7600 Ultimate Series
End Drive Conveyors
Installation, Maintenance and Parts Manual

Flat Belt Conveyor

Cleated Belt Conveyor

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851-673 Rev. C

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Introduction

⚠ CAUTION

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

Upon receipt of shipment:

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

The Dorner Limited Warranty applies.

Dorner 7600 series conveyors are covered by Patent Numbers 7,246,697, 7,207,435, 7,549,531 B2, 7,681,719 B2, 7,383,944, 8,042,682 B2 and corresponding patents and patent applications in other countries.

NOTE

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

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

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

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⚠ 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

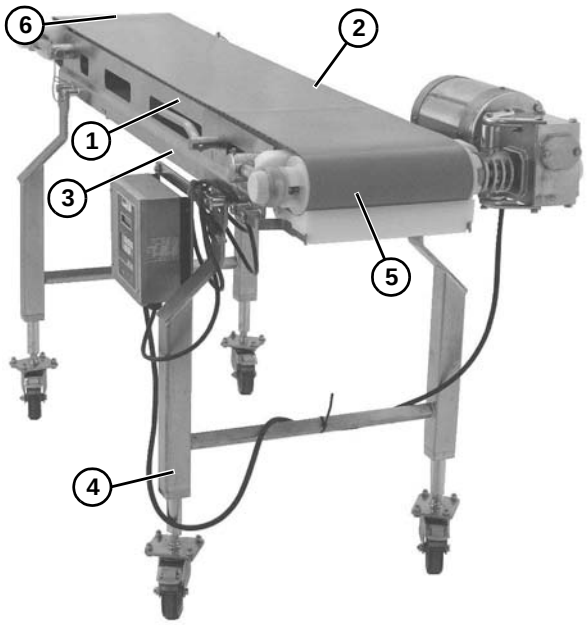
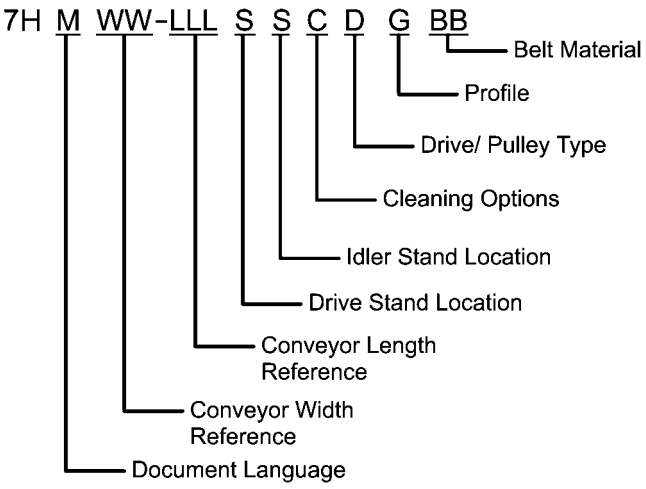
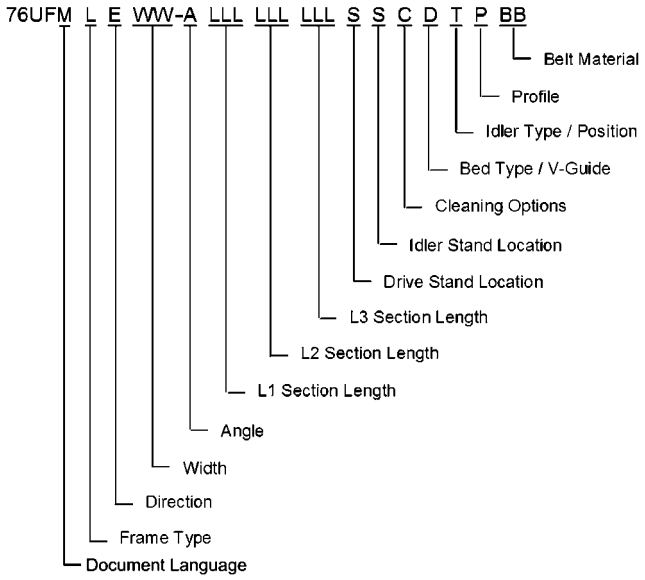


Figure 1

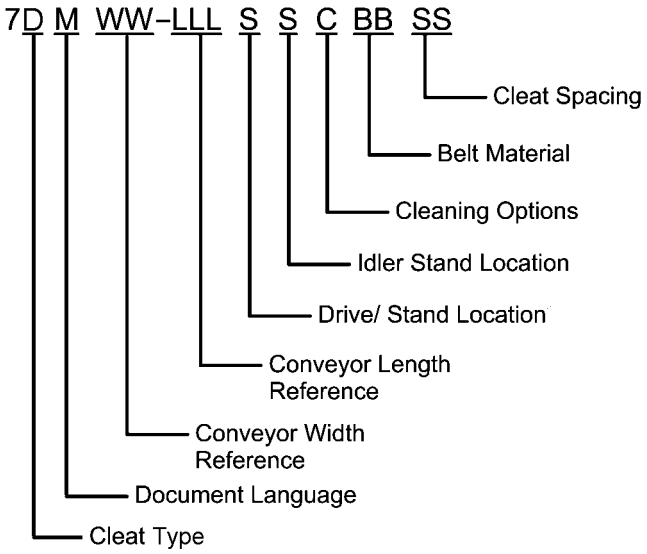
Flat Belt 7600 Ultimate Series Conveyor



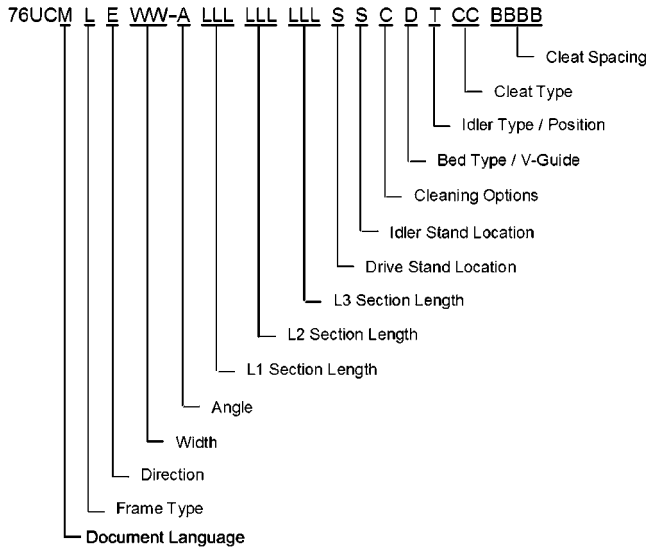
Flat Belt LPZ 7600 Ultimate Series Conveyor



Cleated Belt 7600 Ultimate Series Conveyor



Cleated Belt LPZ 7600 Ultimate Series Conveyor



Specifications

Conveyor Supports

Maximum Distances:

1 = 3 ft (914 mm)

2 = 8 ft (2438 mm)**

3 = 3 ft (914 mm)

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

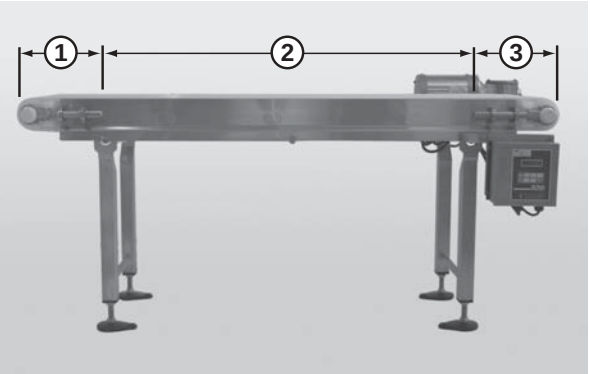


Figure 2

Specifications

Conveyor Width Reference (WW)	06 – 36 in 02 increments
Conveyor Belt Width	6" (152 mm) – 36" (914 mm) in 2" (51 mm) increments
Maximum Conveyor Load	20 lb / ft^2 (97 kg / m^2) with a maximum of 1000 lb / ft^2 (4882 kg / m^2)
Belt Travel	12" (305 mm) per revolution of pulley
Maximum Belt Speed	233 ft / minute (71 m / minute)
Belt Take-up	2" (51 mm)

Conveyor Length Reference (LLL)	036 – 999 in 001 increments
Conveyor Length	36" (914 mm) – 999" (25.4 m) in 1" (25 mm) increments
LPZ Section Lengths (LLL)	024 – 252 in 001 increments
LPZ Section Length	24" (610 mm) – 252" (6401 mm) in 1" (25 mm) increments
Total LPZ Conveyor Length	(L1 +L2 + L3) = Maximum 38' (11.6 m) 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 11 ft (3353 mm)" 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 12.
6. Install the gearmotor. Refer to "Drive Package Installation" on page 13.

Conveyors Longer than 11 ft (3353 mm)

Belt and Frame Sections

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

1	Belt

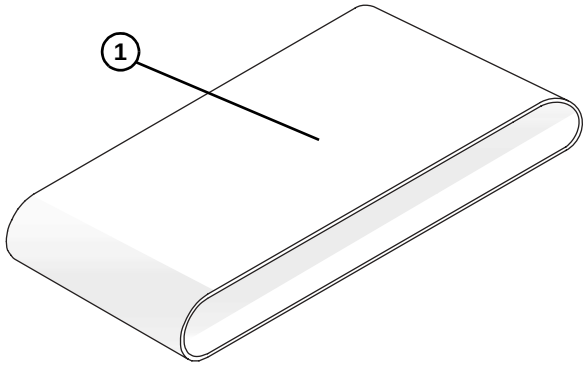


Figure 4

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

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

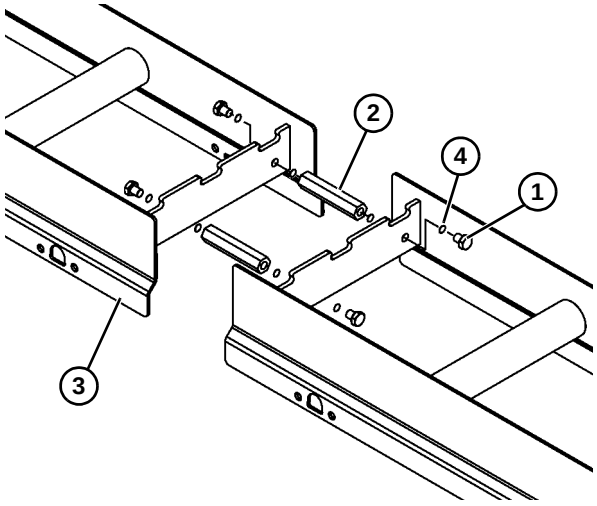


Figure 5

Installation

1. Locate and arrange conveyor sections by section labels **(Figure 6, item 1)**.

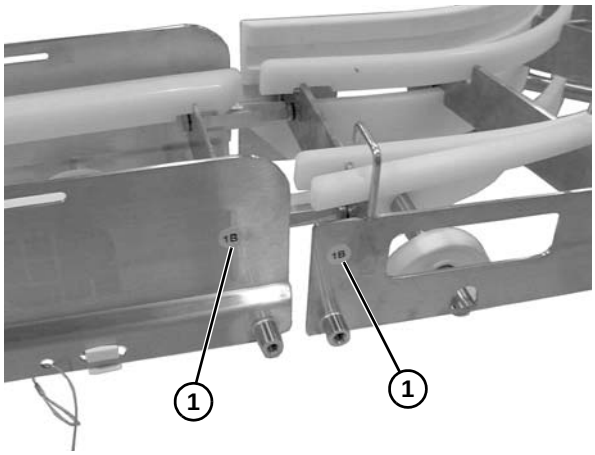


Figure 6

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.

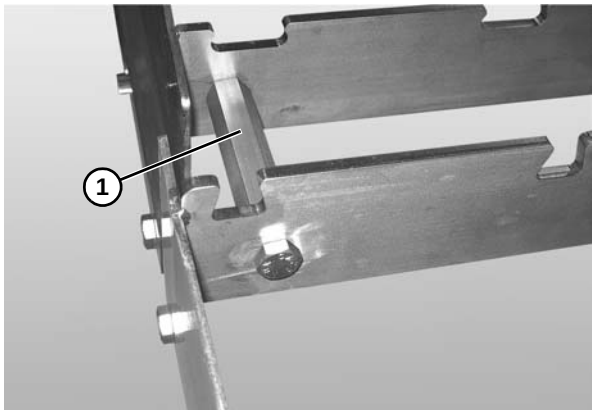


Figure 7

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

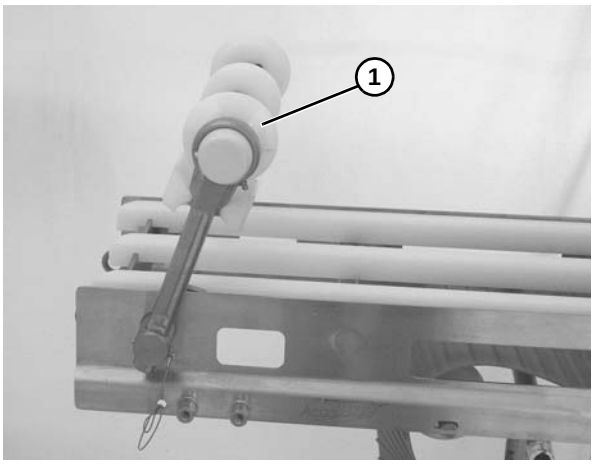


Figure 8

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

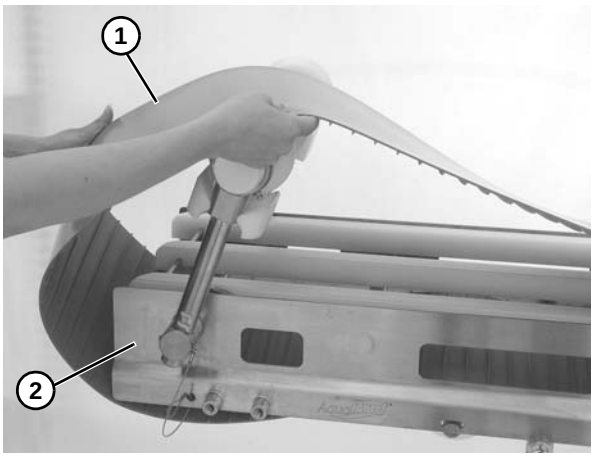


Figure 9

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

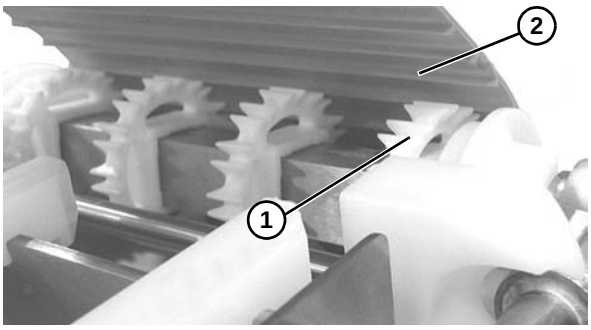


Figure 10

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

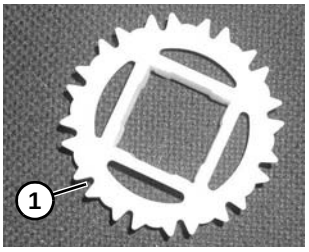


Figure 11

7. Place the idler tail in the down position **(Figure 12)**.

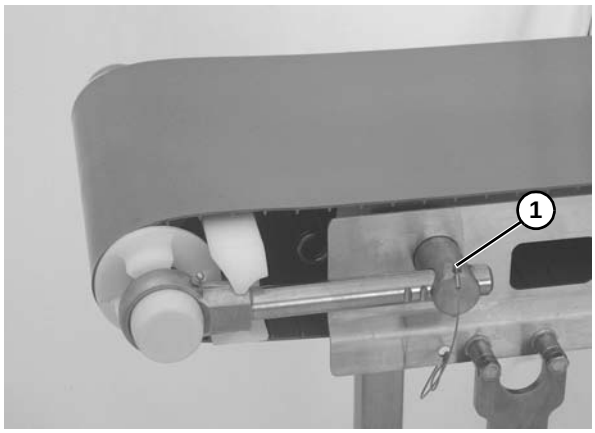


Figure 12

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)**.

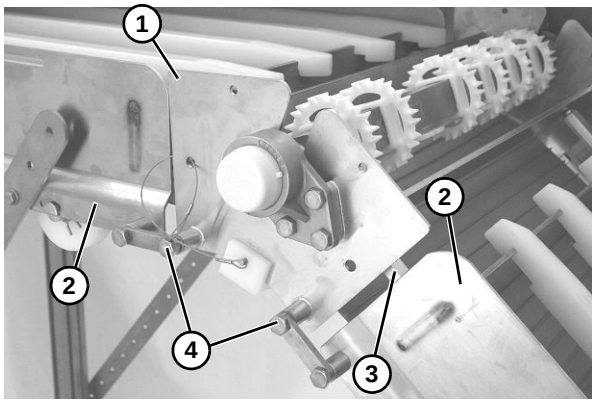


Figure 13

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

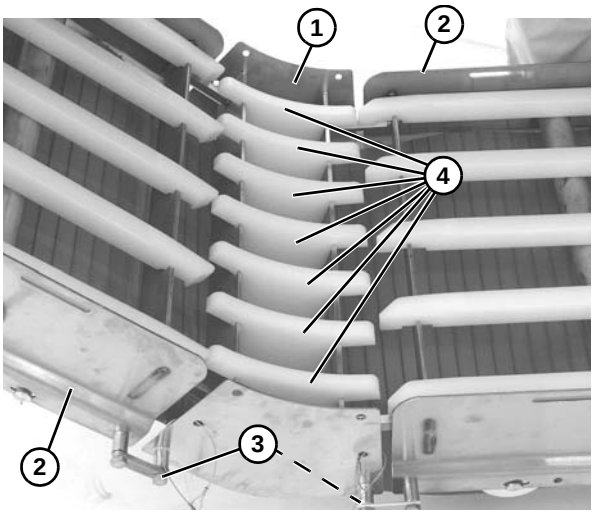


Figure 14

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)**.

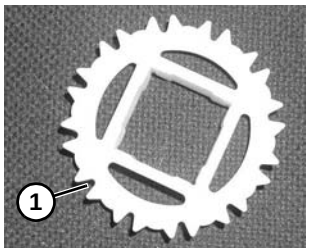


Figure 15

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.

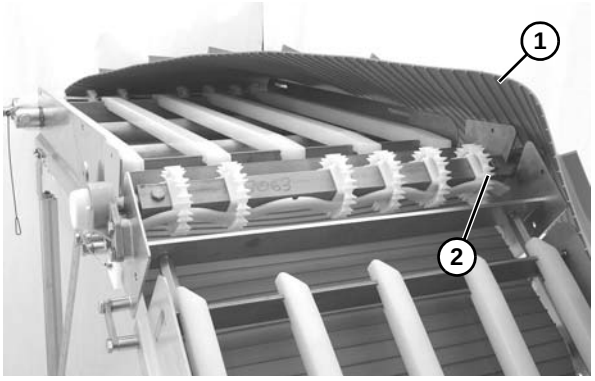


Figure 16

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)**.

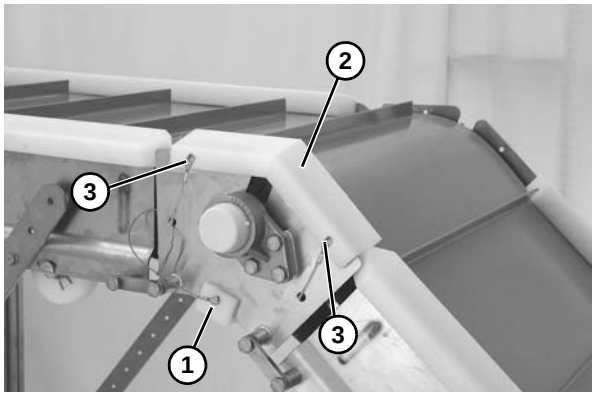


Figure 17 (Upper Knuckle)

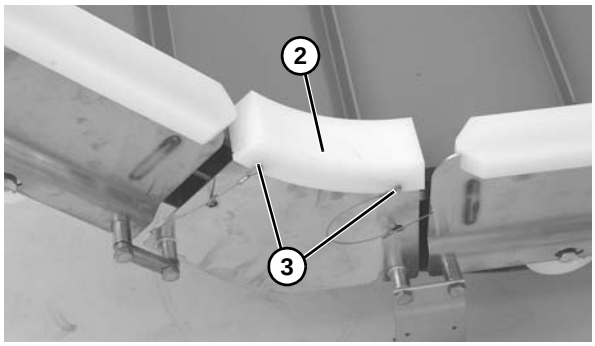


Figure 18 (Lower Knuckle)

3. Repeat for opposite side of conveyor.

All Conveyors

Belt Return Installation

Flat Belt

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

1	Flat belt returns

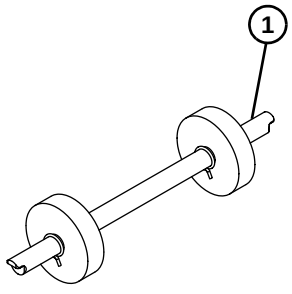


Figure 19

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

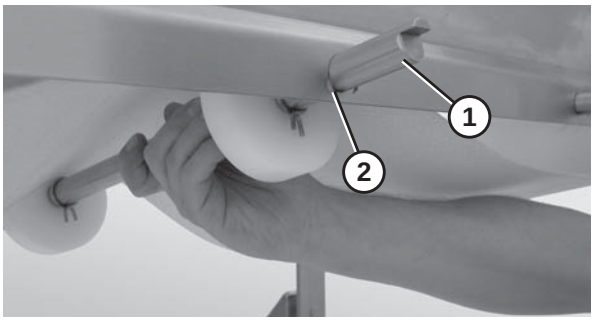


Figure 20

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.

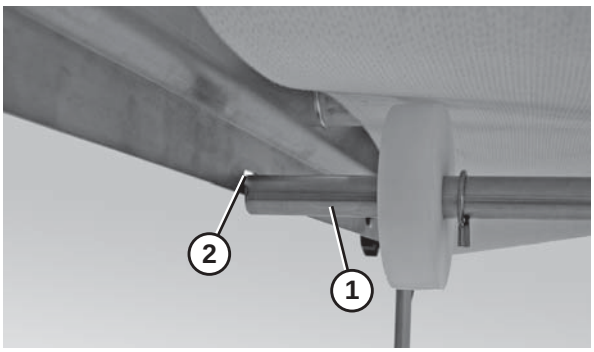


Figure 21

3. Repeat the procedure for all other belt returns.

Cleated Belt

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

1	Cleated belt returns

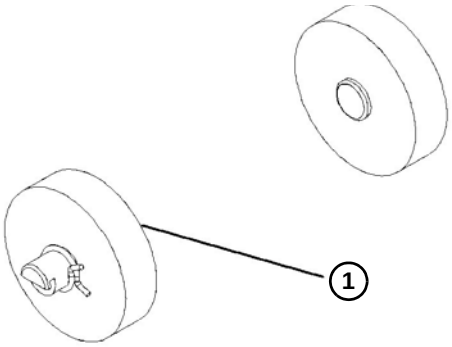


Figure 22

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.

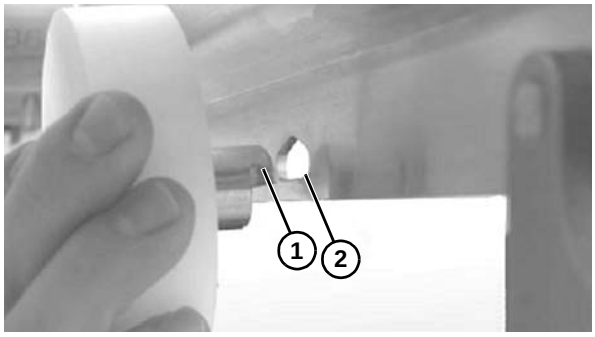


Figure 23

2. Repeat the procedure for all other belt returns.

Limiter Installation

Flat Belt

Typical Flat Belt Limiter Components **(Figure 24)**.

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

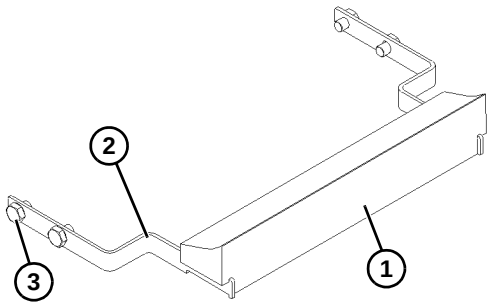


Figure 24

Cleated Belt

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

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

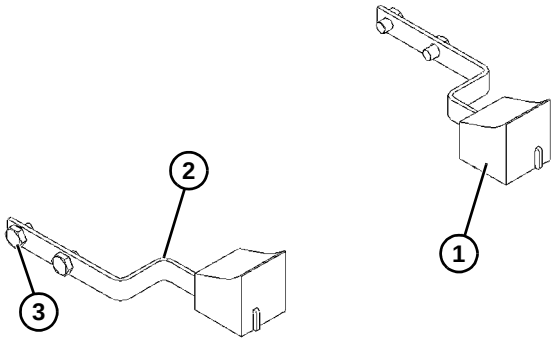


Figure 25

1. Loosely bolt limiter support plate **(Figure 26, item 1)** to conveyor frame stand off posts **(Figure 26, item 2)**. Repeat on opposite side.

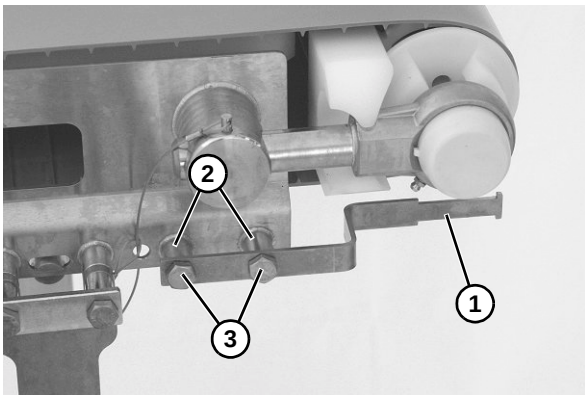


Figure 26

2. Insert limiter **(Figure 27, item 1)** or **(Figure 28, item 1)** between support plates **(Figure 27, item 2)** or **(Figure 28, item 2)**.

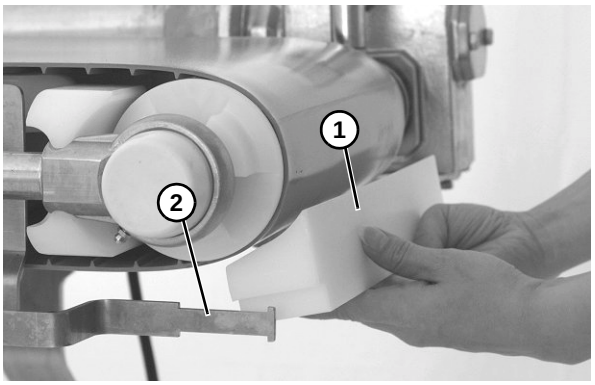


Figure 27 (Flat Belt)

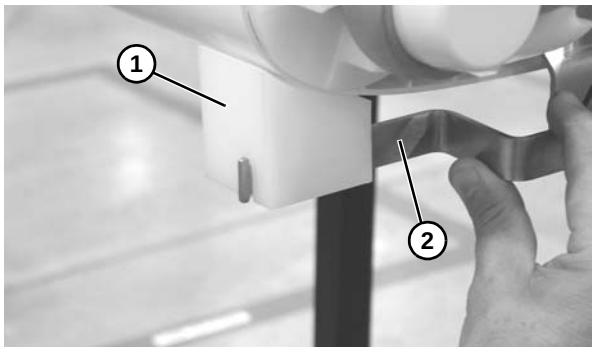


Figure 28 (Cleated Belt)

3. Adjust limiter to within 1/32” from belt, and tighten screws **(Figure 26, item 3)**.

Guide Installation

Typical Guide Components **(Figure 29)**.

1	Guide
2	Pull pin

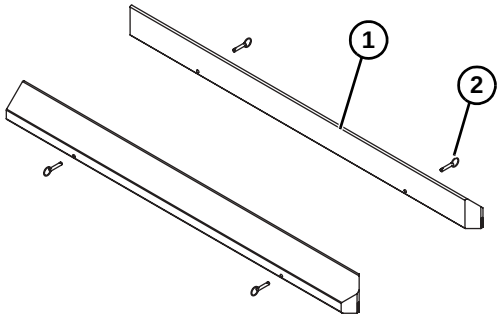


Figure 29

1. Position the guide **(Figure 30, item 1)** so that the flat surface is facing the belt and then slide the guide onto the frame rail **(Figure 30, item 2)**.

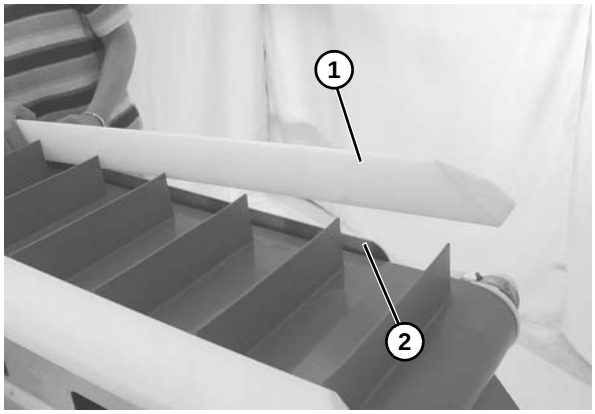


Figure 30

2. Line up the guide holes with the holes in the frame.
3. Insert the pull pins **(Figure 31, item 1)** into the holes in the guide **(Figure 31, item 2)**.

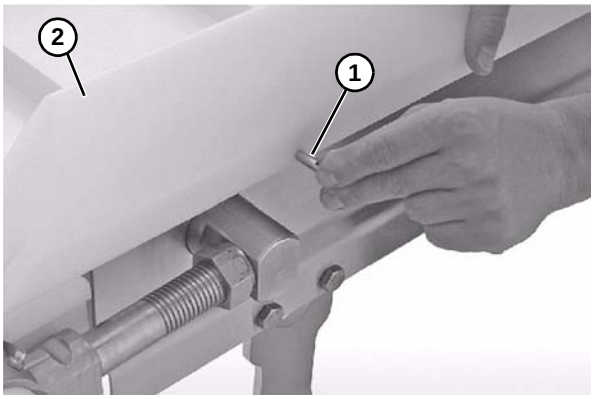


Figure 31

Stand Installation

Typical Stand Components **(Figure 32)**.

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

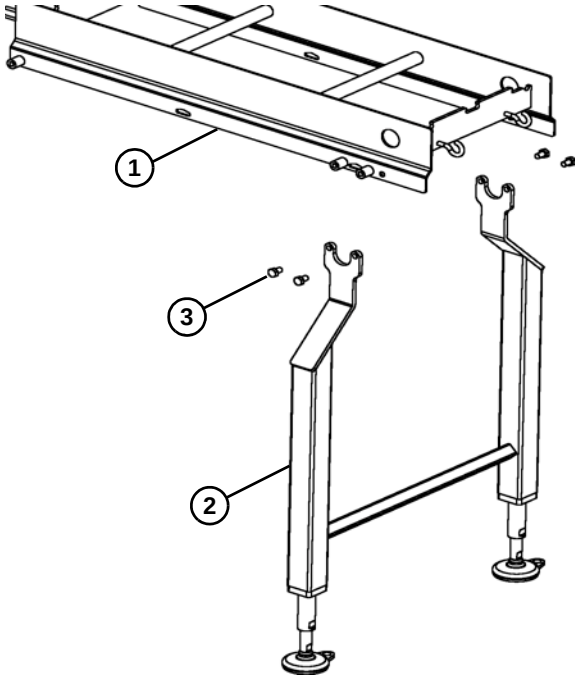


Figure 32

1. Position the stands on a flat, level surface.
2. Attach the stands to the frame **(Figure 33)**.

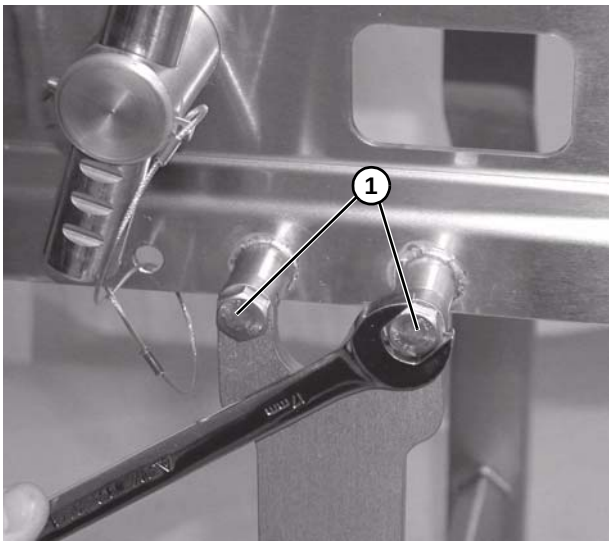


Figure 33

3. Tighten hex screws **(Figure 33, item 1)**.

Drive Package Installation

Typical Motor Components **(Figure 34)**.

1	End drive package
2	Motor

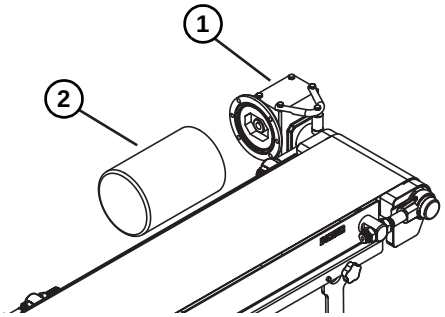


Figure 34

1. Attach the motor **(Figure 35, item 1)** to the gear reducer **(Figure 35, item 2)**.

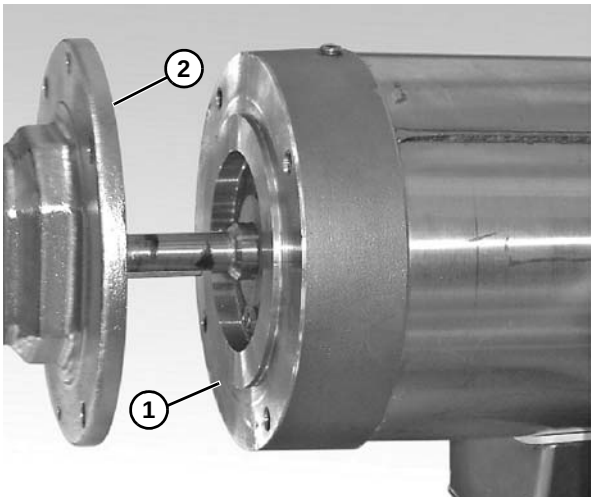


Figure 35

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 36, item 1)** is required for proper operation.

⚠ CAUTION

Required belt sag will create a potential pinch point.

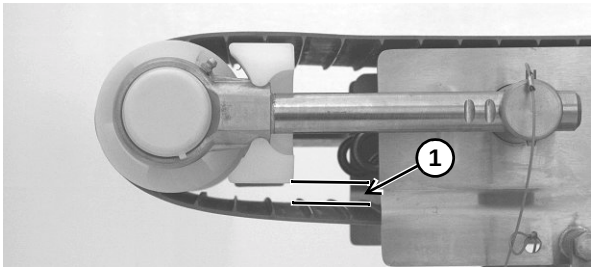


Figure 36

Required Tools

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

Checklist

- Keep service parts on hand. Refer to the "Service Parts" section starting on page 24 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 37, item 1)** that connect the guide **(Figure 37, item 2)** to the frame.

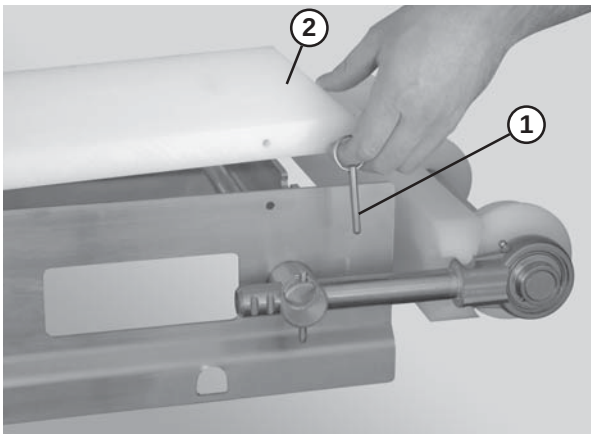


Figure 37

2. Tip up idler tail assembly **(Figure 38)**.

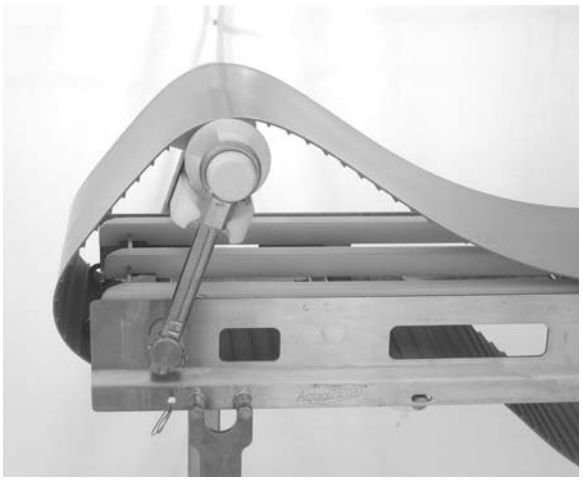


Figure 38

3. Lift up on the belt **(Figure 39)**.

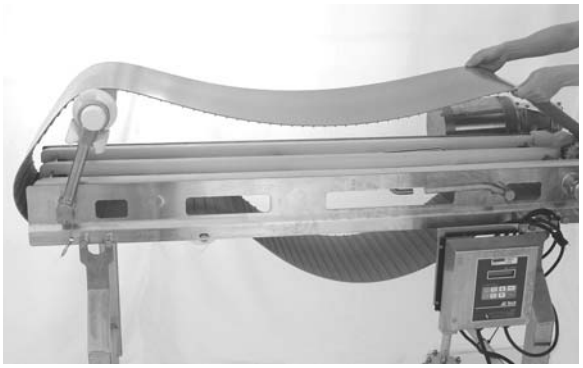


Figure 39

Conveyors with Lifters

1. Remove the guides, if applicable, by removing the pull pins **(Figure 37, item 1)** that connect the guide **(Figure 37, item 2)** to the frame.

2. Use the lifter handle **(Figure 40, item 1)** to raise the lifters **(Figure 40, item 2)** and raise the tip up tail **(Figure 40, item 3)**.

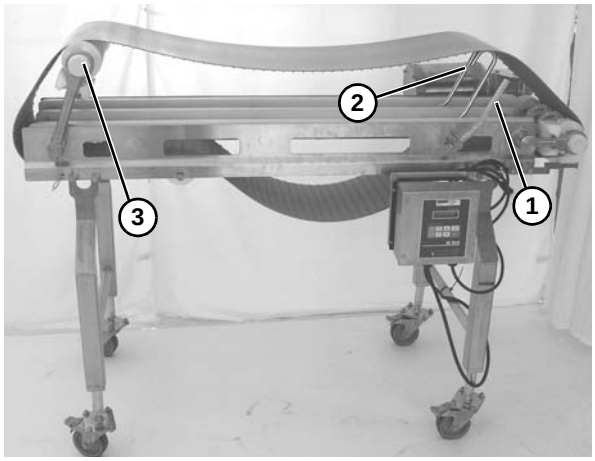


Figure 40

⚠ 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 20.

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

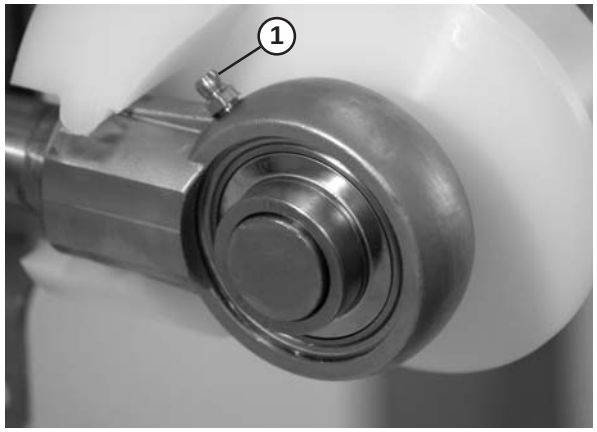


Figure 41

2. On LPZ knuckles, add grease to grease fitting **(Figure 42, item 1)**.

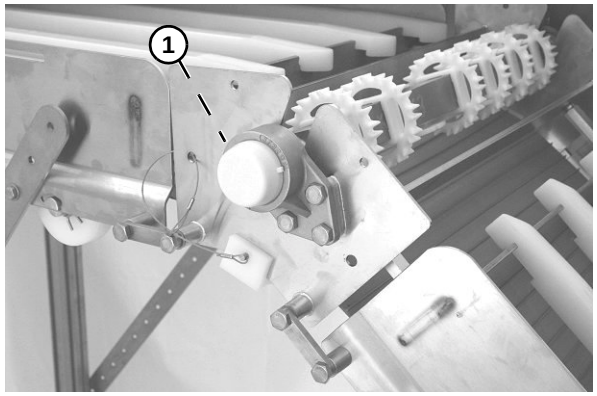


Figure 42

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.

Maintaining the Conveyor Belt

Troubleshooting

Inspect conveyor belt for:

- Surface cuts or wear
- Skipping

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

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

Skipping indicates:

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

Damage to belt links or rods indicate:

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

Conveyor Belt Replacement

⚠ WARNING

SEVERE HAZARD!

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

Conveyors with Guides

1. Remove the pull pins **(Figure 43, item 1)** that connect the guides **(Figure 43, item 2)** to the frame.

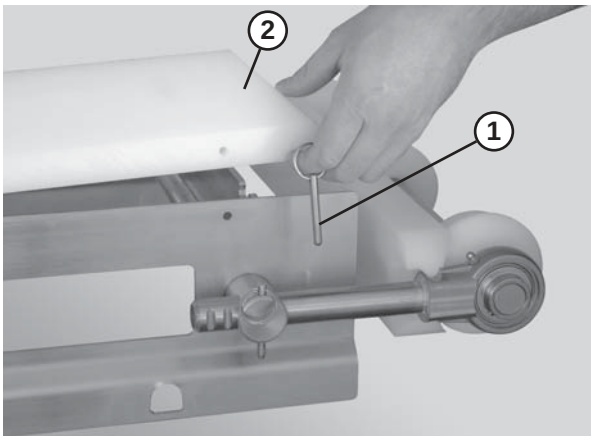


Figure 43

2. Remove the guides **(Figure 44, item 1)**.

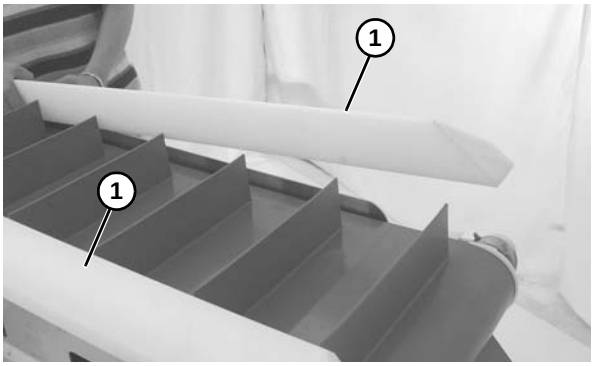


Figure 44

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 45)**.

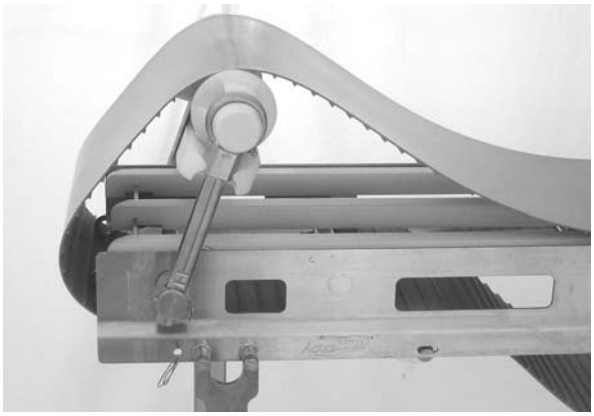


Figure 45

⚠ 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 the stands to the floor can cause the conveyor to tip and may result in serious injury.**

2. Lower the quick release arm **(Figure 46, 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."

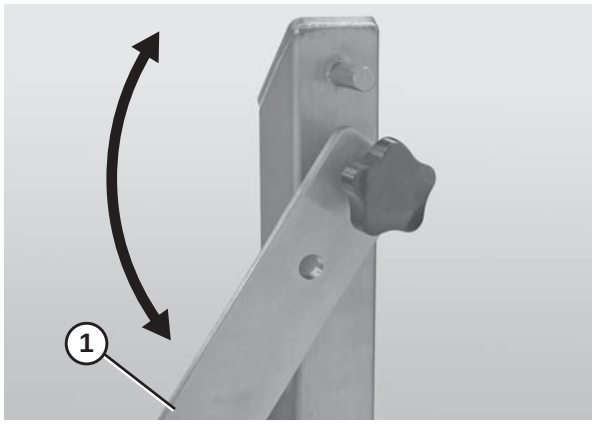


Figure 46

3. Slide the old belt **(Figure 47, item 1)** off the conveyor frame **(Figure 47, item 2)**.

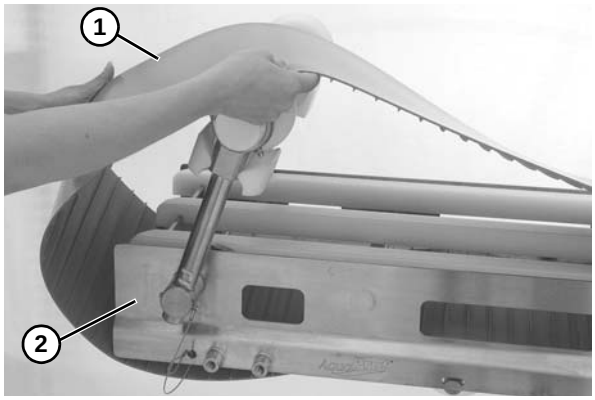


Figure 47

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 48, item 1)** and sliding it through the large hole **(Figure 48, item 2)** in the frame.

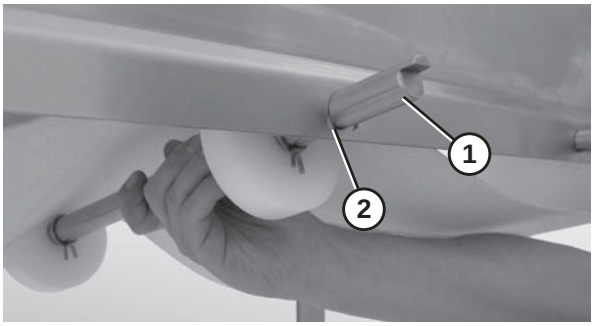


Figure 48

6. Lower the opposite end of the return shaft **(Figure 48, 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 4" (102 mm) from the top of the returns.

- 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 49, item 1)** is required for proper operation.

⚠ CAUTION

Required belt sag will create a potential pinch point.

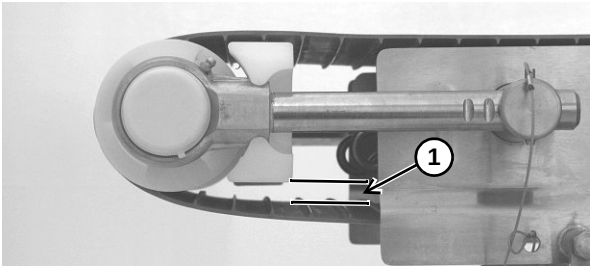


Figure 49

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. Loosen the button head screws **(Figure 50, item 1)** that connect the gearmotor to the drive spindle.

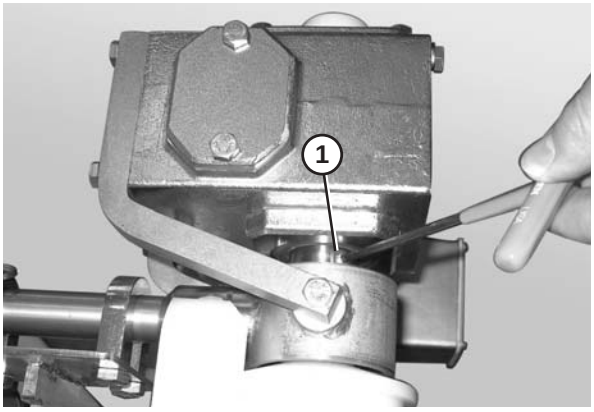


Figure 50

2. Remove the bolts that connect the motor to the drive assembly **(Figure 51)**.
3. Remove the motor **(Figure 51, item 1)** from the drive assembly **(Figure 51, item 2)**.

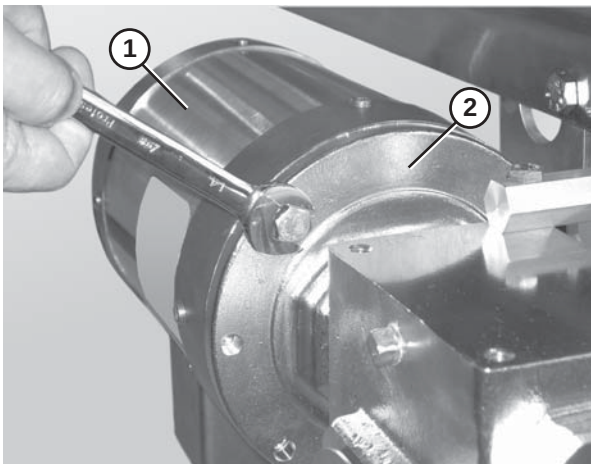


Figure 51

4. Unbolt the drive assembly and slide it off the bearing spindle **(Figure 52, item 1)**.

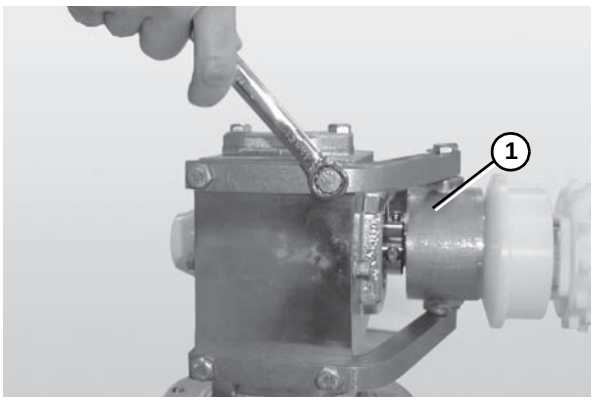


Figure 52

5. Remove the pull pin **(Figure 53, item 1)** from both sides of drive tail assembly.

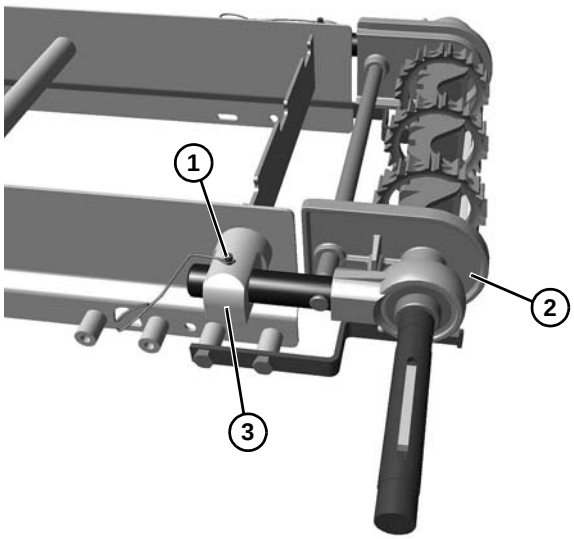


Figure 53

6. Slide the drive tail assembly **(Figure 53, item 2)** out of the take up blocks **(Figure 53, item 3)**.
7. Use a hex wrench to loosen two set screws **(Figure 54, item 1)** on the bearing shaft assembly.

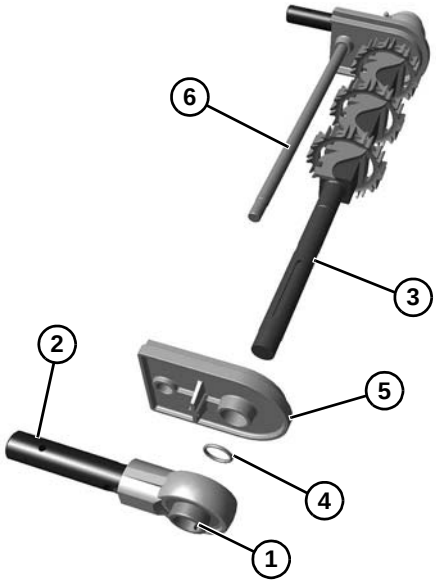


Figure 54

8. Slide the bearing shaft assembly **(Figure 54, item 2)** off the drive spindle **(Figure 54, item 3)**.

NOTE
*When removing tracking plate, be certain not to lose O-ring **(Figure 54, item 4)**.*

9. Slide the tracking plate **(Figure 54, item 5)** off the drive spindle.
10. Remove pinch guard shaft **(Figure 54, item 6)**.
11. Remove the sprockets **(Figure 55, item 1)** and alignment bar **(Figure 55, item 2)**.

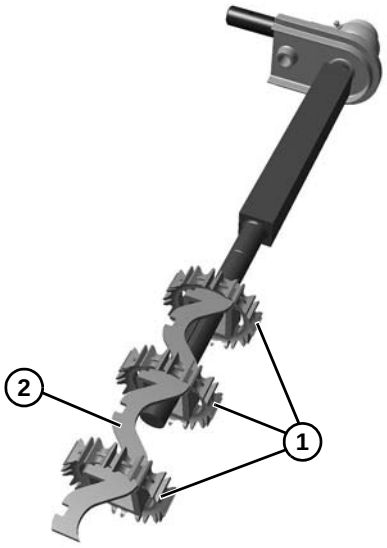


Figure 55

B - Idler Puck Removal

1. Remove the pull pins **(Figure 56, item 1)** from both sides of idler tail assembly.

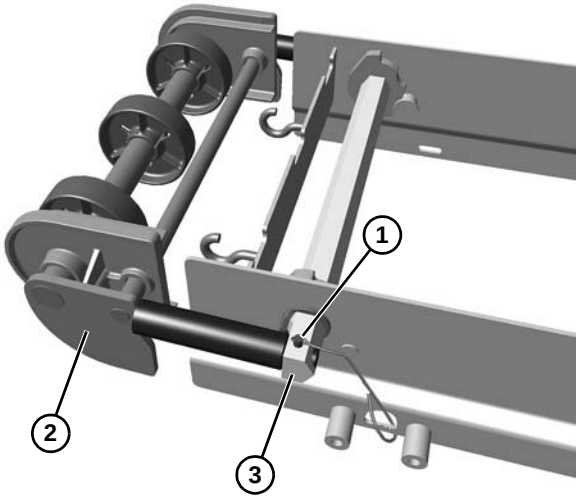


Figure 56

2. Slide the idler tail assembly **(Figure 56, item 2)** out of the the tip up hex shaft assembly **(Figure 56, item 3)**.
3. Remove the shaft assembly **(Figure 57, item 1)** from idler shaft **(Figure 57, item 2)** and pinch guard shaft **(Figure 57, item 3)**.

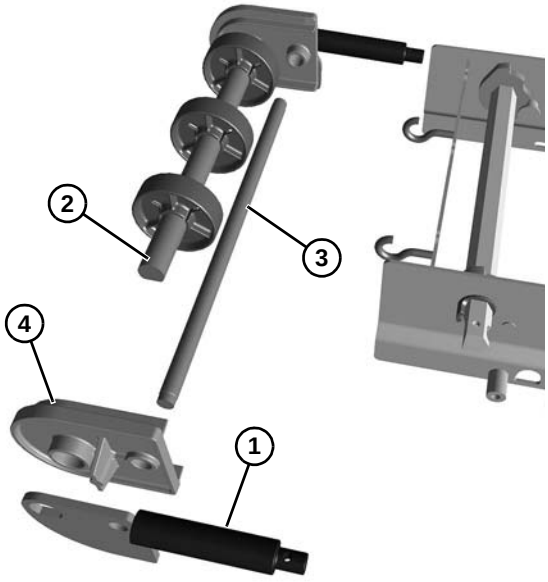


Figure 57

4. Remove tracking plate **(Figure 57, item 4)** from idler shaft and pinch guard shaft.
5. Remove pinch guard shaft **(Figure 57, item 3)**.
6. Slide the pucks **(Figure 58, item 1)** and alignment bar **(Figure 58, item 2)** off the idler shaft **(Figure 58, item 3)**.

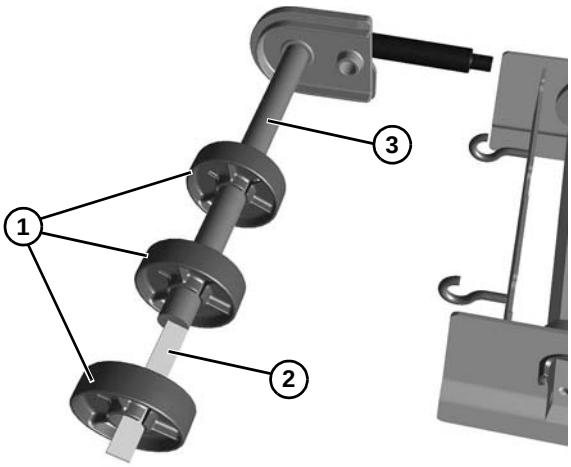


Figure 58

Reassembling Tail Assemblies

Refer to the "Service Parts" section starting on page 24 for complete diagrams and lists of all tail assembly components.

Tip Up Idler Tail

1. Place the pucks **(Figure 59, item 1)** onto the alignment bar **(Figure 59, item 2)**, and install onto the idler shaft **(Figure 59, item 3)**.

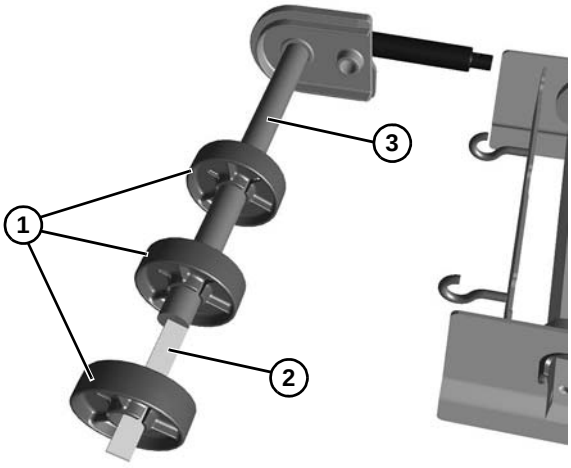


Figure 59

2. Slide all the idler pucks **(Figure 59, item 1)** along with alignment bar onto idler shaft **(Figure 59, item 3)**.

3. Install the tracking plate **(Figure 60, item 1)** to each side onto idler shaft **(Figure 60, item 2)** and pinch guard shaft **(Figure 60, item 3)**.

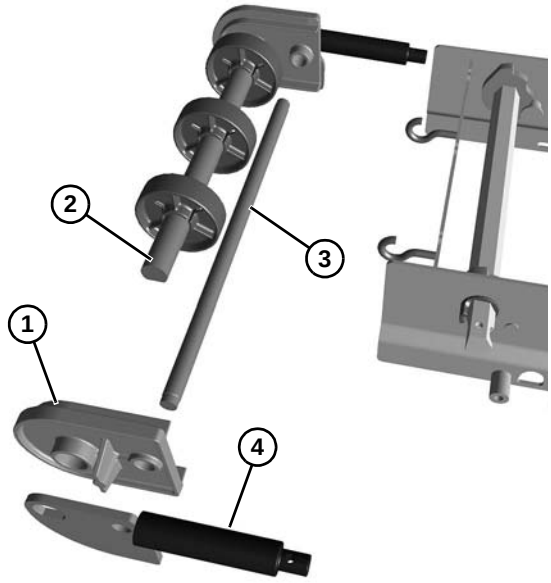


Figure 60

4. Install the shaft assembly **(Figure 60, item 4)**.

Drive Tail

1. Assemble sprockets **(Figure 61, item 1)** to the slots of alignment bar **(Figure 61, item 2)**, and install assembly onto drive spindle **(Figure 61, item 3)**.

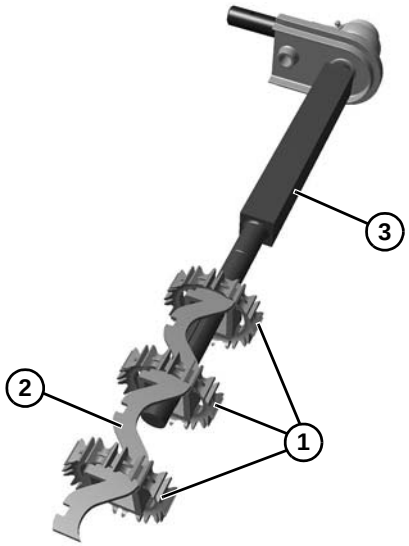


Figure 61

2. Install pinch guard shaft **(Figure 62, item 1)**.

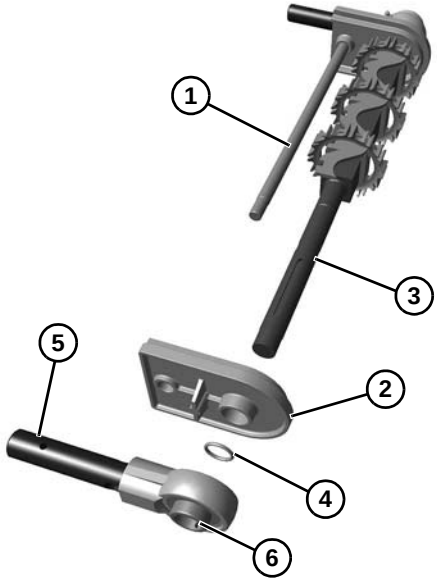


Figure 62

3. Slide the tracking plate **(Figure 62, item 2)** onto the drive spindle **(Figure 62, item 3)** and pinch guard shaft.

NOTE
*When installing tracking plate, be certain O-ring **(Figure 62, item 4)** is installed.*

4. Slide the shaft assembly **(Figure 62, item 5)** onto the drive spindle and tighten set screws **(Figure 62, item 6)** on bearing.

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 63)**.

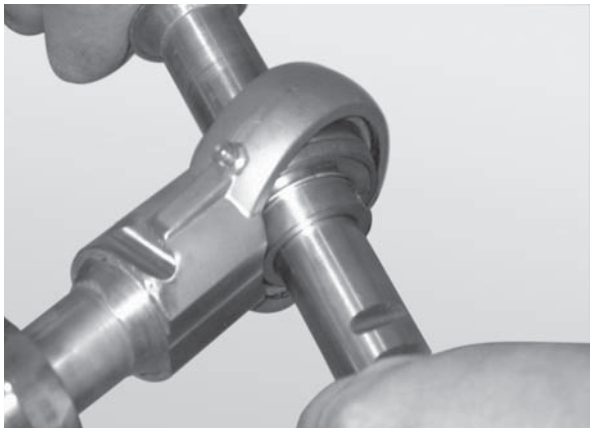


Figure 63

3. Apply lateral pressure to the rod until the bearing comes loose.
4. Remove the worn or damaged bearing **(Figure 64)**.

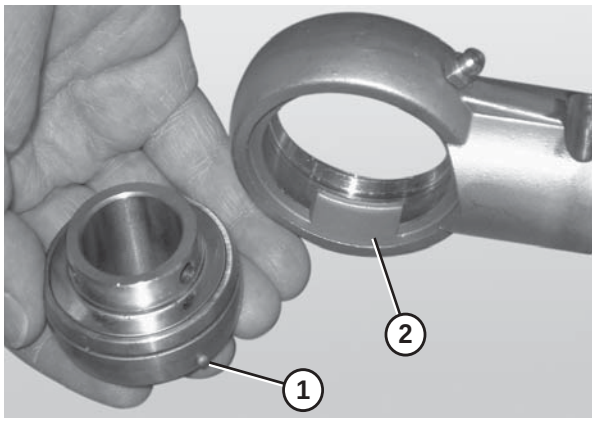


Figure 64

5. Replace the bearing.

NOTE

*When inserting the new bearing, make sure the anti-rotation notch **(Figure 64, item 1)** on the bearing lines up with the groove inside the housing **(Figure 64, 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 65, item 1)** on each side, and remove spindle assembly **(Figure 65, item 2)** from knuckle.

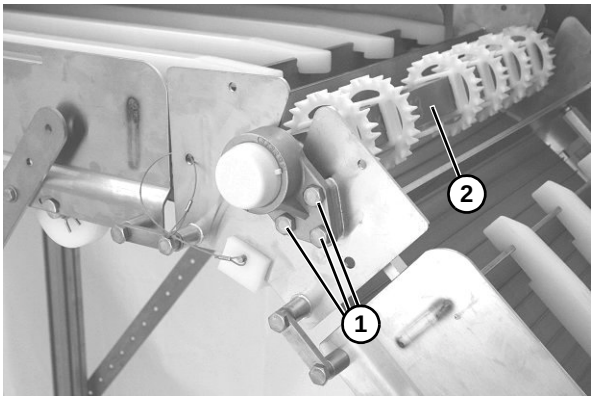


Figure 65

2. Remove the bearing cover **(Figure 66, item 1)**.

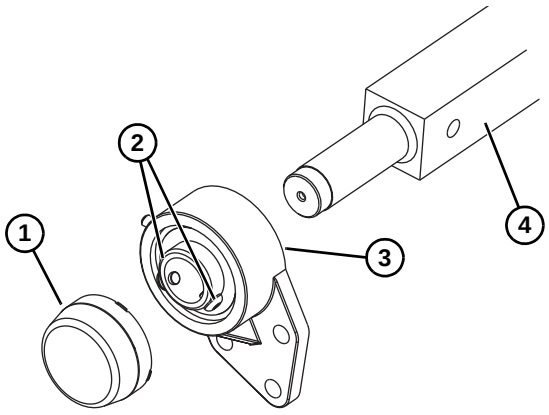


Figure 66

3. Use a hex wrench to loosen the bearing shaft assembly fasteners **(Figure 66, item 2)**.
4. Slide the bearing flange assembly **(Figure 66, item 3)**, off the spindle shaft end **(Figure 66, item 4)**.

5. Remove bolt **(Figure 67, item 1)**, to slide sprockets **(Figure 67, item 2)** from spindle shaft and sprocket alignment bar **(Figure 67, item 3)**.

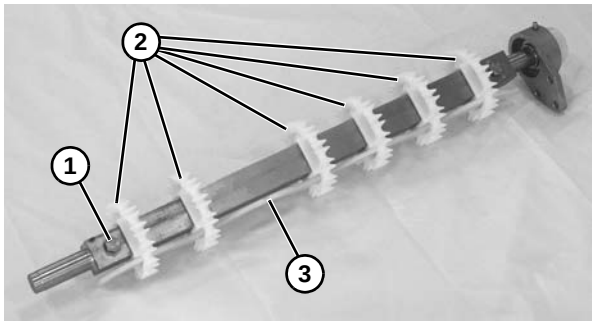


Figure 67

Installation

1. Slide the first sprocket **(Figure 68, item 1)** onto the spindle shaft.

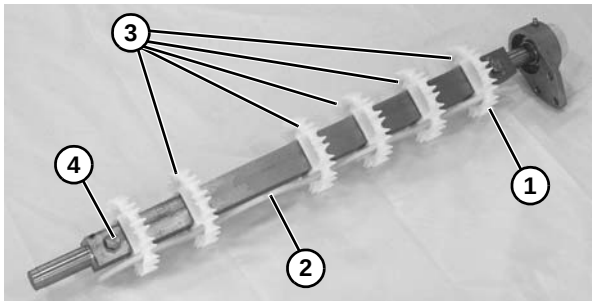


Figure 68

2. Insert the sprocket alignment bar **(Figure 68, item 2)** into the first sprocket **(Figure 68, item 1)**. Position the first sprocket with the notch in the sprocket alignment bar.
3. Install the remaining sprockets **(Figure 68, 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 68, item 4)**.
5. Slide the bearing flange assembly **(Figure 69, item 1)**, onto the spindle shaft end **(Figure 69, item 2)**.

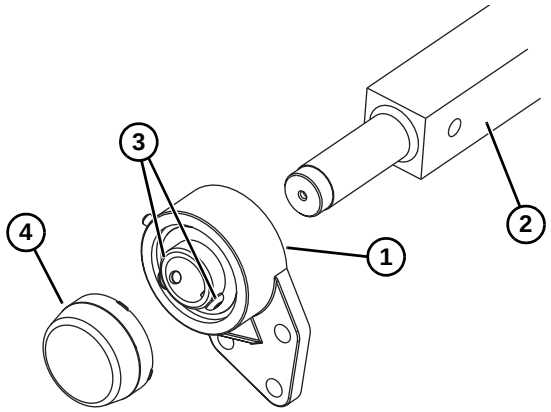


Figure 69

6. Use a hex wrench to tighten the bearing shaft assembly fasteners **(Figure 69, item 3)**.
7. Install the bearing cover **(Figure 69, item 4)**.
8. Insert spindle assembly **(Figure 70, item 1)** onto knuckle, and attach with three bolts **(Figure 70, item 2)**.

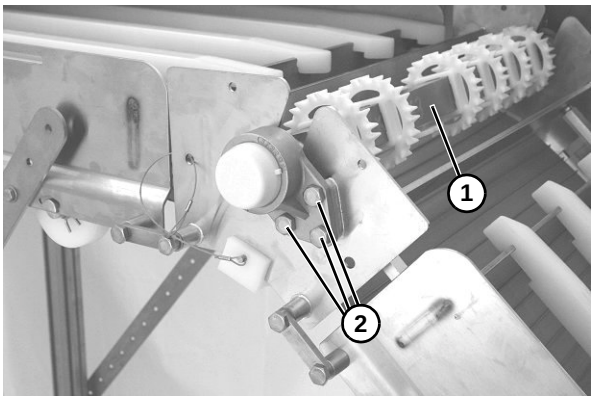
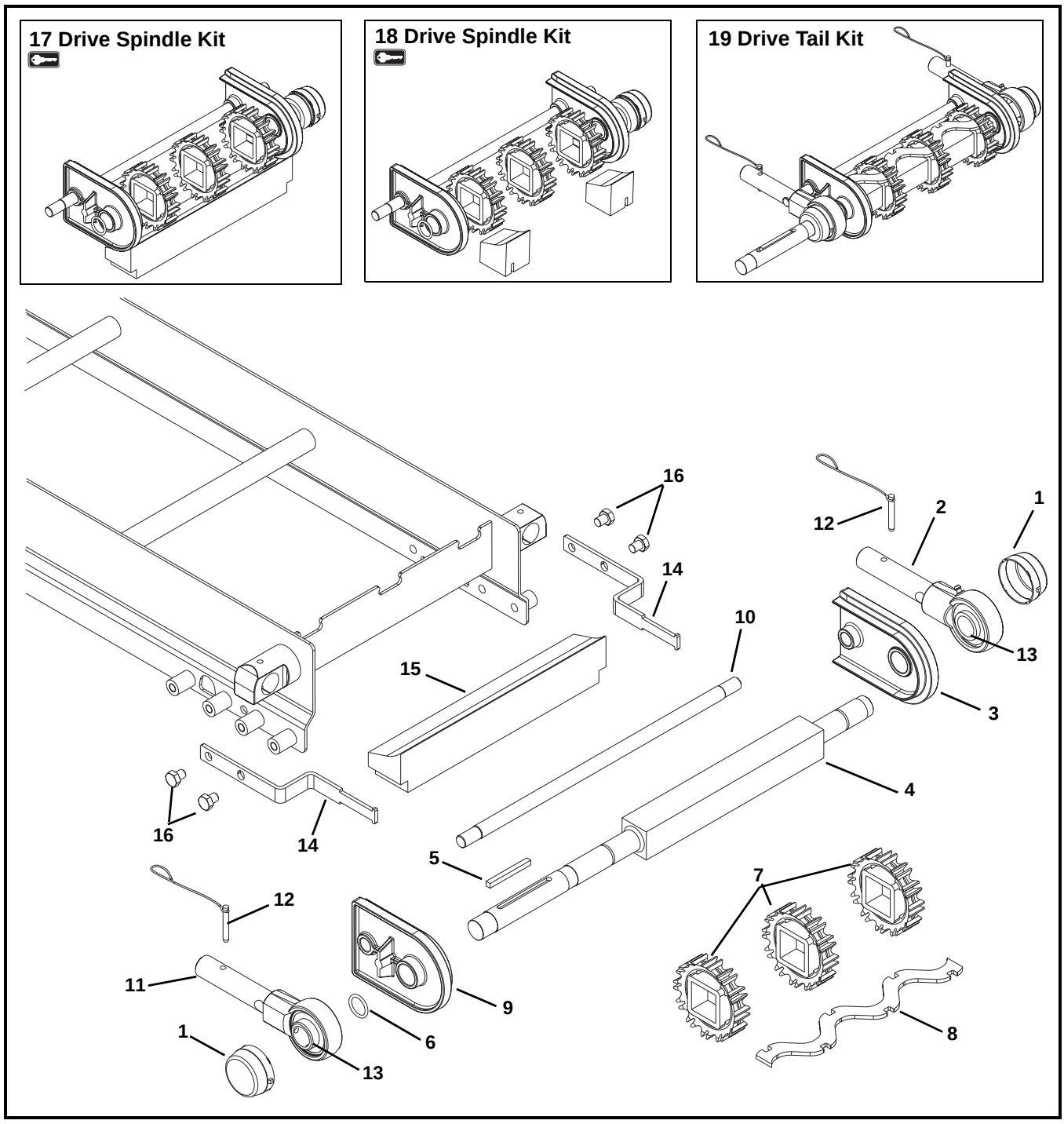


Figure 70

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



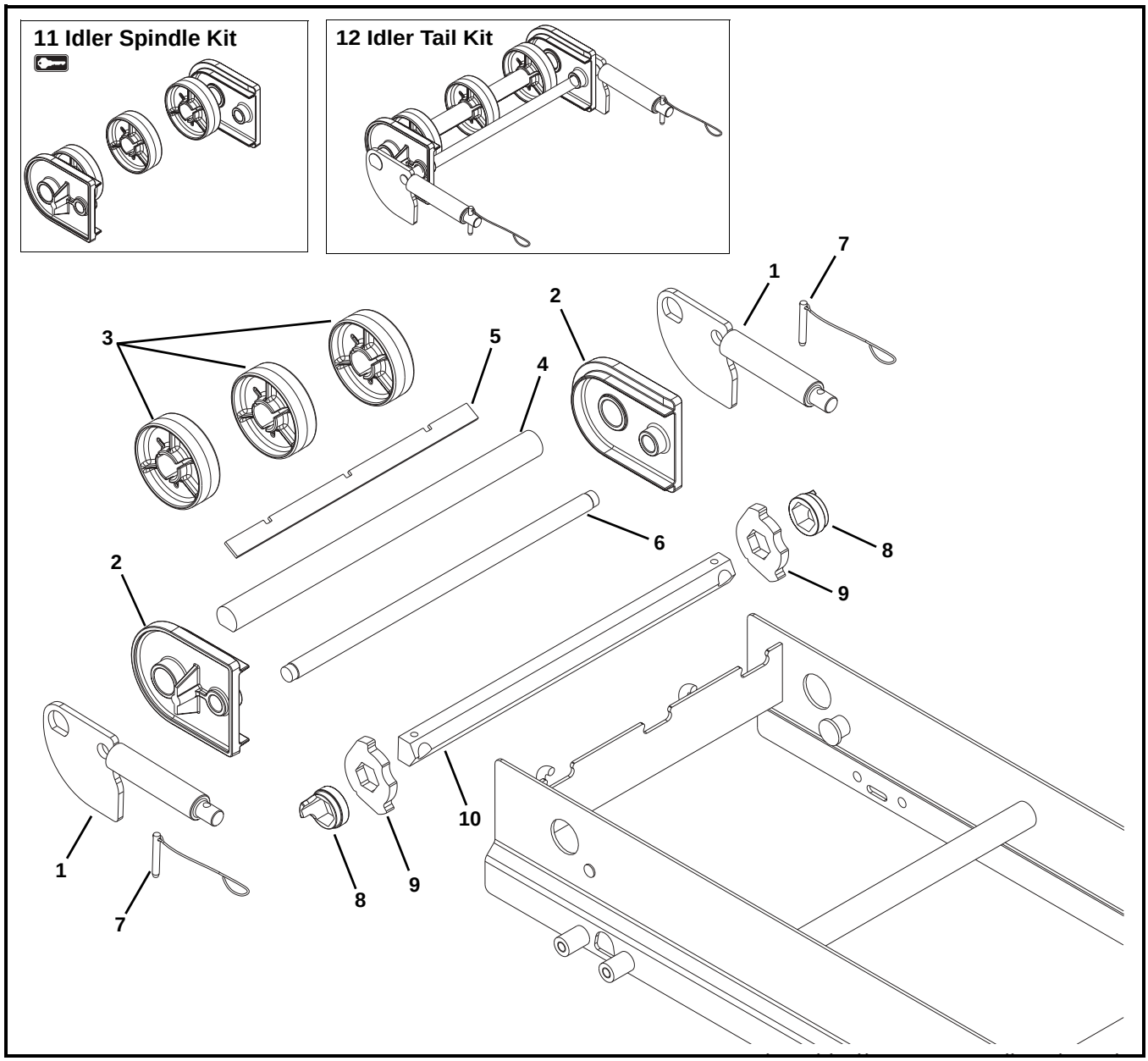
Item	Part Number	Description
1	807-1454	Bearing Cover
2	506394	Shaft Assembly with Bearing
3	506388	Tracking Plate
4	506855-WW	Drive Spindle
	506856-WW	CE Drive Spindle
5	912-111SS	Square Key, 0.25 x 2.50"
6	807-1588	O-Ring
7	807-1445	Sprocket
8	506253-WW	Sprocket Alignment bar
9	506390	Drive End Tracking Plate
	506388	Tracking Cam when Conveyor is ordered without a Dorner Gearmotor Mounting Package
10	506359-WW	Pinch Guard Shaft
11*	506394	Shaft Assembly with Bearing
12	501489	Pin Assembly
13	802-162	Bearing
14	501485	Limiter Support Arm
15	5209WW	Limiter for Flat Belt Conveyors
	520901	Limiter for Left Hand Cleated Belt Conveyors
	520902	Limiter for Right Hand Cleated Belt Conveyors
16	961012MSS	Hex Head Cap Screw, M10-1.50 x 12 mm
17	76DDU12X-WW	Drive Spindle Kit, for Flat Belt Conveyor when Conveyor is ordered with a Dorner Gearmotor Mounting Package (Includes Items 1, 3, 6, 7, 9, 13 and 15)
	76DDCU12X-WW	Drive Spindle Kit, for Flat Belt Conveyor when Conveyor is ordered without a Dorner Gearmotor Mounting Package (Includes Items 1, 3, 6, 7, 9, 13 and 15)
18	76DDUC12X-WW	Drive Spindle Kit, for Cleated Belt Conveyor when Conveyor is ordered with a Dorner Gearmotor Mounting Package (Includes Items 1, 3, 6, 7, 9, 13 and 15)
	76DCUC12X-WW	Drive Spindle Kit, for Cleated Belt Conveyor when Conveyor is ordered without a Dorner Gearmotor Mounting Package (Includes Items 1, 3, 6, 7, 9, 13 and 15)

Item	Part Number	Description
19**	76DDDUT12X-WW	Drive Tail Kit when Conveyor is ordered with a Dorner Gearmotor Mounting Package (Includes Items 1 through 12)
	76DDCTU12X-WW	Drive Tail Kit when Conveyor is ordered without a Dorner Gearmotor Mounting Package (Includes Items 1 through 12)
WW = Conveyor width ref: 06 - 36 in 02 increments		
* When conveyor is ordered with a Dorner gearmotor mounting package a shaft assembly is replaced with a gearmotor mounting bracket.		
** Drive Tail Kits are not available for CE conveyors.		

Sprocket Quantity (Item 7)	
Width	Sprocket Quantity
6" (152 mm)	2
8" (203 mm)	2
10" (254 mm)	4
12" (305 mm)	4
14" (356 mm)	4
16" (406 mm)	5
18" (457 mm)	5
20" (508 mm)	6
22" (559 mm)	6
24" (610 mm)	6
26" (660 mm)	7
28" (711 mm)	8
30" (762 mm)	8
32" (813 mm)	8
34" (864 mm)	9
36" (914 mm)	10

Service Parts

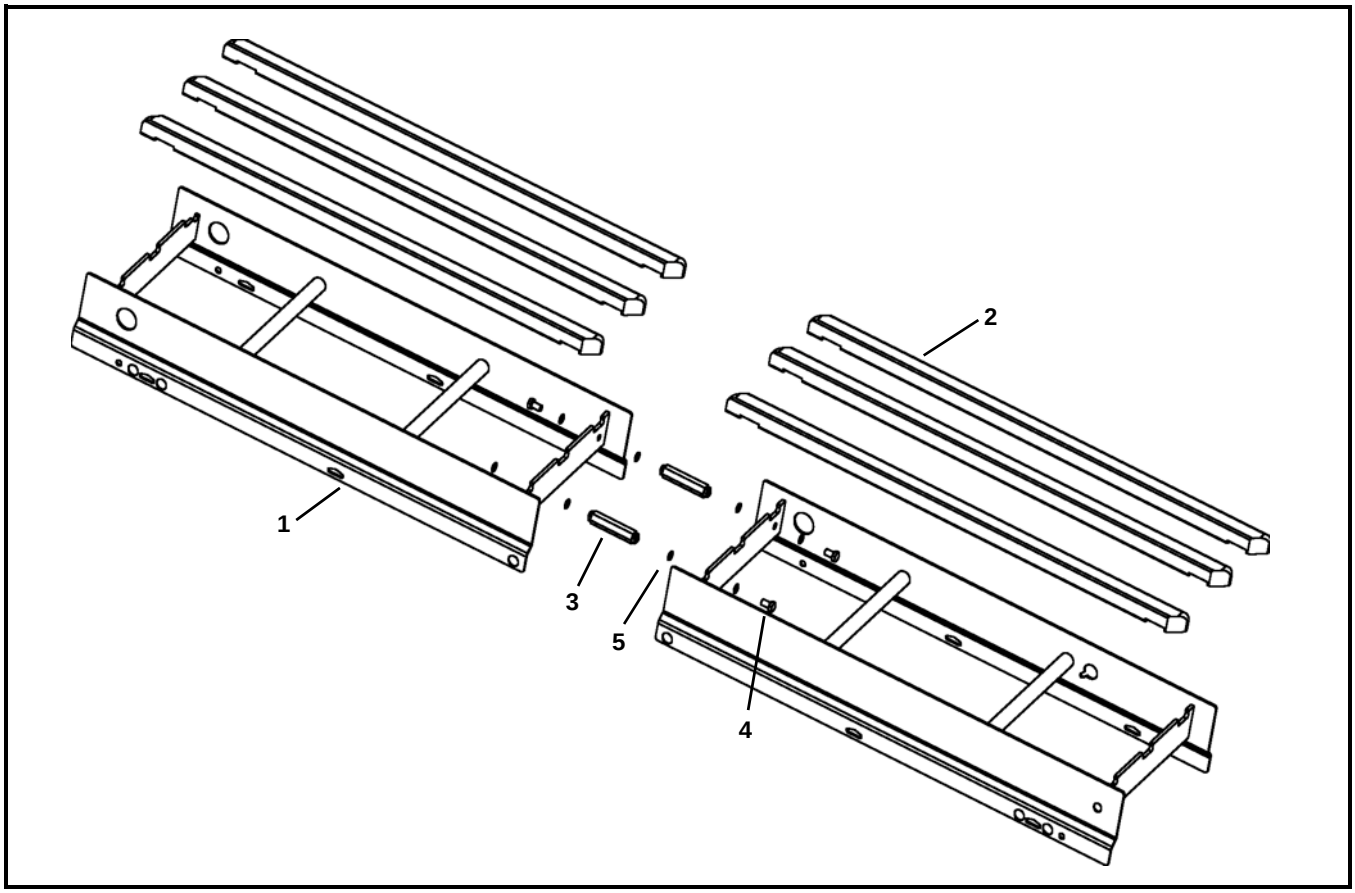
Tip Up Tension End



Item	Part Number	Description
1	506802	Idler Shaft Assembly
2	506389	Tracking Plate
3	506297	Idler Puck
4	514374-WW	Idler Shaft
5	506312-WW	Alignment Bar
6	506396-WW	Pinch Guard Shaft
7	501489	Pin Assembly
8	514387	Tip Up Sleeve

Item	Part Number	Description
9	506356	Stop Key
10	506391-WW	Hex Bar
11	76UIX-WW	Idler Spindle Kit (Includes Items 2 and 3)
12	76UITX-WW	Idler Tail Kit (Includes Items 1 through 7)
WW = Conveyor width ref: 06 - 36 in 02 increments		

Conveyor Frame and Extension

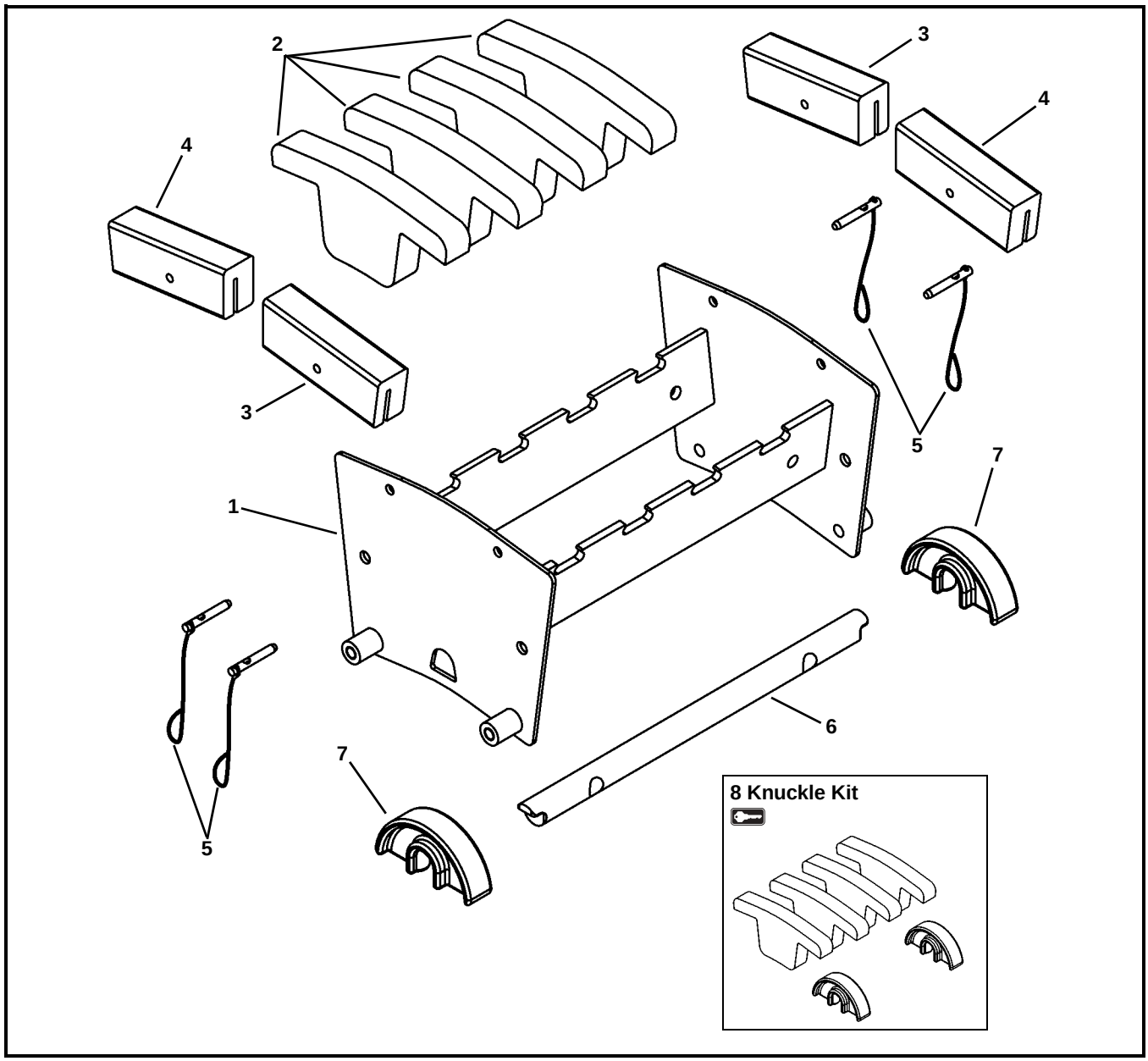


Item	Part Number	Description
1	------	Consult Factory for Frame Part Number
2	501800-LLL	Straight Wear Strip
3	501190	Hex Post Connector
4	501494	Grooved Hex Head Cap Screw, M10-1.5 x 16mm
5	807-1616	O-Ring
LLL = Conveyor length ref: 036 - 999 in 001 increments		
WW = Conveyor width ref: 06 - 36 in 02 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

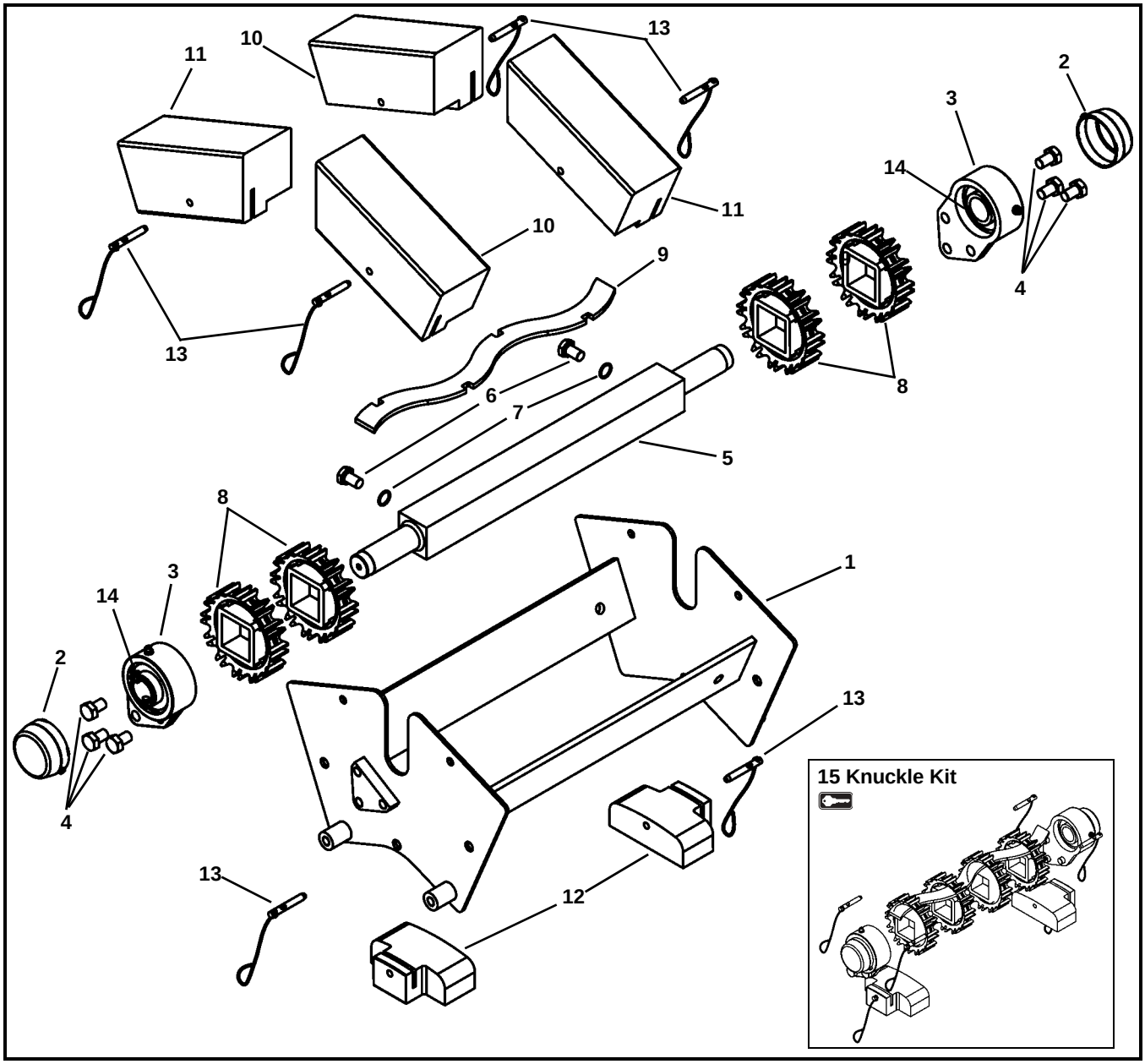
Upper Knuckle for Flat Belt Conveyors



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

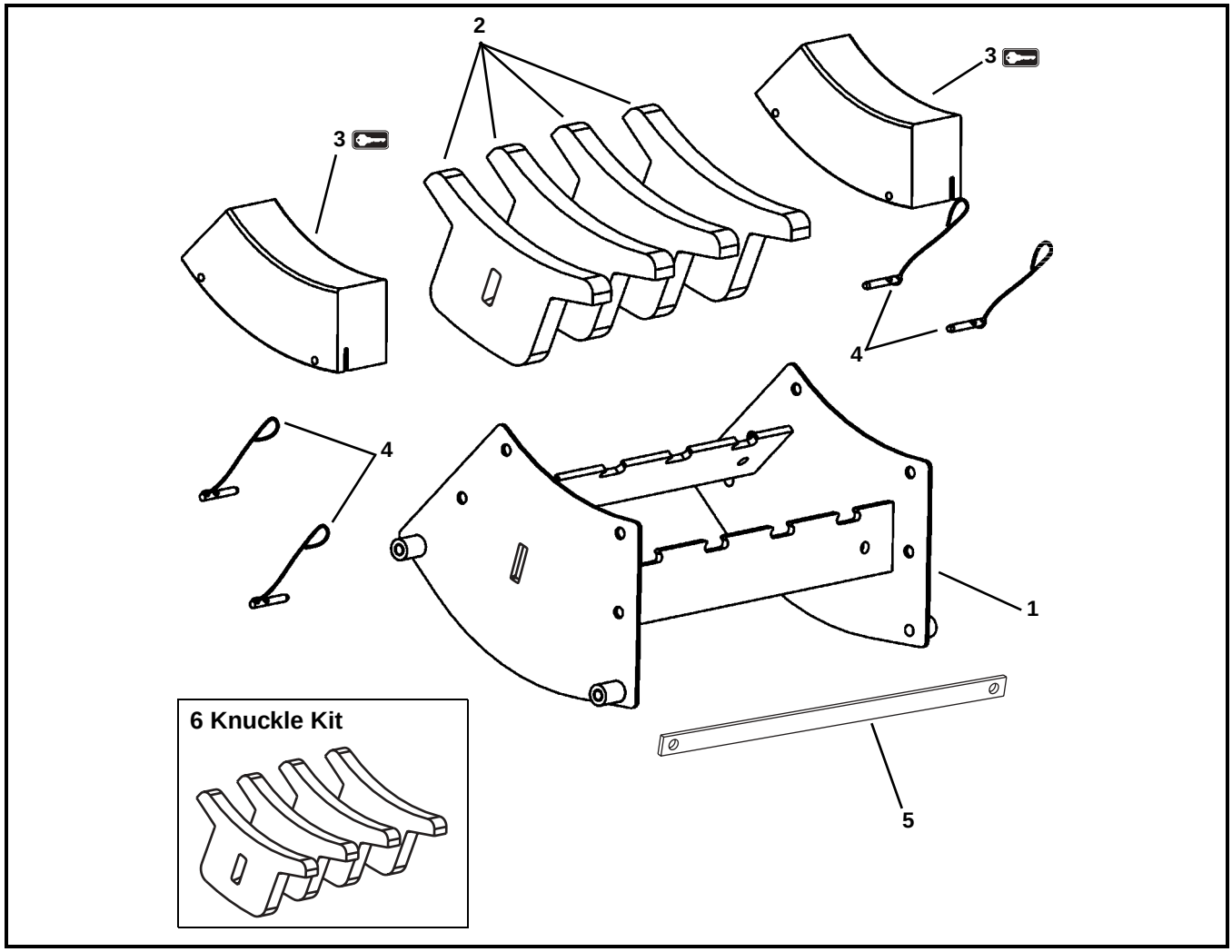


Item	Part Number	Description
1	5263WW	Frame Assembly for 30° Knuckle
	5264WW	Frame Assembly for 45° Knuckle
	5265WW	Frame Assembly for 60° Knuckle
2	807-1454	Bearing Cover
3	500288	3 Hole Flange with Bearing
4	961016MSS	Hex Head Cap Screw, M10-1.5x16 mm
5	5243WW	Spindle
6	501494	Grooved Hex Head Cap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

Item	Part Number	Description
9	5164WW	Sprocket Alignment Bar
10	501881-AA	1.5” High Top Guide, Right Hand
	501880-AA	3” High Top Guide, Right Hand
11	501976-AA	1.5” High Top Guide, Left Hand
	501975-AA	3” 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

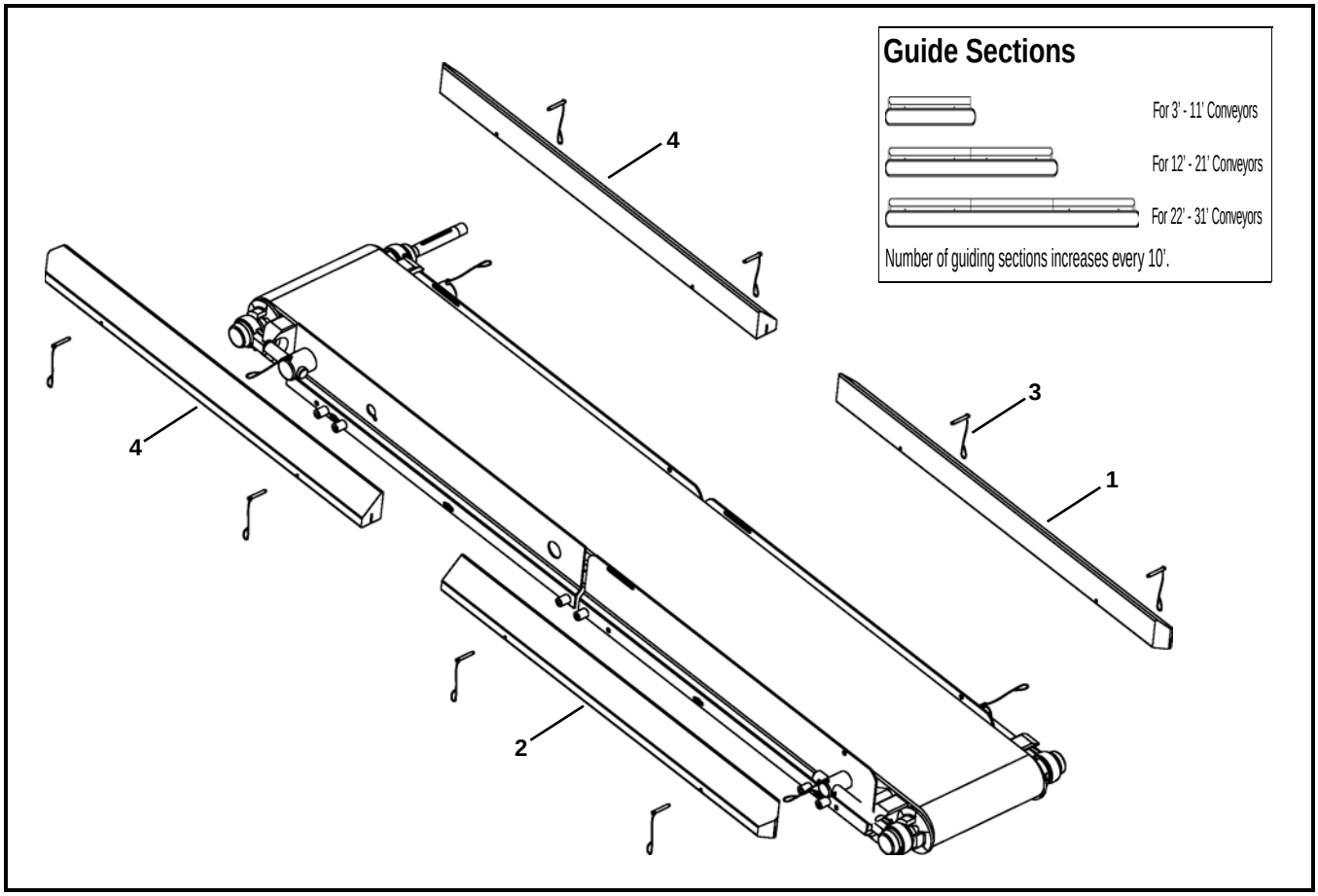
Lower Knuckle for Cleated Belt Conveyors



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	1.5" Hold Down Guide
	501979-AA	3" Hold Down Guide
4	501676	Pin Assembly
5	506254-WW	Retention Wearstrip
6	76ULK-WW-AA	Lower Knuckle Kit (Includes Item 2)
WW = Conveyor width ref: 06 - 24 in 02 increments		
AA = Angle 30, 45 or 60		

3" (76 mm) High Sides

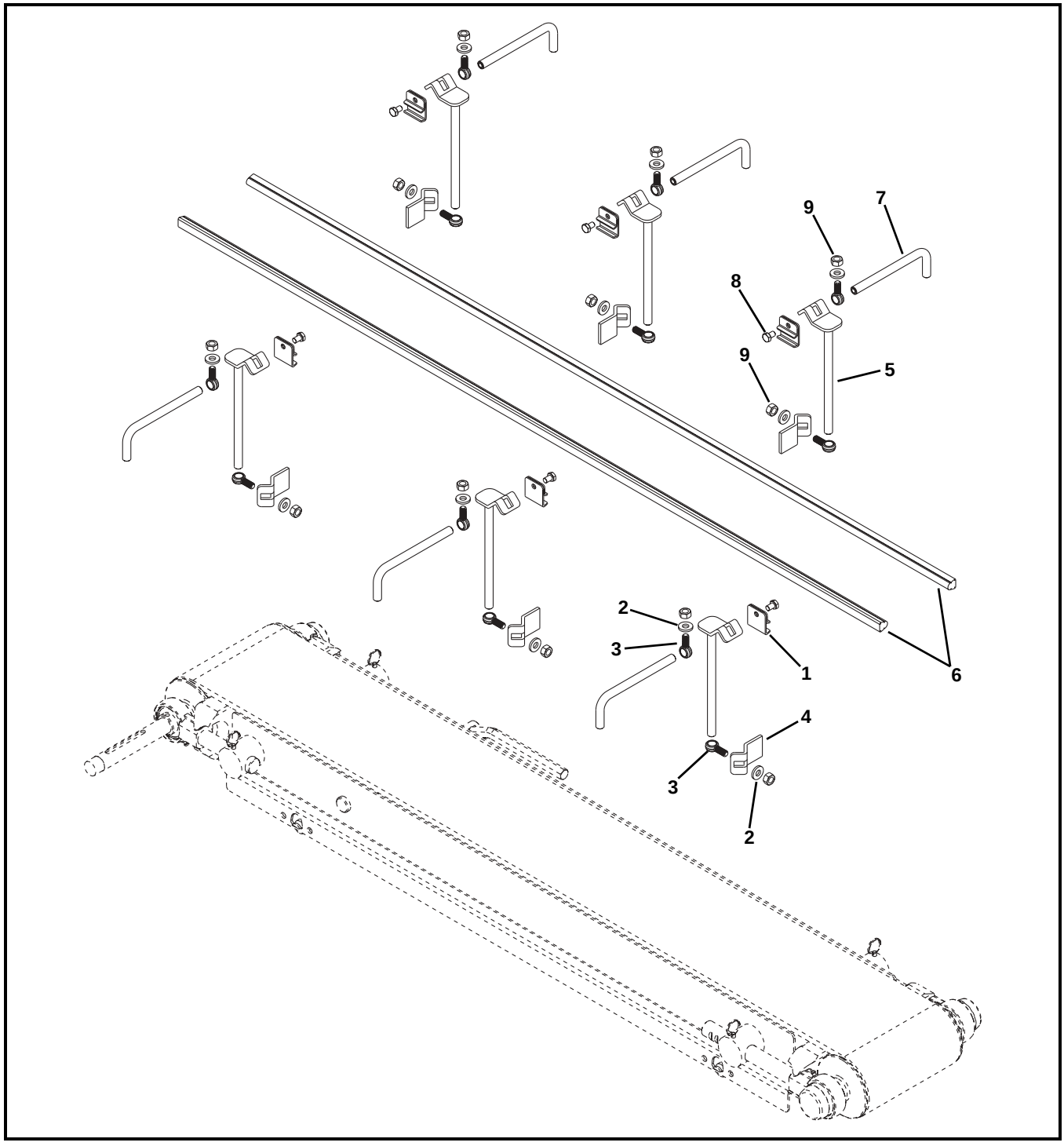


Item	Part Number	Description
1	503501-LLLLL	Right Hand High Side Guide
2	503601-LLLLL	Left Hand High Side Guide
3	501676	Pin Assembly

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

Service Parts

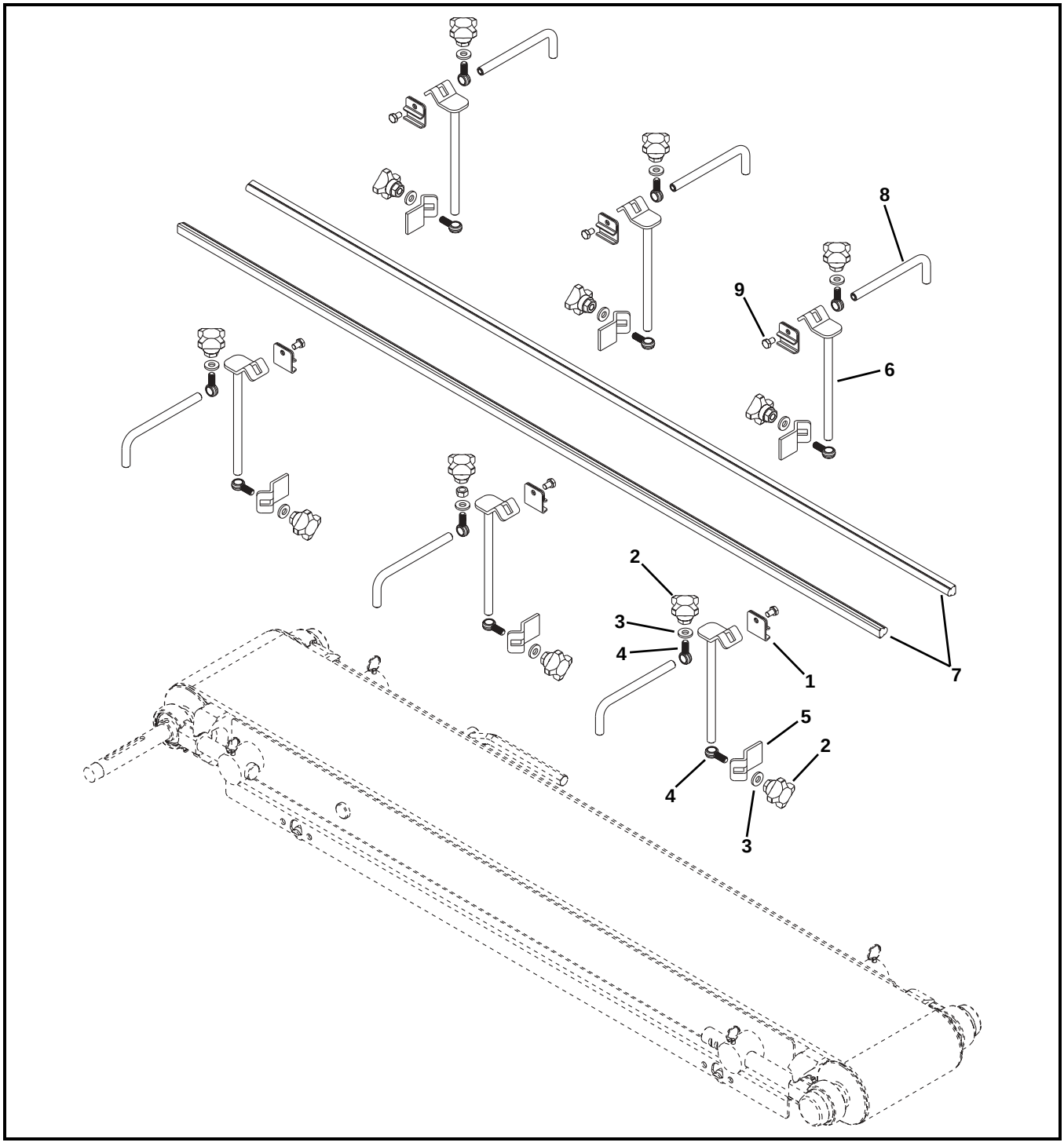
Adjustable Guiding



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

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

Tool-Less Adjustable Guiding

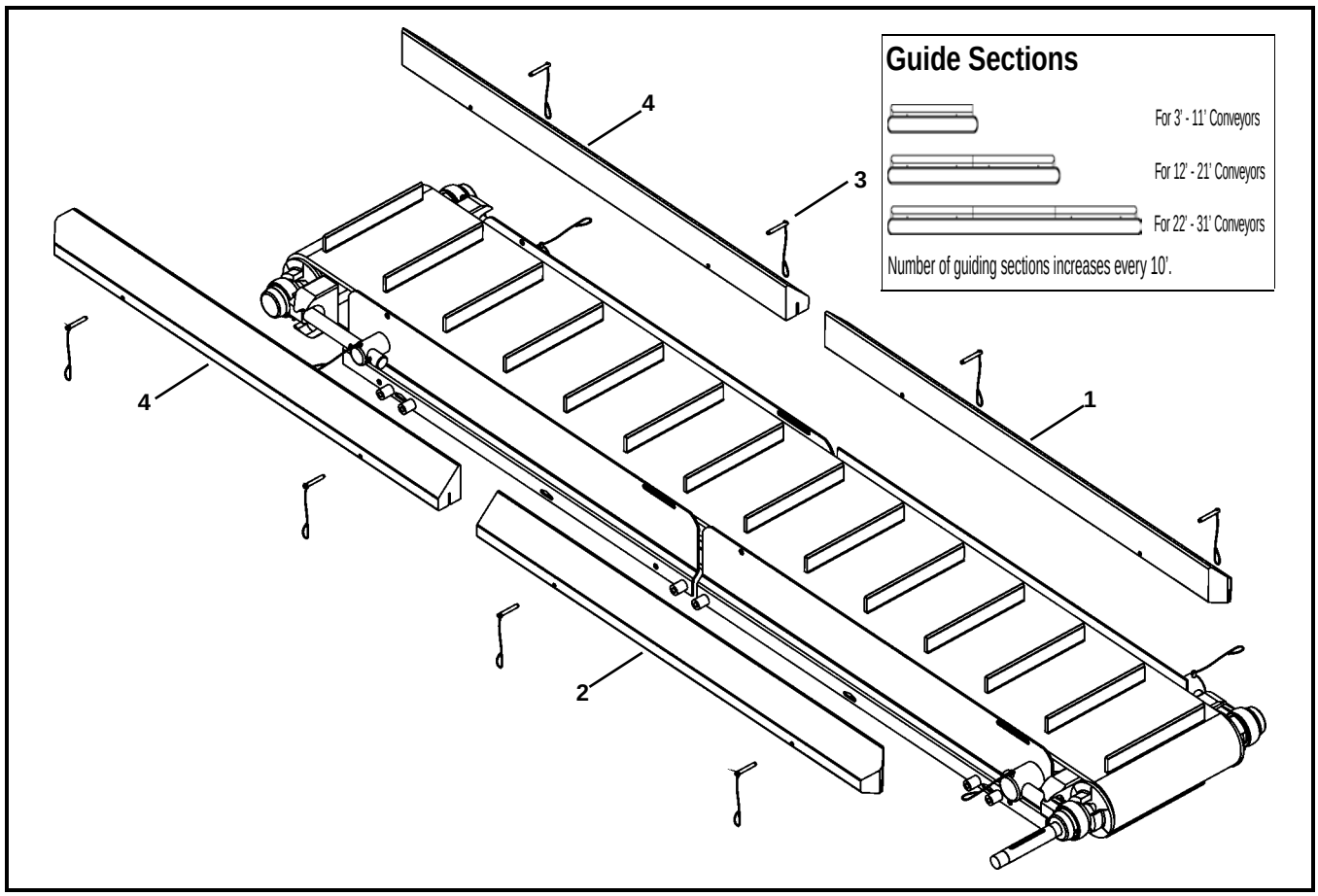


Item	Part Number	Description
1	807-015	Rail Clamp
2	807-1057	Handle
3	807-1821	Washer
4	807-1994	Eye Bolt M10 x 1.50 mm
5	509875	Mounting Bracket
6	509876	Vertical Post Assembly

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

Service Parts

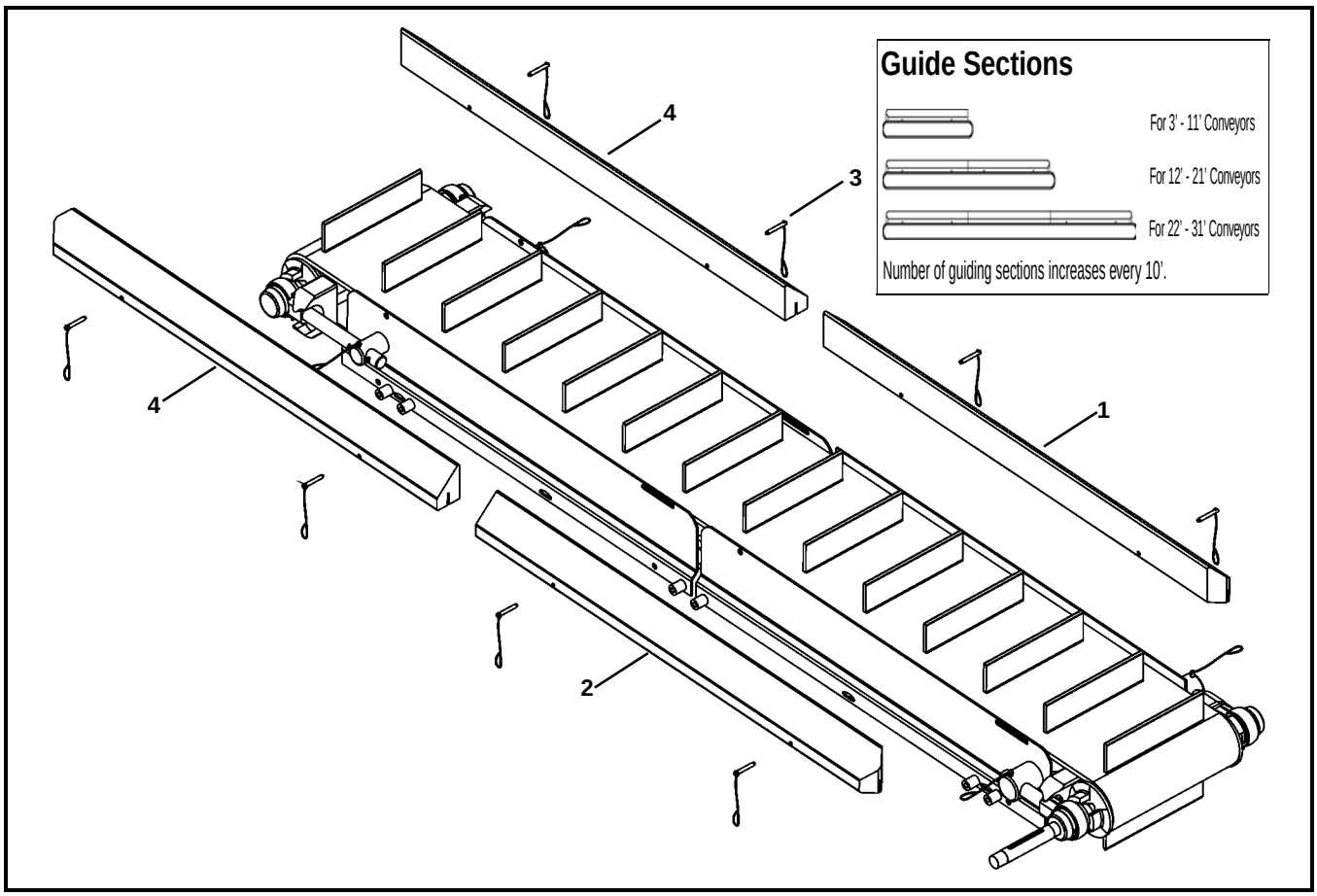
Cleated 1" (25 mm) Guides



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

Item	Part Number	Description
3	501676	Pin Assembly
4	502301-LLLLL	1" Cleated Guide Square End (6" - 16" wide conveyors)
	502302-LLLLL	1" 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 3" (76 mm) Guides

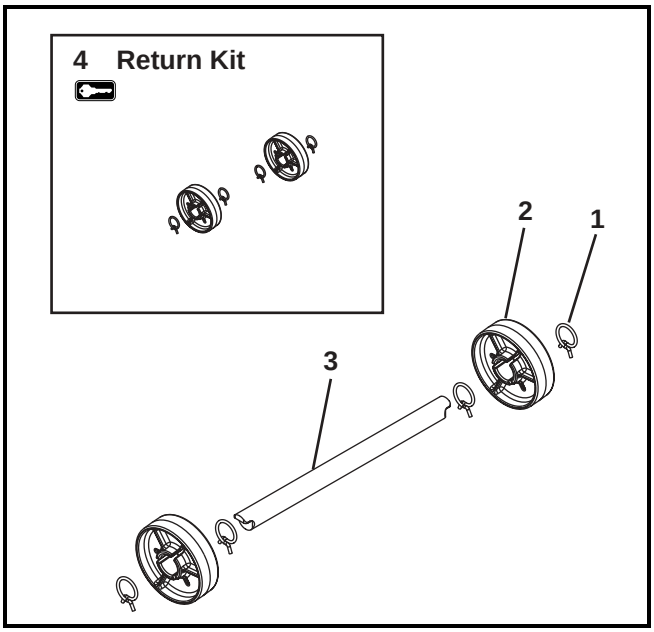


Item	Part Number	Description
1	502701-LLLLL	3" Cleated Right Hand Guide (6" - 16" wide conveyors)
	502702-LLLLL	3" Cleated Right Hand Guide (18" - 24" wide conveyors)
2	502801-LLLLL	3" Cleated Left Hand Guide (6" - 16" wide conveyors)
	502802-LLLLL	3" Cleated Left Hand Guide (18" - 24" wide conveyors)

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

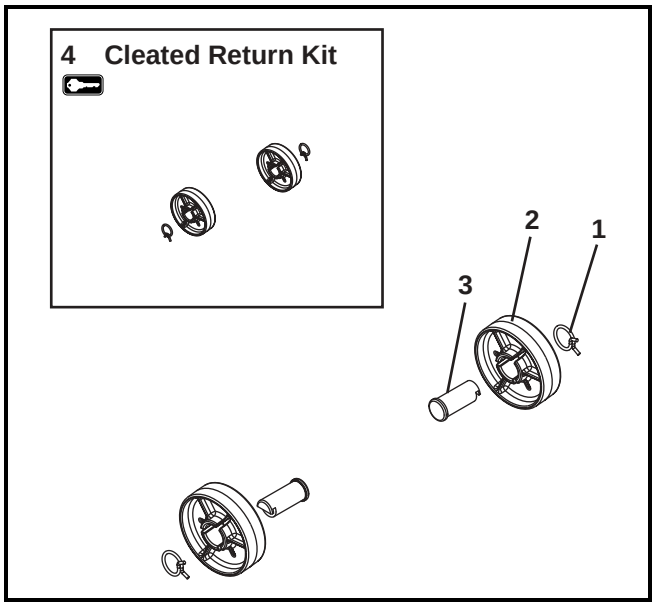
Service Parts

Flat Belt Returns



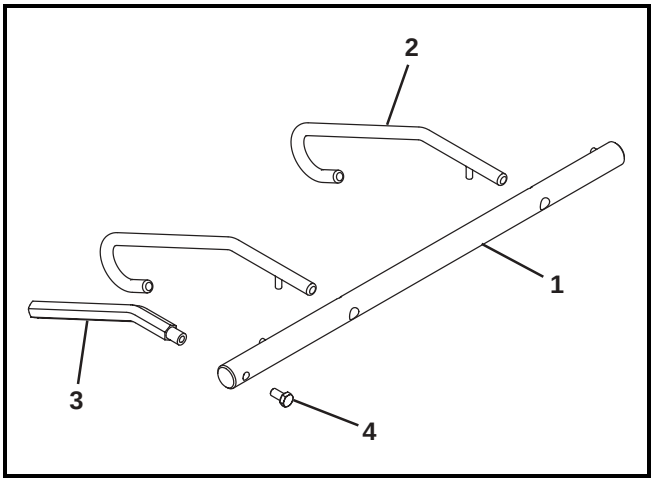
Item	Part Number	Description
1	807-1551	Clamp
2	506296	Return Disk
3	5108WW	Return Shaft
4	76R-WW	Return Kit (Includes Items 1 and 2)
WW = Conveyor width ref: 06 - 36 in 02 increments		

Cleated Belt Returns



Item	Part Number	Description
1	807-1551	Clamp
2	506296	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	501376	Belt Lifter
3	500491	Belt Lifter Handle
4	960812MSS	Hex Head Cap Screw M8-1.25 x 12 mm
WW = Conveyor width ref: 06 - 36 in 02 increments		

Configuring Conveyor Part Number

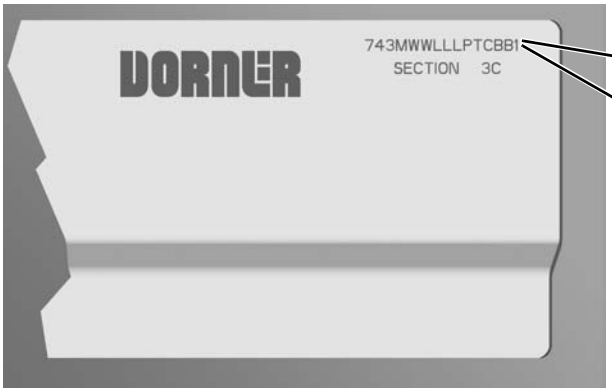


Figure 71

Flat Belt Conveyor

Refer to the model number on the conveyor frame **(Figure 71)**. 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:
7HM12-072CCAA101

7600 Ultimate Series end drive, flat belt conveyor, 12" (305mm) wide x 72" (1829mm) long, stands located 18" (457mm) 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 **(Figure 71)**. 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:
7DM12-072CCA0110

7600 Ultimate Series end drive, cleated belt conveyor, 12” (305mm) wide x 72” (1829mm) long, stands located 18” (457mm) 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 (if available, part serial number).

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

<table>
<tr><th></th><th colspan="8">Product Type</th></tr>
<tr><th></th><th colspan="7">Standard Products</th><th>Engineered to order parts</th></tr>
<tr><th>Product Line</th><th>Conveyors</th><th>Gearmotors & Mounting Packages</th><th>Support Stands</th><th>Accessories</th><th>Spare Parts (non-belt)</th><th>Spare Belts - Standard Flat Fabric</th><th>Spare Belts - Cleated & Specialty Fabric</th><th>Spare Belts - Plastic Chain</th><th>All equipment and parts</th></tr>
<tr><td>1100</td><td colspan="6" rowspan="14">30% return fee for all products except:
50% return fee for conveyors with modular belt, cleated belt or specialty belts</td><td colspan="2" rowspan="15">non-returnable</td><td rowspan="15">case-by-case</td></tr>
<tr><td>2200</td></tr>
<tr><td>2200 Modular Belt</td></tr>
<tr><td>2200 Precision Move</td></tr>
<tr><td>2300</td></tr>
<tr><td>2300 Modular Belt</td></tr>
<tr><td>3200</td></tr>
<tr><td>3200 LPZ</td></tr>
<tr><td>3200 Precision Move</td></tr>
<tr><td>4100</td></tr>
<tr><td>5200</td></tr>
<tr><td>5300</td></tr>
<tr><td>6200</td></tr>
<tr><td>Controls</td></tr>
<tr><td>7200 / 7300</td><td colspan="6">50% return fee for all products</td></tr>
<tr><td>7350</td><td colspan="9" rowspan="4">non-returnable</td></tr>
<tr><td>7360</td></tr>
<tr><td>7400</td></tr>
<tr><td>7600</td></tr>
</table>

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

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

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

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

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