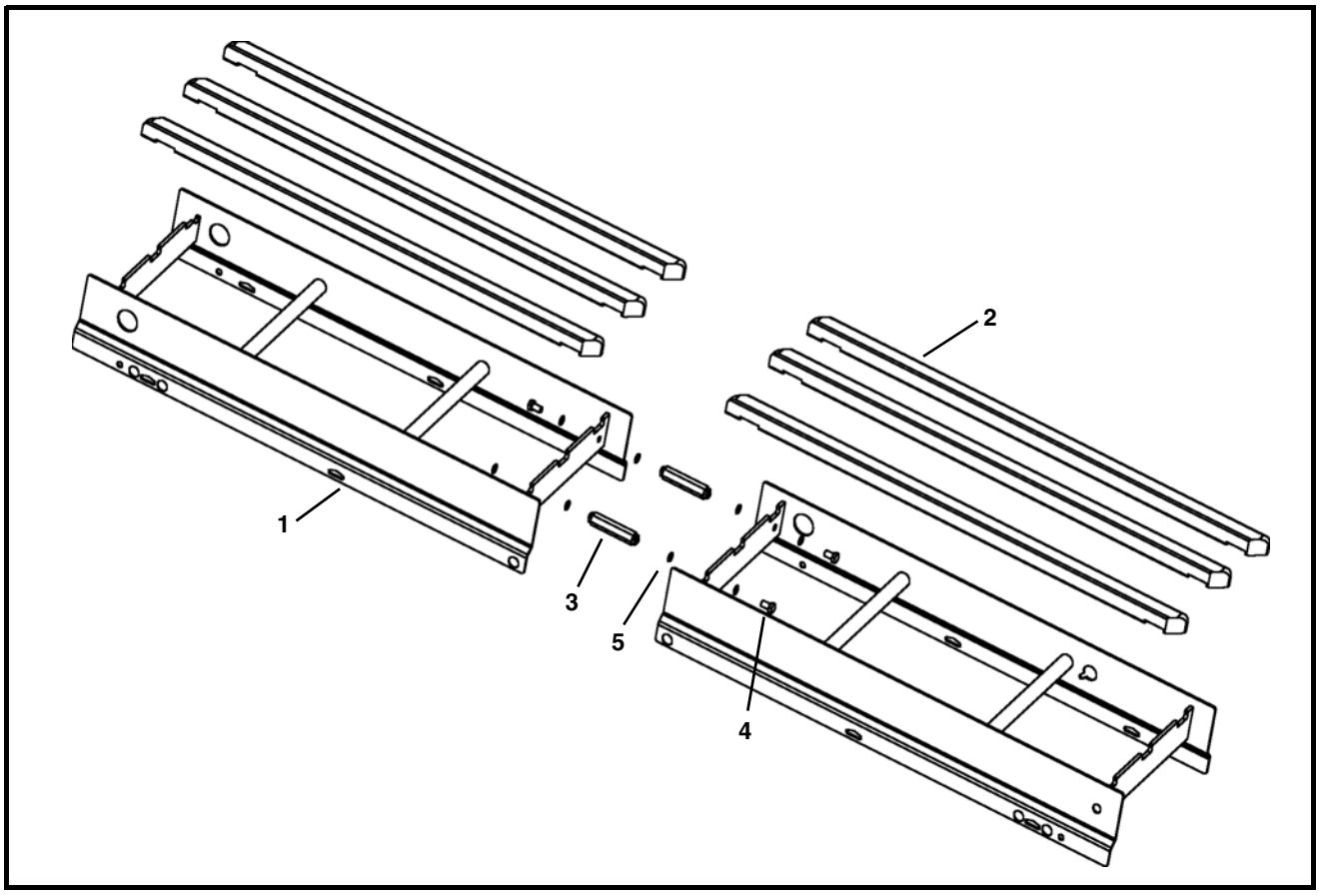
Tension End



Item	Part Number	Description
1	807-1454	Bearing Cover
2	500079	Shaft Assembly with Bearing
3	501486	Flanged Puck
4	501189	Idler Disc
5	5156WW	Idler Shaft
6	5212WW	Bent Retaining Bar
7	501583	Pinch Guard
8	5154WW	Pinch Guard Shaft
9	501381	Washer

Item	Part Number	Description
10	807-1588	O-Ring
11	501184	Stop Key
12	5182WW	Tip Up Shaft Assembly
13	501676	Pin Assembly
14	802-162	Bearing
15	501681	Idler Shaft Sleeve
16	76UI-WW	Idler Spindle Kit (Includes items 1, 3, 4, 10 and 14)
17	76UIT-WW	Idler Tail Kit (Includes items 1 through 10, 13 and 14)
WW = Conveyor width ref: 06 - 36 in 02 increments		

Conveyor Frame and Extension

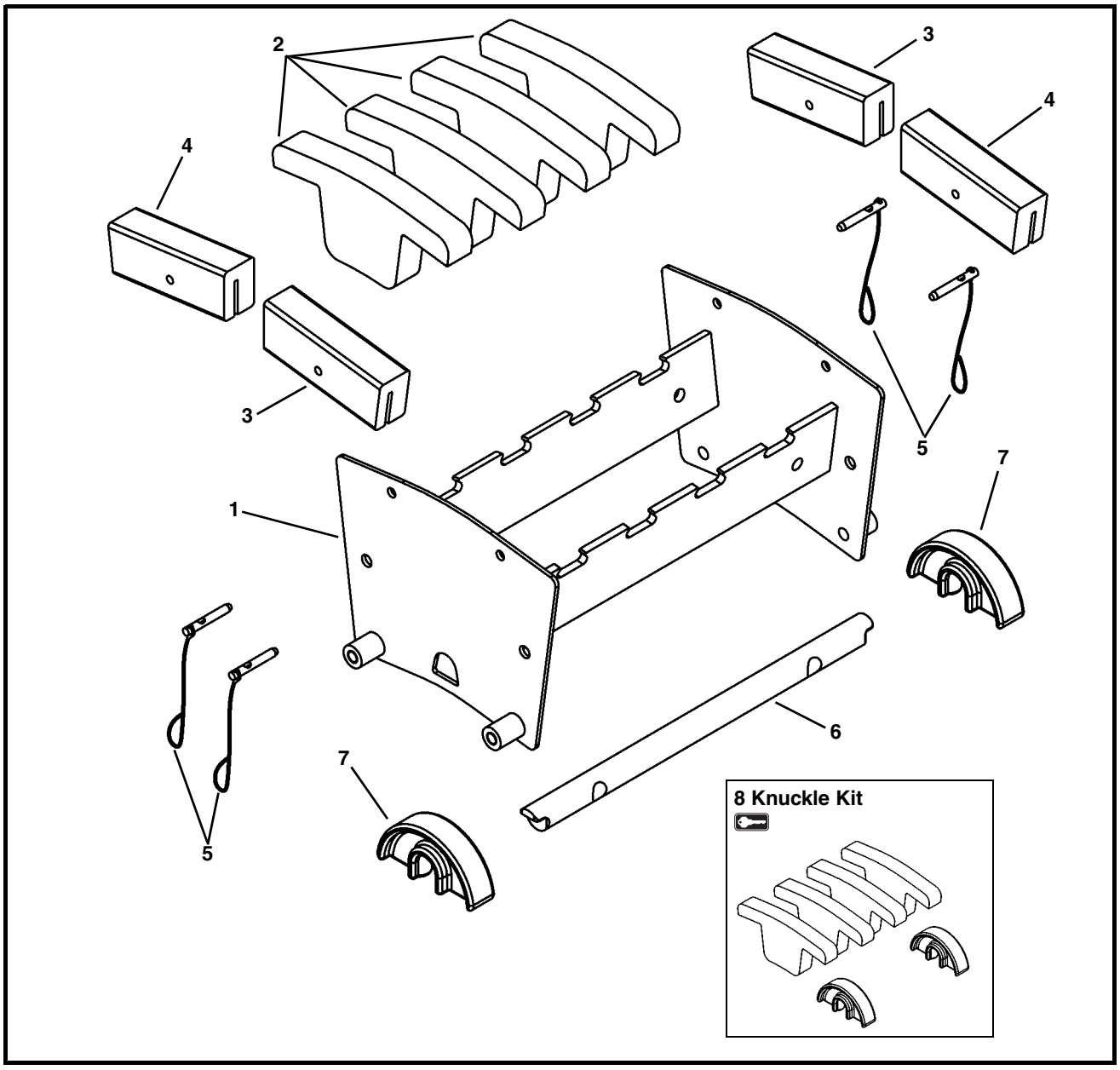


Item	Part Number	Description
1	------	Consult Factory for Frame Part Number
2	501800-LLL	Straight Wear Strip
3	501190	Hex Post Connector
4	961016MSS	Hex Head Cap Screw M10-1.5 x 16mm
5	807-1616	O-Ring
LLL = Conveyor length ref: 036 - 999 in 001 increments		

Wear Strip Quantity (Item 2)								
		Conveyor Length (LLL)							
		036 - 132	133 - 252	253 - 372	373 - 492	493 - 612	613 - 732	733 - 852	853 - 999
Conveyor Width (WW)	06	2	4	6	8	10	12	14	16
	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

Service Parts

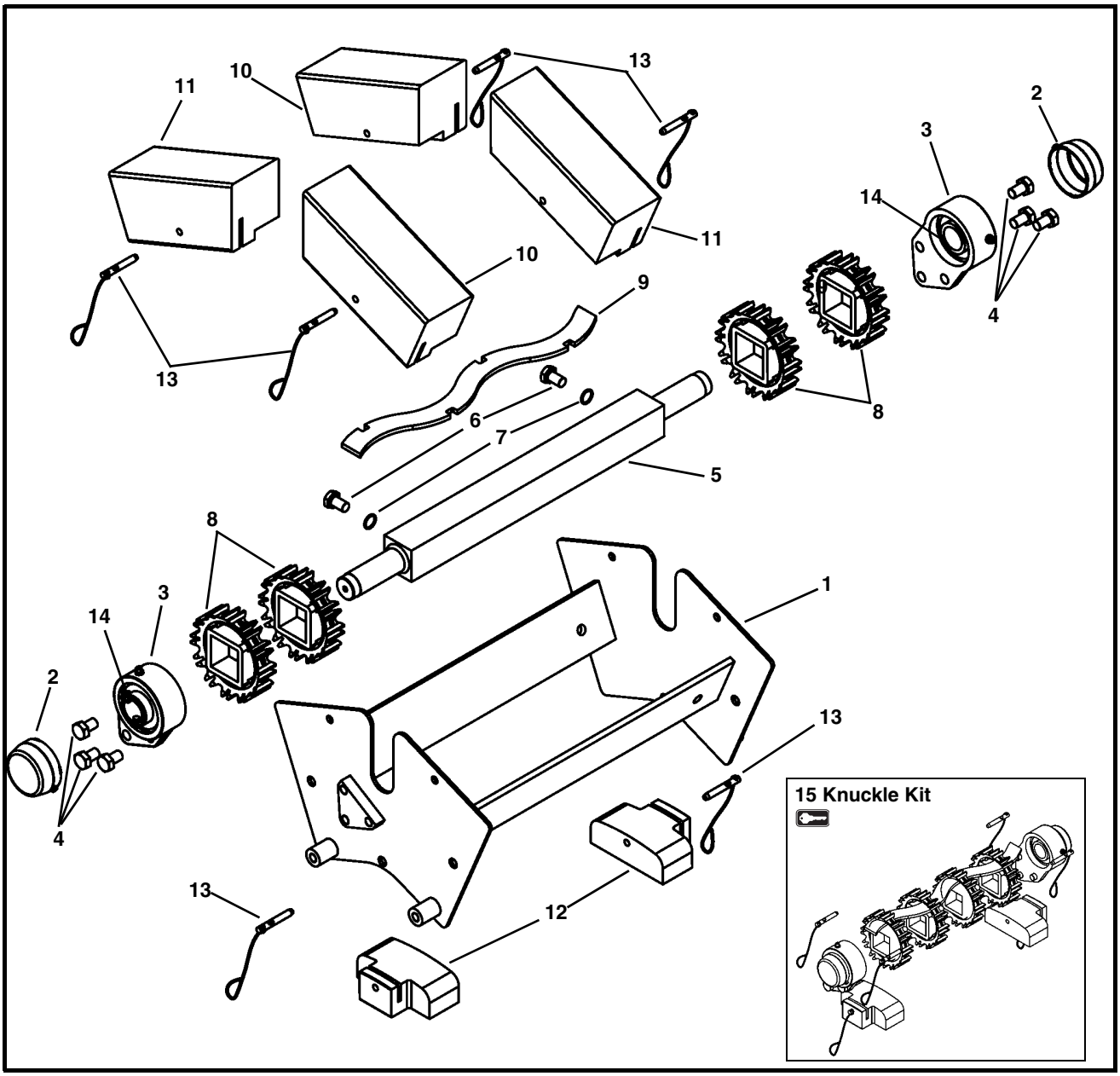
Upper Knuckle for Flat Belt Conveyors



Item	Part Number	Description
1	5260WW	Frame Assembly for 5° Knuckle
	5261WW	Frame Assembly for 10° Knuckle
	5262WW	Frame Assembly for 15° Knuckle
2	501695-AA	Wear Strips
3	501985-AA	Hold Down Guide for Knuckle - Right Hand
4	501984-AA	Hold Down Guide for Knuckle - Left Hand

Item	Part Number	Description
5	501676	Pull Pin
6	5032WW	Return Shaft
7	500075	Return Shoe
8	76UKL-WW-AA	Upper Knuckle Kit (Includes items 2 and 7)
WW = Conveyor width ref: 06 - 24 in 02 increments		
AA = Angle 05, 10 or 15		

Upper Knuckle for Cleated Belt Conveyors

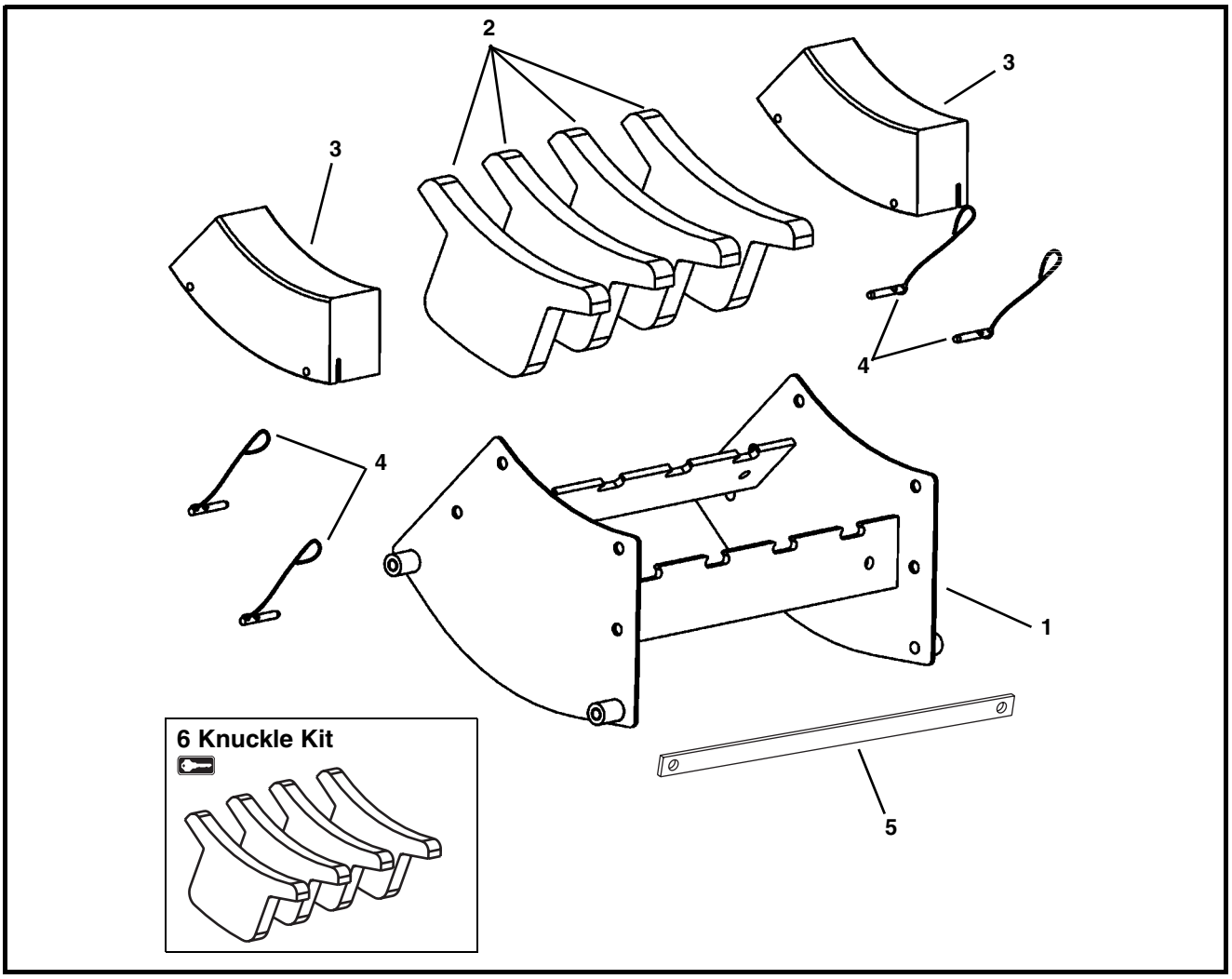


Item	Part Number	Description
1	5263WW	Frame Assembly for 30° Knuckle
	5264WW	Frame Assembly for 45° Knuckle
	5265WW	Frame Assembly for 60° Knuckle
2	807-1454	Bearing Cover
3	500288	3 Hole Flange with Bearing
4	961016MSS	Hex Head Cap Screw, M10-1.5x16 mm
5	5243WW	Spindle
6	501494	Grooved Hex Head Cap Screw, M10-1.5x16 mm
7	807-1616	O-Ring
8	807-1445	Sprocket
9	5164WW	Sprocket Alignment Bar

Item	Part Number	Description
10	501881-AA	38 mm High Top Guide, Right Hand
	501880-AA	76 mm High Top Guide, Right Hand
11	501976-AA	38 mm High Top Guide, Left Hand
	501975-AA	76 mm High Top Guide, Left Hand
12	501683	Return Guide
13	501676	Pin Assembly
14	802-162	Bearing
15	76UK-WW	Upper Knuckle Kit (Includes items 2, 3, 4, 8, 9, 12 and 13)
WW = Conveyor width ref: 06 - 24 in 02 increments		
AA = Angle 30, 45 or 60		

Service Parts

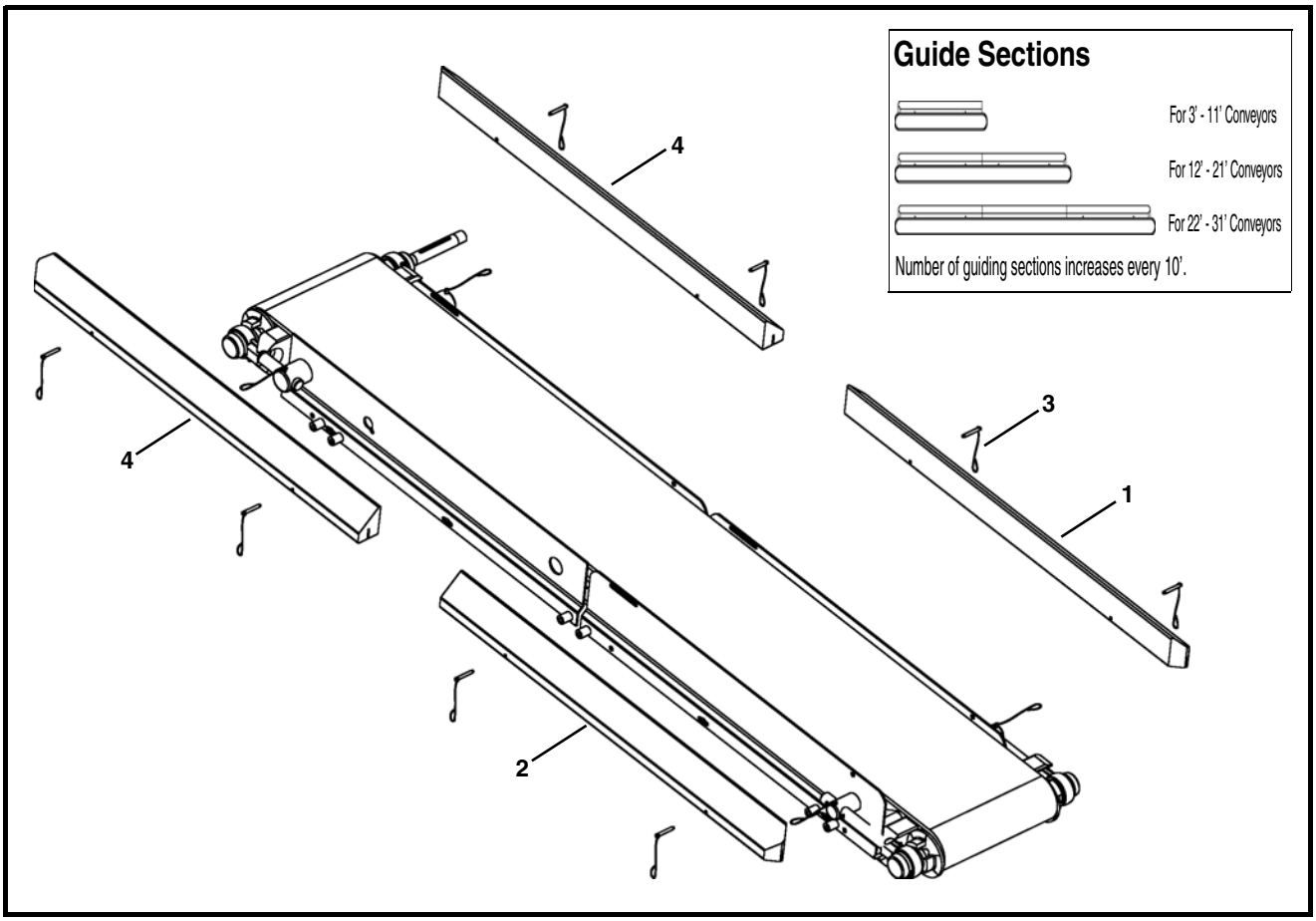
Lower Knuckle for Cleated Belt Conveyors



Item	Part Number	Description
1	5257WW	Frame Assembly for 30° Knuckle
	5258WW	Frame Assembly for 45° Knuckle
	5259WW	Frame Assembly for 60° Knuckle
2	501886-AA	Wear Strip

Item	Part Number	Description
3	501980-AA	38 mm Hold Down Guide
	501979-AA	76 mm Hold Down Guide
4	501676	Pin Assembly
5	506254-WW	Retention Wearstrip
6	74LK-WW-AA	Lower Knuckle Kit (Includes Item 2)
WW = Conveyor width ref: 06 - 24 in 02 increments		
AA = Angle 30, 45 or 60		

76 mm High Sides

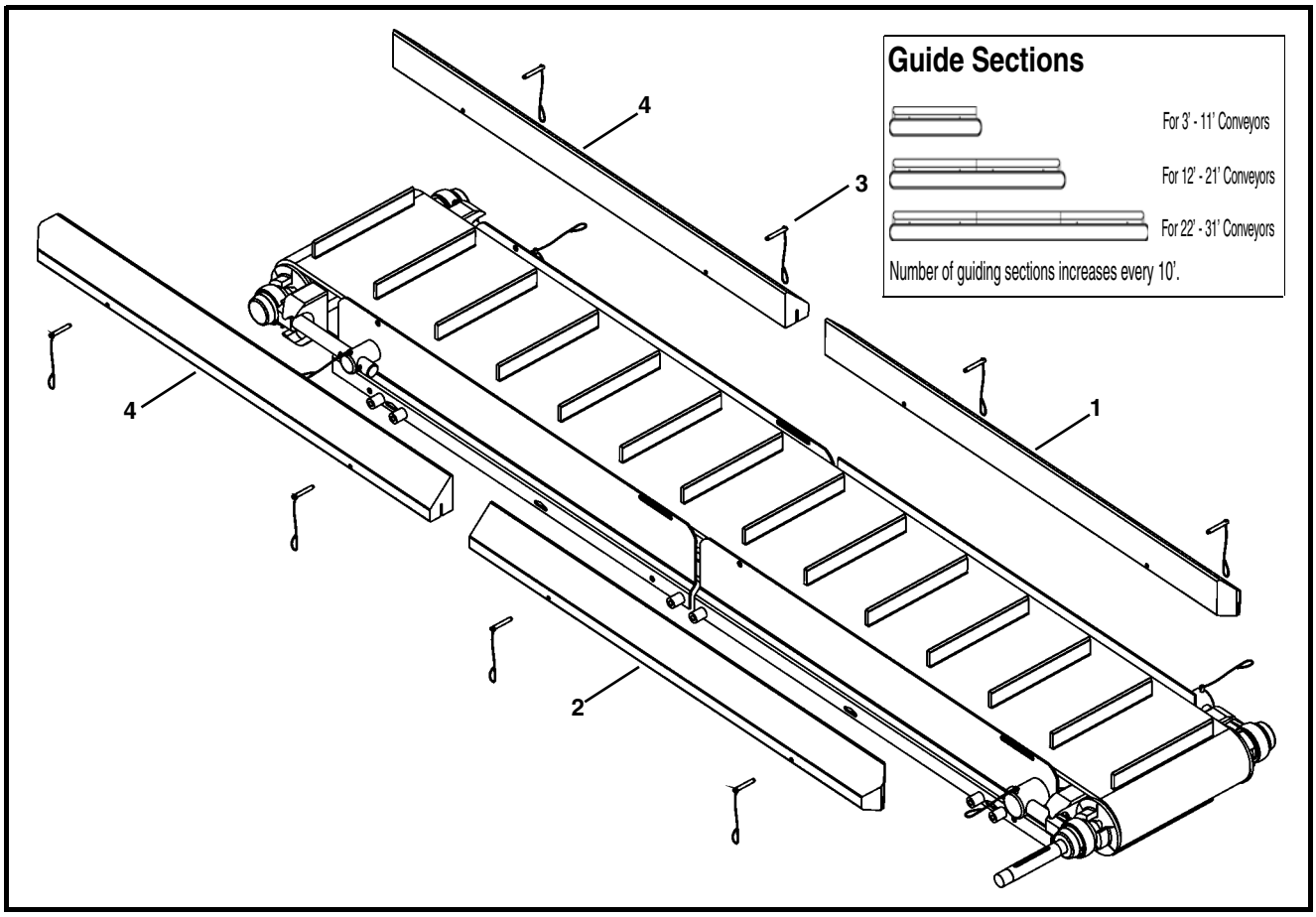


Item	Part Number	Description
1	503501-LLLLL	Right Hand High Side Guide
2	503601-LLLLL	Left Hand High Side Guide
3	501676	Pin Assembly

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

Service Parts

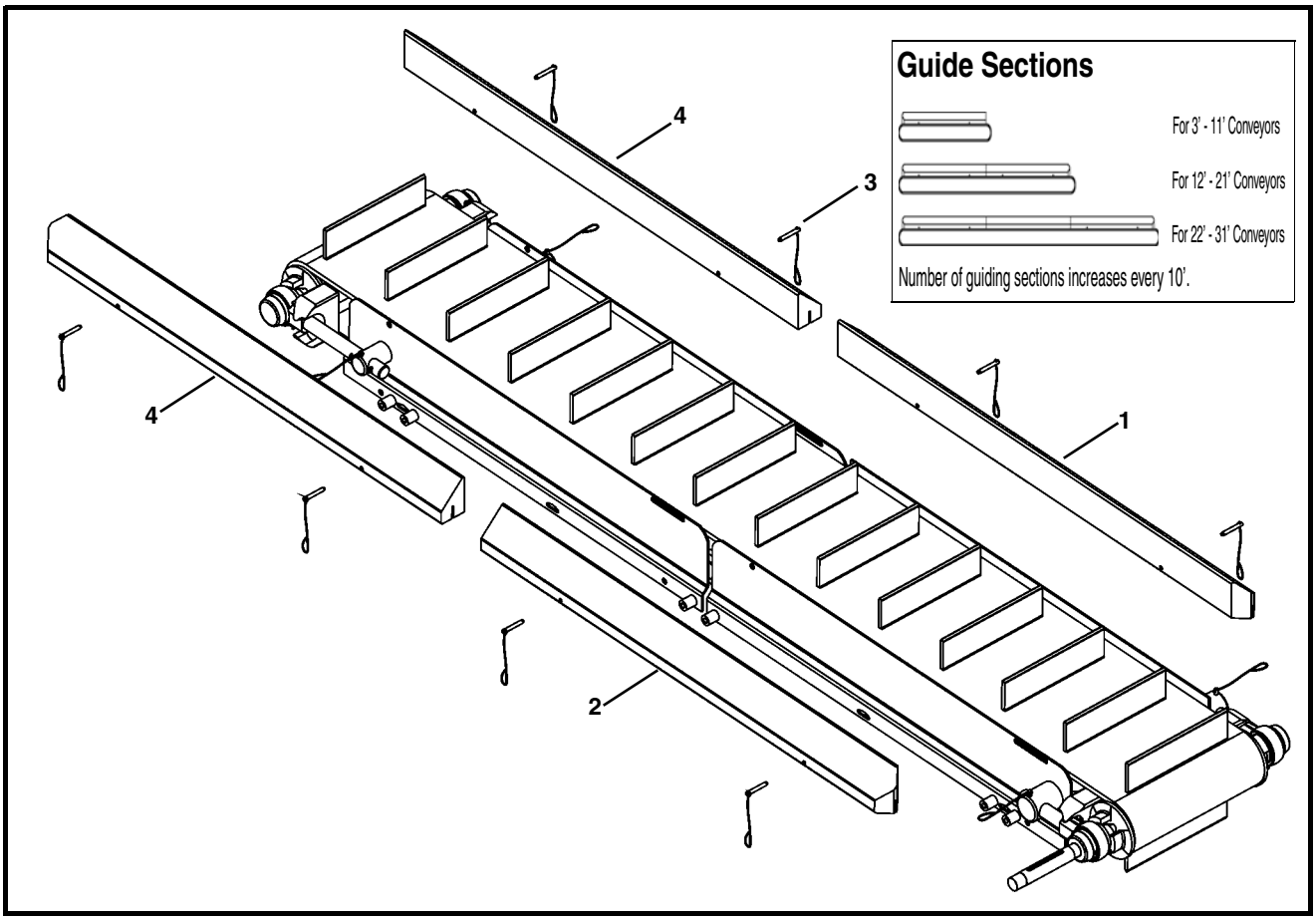
Cleated 25 mm Guides



Item	Part Number	Description
1	502401-LLLLL	25 mm Cleated Right Hand Guide (6" - 16" wide conveyors)
	502402-LLLLL	25 mm Cleated Right Hand Guide (18" - 24" wide conveyors)
2	502501-LLLLL	25 mm Cleated Left Hand Guide (6" - 16" wide conveyors)
	502502-LLLLL	25 mm Cleated Left Hand Guide (18" - 24" wide conveyors)

Item	Part Number	Description
3	501676	Pin Assembly
4	502301-LLLLL	25 mm Cleated Guide Square End (6" - 16" wide conveyors)
	502302-LLLLL	25 mm Cleated Guide Square End (18" - 24" wide conveyors)
LLLLL = Guide Length in inches with 2 decimal places.		
Example: Guide Length = 95.25" LLLLL = 09525		

Cleated 76 mm Guides

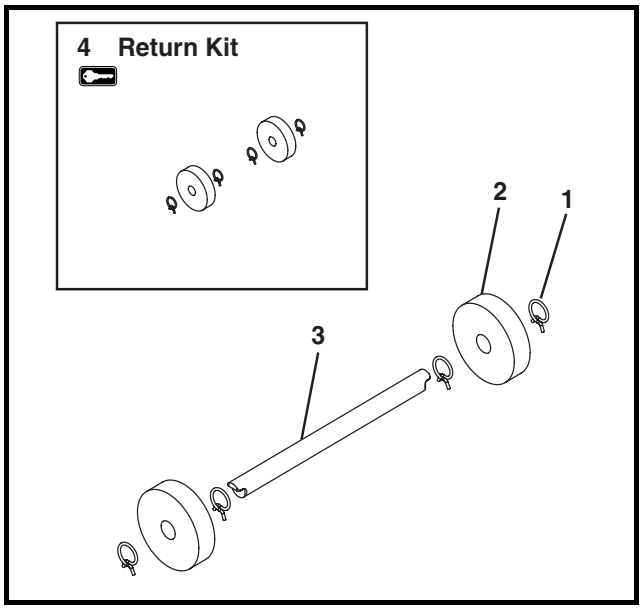


Item	Part Number	Description
1	502701-<u>LLLLL</u>	76 mm Cleated Right Hand Guide (6" - 16" wide conveyors)
	502702-<u>LLLLL</u>	76 mm Cleated Right Hand Guide (18" - 24" wide conveyors)
2	502801-<u>LLLLL</u>	76 mm Cleated Left Hand Guide (6" - 16" wide conveyors)
	502802-<u>LLLLL</u>	76 mm Cleated Left Hand Guide (18" - 24" wide conveyors)

Item	Part Number	Description
3	501676	Pin Assembly
4	502601-<u>LLLLL</u>	76 mm Cleated Guide Square End (6" - 16" wide conveyors)
	502602-<u>LLLLL</u>	76 mm Cleated Guide Square End (18" - 24" wide conveyors)
<u>LLLLL</u> = Guide Length in inches with 2 decimal places.		
Example: Guide Length = 95.25" <u>LLLLL</u> = 09525		

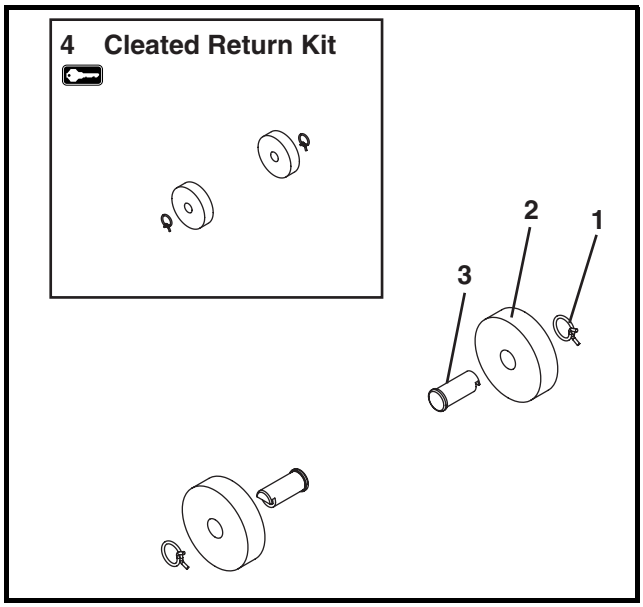
Service Parts

Flat Belt Returns



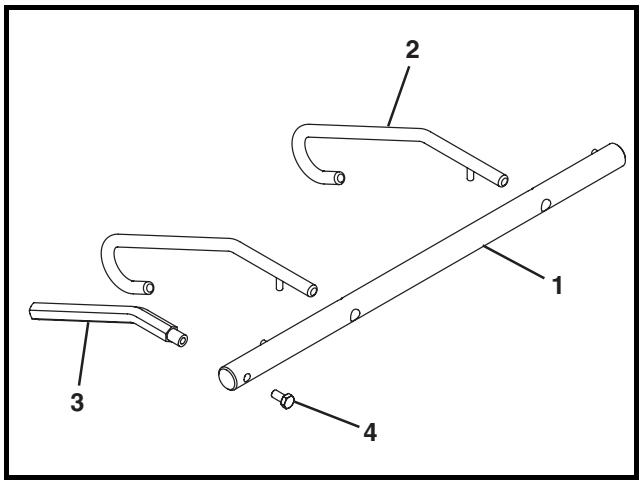
Item	Part Number	Description
1	807-1551	Clamp
2	500990	Return Disk
3	5108WW	Return Shaft
4	76R-WW	Return Kit (Includes Items 1 and 2)
WW = Conveyor width ref: 06 - 36 in 02 increments		

Cleated Belt Returns



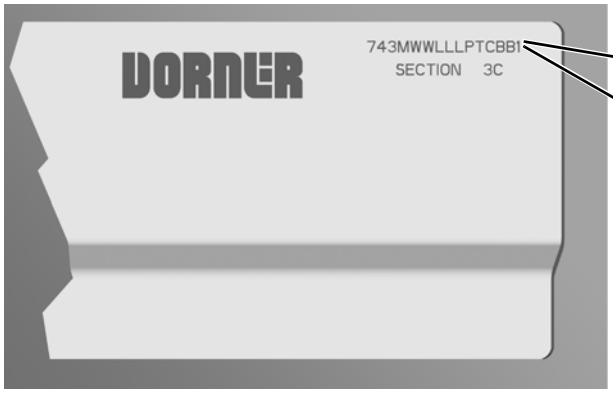
Item	Part Number	Description
1	807-1551	Clamp
2	500990	Return Disk
3	501097	Cleated Return Shaft
4	76CR	Cleated Return Kit (Includes Items 1 and 2)

Lifters



Item	Part Number	Description
1	5054WW	Belt Lifter Shaft
2	500195	Belt Lifter
3	500491	Belt Lifter Handle
4	960812MSS	Hex Head Cap Screw M8-1.25 x 12 mm
WW = Conveyor width ref: 06 - 36 in 02 increments		

Configuring Conveyor Part Number



7HMWWLLLSSCDGBB = FLAT BELT

7DMWWLLLSSCBBSS = CLEATED BELT

Flat Belt Conveyor

Refer to the model number on the conveyor frame **()**. From the model number, determine conveyor width (WW), length (LLL), drive stand location (S), idler stand location (S), cleaning options (C), drive/pulley type (D), profile (G) and belt material (BB).

Example:
7HM12072CCAA101

7600 Ultimate Series end drive, flat belt conveyor, 305mm (12") wide x 1829mm (72") long, stands located 457mm (18") from each end, frame cutout cleaning option, side drive with standard pulleys on each end, low side profiles, and 01 belt material.

Cleated Belt Conveyor

Refer to the model number on the conveyor frame **()**. From the model number, determine conveyor width (WW), length (LLL), drive stand location (S), idler stand location (S), cleaning options (C), cleated belt material (BB) and cleat spacing (SS).

Example:
7DM12072CCA0110

7600 Ultimate Series end drive, cleated belt conveyor, 305mm (12”) wide x 1829mm (72”) long, stands located 457mm (18”) from each end, frame cutout cleaning option, 01 cleated belt material, side drive with standard pulleys on each end, and 10”spacing for cleats.

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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