3200 Series Cleated and Sidewall Cleated Belt LPZ Conveyors

Installation, Maintenance & Parts Manual

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851-520 Rev. I

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IMPORTANT

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.

Dorner's Limited Warranty applies.

Dorner 3200 series conveyors are covered by Patent Numbers 5,156,260, 6,871,737B2, 6,910,571B1, 6,971,509B2, 6,298,981, 6,971,509, 6,901,571, 6,871,737 and corresponding patents and patent applications in other countries.

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

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

Warnings - General Safety

⚠ WARNING

The safety alert symbol, black triangle with white exclamation, is used to alert you to potential personal injury hazards.

⚠ DANGER

Climbing, sitting, walking or riding on conveyor will cause severe injury.

KEEP OFF CONVEYORS.

⚠ DANGER

DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT.

⚠ WARNING

LPZ Series Conveyors are not reversible. Reversing creates pinch points which can cause severe injury.

DO NOT REVERSE LPZ SERIES CONVEYORS.

⚠ WARNING

Gearmotors may be HOT.

DO NOT TOUCH Gearmotors.

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

⚠ WARNING

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.

⚠ WARNING

Loosening stand height or angle adjustment screws may cause conveyor sections to drop down, causing severe injury.

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.

SUPPORT CONVEYOR SECTIONS PRIOR TO LOOSENING STAND HEIGHT OR ANGLE ADJUSTMENT SCREWS.

Product Description

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

1	Conveyor
2	Gearmotor Mounting Package
3	Gearmotor
4	Mounting Brackets
5	Lower Knuckle
6	Upper Knuckle
7	Support Stand
8	Drive End
9	Idler/Tension End

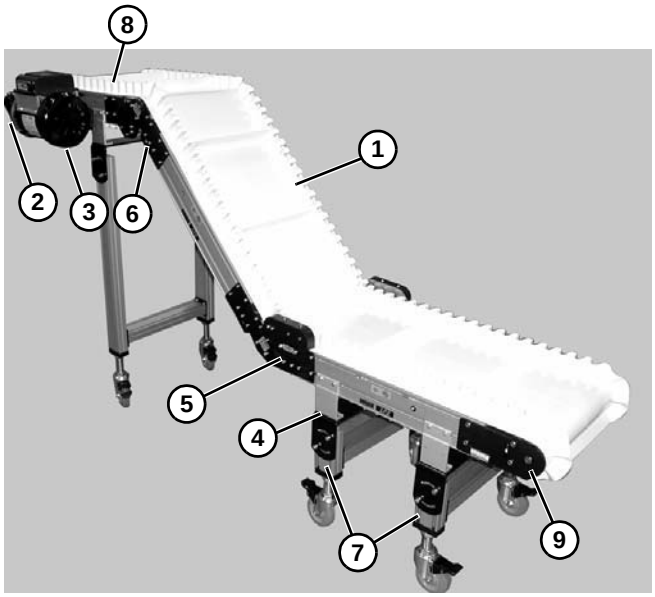


Figure 1

Specifications

Models

Models:

Cleated Belt LPZ Series End Drive Conveyor

3E 1 A M WW LLLL–LLLL–LLLL A LLLL

- **Cleat Spacing**
- **Output Shaft Position***
- **Conveyor Section Length Reference**
- **Conveyor Section Length Reference**
- **Conveyor Section Length Reference**
- **Conveyor Width Reference**
- **Document Language, M = English**
- **Cleat Type***
- **1 = Manual tracking and supports**
  2 = V-guide tracking and supports
  3 = Manual tracking
  4 = V–guide tracking
- **E = Elevating**
  D = Declining

*** See Ordering and Specifications Catalog for details.**

Conveyor Supports:

Maximum Distances:

1 = 24” (610 mm) (Drive End)

2 = 12 ft (3658 mm)

3 = 36” (914 mm) (Idler End)

Maximum Angle:

4 = 0 and 25 to 60 degrees

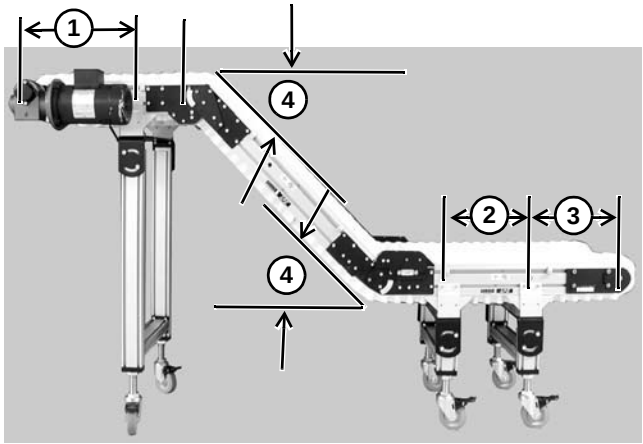


Figure 2

Specifications

Specifications:

Conveyor Width Reference (WW)	08	10	12	18	24
Conveyor Belt Width	8” (203mm)	10” (254mm)	12” (305mm)	18” (457mm)	24” (610mm)
Conveyor Startup Torque*	10 in-lb (1.1Nm)	13 in-lb (1.5Nm)	15 in-lb (1.7Nm)	25 in-lb (2.8Nm)	34 in-lb (3.9Nm)
Conveyor Section Length Reference (LLLL)	0200 to 1300 in 0001 increments (2 ft to 13 ft in 0.12” increments)				
Total Conveyor Length	4 ft (1219mm) to 25 ft (7620mm) in 0.12” (0.31mm) increments				
Belt Travel	9.7” (246 mm) per revolution of pulley				
Maximum Belt Speed*	275 ft/minute (84 m/minute)				
Belt Takeup	1.62” (41 mm) of Belt Takeup				

NOTE

Maximum conveyor loads based on:

- *Non-accumulating product*
- *Product moving towards gearmotor*
- *Conveyor being mounted horizontal*

NOTE

Refer to the table provided for maximum recommended tension pinion torque values and maximum conveyor loads for different angles. Choose the appropriate value which relates to your particular requirements.

Transition Angle	Standard Cleated Belt				Sidewall Cleated Belt			
	Tension Pinion Torque		Maximum Conveyor Load		Tension Pinion Torque		Maximum Conveyor Load	
	in-lb	Nm	lb	kg	in-lb	Nm	lb	kg
25° *	25	2.8	25	11.3	50	5.6	75	34
30° *	35	3.9	50	22.7	60	6.8	100	45.4
35°	50	5.6	75	34	70	7.9	100	45.4
40°	75	8.5	100	45.4	80	9.0	100	45.4
45°	75	8.5	100	45.4	80	9.0	100	45.4
50°	75	8.5	100	45.4	80	9.0	100	45.4
55°	75	8.5	100	45.4	80	9.0	100	45.4
60°	75	8.5	100	45.4	80	9.0	100	45.4

* Not available on 18″ & 24″ (457 & 610 mm) width conveyors

⚠ WARNING

LPZ Series Conveyors are not reversible. Reversing creates pinch points which can cause severe injury.

DO NOT REVERSE LPZ SERIES CONVEYORS.

NOTE

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

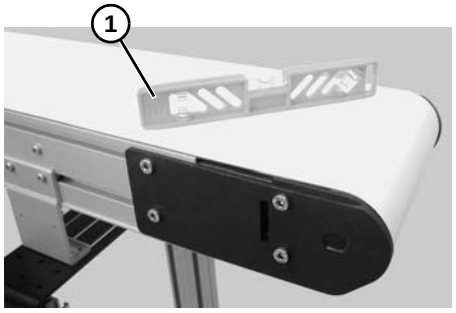


Figure 3

Required Tools

- Hex-key wrenches: 4 mm, 5 mm
- Level
- Torque wrench
- 8 mm hex, open end wrench

Recommended Installation Sequence

- Install support stands (see accessory instructions)
- Assemble conveyor (if required)
- Attach mounting brackets to conveyor (see page 9 for instructions)
- Adjust angle (see page 18 for instructions)
- Attach conveyor to stands
- Install return rollers on conveyor (see page 13 for instructions)
- Mount gearmotor mounting package (see accessory instructions)
- Attach guides/accessories (see page 34 through page 45 of "Service Parts" section for details)

Conveyors Up to 13 ft (3962 mm)

No assembly is required. Install mounting brackets and return rollers. Refer to "Mounting Brackets" on page 9 and "Return Rollers" on page 13.

Conveyors Longer Than 13 ft (3962 mm)

Installation Component List:

1	Conveyor frame
2	Section Label

1. Locate and arrange conveyor sections by section labels **(Figure 4, item 2)**.

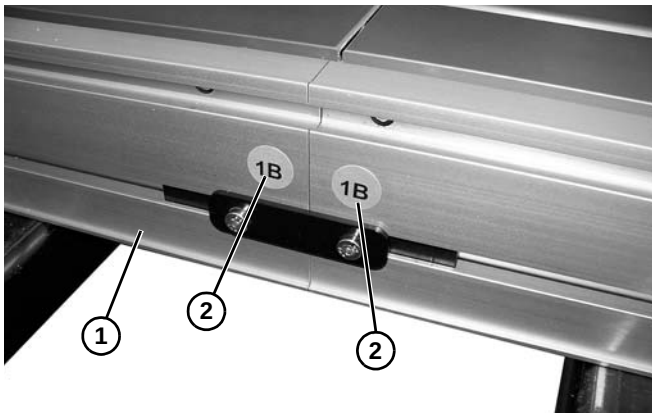


Figure 4

2. On tension end of the conveyor, identified by the pinion locking screw **(Figure 5, item 1)**, push in head plate assembly **(Figure 5, item 2)**: Loosen the pinion locking screw **(Figure 5, item 1)**, adjust the pinion torque screw **(Figure 6, item 1)**. On both sides of conveyor, loosen the two tail clamp bolts **(Figure 5, item 3)**, and push head plate assembly **(Figure 5, item 2)** inward.

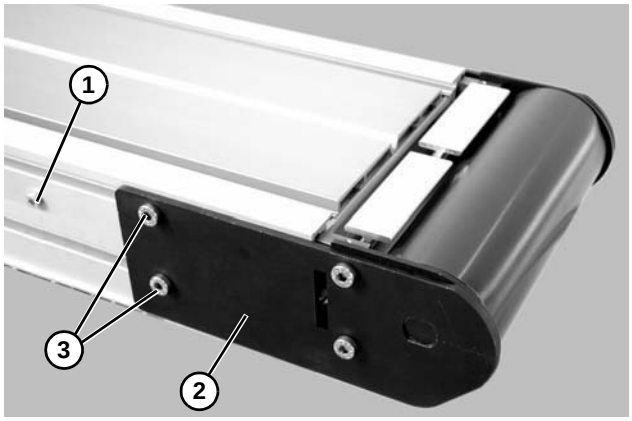


Figure 5

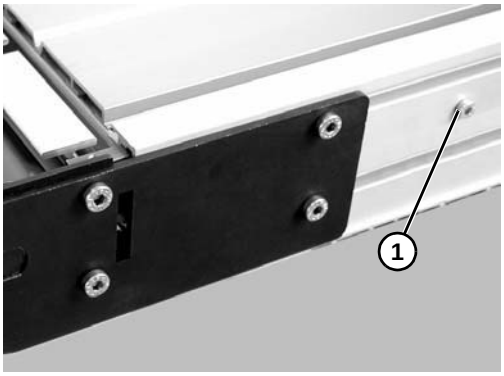


Figure 6

3. Roll out conveyor belt **(Figure 7, item 1)**. Loosen (4) screws **(Figure 7, item 2)** on both sides of knuckle **(Figure 7, item 3)**. Slide frame **(Figure 7, item 4)** into knuckle **(Figure 7, item 3)**. Tighten screws **(Figure 7, item 2)** to 60 in-lb (7 Nm) on both sides of conveyor.

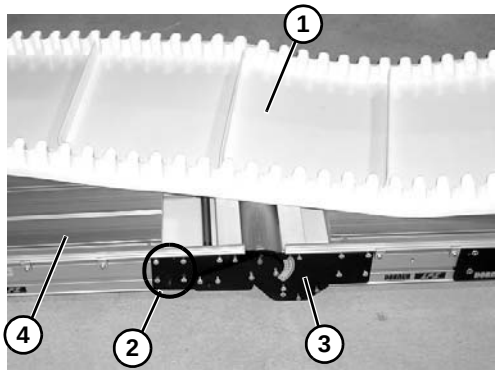


Figure 7

4. Slide frame **(Figure 8, item 1)** into lower knuckle **(Figure 8, item 2)**. Tighten screws **(Figure 8, item 3)** to 60 in-lb (7 Nm) on both sides of conveyor.

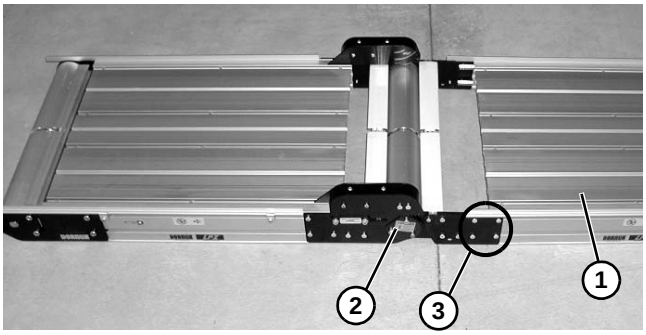


Figure 8

5. Join additional conveyor sections if necessary and install connector brackets **(Figure 9, item 1)** or connector/mount brackets **(Figure 9, item 2)** and screws **(Figure 9, item 3)** on both sides as indicated. Tighten screws to 60 in-lb (7 Nm).

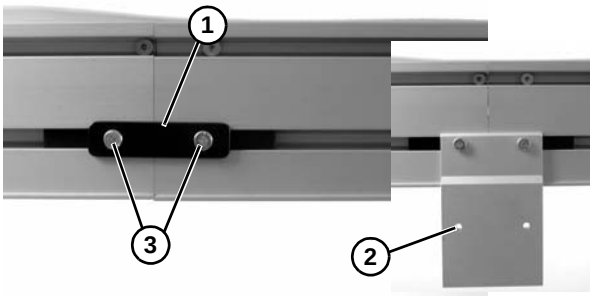


Figure 9

6. Slide belt **(Figure 10, item 1)** over assembled conveyor sections **(Figure 10, item 2)**.

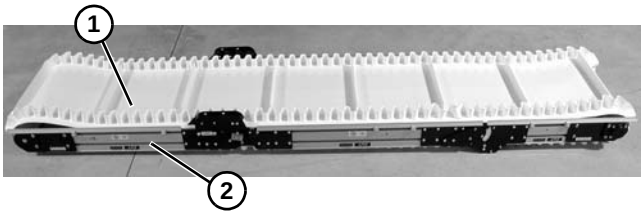


Figure 10

7. Tension conveyor belt, refer to “Conveyor Belt Tensioning” on page 15.
8. Install mounting brackets and return rollers. Refer to “Mounting Brackets” on page 9 and “Return Roller” on page 11.
9. Conveyors are shipped flat. Adjust conveyor angle. See “Conveyor Angle Adjustment” on page 18.

Mounting Brackets

1. Locate brackets. Exploded views shown in **Figure 11**.

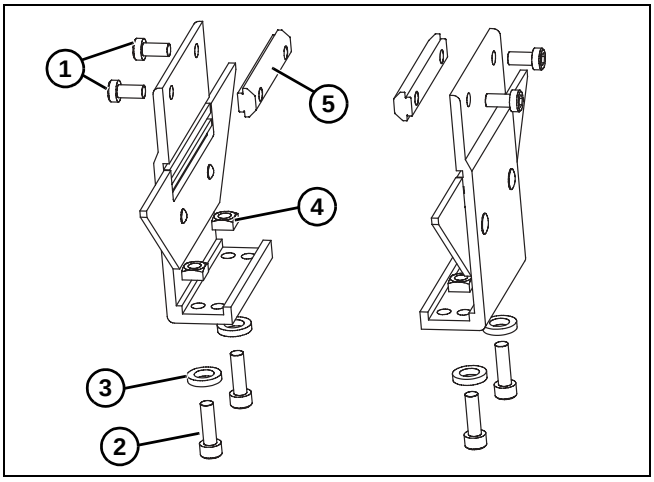


Figure 11

2. Remove screws **(Figure 11, item 1 & 2)**, washers **(Figure 11, item 3)**, nuts **(Figure 11, item 4)** and T-bars **(Figure 11, item 5)** from brackets.
3. Insert T-bars **(Figure 11, item 1)** into conveyor side slots **(Figure 12, item 1)**. Fasten brackets **(Figure 12, item 2)** to conveyor with mounting screws **(Figure 12, item 3)**.

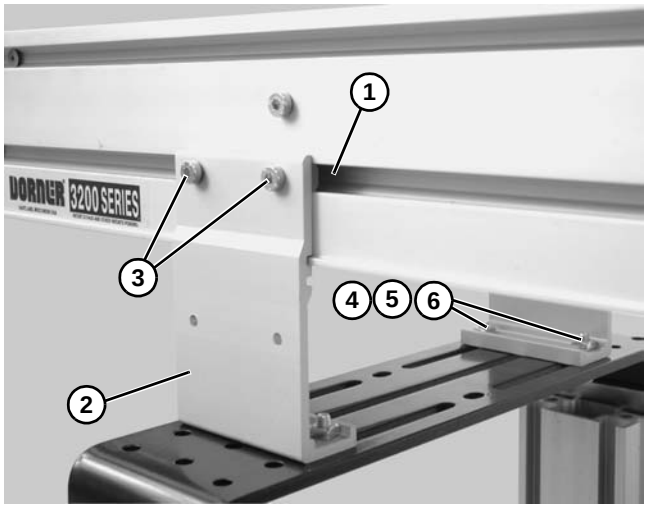


Figure 12

4. Fasten brackets to support stand with mounting screws **(Figure 12, item 4)**, washers **(Figure 12, item 5)** and nuts **(Figure 12, item 6)**.
5. Tighten screws **(Figure 12, item 3 & 4)** to 60 in-lb (7 Nm).

Return Rollers

1. Locate return rollers. Exploded views shown in **Figure 13**.

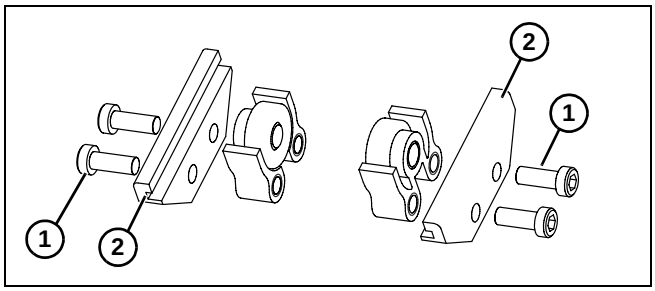


Figure 13

2. Remove screws **(Figure 13, item 1)** and clips **(Figure 13, item 2)** from roller assembly.
3. Install roller assemblies **(Figure 14, item 1)** as shown. Tighten screws **(Figure 14, item 2)** to 60 in-lb (7 Nm).

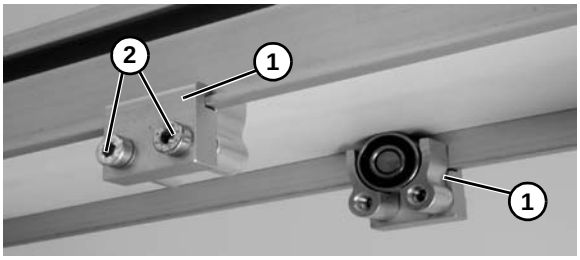


Figure 14

Preventive Maintenance and Adjustment

Required Tools

Standard Tools

- Hex-key wrenches:
  2.5 mm, 4 mm, 5 mm
- 8 mm hex, open end wrench

Checklist

- Keep service parts on hand (see “Service Parts” section for recommendations)
- Keep supply of belt cleaner
- Clean entire conveyor and knurled pulley while disassembled
- Replace worn or damaged parts

Lubrication

No lubrication is required. Replace bearings if worn.

Maintaining Conveyor Belt

Troubleshooting

Inspect conveyor belt for:

- Surface cuts or wear
- Stalling or slipping
- Damage to V-guide

Surface cuts and wear indicate:

- Sharp or heavy parts impacting belt
- Jammed parts
- Improperly installed bottom wipers (if installed)
- Accumulated dirt in wipers (if installed)
- Foreign material inside the conveyor
- Improperly positioned accessories
- Bolt-on guiding is pinching belt

Stalling or slipping indicates:

- Excessive load on belt
- Conveyor belt or drive timing belt are not properly tensioned
- Worn knurl or impacted dirt on drive pulley
- Intermittent jamming or drive train problems

Damage to V-guide indicates:

- Twisted or damaged conveyor frame
- Dirt impacted on pulleys
- Excessive or improper side loading

Cleaning

Use Dorner Belt Cleaner. Mild soap and water may also be used. Do not soak the belt.

For /05 woven polyester and /06 black anti-static belts, use a bristled brush to improve cleaning.

Conveyor Belt Replacement

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

Conveyor Belt Replacement Sequence

- Release Tension
- Remove old conveyor belt:
  - Conveyor without Stands or Gearmotor Mounting Package
  - Conveyor with Stands and Gearmotor Mounting Package
- Install new conveyor belt
- Tension conveyor belt

Belt Removal for Conveyor Without Stands or Gearmotor Mounting Package

1. If equipped, remove return rollers and guiding and accessories from one side of conveyor.
2. On tension end of the conveyor, identified by the pinion locking screw **(Figure 15, item 1)**, push in head plate assembly **(Figure 15, item 2)**: Loosen the pinion locking screw **(Figure 15, item 3)**, adjust the pinion torque screw **(Figure 16, item 1)**. On both sides of conveyor, loosen the two tail clamp bolts **(Figure 15, item 3)**, and push head plate assembly **(Figure 15, item 2)** inward.

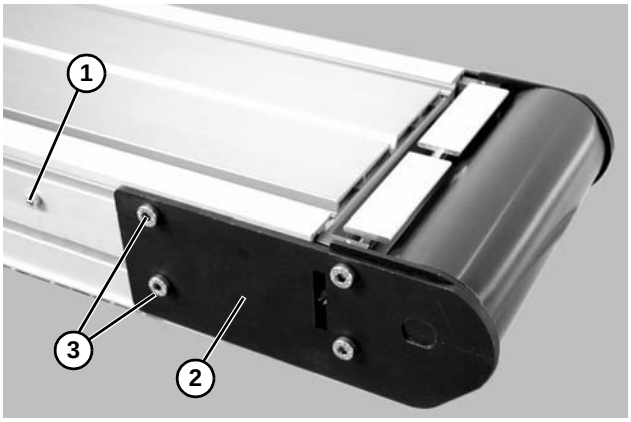


Figure 15

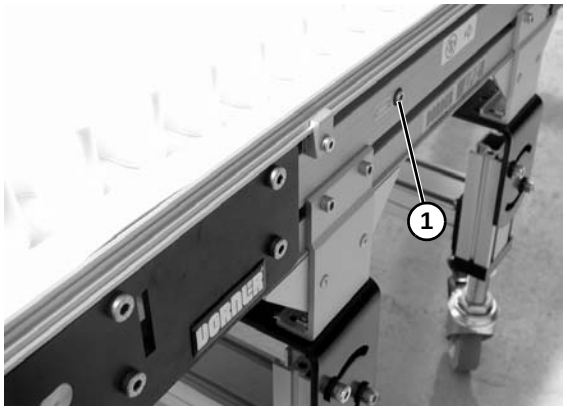


Figure 16

3. If equipped with a lower knuckle, remove screws **(Figure 17, item 1)** and remove lower knuckle return roller assembly **(Figure 17, item 2)** on both sides of conveyor, note the position of the meshing teeth.

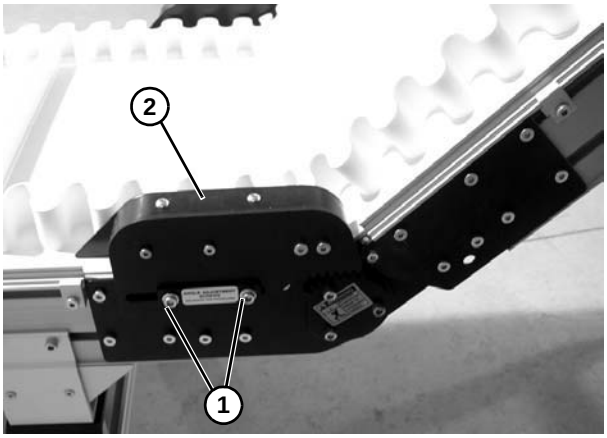


Figure 17

4. If equipped with an upper knuckle, remove screws **(Figure 18, item 1)** and remove guard **(Figure 18, item 2)** on both sides of knuckle.

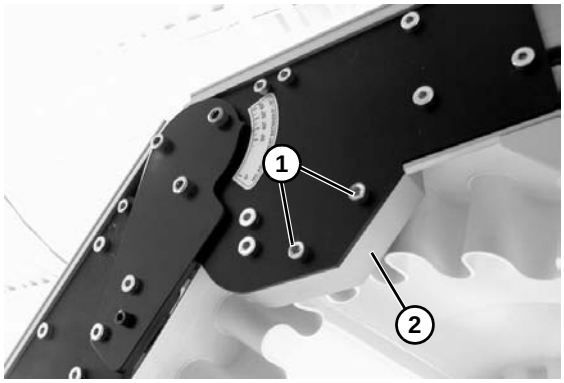


Figure 18

5. Remove screws **(Figure 19, item 1)** and remove roller bearing **(Figure 19, item 2)**.

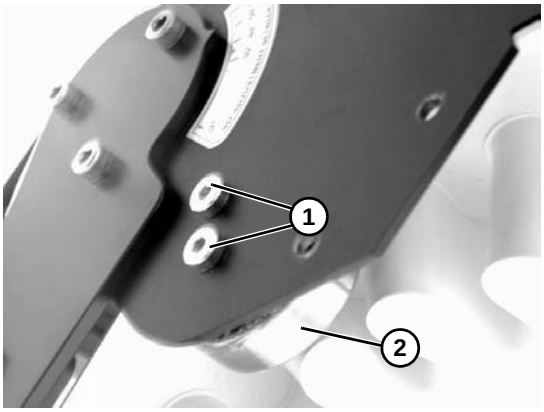


Figure 19

6. Remove belt **(Figure 20, item 1)** from conveyor.

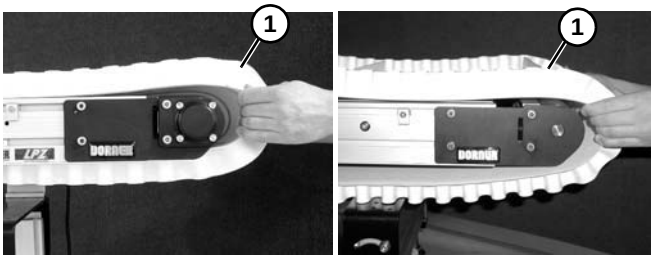


Figure 20

Belt Removal for Conveyor With Stands and Gearmotor Mounting Package

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

1. Place temporary support stands **(Figure 21, item 1)** at both ends of the conveyor. Place an additional support stand **(Figure 21, item 2)** under the drive motor **(Figure 21, item 3)**, if equipped. See WARNING.

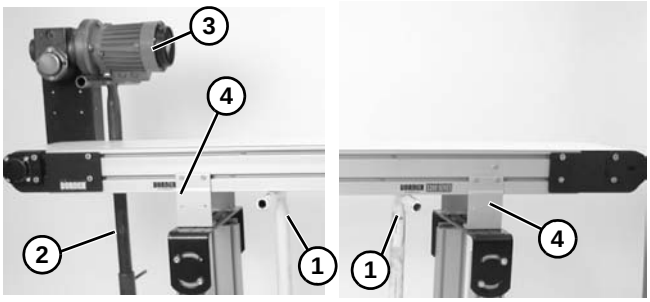


Figure 21

2. Remove mounting brackets **(Figure 21, item 4)** from one side of conveyor. (Reverse steps 3 & 4 of "Mounting Brackets" section on page 9).
3. If equipped, remove return rollers, guiding and accessories from side opposite drive cover.
4. On tension end of the conveyor, identified by the pinion locking screw **(Figure 22, item 1)**, push in head plate assembly **(Figure 22, item 2)**: Loosen the pinion locking screw **(Figure 22, item 1)**, adjust the pinion torque screw **(Figure 23, item 1)**. On both sides of conveyor, loosen the two tail clamp bolts **(Figure 22, item 3)**, and push head plate assembly **(Figure 22, item 2)** inward.

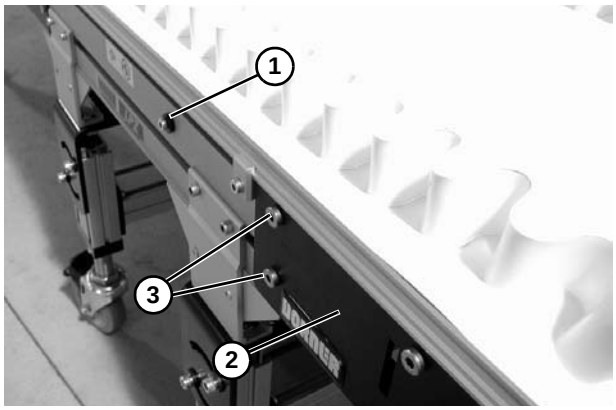


Figure 22

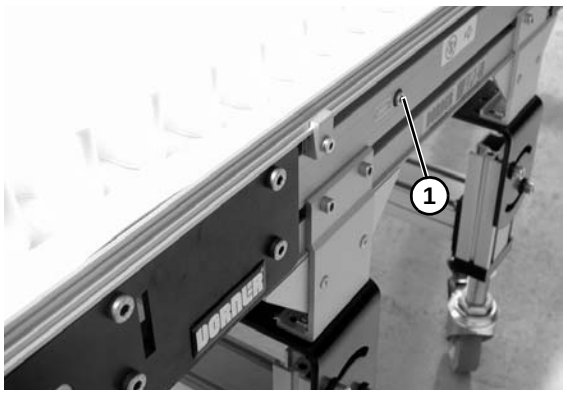


Figure 23

5. If equipped, remove screws **(Figure 24, item 1)** and remove lower knuckle return roller assembly **(Figure 24, item 2)** on both sides of conveyor, note the position of the meshing teeth.

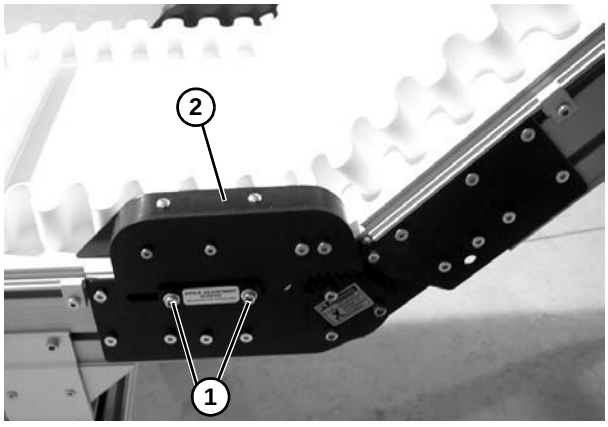


Figure 24

6. If equipped, remove screws **(Figure 25, item 1)** on both sides of knuckle and remove guard **(Figure 25, item 2)**.

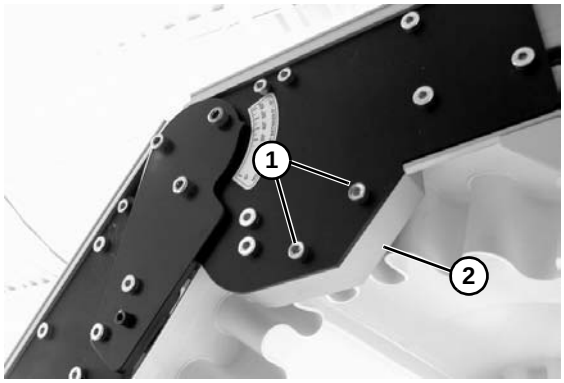


Figure 25

7. Remove screws **(Figure 26, item 1)** and remove roller bearing **(Figure 26, item 2)**.

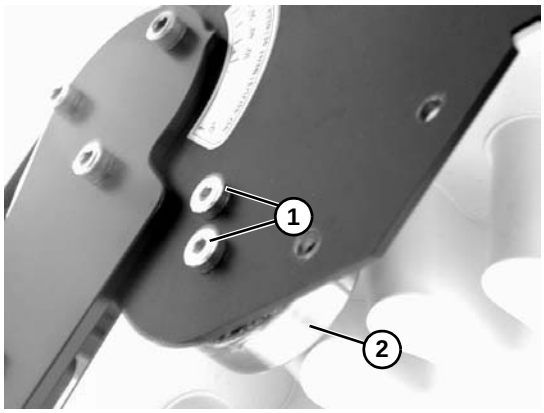


Figure 26

8. Remove belt **(Figure 27, item 1)** from conveyor.

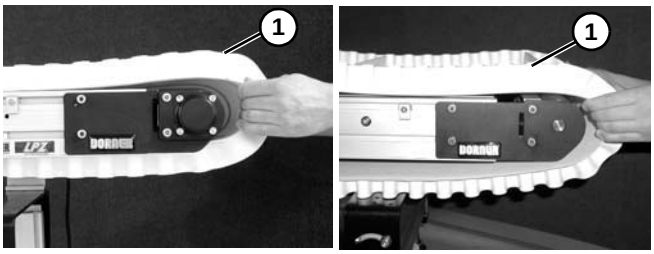


Figure 27

Belt Installation for Conveyor without Stands or Gearmotor Mounting Package

1. Orient belt so splice leading fingers **(Figure 28, item 1)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 28, item 2)**.

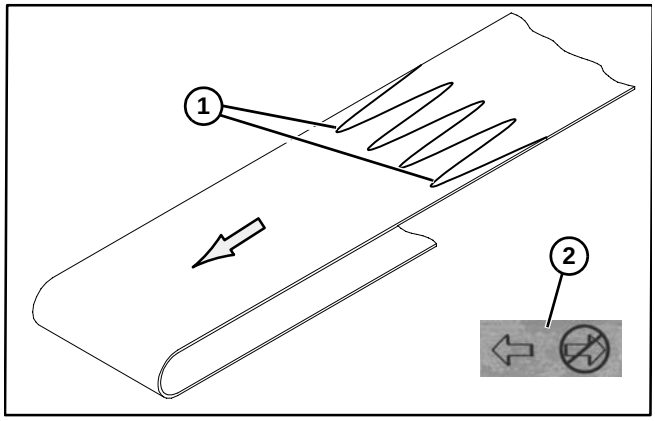


Figure 28

2. Slide belt onto the conveyor frame assembly.
3. If equipped, install return roller bearing **(Figure 29, item 1)** into knuckle plate **(Figure 29, item 2)** using screws **(Figure 29, item 3)**.

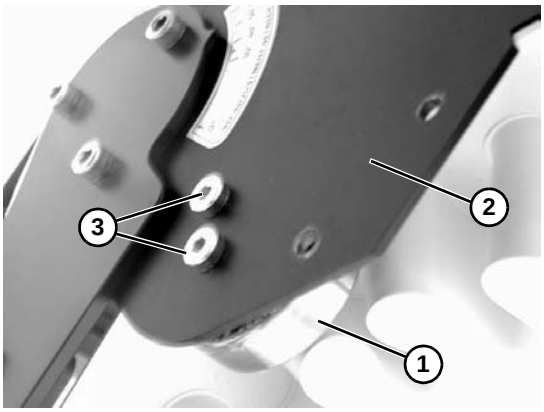


Figure 29

4. Install knuckle guard **(Figure 30, item 1)** on both sides of knuckle with screws **(Figure 30, item 2)**. Tighten screws to 25 in-lb (3 Nm).

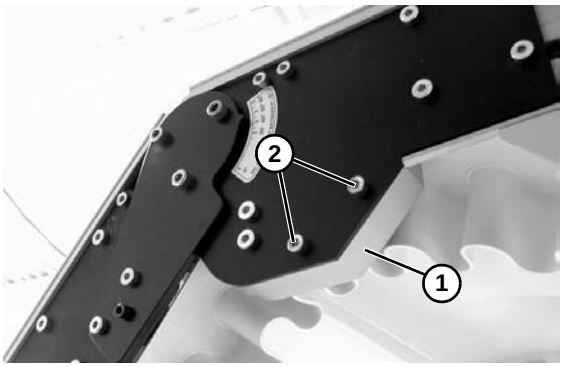


Figure 30

5. If equipped, install lower knuckle return roller assembly **(Figure 31, item 1)** with screws **(Figure 31, item 2)** on both sides of knuckle, note the position of the meshing teeth.

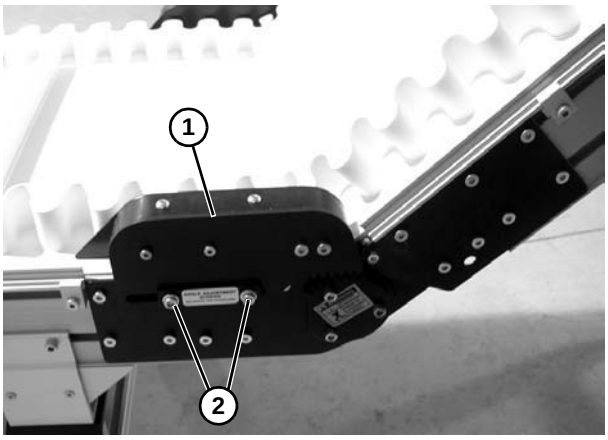


Figure 31

6. Tension belt. Refer to "Conveyor Belt Tensioning" on page 15.
7. If equipped, install return rollers and guiding.

Belt Installation for Conveyor with Stands and Gearmotor Mounting Package

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

1. Ensure temporary support stands **(Figure 21, item 1)** are placed at both ends of the conveyor. Place an additional support stand **(Figure 21, item 2)** under the drive motor **(Figure 21, item 3)**, if equipped. See WARNING.
2. Orient belt so splice leading fingers **(Figure 28, item 1)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 28, item 2)**.
3. Install belt **(Figure 32, item 1)** on conveyor. Lift conveyor slightly to avoid pinching belt on temporary support stands.

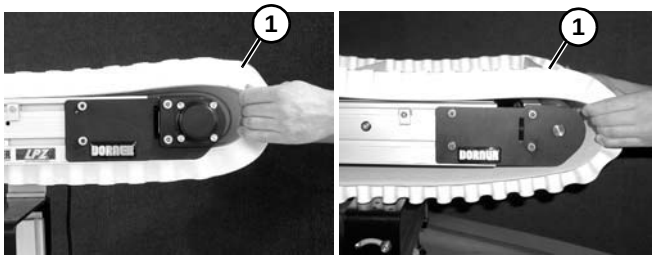


Figure 32

4. Re-install conveyor mounting brackets. Refer "Mounting Brackets" on page 9, steps 3 through 5.
5. If equipped, install return roller bearing **(Figure 33, item 1)** into knuckle plate **(Figure 33, item 2)** using screws **(Figure 33, item 3)**.

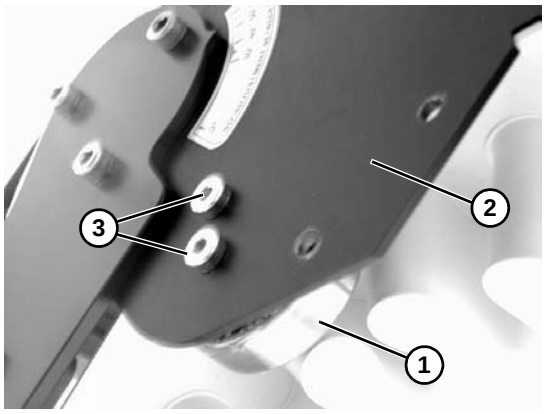


Figure 33

6. Install knuckle guard **(Figure 34, item 1)** on both sides of knuckle with screws **(Figure 34, item 2)**. Tighten screws to 25 in-lb (3 Nm).

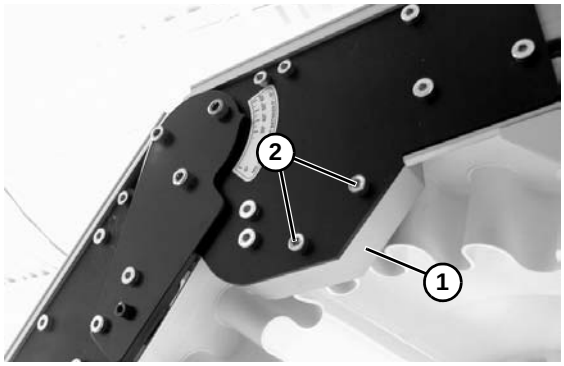


Figure 34

7. If equipped, install lower knuckle return roller assembly **(Figure 35, item 1)**. To properly align teeth, ensure the first gear of the pinion plate **(Figure 36, item 1)** matches with the first pocket of the rack plate **(Figure 36, item 2)**. Secure with screws **(Figure 35, item 2)** on both sides of the conveyor.

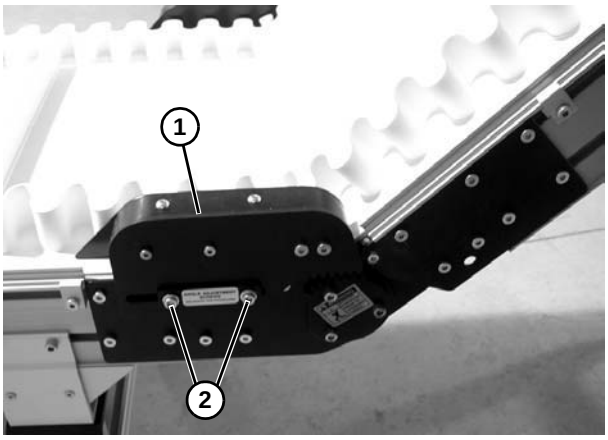


Figure 35

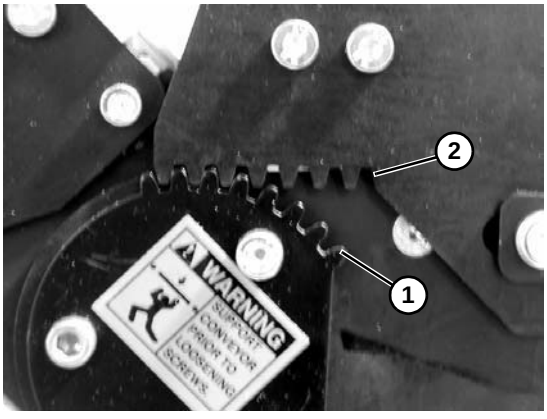


Figure 36

8. Tension belt. Refer to "Conveyor Belt Tensioning" on page 15.
9. If equipped, re-install return rollers and guiding.

Conveyor Belt Tensioning

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. On tension end of the conveyor, identified by the pinion locking screw **(Figure 37, item 1)**, loosen the two tail clamp bolts **(Figure 37, item 2)**, on both sides of conveyor.

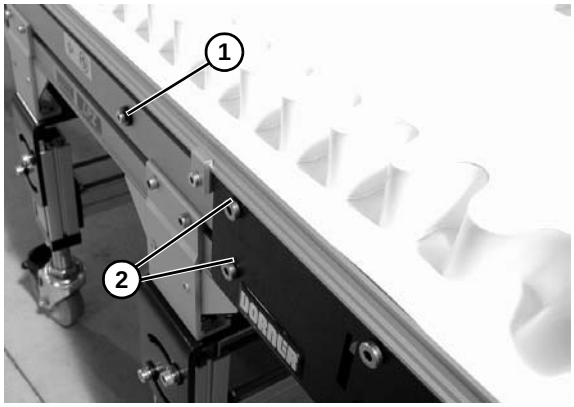


Figure 37

2. With 5mm hex wrench, hold pinion torque screw **(Figure 38, item 1)**. Loosen the pinion locking screw **(Figure 37, item 1)** and turn the pinion torque screw **(Figure 38, item 1)** to extend head plate assembly.

NOTE

Refer to the table provided for maximum recommended tension pinion torque values and maximum conveyor loads for different angles. Choose the appropriate value which relates to your particular requirements.

Transition Angle	Standard Cleated Belt				Sidewall Cleated Belt			
	Tension Pinion Torque		Maximum Conveyor Load		Tension Pinion Torque		Maximum Conveyor Load	
	in-lb	Nm	lb	kg	in-lb	Nm	lb	kg
25° *	25	2.8	25	11.3	50	5.6	75	34
30° *	35	3.9	50	22.7	60	6.8	100	45.4
35°	50	5.6	75	34	70	7.9	100	45.4
40°	75	8.5	100	45.4	80	9.0	100	45.4
45°	75	8.5	100	45.4	80	9.0	100	45.4
50°	75	8.5	100	45.4	80	9.0	100	45.4
55°	75	8.5	100	45.4	80	9.0	100	45.4
60°	75	8.5	100	45.4	80	9.0	100	45.4

* Not available on 18” & 24” (457 & 610 mm) width conveyors

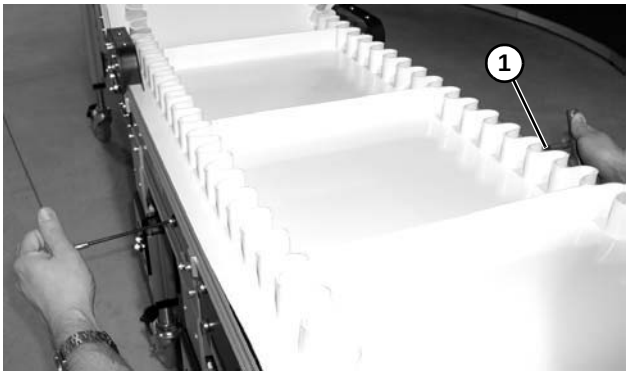


Figure 38

NOTE

*Bowing of the belt **(Figure 39, item 1)** may occur if excessive tension is applied to the belt. Do not over tension the belt.*

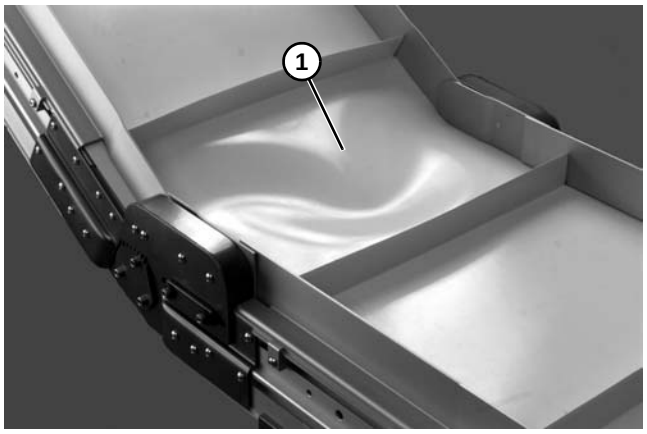


Figure 39

NOTE

On pinion gear, do not exceed a torque of 100 in-lb (11.3 Nm). Over tensioning the conveyor belt could cause excessive pulley bearing load and early failure.

3. Extend head plate assembly until proper tension in the belt is achieved. If proper tensioning can not be obtained before the belt life indicator is all black **(Figure 40, item 1)** the belt must be replaced.

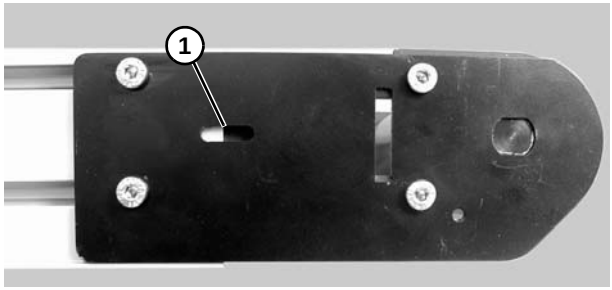


Figure 40

4. After adjusting proper tensioning, tighten the pinion locking screw **(Figure 37, item 1)** to 69 in–lbs (7.8 N–m), and tighten tail clamp bolts **(Figure 37, item 2)** on both sides of conveyor to 146 in-lb (16.5 N–m).
5. If belt tracking is necessary, refer to “Conveyor Belt Tracking” on page 17.

Conveyor Belt Tracking

V-Guided Belts

V-guides on belts help maintain proper belt tracking. Track as needed to reduce belt bulge from center of belt (Figure 41). See steps below in "Non V-guided Belts" procedure for adjusting for any belt bulging. Belt bulge will be minimal when belt is properly tracked.

Figure 41

Non V-Guided Belts

Non V-guided belt conveyors are equipped with belt tracking assemblies.

When adjusting belt tracking, always adjust the discharge end of the conveyor first. To adjust belt tracking:

1. Ensure tensioning racks are extended and touching the idler pulley headplates: loosen the pinion locking screw **(Figure 37, item 1)** and rotate the pinion torque screw **(Figure 38, item 1)** clockwise until contact with the head plate is made, then tighten the pinion locking screw **(Figure 42, item 1)** to 69 in-lb (7.8 Nm)
2. On the side of conveyor to be adjusted, loosen two (2) tail clamp screws **(Figure 42, item 2)**.

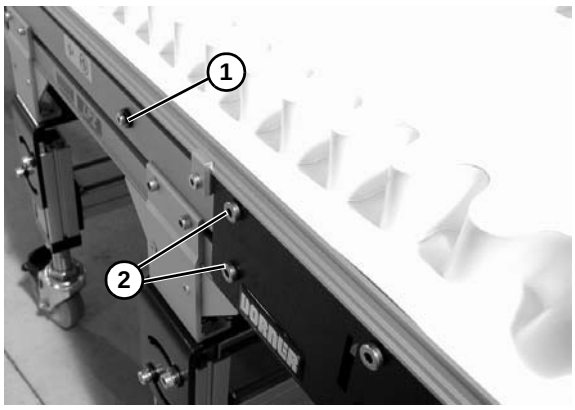


Figure 42

3. With the conveyor running, use wrench **(Figure 43, item 1)** to rotate the tracking screw **(Figure 44, item 1)** in small increments until the belt tracks in the center of the conveyor.

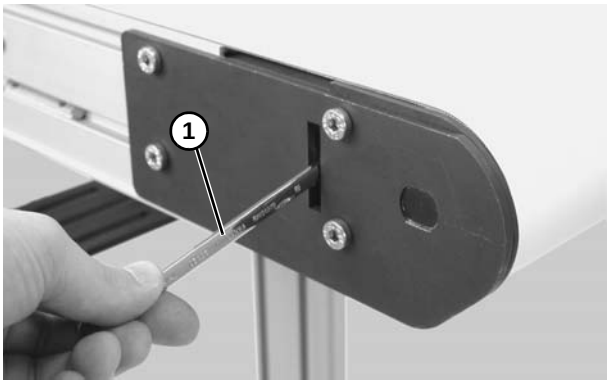


Figure 43

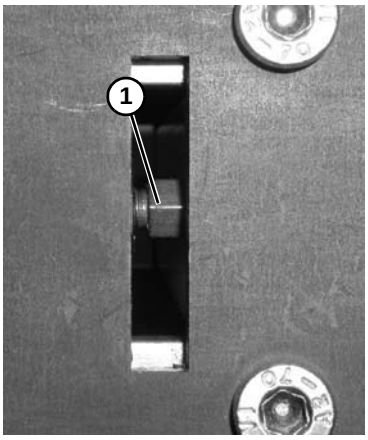


Figure 44

4. Re-tighten the head plate fastening screws **(Figure 45, item 1)** with a 5 mm hex-key wrench to 100 in-lb (12 Nm).

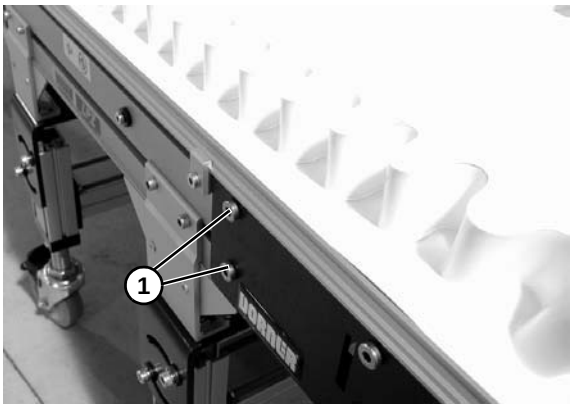


Figure 45

Conveyor Angle Adjustment

Nose Over Angle Adjustment

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

NOTE

If just changing the angle of an installed conveyor skip to step 2.

NOTE

.Special-colored “0° Angle” screws must be removed when making the initial adjustment from (or to) the (0°) shipping position. When sections of conveyor are flat, the “0° Angle” screw locks-out and prevents operation between 0° and 25°. Special-colored “0° Angle” screws need only to be loosened, when making the “transition angle” (see table on page 16) adjustments. LPZ conveyors should never be operated with the “0° Angle” screws removed.

1. Conveyor is shipped from factory locked in the flat position, to unlock conveyor knuckle remove the gold screw **(Figure 46, item 1)** on both sides of the conveyor.

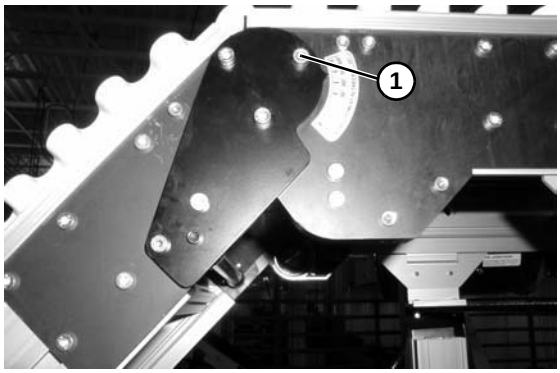


Figure 46

2. Place temporary support **(Figure 47, item 1)** under conveyor sections.

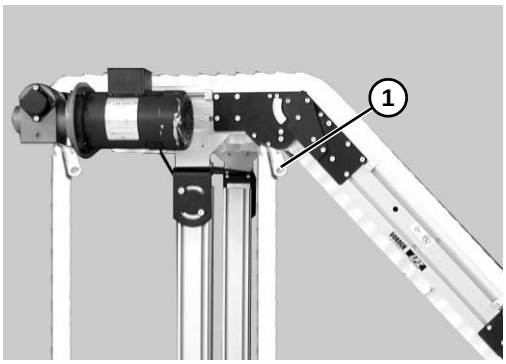


Figure 47

3. Loosen screws **(Figure 48, item 1)** on both sides of knuckle.

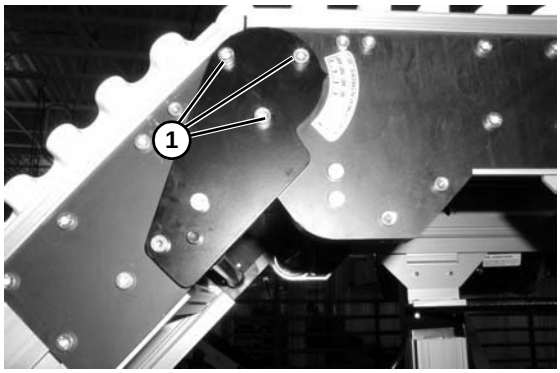


Figure 48

4. Move conveyor to desired angle as indicated by angle label **(Figure 49, item 1)**.

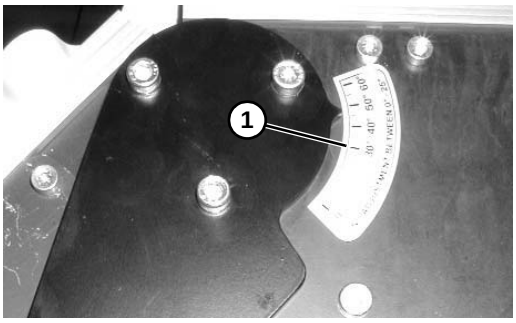


Figure 49

5. Tighten screws **(Figure 48, item 1)** on both sides of knuckle to 100 in-lbs (12 Nm). If applicable, replace the gold locking screw **(Figure 46, item 1)**.

Horizontal to Incline Angle Adjustment

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

NOTE

If just changing the angle of an installed conveyor skip to step 2.

NOTE

Special-colored "0° Angle" screws must be removed when making the initial adjustment from (or to) the (0°) shipping position. When sections of conveyor are flat, the "0° Angle" screw locks-out and prevents operation between 0° and 25°. Special-colored "0° Angle" screws need only to be loosened, when making the "transition angle" (see table on page 16) adjustments. LPZ conveyors should never be operated with the "0° Angle" screws removed.

1. Conveyor is shipped from factory locked in the flat position, to unlock conveyor knuckle remove the gold screw **(Figure 46, item 1)** on both sides of the conveyor.
2. Place temporary support **(Figure 50, item 1)** under conveyor sections.

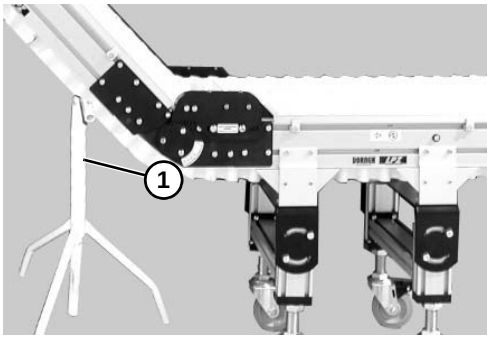


Figure 50

3. Loosen screws **(Figure 51, item 1 and 2)** on both sides of knuckle.

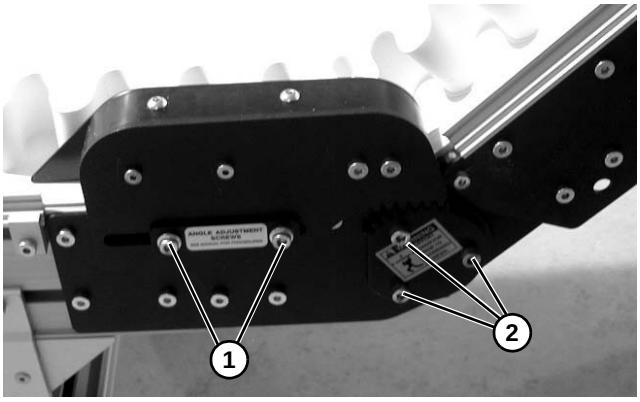


Figure 51

4. Move conveyor to desired angle as indicated by angle label **(Figure 52, item 1)**.

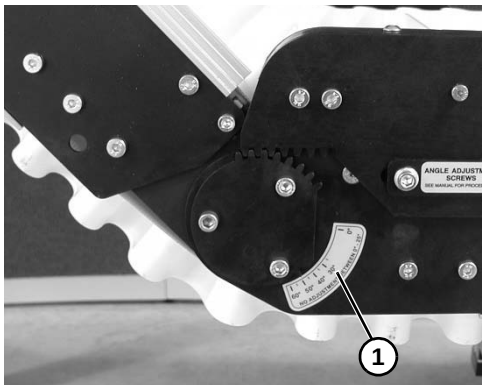


Figure 52

5. Tighten screws **(Figure 48, item 1)** on both sides of knuckle to 100 in-lbs (12 Nm).

Pulley Removal

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

Remove conveyor belt to access pulley(s). See "Conveyor Belt Replacement" on page 10. Remove the desired pulley following the corresponding instructions below:

- **A** – Idler Pulley Removal
- **B** – Drive Pulley Removal
- **C** – Upper Knuckle Idler Pulley Removal
- **D** – Lower Knuckle Idler Pulley Removal
- **E** – Knuckle Return Roller Removal

A – Idler Pulley Removal

1. Temporarily support the idler pulley.

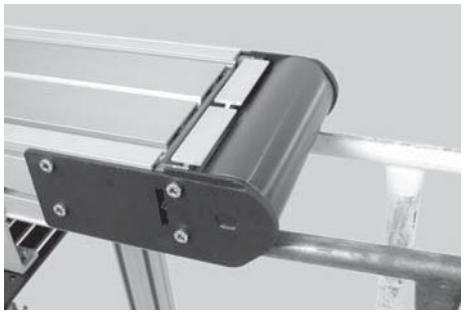


Figure 53

2. On one side of conveyor, loosen the two (2) back fastening screws **(Figure 54, item 1)** and remove two (2) front fastening screws **(Figure 54, item 2)**.

Figure 54

3. Pull back the outer headplate **(Figure 55, item 1)** and remove the inner spacer **(Figure 55, item 2)**.

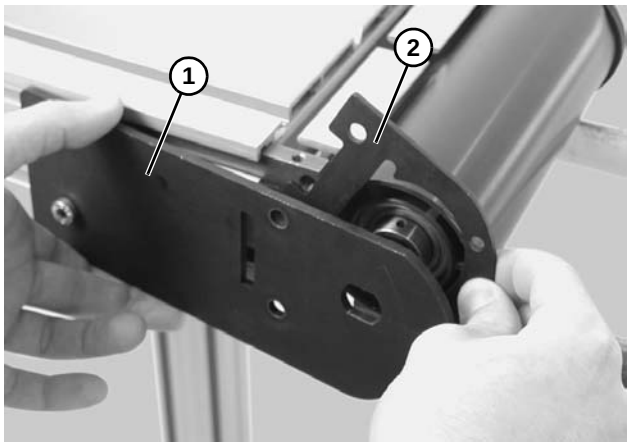


Figure 55

4. Slide the idler pulley assembly **(Figure 56, item 1)** out of the headplate on the opposite side.

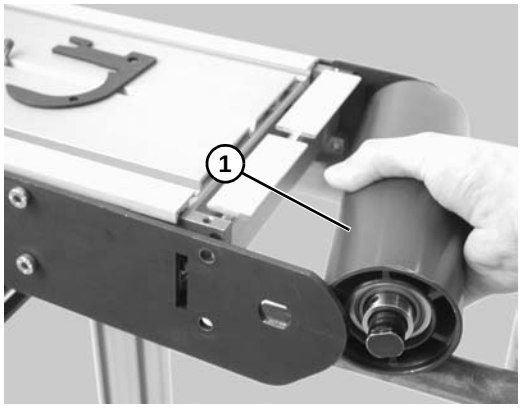


Figure 56

5. Remove the pulley shaft assembly: remove the clip ring **(Figure 57, item 1)** and washer **(Figure 57, item 2)** from one side of the pulley assembly.

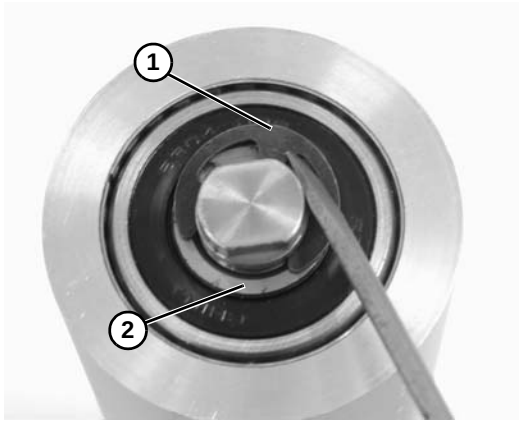


Figure 57

6. Slide the shaft assembly **(Figure 58, item 1)** out of the pulley **(Figure 58, item 2)**.

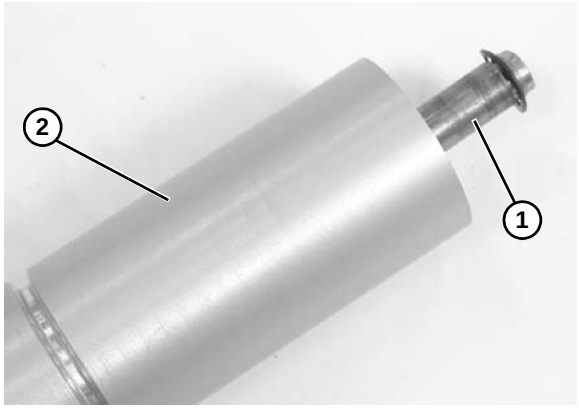


Figure 58

B – Drive Pulley Removal

⚠ WARNING

Drive shaft keyway may be sharp.
HANDLE WITH CARE.

1. Remove the gearmotor mounting package:

- Top and Bottom Mount Drives
- Side Mount Drives

Top and Bottom Mount Drives

a. Use a temporary support **(Figure 59, item 1)** to support Gearmotor.

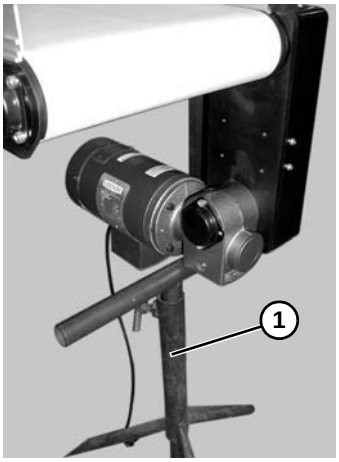


Figure 59

b. Remove four (4) screws **(Figure 60, item 1)** and remove cover **(Figure 60, item 2)**.

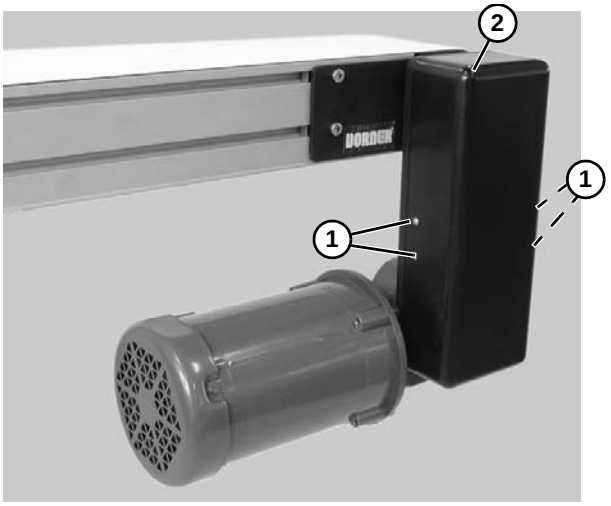


Figure 60

c. Loosen tensioner **(Figure 61, item 1)**.

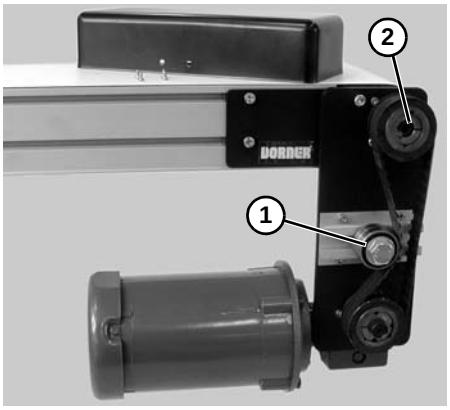


Figure 61

d. Remove taper-lock screws **(Figure 62, item 1)** on the driven pulley **(Figure 61, item 2)**. Insert one (1) of taper lock screws **(Figure 62, item 1)** in remaining hole **(Figure 62, item 2)**. Tighten screw **(Figure 62, item 1)** until pulley is loose. Remove pulley, taper hub assembly and timing belt.

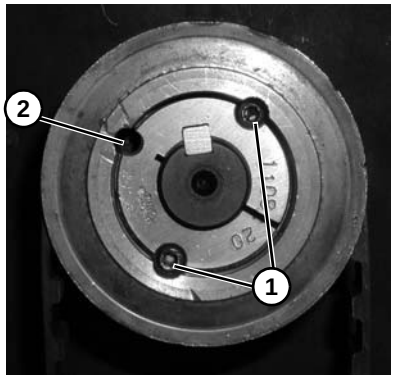


Figure 62

e. Remove four (4) M5 mounting screws **(Figure 63, item 1)** and two (2) M8 mounting screws **(Figure 63, item 2)**.

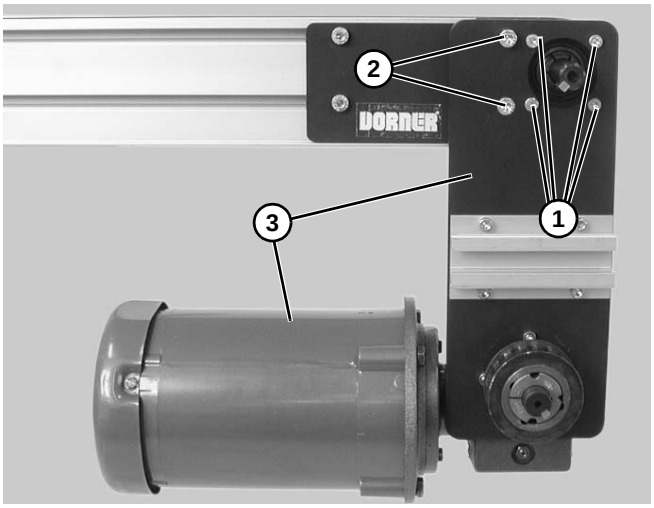


Figure 63

f. Remove gearmotor and mounting plate assembly **(Figure 63, item 3)**.

Side Mount Drives

a. Temporarily support Gearmotor

b. Loosen the four (4) lock screw **(Figure 64, item 1)**.

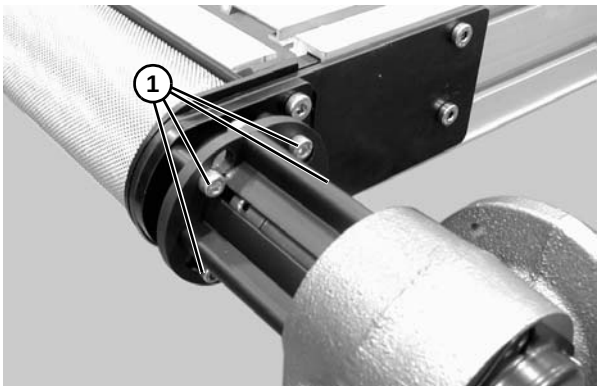


Figure 64

c. Rotate and remove the gear motor and guard assembly **(Figure 65, item 1)**.

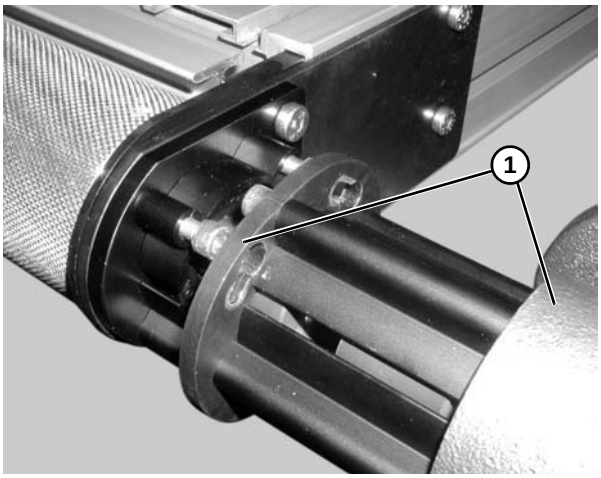


Figure 65

d. Remove the four (4) lock screws **(Figure 66, item 1)** and the short side drive guard **(Figure 66, item 2)**.

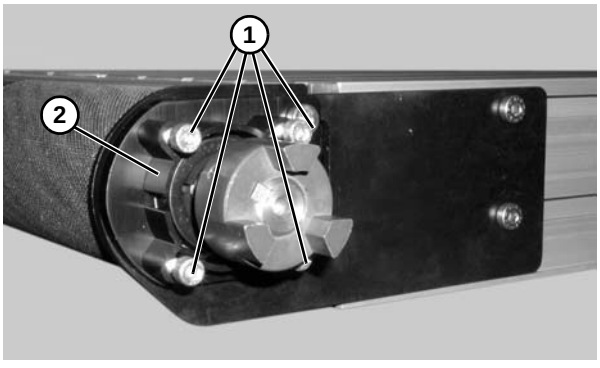


Figure 66

2. Temporarily support the drive pulley.

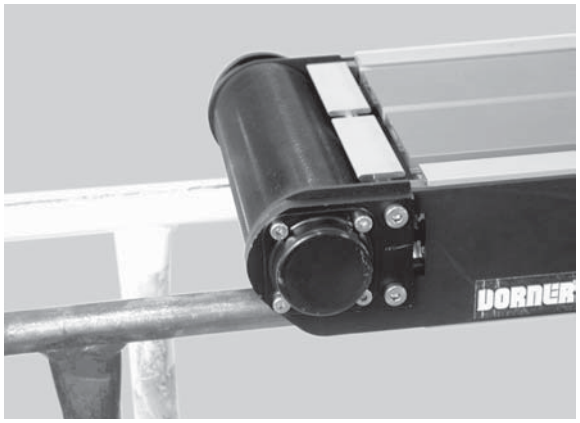


Figure 67

3. Remove four shaft cover screws **(Figure 68, item 1)**. Remove the shaft cover **(Figure 68, item 2)**.

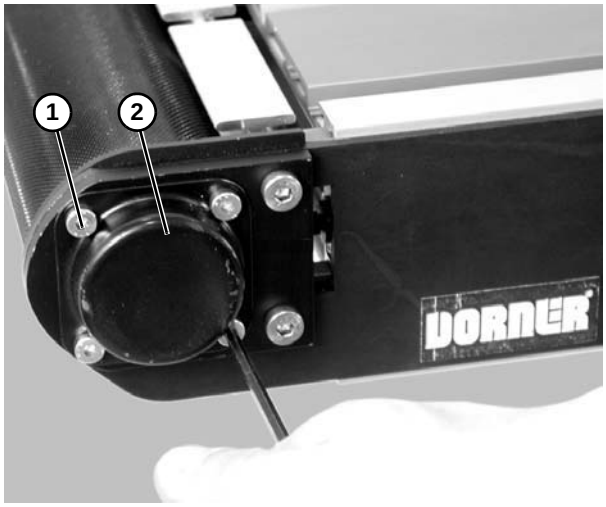


Figure 68

4. Loosen the bearing collar set screw **(Figure 69, item 1)** and remove bearing collar **(Figure 69, item 2)**. Repeat on drive shaft side of pulley **(Figure 70, item 1 and 2)**.

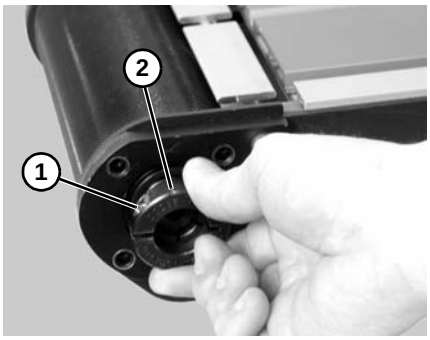


Figure 69

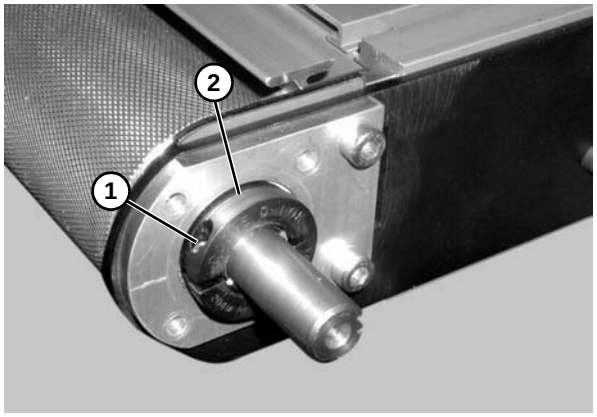


Figure 70

NOTE

When reassembling, tighten the bearing collar set screws to 52 in-lbs (6 Nm). Check after 24 hours of conveyor use.

5. On the drive headplate, remove two (2) screws **(Figure 71, item 1)**.

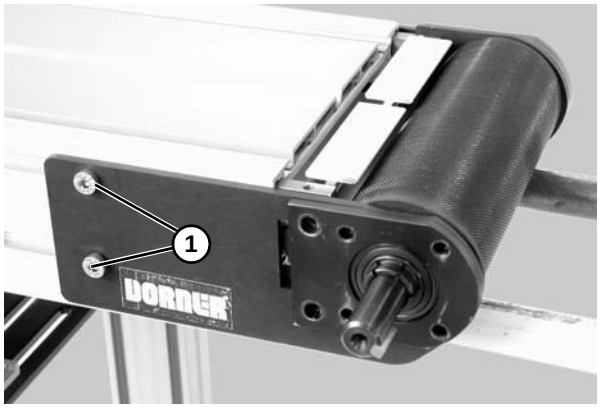


Figure 71

6. Remove the outer headplate assembly **(Figure 72, item 1)**, and inner spacer **(Figure 72, item 2)**.

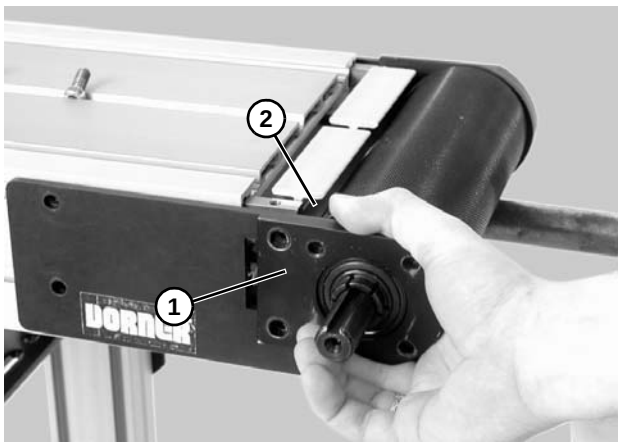


Figure 72

7. Slide the drive pulley **(Figure 73, item 1)** out of the headplate on the opposite side.

Figure 73

C – Upper Knuckle Idler Pulley Removal

1. Ensure knuckle return roller and guard are removed, see "Knuckle Return Roller Removal" on page 26.
2. Temporarily support the knuckle idler pulley.

Figure 74

3. On one side of knuckle, remove screws **(Figure 75, item 1)** and knuckle plate assembly **(Figure 75, item 1)**.

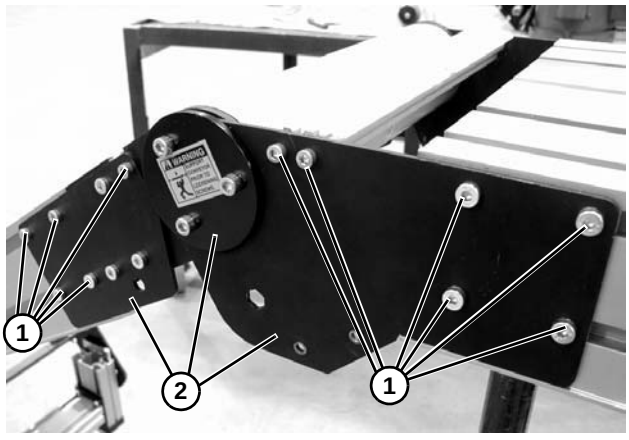


Figure 75

4. Slide the idler pulley assembly **(Figure 76, item 1)** out of the knuckle plate on the opposite side.

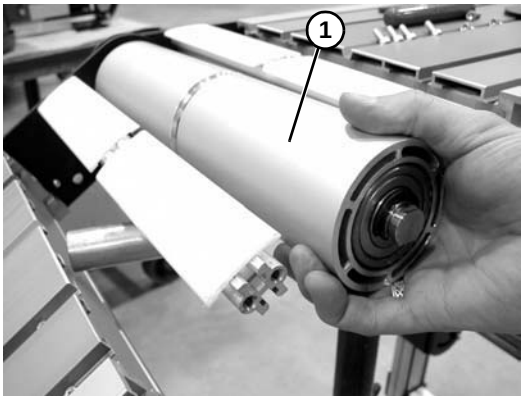


Figure 76

5. Remove the pulley shaft assembly: remove the clip ring **(Figure 77, item 1)** and washer **(Figure 77, item 2)** from one side of the pulley assembly.

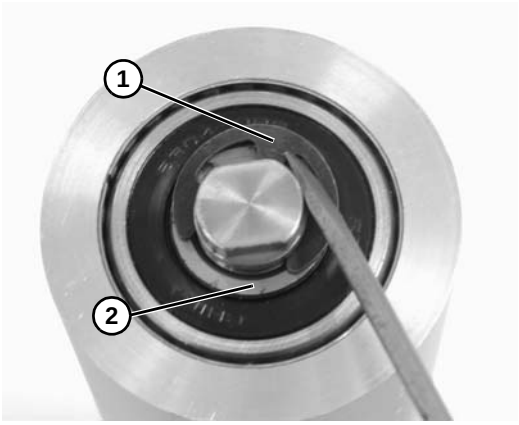


Figure 77

6. Slide the shaft assembly **(Figure 78, item 1)** out of the pulley **(Figure 78, item 2)**.

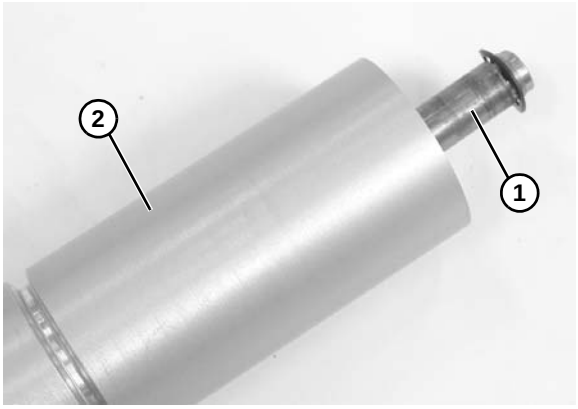


Figure 78

D – Lower Knuckle Idler Pulley Removal

1. Remove screws **(Figure 79, item 1)** and remove lower knuckle return roller assembly **(Figure 79, item 2)** on both sides of knuckle, note the position of the meshing teeth.

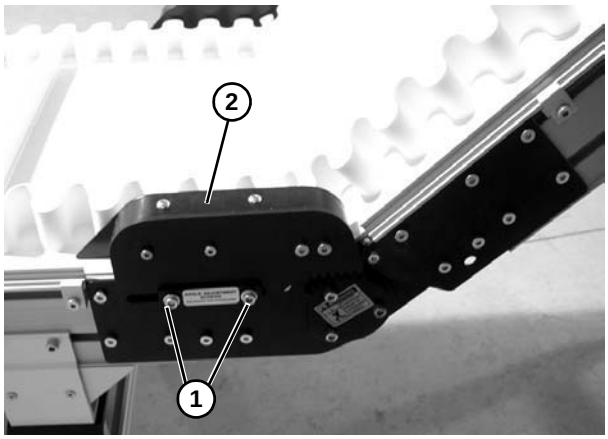


Figure 79

2. Temporarily support the knuckle idler pulley.

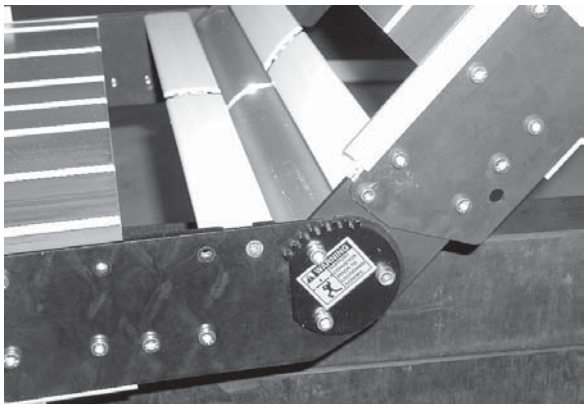


Figure 80

3. On one side of knuckle, remove screws **(Figure 81, item 1)** and knuckle plate assembly **(Figure 81, item 2)**.

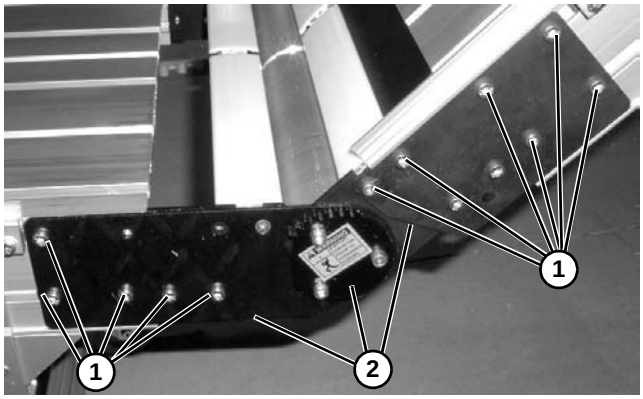


Figure 81

4. Slide the idler pulley assembly **(Figure 82, item 1)** out of the knuckle plate on the opposite side.

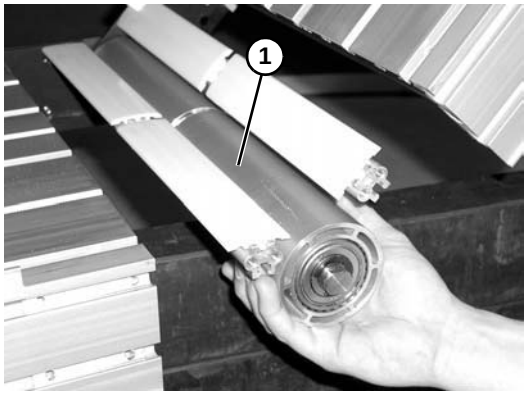


Figure 82

5. Remove the pulley shaft assembly: remove the clip ring **(Figure 83, item 1)** and washer **(Figure 83, item 2)** from one side of the pulley assembly.

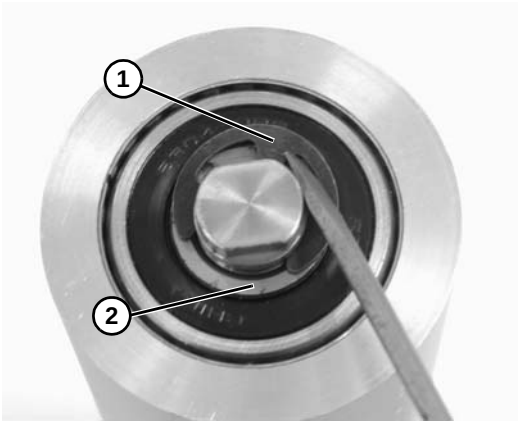


Figure 83

6. Slide the shaft assembly **(Figure 84, item 1)** out of the pulley **(Figure 84, item 2)**.

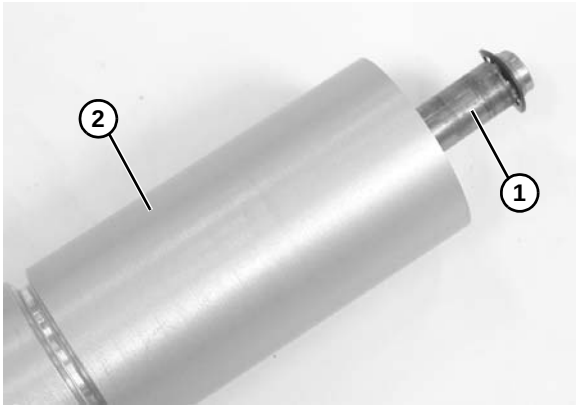


Figure 84

E – Knuckle Return Roller Removal

1. Remove screws **(Figure 85, item 1)** on both sides of knuckle and remove guard **(Figure 85, item 2)**.

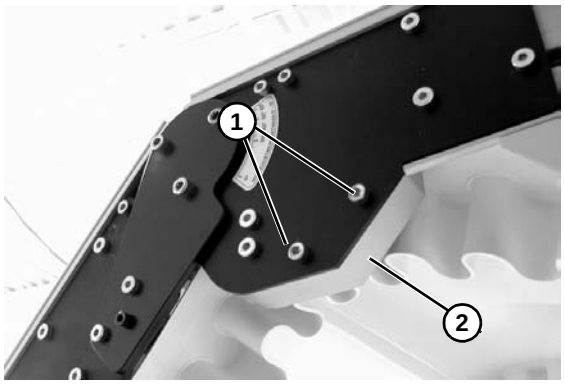


Figure 85

2. Remove screws **(Figure 86, item 1)** and remove roller bearing **(Figure 86, item 2)**.

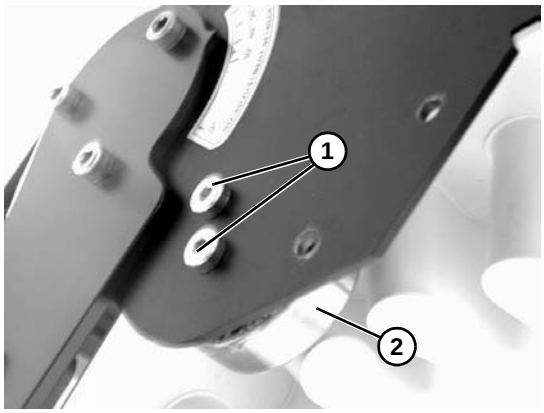


Figure 86

Bearing Replacement

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

- **A** – Idler Bearing
- **B** – Drive Bearing
- **C** – Nose Over Knuckle Idler Bearing
- **D** – Horizontal to Incline Knuckle Idler Bearing
- **E** – Knuckle Return Roller Bearing

A – Idler Bearing Replacement

The bearings in a 3200 Series Idler Pulley can not be removed. Replace the entire pulley assembly when worn.

B – Drive Bearing Removal and Replacement

Removal

1. Turn bearing **(Figure 87, item 1)** to align with slots **(Figure 87, item 2)** in bearing housing. Then remove bearing.

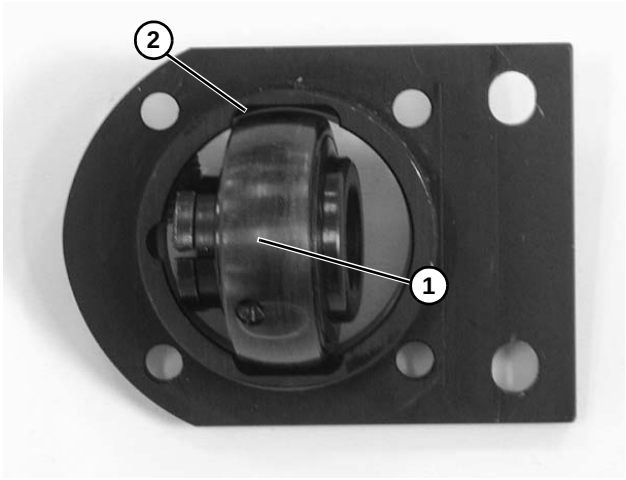


Figure 87

Replacement

1. Inspect bearing housing bearing surface. If worn or damaged, replace. See “Service Parts” on page 28.
2. Insert bearing **(Figure 88, item 1)** into housing slot **(Figure 88, item 2)**. Locate anti–rotation nub **(Figure 88, item 3)** to align with slot **(Figure 88, item 4)**, and twist bearing into housing.

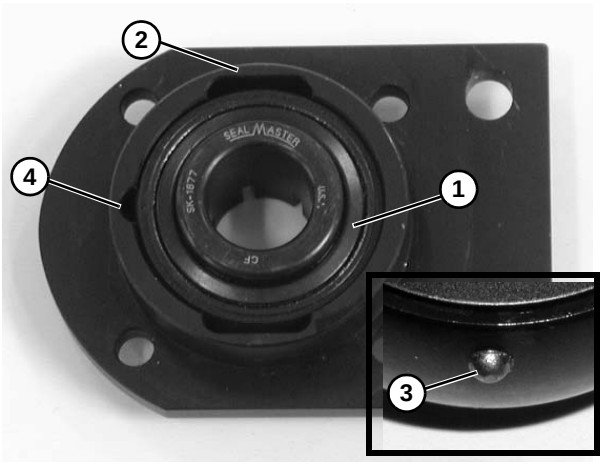


Figure 88

C – Nose Over Knuckle Idler Bearing Replacement

The bearings in a 3200 Series Nose Over Knuckle Idler Pulley can not be removed. Replace the entire pulley assembly when worn.

D – Horizontal to Incline Knuckle Idler Bearing Replacement

The bearings in a 3200 Series Nose Over Knuckle Idler Pulley can not be removed. Replace the entire pulley assembly when worn.

E – Knuckle Return Roller Bearing Replacement

1. Remove screws **(Figure 89, item 1)** on the worn bearing side of the knuckle and remove guard **(Figure 89, item 2)**.

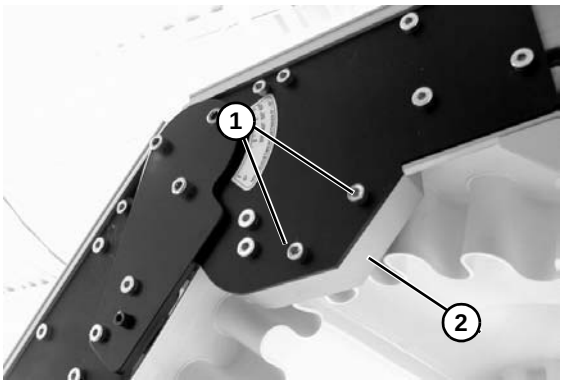


Figure 89

2. Remove screws **(Figure 90, item 1)** and remove worn roller bearing **(Figure 90, item 2)**.

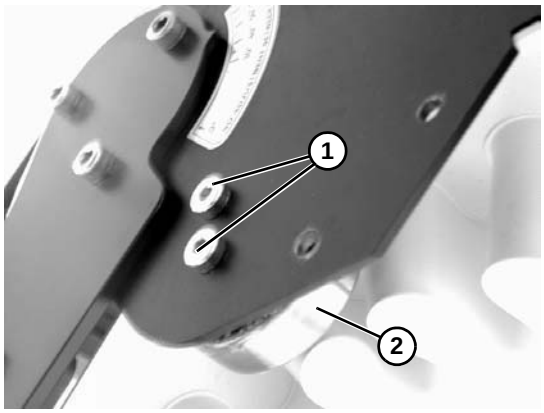


Figure 90

3. Replace worn bearing with new bearing, use screws **(Figure 90, item 1)** to attach new bearing.
4. Replace guard **(Figure 89, item 2)** and secure with screws **(Figure 89, item 1)** on both sides of knuckle and remove guard.

Pulley Replacement

Idler Pulley

To replace the idler pulley, reverse the "Idler Pulley Removal" procedure on page 20.

Drive Pulley

To replace the drive pulley, reverse the "Drive Pulley Removal" procedure on page 21.

Knuckle Pulley

To replace the knuckle pulley, reverse the "Knuckle Pulley Removal" procedure on page 21.

Knuckle Return Roller

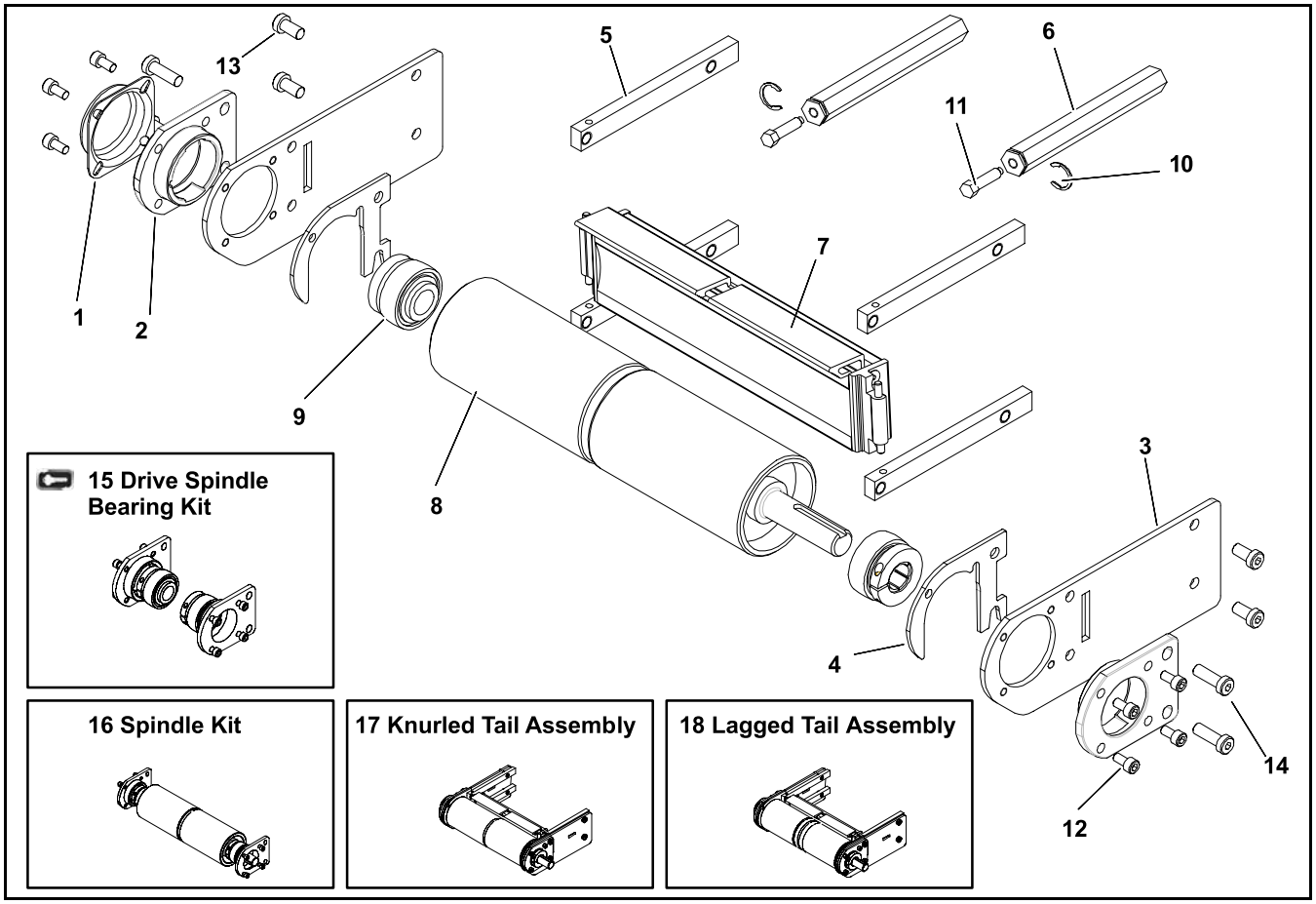
To replace the knuckle return roller, reverse the "Knuckle Return Roller Removal" procedure on page 26.

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.

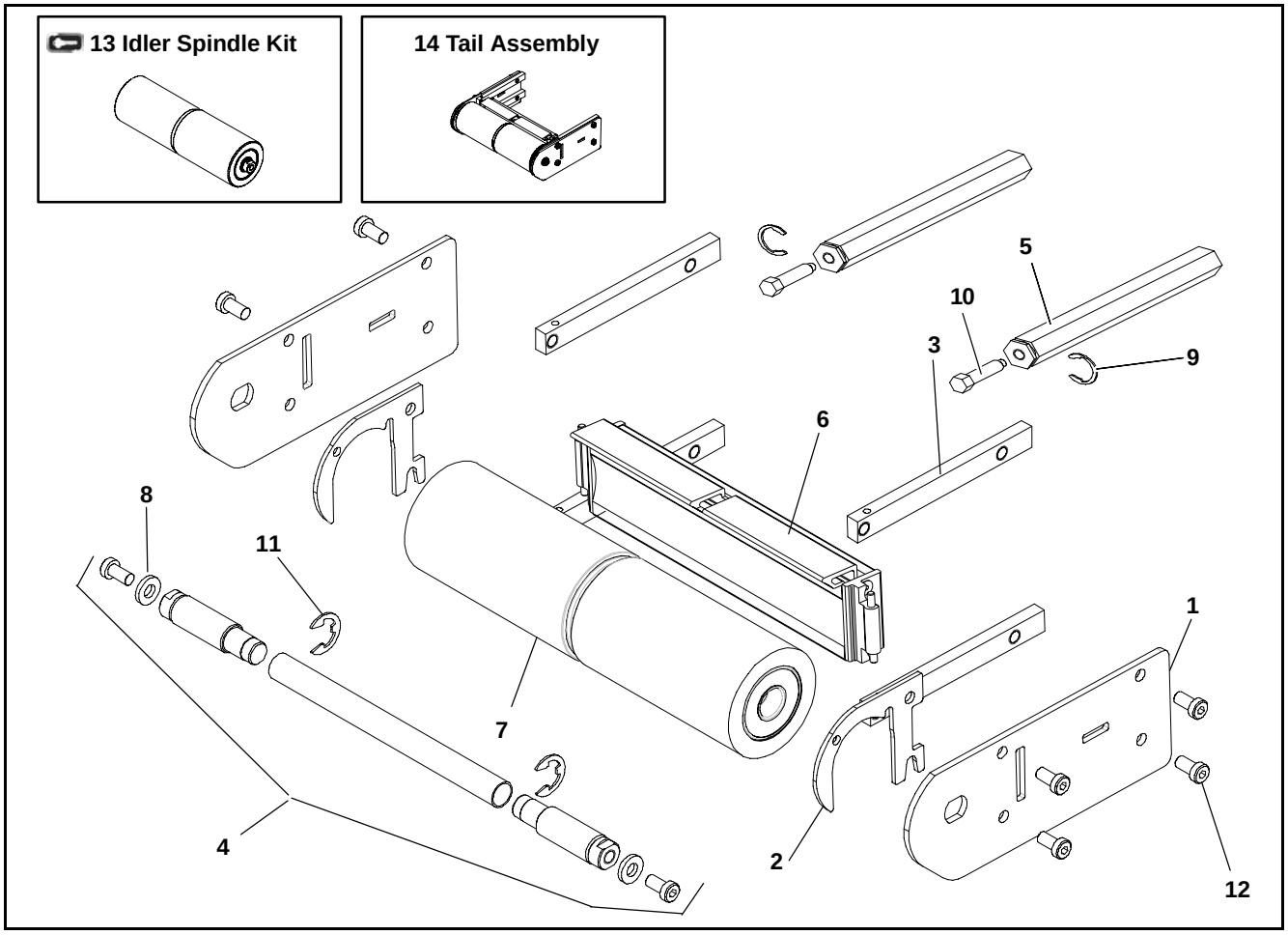
Drive End Tail Assembly



Item	Part Number	Description
1	300139	Shaft Cover
2	300885	Bearing Retainer
3	301048	Drive Tail Cover Plate
4	301083	3” Inner Tail Plate
5	301088	Tail Bar Clamp
6	301196	Hex Tension Tracking Shaft
7	3202WW	Tail Articulation Bar
8	3286WW	Knurled Drive Spindle Assy.
	3288WW	Lagged Drive Spindle Assy.
9	802–135	D–Lok Bearing
10	807–1151	Retaining Ring
11	807–1152	Hex Head Cap Screw M6 x 20 mm
12	920612M	Socket Head Screw M6 x 12 mm
13	950816M	Low Head Cap Screw M8 x 16 mm
14	950825M	Low Head Cap Screw M8 x 25 mm
15	32D	Drive Spindle Bearing Kit (Includes Items 2, 9 and 12)

Item	Part Number	Description
16	32KD–WW	Knurled Spindle Kit (Includes Items 2, 8, 9 and 12)
	32LD–WW	Lagged Spindle Kit (Includes Items 2, 8, 9 and 12)
17	32KDTA–WW	Knurled Tail Assy. Position A and B (Includes items 1 through 5, 7 through 9 and 12 through 14)
	32KDTD–WW	Knurled Tail Assy. Position C and D (Includes items 1 through 5, 7 through 9 and 12 through 14)
18	32LDTA–WW	Lagged Tail Assy. Position A and B (Includes items 1 through 5, 7 through 9 and 12 through 14)
	32LDTD–WW	Lagged Tail Assy. Position C and D (Includes items 1 through 5, 7 through 9 and 12 through 14)
WW = Conveyor width reference: 04 – 48 in 02 increments		

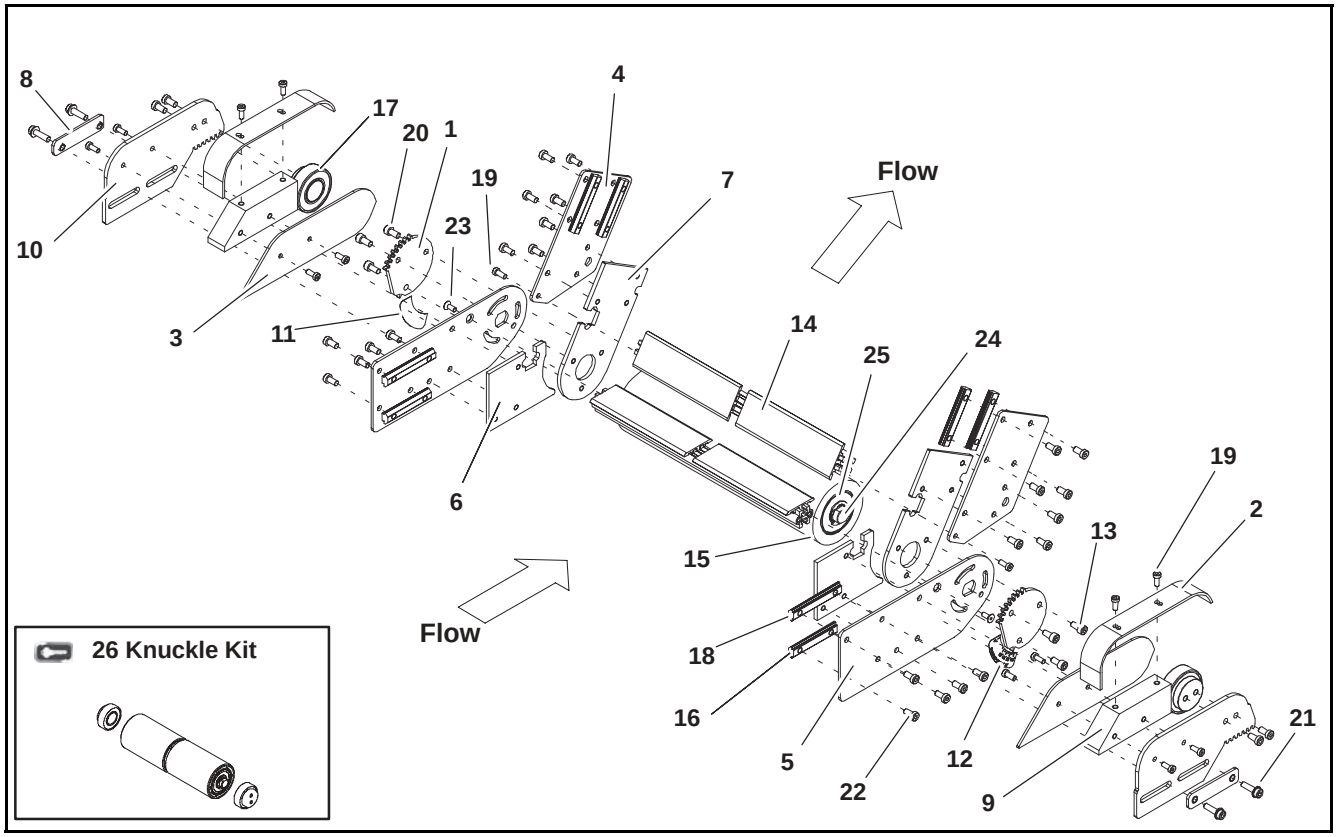
Idler End Assembly



Item	Part Number	Description
1	301049	Idler Cover Plate
2	301083	Inner 3” Tail Plate
3	301088	Tail Bar Clamp
4	3282WW	Idler Spindle Wand Assembly (includes items 8 and 11)
5	301196	Hex Tension Tracking Shaft
6	3202WW	Tail Articulation Bar
7	3289WW	3” Idler Pulley
8	605280P	Hard Washer
9	807–1151	Tracking Shaft Retaining Ring
10	807–1152	Hex Head Cap Screw M6 x 20 mm
11	915–235	Stub Shaft Retaining Ring
12	950816M	Low Head Cap Screw M8 x 16 mm
13	32T3–WW	Idler Spindle Kit (includes items 4 and 7)
14	32TT3–WW	Tail Assembly (including items 1 through 4, 6, 7 and 12)
WW = Conveyor width reference: 04 – 48 in 02 increments		

Service Parts

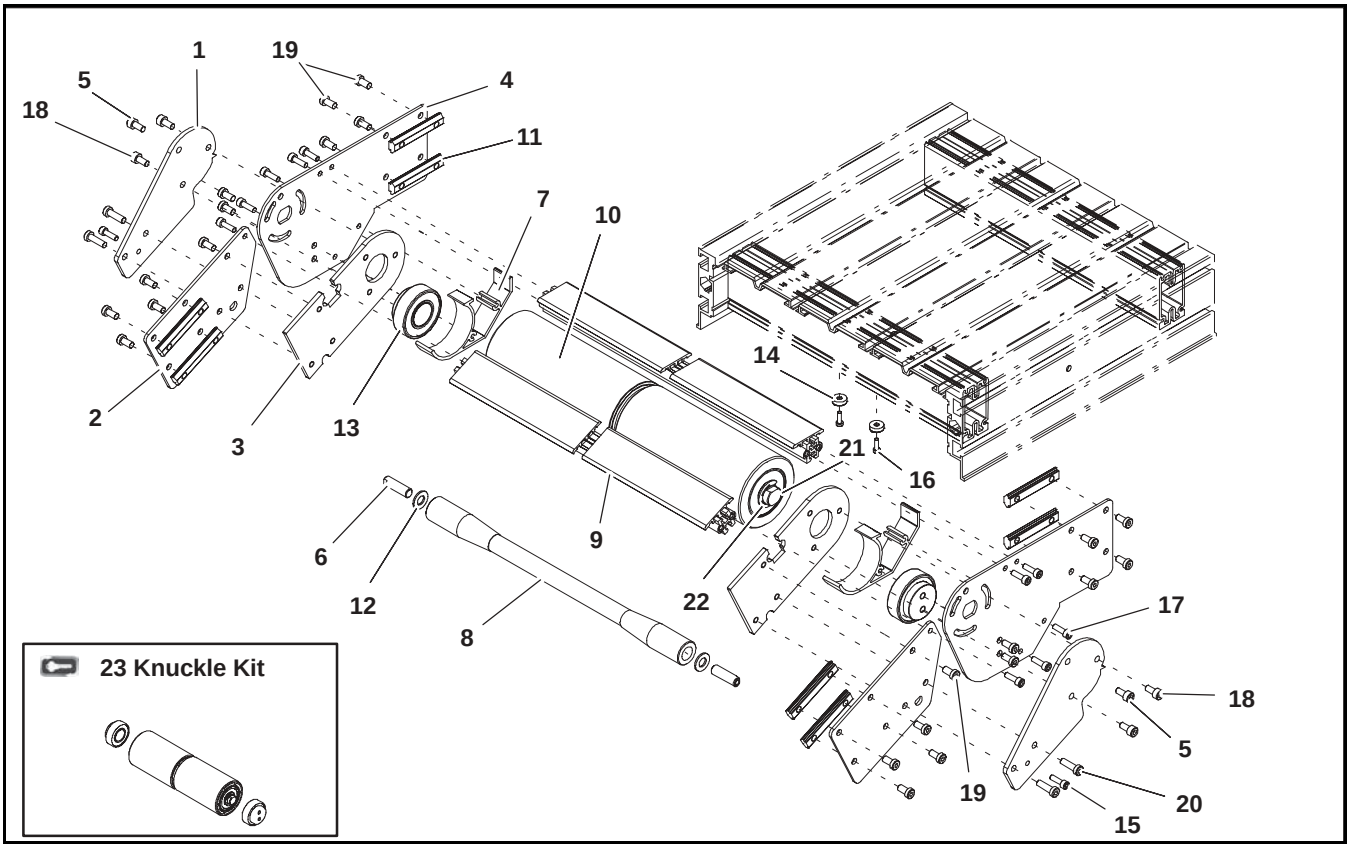
Horizontal to Incline Knuckle Assembly



Item	Part Number	Description
1	300538	Top Roller Moving Pointer Gear
2	301147	Bearing Cover and Top Sidewall Guard (sidewall cleated belts)
	301169	Bearing Cover Offset Guide (cleated belts)
3	301148	Roller Cover Plate (sidewall cleated belts)
	301149	Roller Cover Plate (cleated belts)
4	301155	Short LPZ Cover Plate
5	301157	Lower LPZ Outside Plate
6	301159	Lower LPZ Inside Plate
7	301160	Pivot LPZ Inside Plate
8	301168	Slot Cover Plate Assy
9	301170	LPZ Cover Mounting Block
10	301171	Top Roller Cleated Rack Plate
11	301174	0–60 LH Angle Scale Label
12	301175	0–60 RH Angle Scale Label

Item	Part Number	Description
13	301280	Yellow Chrome Special Screw
14	3276WW	Belt Support Rail Assy
15	3289WW	LPZ Idler Pulley Assy
16	300150M	Tee Bar, Drop In 1.88”
17	300495M	Axle Bearing Assy
18	300536M	Tee Bar, Drop In 2.12”
19	950512M	Low Head Cap Screw M5 x 12 mm
20	920612M	Socket Head Screw M6 x 12 mm
21	920684M	Flanged Socket Head Screw M6 x 20 mm
22	950612M	Low Head Cap Screw M6 x 12 mm
23	930512M	Flat Head Screw M5 x 12 mm
24	3283WW	Shaft Assembly for 3” Idler
25	915–235	Retaining Ring
26	LPZHI–WW	Knuckle Kit (includes items 15, 17, 24 and 25)
WW = Conveyor width reference: 08 – 24 in 02 increments		

Nose Over Knuckle Assembly

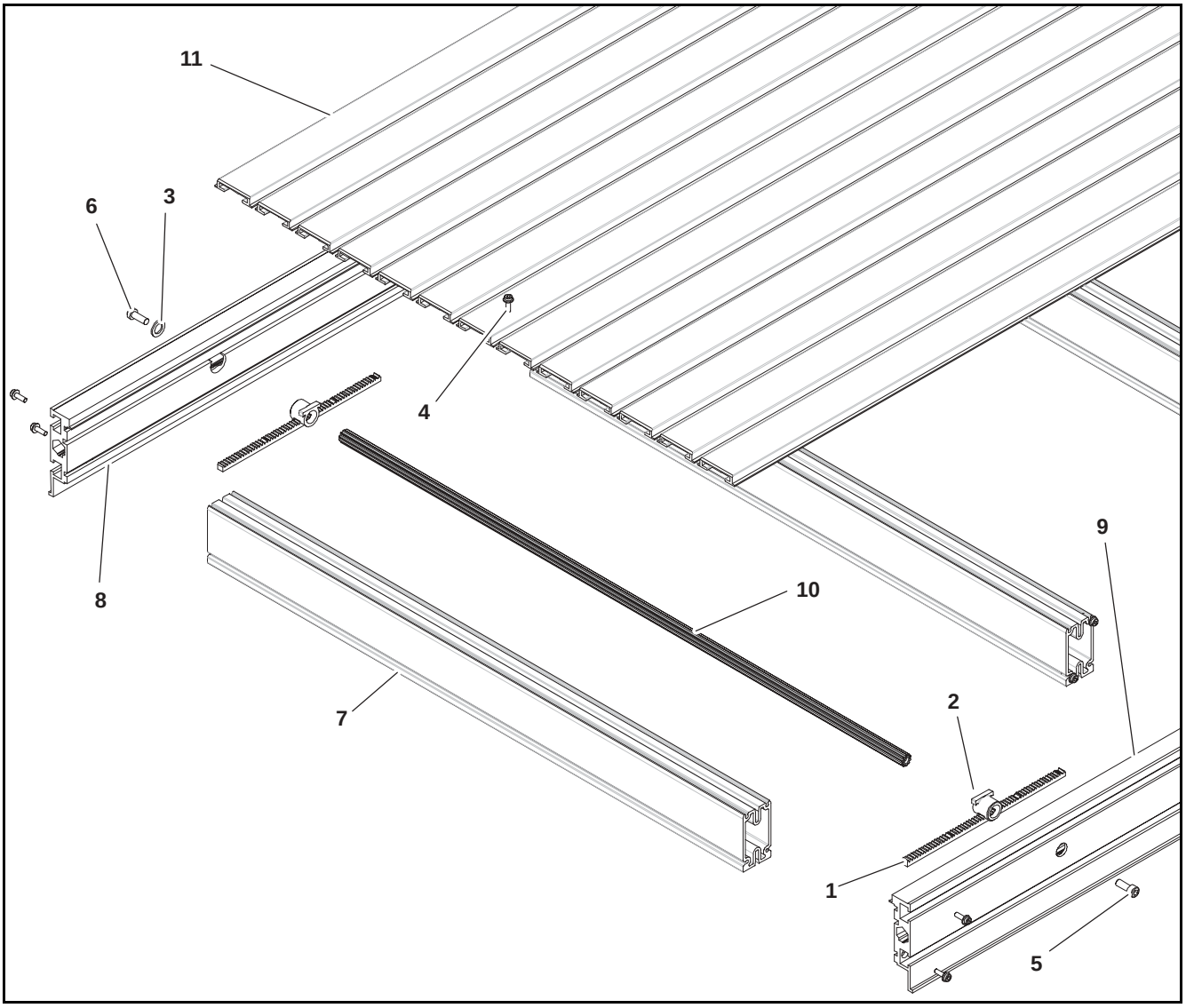


Item	Part Number	Description
1	300657	Slots Pointer Cover Disc
2	301155	Short LPZ Cover Plate
3	301160	LPZ Inside Pivot Plate
4	301161	Upper Outside Plate – Cleated
5	301280	Special Screw – Yellow Head
6	301358	Dowel Pin 3/8" 2x (18" to 24" Wide Only)
7	322501	Bottom Bearing Cover – Cleated
8	3254WW	Return Roller (18" to 24" Wide Only)
9	3276WW	Belt Support Rail Assy
10	3289WW	LPZ–CD Idler Pulley Assy
11	300150M	Drop In Tee Bar
12	300160P	Nylon Washer 2x (18" to 24" Wide Only)
13	300495M	Axle/Bearing Assy

Item	Part Number	Description
14	807–1283	Hinged Screw Cover
15	901–110	Socket Head Screw #10–32 x 0.62"
16	950412M	Low Head Cap Screw M4 x 12 mm
17	920516M	Socket Head Screw M5 x 16 mm
18	920612M	Socket Head Screw M6 x 12 mm
19	950612M	Low Head Cap Screw M6 x 12 mm
20	950620M	Low Head Cap Screw M6 x 20 mm
21	3283WW	Idler Shaft Assembly
22	915–235	Retaining Ring
23	LPZZ-WW	Knuckle Kit (includes items 10, 13, 21 and 22)
WW = Conveyor width reference: 08 – 24 in 02 increments		

Service Parts

Frame Assembly



Item	Part Number	Description
1	240420	Rack Gear
2	301091	Pinion Bearing
3	605279P	Washer
4	920484M	Flange Torx Screw, M4 x 16 mm
5	920616M	Socket Head Screw M6 x 16 mm
6	950616M	Low Head Cap Screw M6 x 16 mm
7	3245WW	Cross Support Rail
8	301041–LLLLL	RH Side Rail
9	301042–LLLLL	LH Side Rail
10	3229WW	Pinion
11	See Bed Plate Rail chart	Bed Plate Rail
WW = Conveyor width reference: 04 – 48 in 02 increments LLLLL = Frame Length (see Bed Plate & Frame Formulas)		

Item 11: Bed Plate Rail	
Width	Part Number
1.75” (mm)	300887–LLLLL
2” (54mm)	300888–LLLLL
4” (102mm)	300889–LLLLL
6” (152mm)	300890–LLLLL
LLLLL = Bed Plate Length (see Bed Plate & Frame Formulas on next page)	

Bed Plate and Frame Formulas

Bed Plate and Frame Formulas

Bed Plate LLLLL = Frame LLLLL − 00013

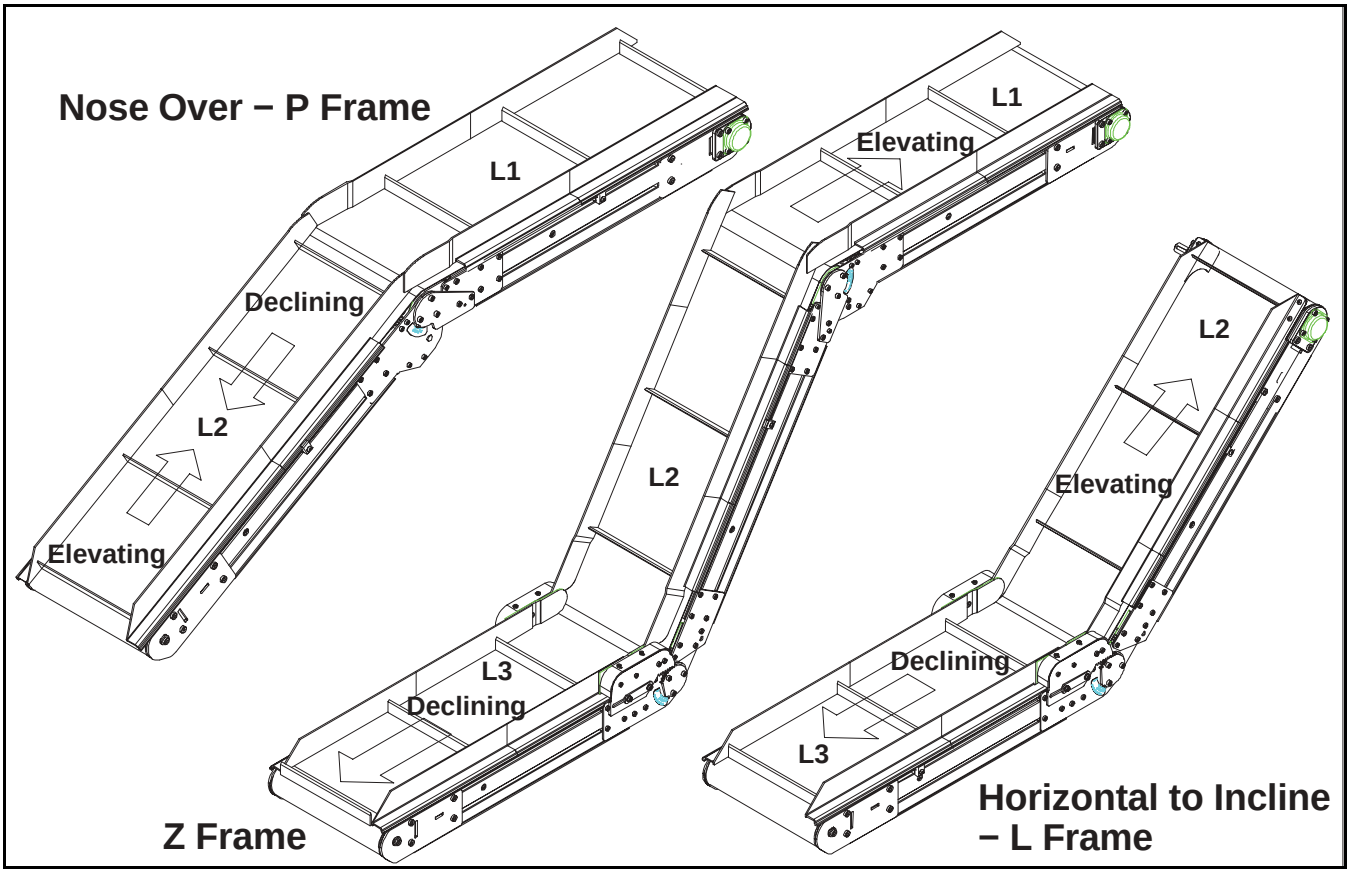
Frame LLLLL = Conveyor Length LLLL X 12 − Tail Adder / # of Sections of Conveyor

Tail Adder = 00600 for each Tension End
00425 for each Non−Tension End
00600 for each Knuckle Attachment

Width	Bed Plate Configuration												
4”							1.75”						
6”							4”						
8”							6”						
10”						2”	4”	2”					
12”						2”	6”	2”					
14”						4”	4”	4”					
16”						4”	6”	4”					
18”						6”	4”	6”					
20”						6”	6”	6”					
22”					4”	4”	4”	4”	4”				
24”					4”	4”	6”	4”	4”				
26”					6”	4”	4”	4”	6”				
28”					6”	4”	6”	4”	6”				
30”					6”	6”	4”	6”	6”				
32”					6”	6”	6”	6”	6”				
34”				4”	4”	6”	4”	6”	4”	4”			
36”				4”	4”	6”	6”	6”	4”	4”			
38”				4”	6”	6”	4”	6”	6”	4”			
40”				4”	6”	6”	6”	6”	6”	4”			
42”				6”	6”	6”	4”	6”	6”	6”			
44”				6”	6”	6”	6”	6”	6”	6”			
46”			4”	4”	6”	6”	4”	6”	6”	4”	4”		
48”			4”	4”	6”	6”	6”	6”	6”	4”	4”		
50”			4”	6”	6”	6”	4”	6”	6”	6”	4”		
52”			4”	6”	6”	6”	6”	6”	6”	6”	4”		
54”			6”	6”	6”	6”	4”	6”	6”	6”	6”		
56”			6”	6”	6”	6”	6”	6”	6”	6”	6”		
58”		4”	4”	6”	6”	6”	4”	6”	6”	6”	4”	4”	
60”		4”	4”	6”	6”	6”	6”	6”	6”	6”	4”	4”	
62”		4”	6”	6”	6”	6”	4”	6”	6”	6”	6”	4”	
64”		4”	6”	6”	6”	6”	6”	6”	6”	6”	6”	4”	
66”		6”	6”	6”	6”	6”	4”	6”	6”	6”	6”	6”	
68”		6”	6”	6”	6”	6”	6”	6”	6”	6”	6”	6”	
70”	4”	4”	6”	6”	6”	6”	4”	6”	6”	6”	6”	4”	4”
72”	4”	4”	6”	6”	6”	6”	6”	6”	6”	6”	6”	4”	4”

Service Parts

Cleated Belt Conveyor Configurations



Section and Length Determination

Model Number

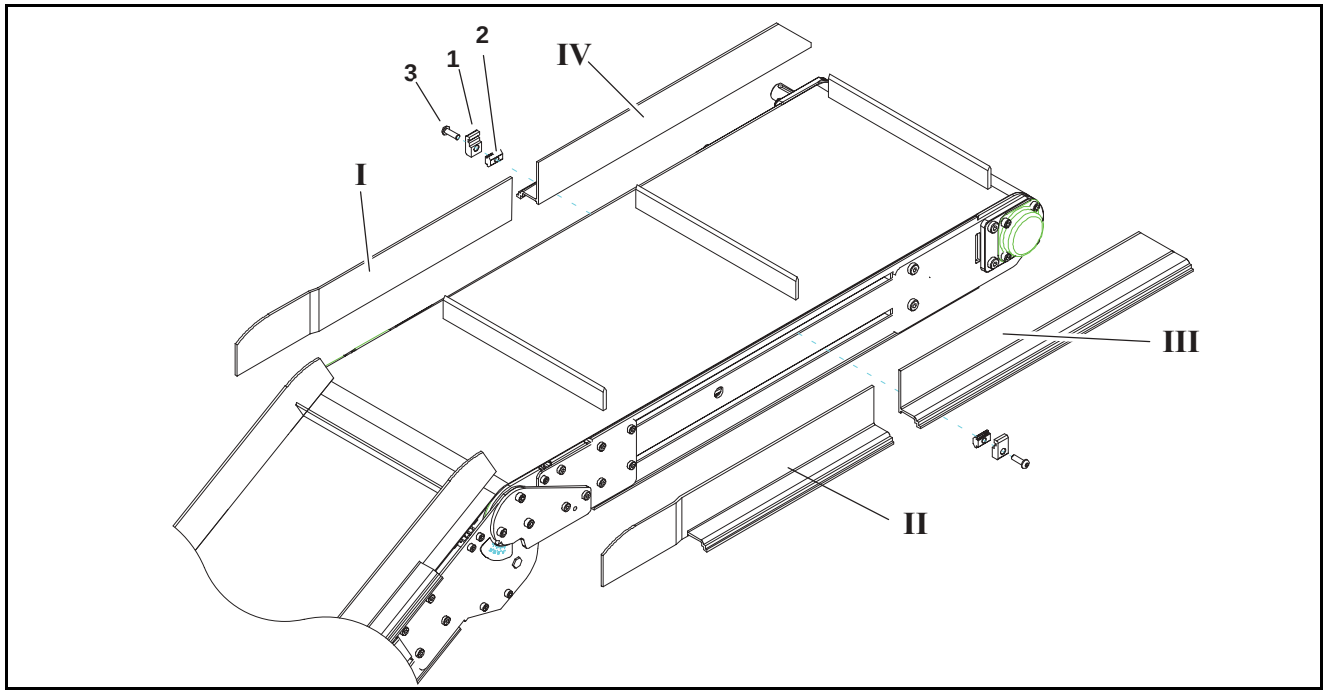
3 E A 0 M WW LLLL−LLLL−LLLL A LLLL

- **Conveyor Section L3 Length Reference**
- **Conveyor Section L2 Length Reference**
- **Conveyor Section L1 Length Reference**
- **E = Elevating**
- **D = Declining**

LLLL = Section length in feet from model number

LLLLL = Guiding Length in inches (see pages 33 thru 39 for length formulas per section)

Z Frame – Section L1



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

Inclining Belt Travel*

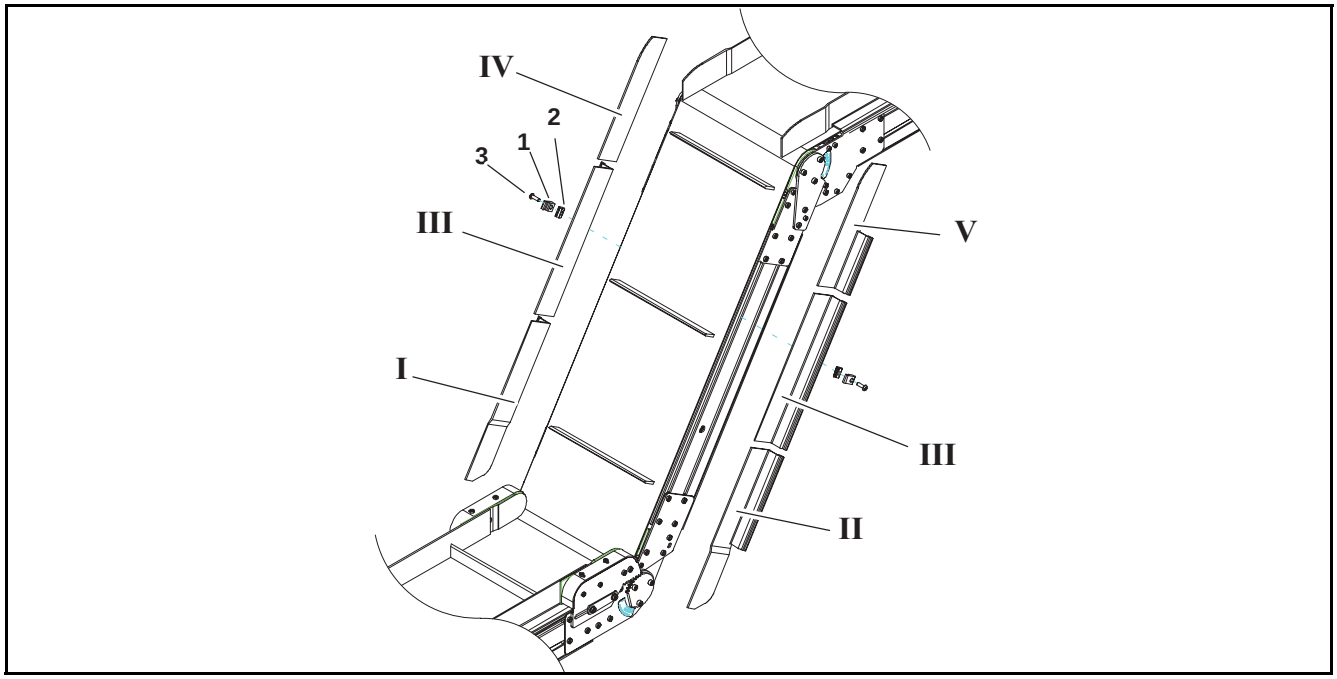
Section L1 Length – LLLL	I	II	III	IV
0200	382227 (382207 with 45 deg added)	382228 (382208 with 45 deg added)	No Guiding Section	No Guiding Section
0201 – 0399	382207–LLLLL LLLLL = (LLLL x 6) – 00089	382208–LLLLL LLLLL = (LLLL x 6) + 00089	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)
0400 and up	382207	382208	382213–LLLLL LLLLL = (LLLL x 12) –02400	382214–LLLLL LLLLL = (LLLL x 12) –02400

Declining Belt Travel*

Section L1 Length – LLLL	I	II	III	IV
0200	382225 (382205 with 45 deg added)	382226 (382206 with 45 deg added)	No Guiding Section	No Guiding Section
0201 – 0399	382205–LLLLL LLLLL = (LLLL x 6) – 00089	382206–LLLLL LLLLL = (LLLL x 6) + 00089	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)
0400 and up	382205	382206	382213–LLLLL LLLLL = (LLLL x 12) –02400	382214–LLLLL LLLLL = (LLLL x 12) –02400

Service Parts

Z Frame – Section L2



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

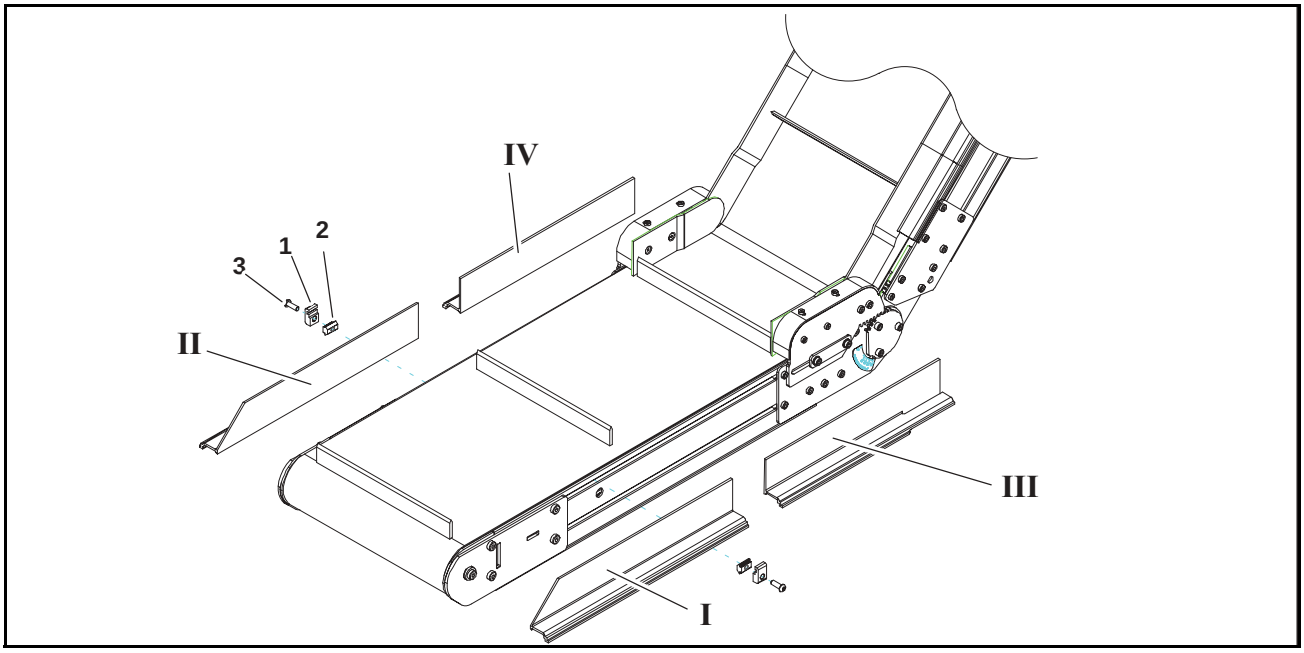
Inclining Belt Travel*

Section L2 Length – LLLL	I	II	III	IV	V
0200 – 0371	382203–LLLLL LLLLL = (LLLL x 6) – 00145	382204–LLLLL LLLLL = (LLLL x 6) – 00145	No Guiding Section	382205–LLLLL LLLLL = (LLLL x 6) – 00070	382206–LLLLL LLLLL = (LLLL x 6) – 00070
0371 – 0600	382203–LLLLL LLLLL = (LLLL x 4) + 00100	382204–LLLLL LLLLL = (LLLL x 4) + 00100	382200–LLLLL LLLLL = (LLLL x 4) – 00490	382205–LLLLL LLLLL = (LLLL x 4) + 00315	382206–LLLLL LLLLL = (LLLL x 4) + 00315
0601 and up	382203	382204	382200–LLLLL LLLLL = (LLLL x 12) – 04485	382205	382206

Declining Belt Travel*

Section L2 Length – LLLL	I	II	III	IV	V
0200 – 0325	382201–LLLLL LLLLL = (LLLL x 6) – 00282	382202–LLLLL LLLLL = (LLLL x 6) – 00282	No Guiding Section	382207–LLLLL LLLLL = (LLLL x 6) – 00357	382208–LLLLL LLLLL = (LLLL x 6) – 00357
0326 – 0499	382201–LLLLL LLLLL = (LLLL x 4) – 00331	382202–LLLLL LLLLL = (LLLL x 4) – 00331	382200–LLLLL LLLLL = (LLLL x 4) – 00092	382207–LLLLL LLLLL = (LLLL x 4) + 00314	382208–LLLLL LLLLL = (LLLL x 4) + 00314
0500 and up	382201	382202	382200–LLLLL LLLLL = (LLLL x 12) – 03905	382207	382208

Z Frame – Section L3



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

Inclining Belt Travel*

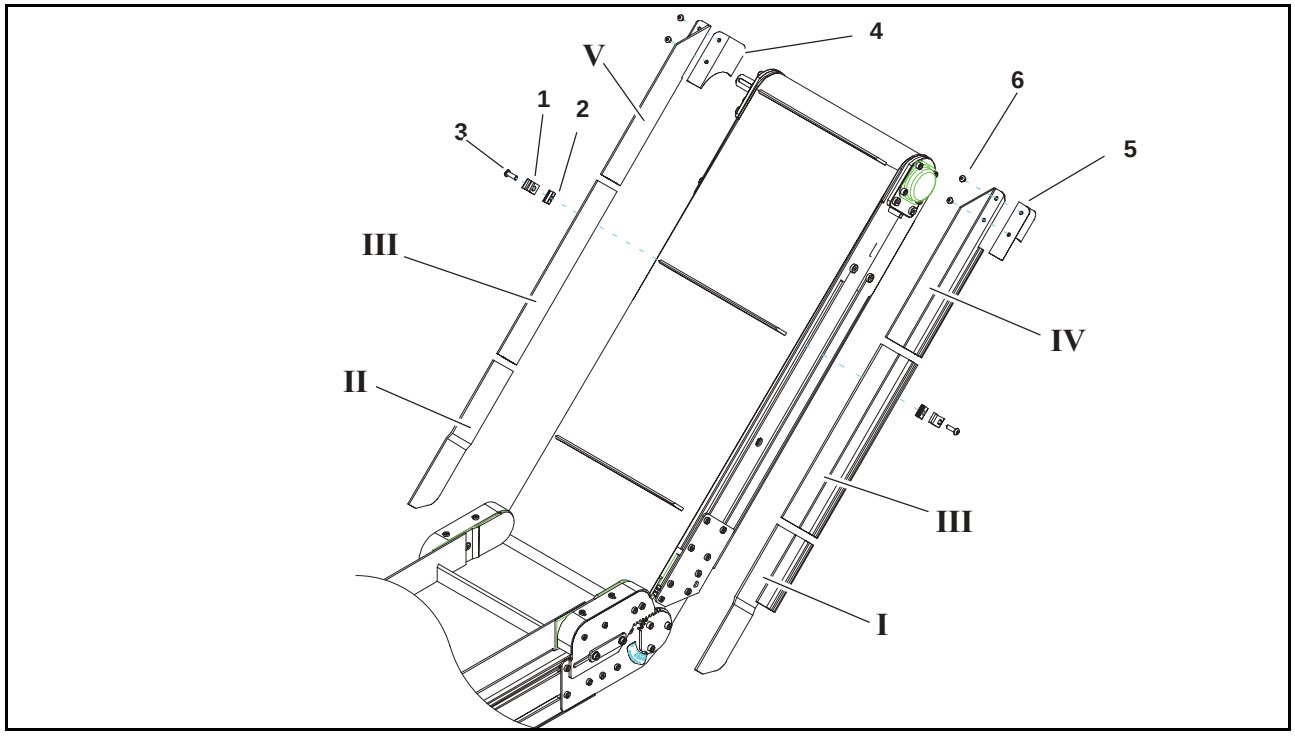
Section L2 Length – LLLL	I	II	III	IV
0200	No Guiding Section	No Guiding Section	382221 (382201 with 45 deg added)	382222 (382202 with 45 deg added)
0201 – 0399	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)	382201–LLLLL LLLLL = (LLLL x 6) – 00731	382202–LLLLL LLLLL = (LLLL x 6) – 00731
0400 and up	382213–LLLLL LLLLL = (LLLL x 12) – 02400	382214–LLLLL LLLLL = (LLLL x 12) – 02400	382201	382202

Declining Belt Travel*

Section L3 Length – LLLL	I	II	III	IV
0200	No Guiding Section	No Guiding Section	382223 (382203 with 45 deg added)	382224 (382204 with 45 deg added)
0201 – 0399	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)	382203–LLLLL LLLLL = (LLLL x 6) – 00301	382204–LLLLL LLLLL = (LLLL x 6) – 00301
0400 and up	382213–LLLLL LLLLL = (LLLL x 12) – 02400	382214–LLLLL LLLLL = (LLLL x 12) – 02400	382203	382204

Service Parts

L Frame – Section L2



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar
3	950620M	Low Head Cap Screw M6 x 20 mm

Item	Part Number	Description
4	382094M	Extension Exit Guide, Left
5	382095M	Extension Exit Guide, Right
6	910506M	Button Head Screw M5 x 6 mm

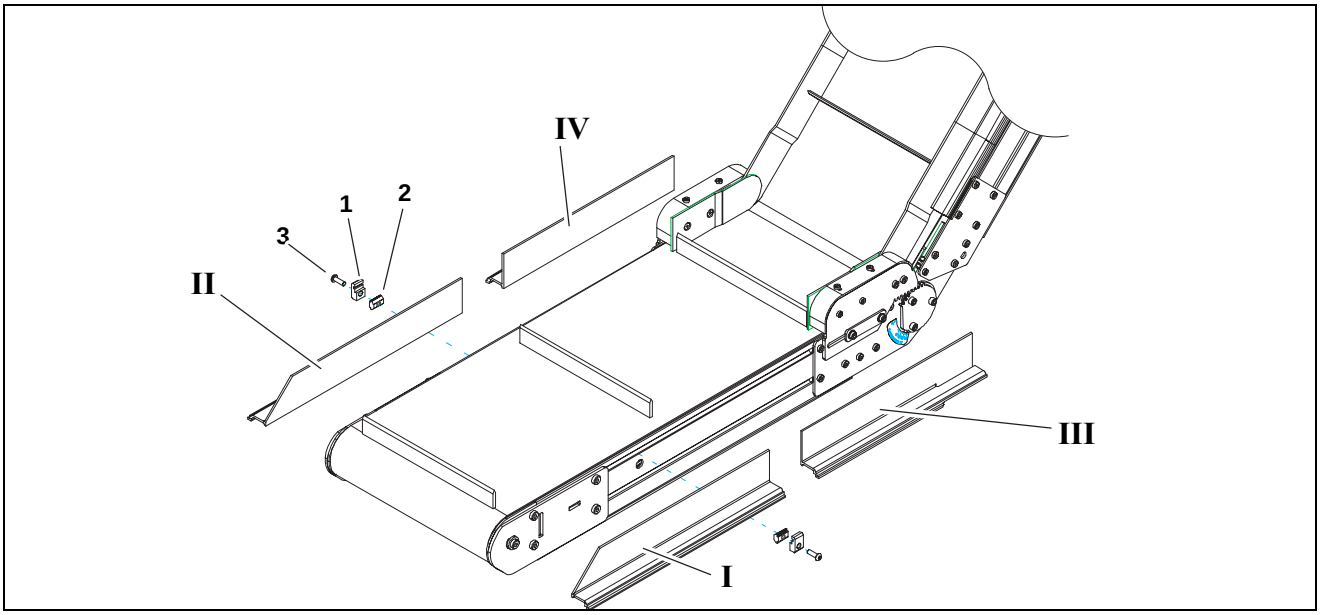
Inclining Belt Travel*

Section L2 Length – LLLL	I	II	III	IV	V
0200	382203–LLLLL LLLLL = (LLLL x 6) – 00140	382204–LLLLL LLLLL = (LLLL x 6) – 00140	No Guiding Section	382209–LLLLL LLLLL = (LLLL x 6) – 00193	382210–LLLLL LLLLL = (LLLL x 6) – 00193
0201 – 0399	382203–LLLLL LLLLL = (LLLL x 4) – 00140	382204–LLLLL LLLLL = (LLLL x 4) – 00140	382200–LLLLL LLLLL = (LLLL x 4) – 00200	382209–LLLLL LLLLL = (LLLL x 4) – 00193	382210–LLLLL LLLLL = (LLLL x 4) – 00193
0400 and up	382203	382204	382200–LLLLL LLLLL = (LLLL x 12) – 04477	382209	382210

Declining Belt Travel*

Section L2 Length – LLLL	I	II	III	IV	V
0200	382221 (382201 with 45 deg added)	382222 (382202 with 45 deg added)	No Guiding Section	No Guiding Section	No Guiding Section
0201 – 0399	382201–LLLLL LLLLL = (LLLL x 6) – 00731	382202–LLLLL LLLLL = (LLLL x 6) – 00731	No Guiding Section	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)
0400 and up	382201	382202	No Guiding Section	382213–LLLLL LLLLL = (LLLL x 12) – 02400	382214–LLLLL LLLLL = (LLLL x 12) – 02400

L Frame – Section L3



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

Inclining Belt Travel*

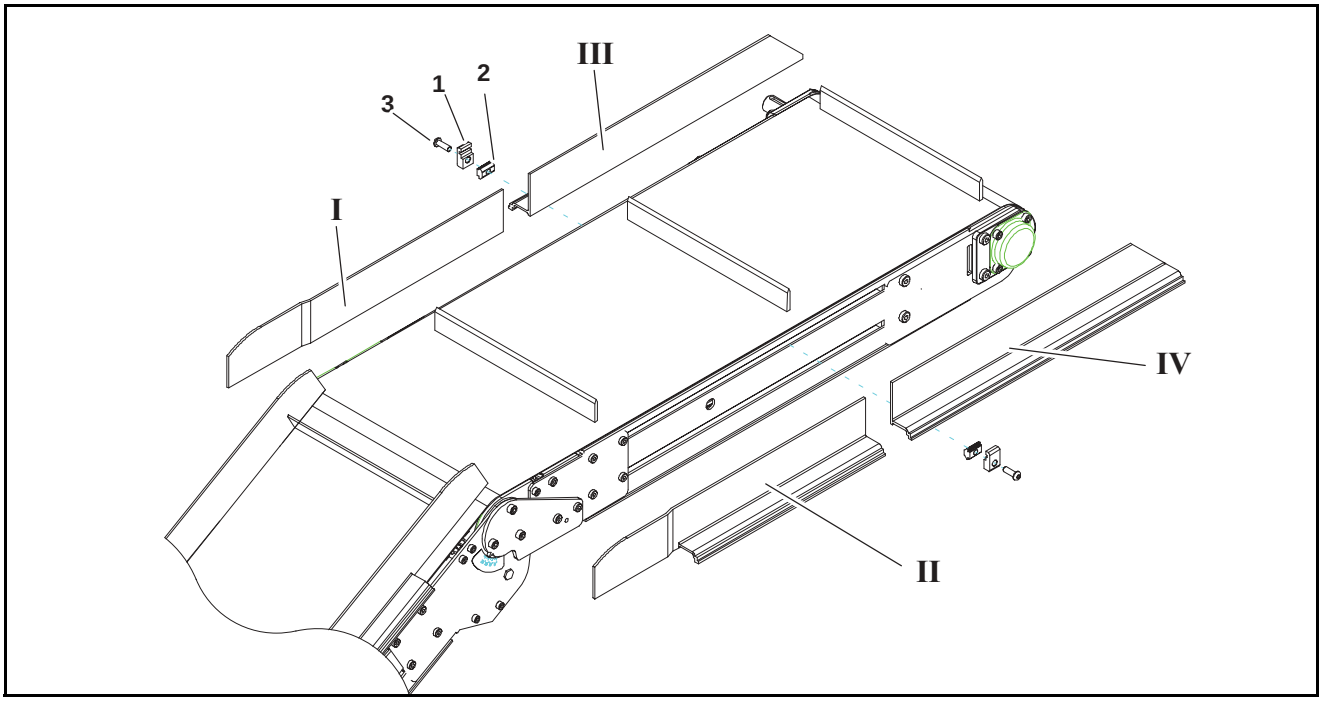
Section L3 Length – LLLL	I	II	III	IV
0200	No Guiding Section	No Guiding Section	382221 (382201 with 45 deg added)	382222 (382202 with 45 deg added)
0201 – 0399	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)	382201–LLLLL LLLLL = (LLLL x 6) – 00731	382202–LLLLL LLLLL = (LLLL x 6) – 00731
0400 and up	382213–LLLLL LLLLL = (LLLL x 12) – 02400	382214–LLLLL LLLLL = (LLLL x 12) – 02400	382201	382202

Declining Belt Travel*

Section L3 Length – LLLL	I	II	III	IV
0200	No Guiding Section	No Guiding Section	382223 (382203 with 45 deg added)	382224 (382204 with 45 deg added)
0201 – 0399	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)	382203–LLLLL LLLLL = (LLLL x 6) – 00301	382204–LLLLL LLLLL = (LLLL x 6) – 00301
0400 and up	382213–LLLLL LLLLL = (LLLL x 12) – 02400	382214–LLLLL LLLLL = (LLLL x 12) – 02400	382203	382204

Service Parts

P Frame – Section L1



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

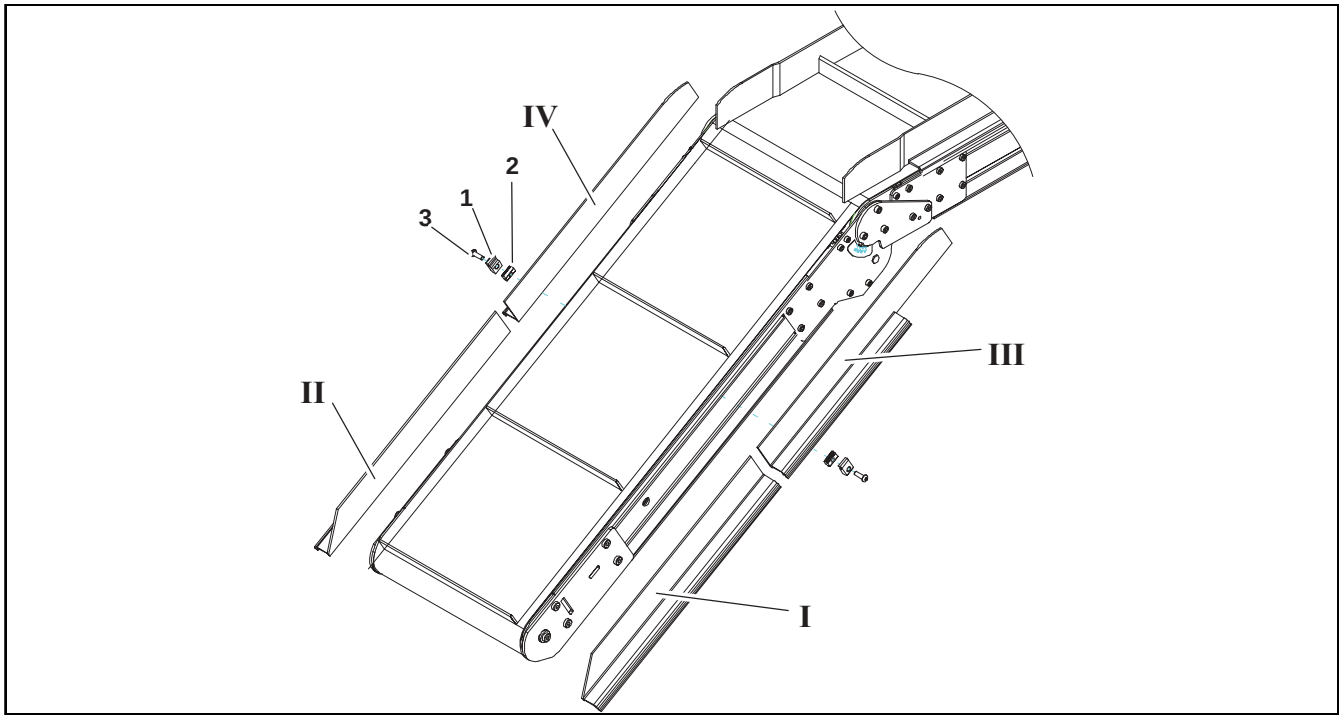
Inclining Belt Travel*

Section L1 Length – LLLL	I	II	III	IV
0200	382227 (382207 with 45 deg added)	382228 (382208 with 45 deg added)	No Guiding Section	No Guiding Section
0201 – 0399	382207–LLLLL LLLLL = (LLLL x 6) – 00089	382208–LLLLL LLLLL = (LLLL x 6) + 00089	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)
0400 and up	382207	382208	382213–LLLLL LLLLL = (LLLL x 12) –02400	382214–LLLLL LLLLL = (LLLL x 12) –02400

Declining Belt Travel*

Section L1 Length – LLLL	I	II	III	IV
0200	382225 (382205 with 45 deg added)	382226 (382206 with 45 deg added)	No Guiding Section	No Guiding Section
0201 – 0399	382205–LLLLL LLLLL = (LLLL x 6) – 00089	382206–LLLLL LLLLL = (LLLL x 6) + 00089	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)
0400 and up	382205	382206	382213–LLLLL LLLLL = (LLLL x 12) –02400	382214–LLLLL LLLLL = (LLLL x 12) –02400

P Frame – Section L2



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

Inclining Belt Travel*

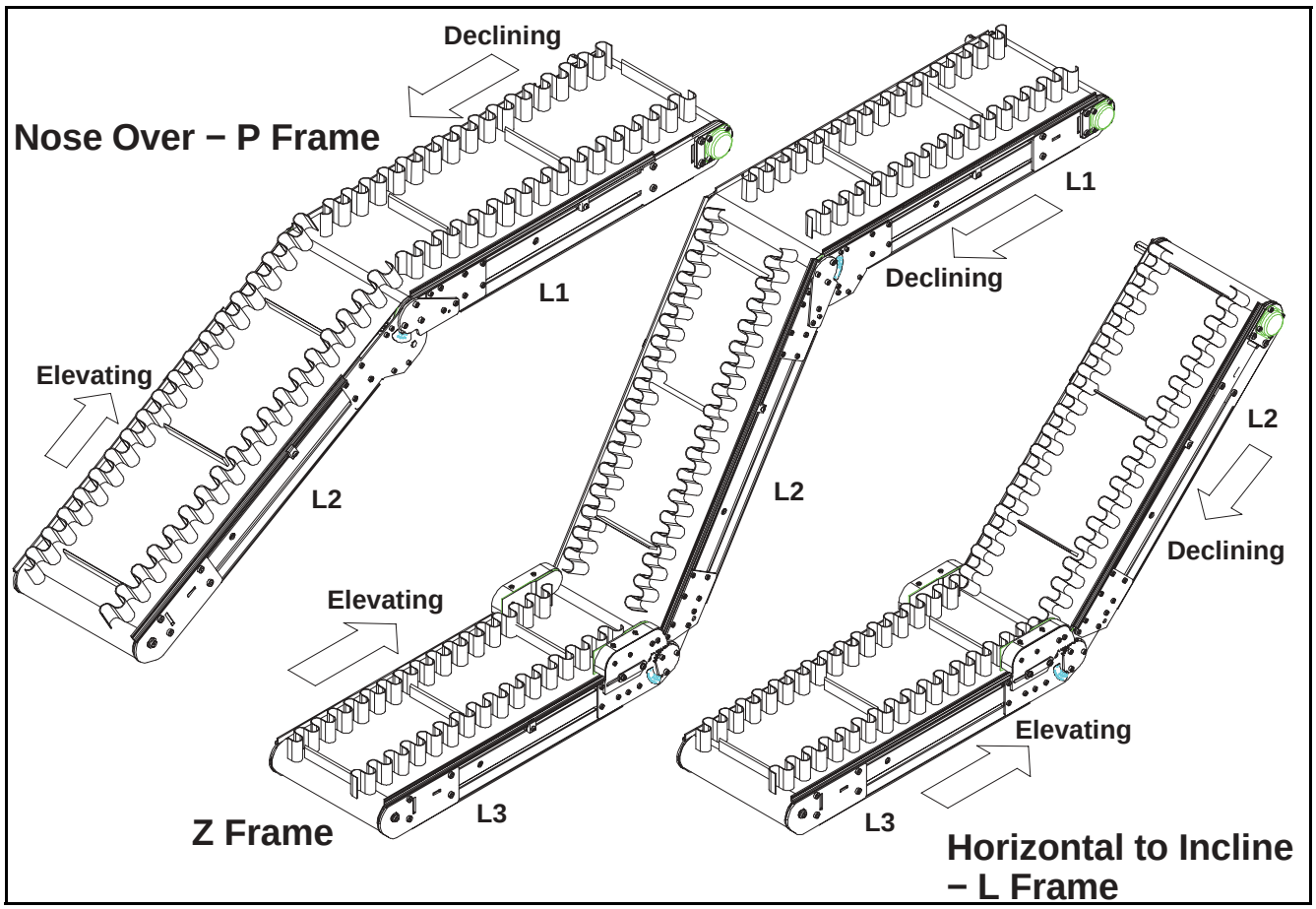
Section L2 Length – LLLL	I	II	III	IV
0200	No Guiding Section	No Guiding Section	382225 (382205 with 45 deg added)	382226 (382206 with 45 deg added)
0201 – 0399	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)	382205–LLLLL LLLLL = (LLLL x 6) – 00089	382206–LLLLL LLLLL = (LLLL x 6) – 00089
0400 and up	382213–LLLLL LLLLL = (LLLL x 12) – 02400	382214–LLLLL LLLLL = (LLLL x 12) – 02400	382205	382206

Declining Belt Travel*

Section L2 Length – LLLL	I	II	III	IV
0200	No Guiding Section	No Guiding Section	382227 (382207 with 45 deg added)	382228 (382208 with 45 deg added)
0201 – 0399	382213–LLLLL LLLLL = (LLLL x 6)	382214–LLLLL LLLLL = (LLLL x 6)	382207–LLLLL LLLLL = (LLLL x 6) – 00089	382208–LLLLL LLLLL = (LLLL x 6) – 00089
0400 and up	382213–LLLLL LLLLL = (LLLL x 12) – 02400	382214–LLLLL LLLLL = (LLLL x 12) – 02400	382207	382208

Service Parts

Sidewall Cleated Belt Conveyor Configurations



Section and Length Determination

Model Number

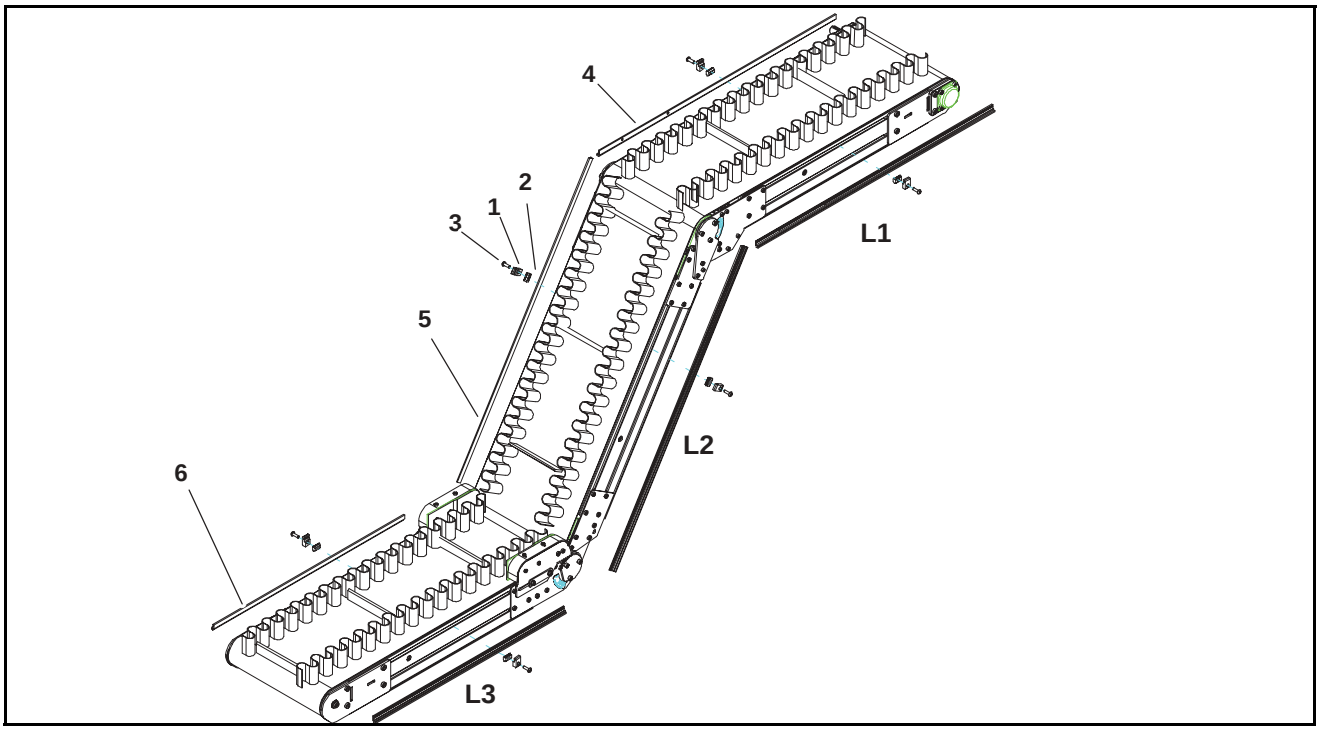
3 E A 0 M WW LLLL−LLLL−LLLL A LLLL

- **Conveyor Section L3 Length Reference**
- **Conveyor Section L2 Length Reference**
- **Conveyor Section L1 Length Reference**
- **E = Elevating**
- **D = Declining**

LLLL = Section length in feet from model number

LLLLL = Guiding Length in inches (see pages 41 thru 42 for length formulas per section)

Z Frame – Cleated Sidewall Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

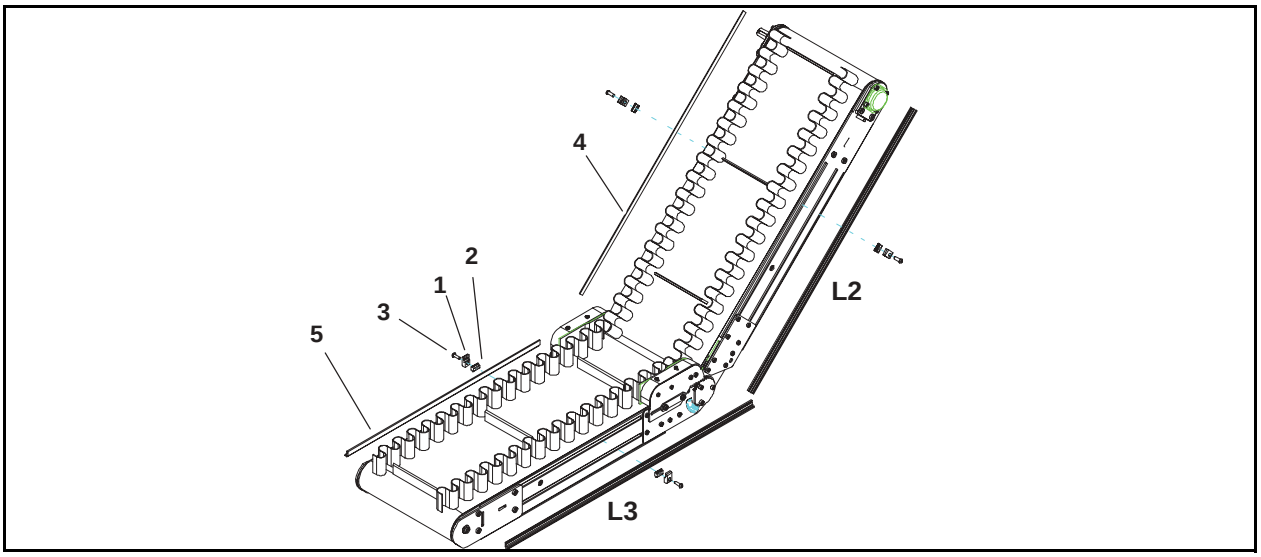
Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

Guides

Item	Part Number	Description	Length Formula
4	380900–LLLLL	Z Frame Section L1 Cleated Sidewall Guide	LLLLL = (LLLL * 12) – 00175
5	380900–LLLLL	Z Frame Section L2 Cleated Sidewall Guide	LLLLL = (LLLL * 12) – 00443
6	380900–LLLLL	Z Frame Section L3 Cleated Sidewall Guide	LLLLL = (LLLL * 12) – 00100

Service Parts

L Frame Horizontal to Incline Cleated Sidewall Guiding



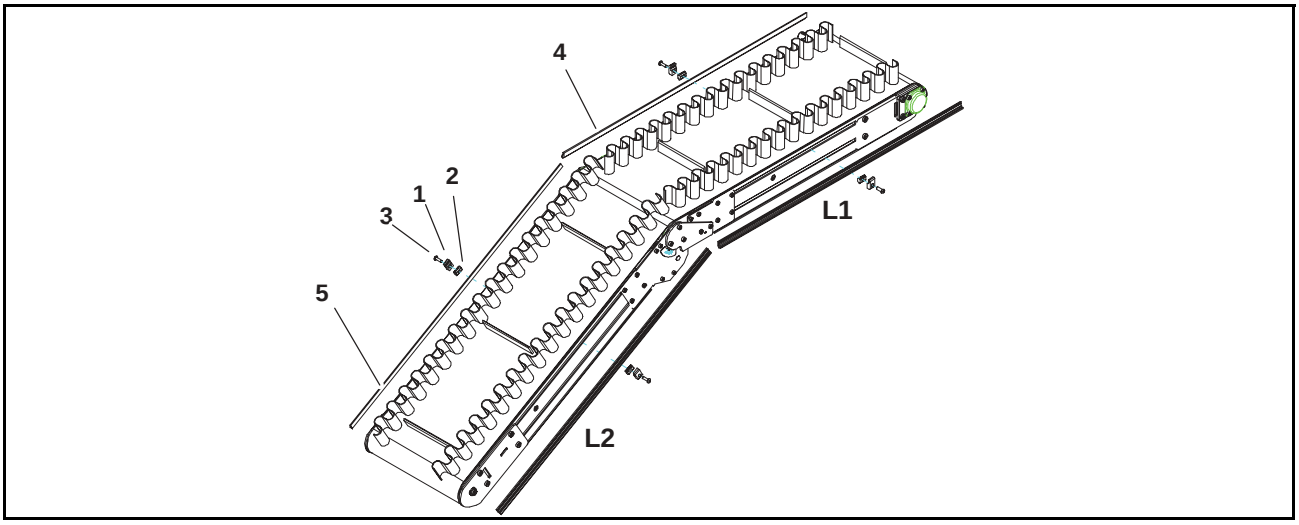
Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

Guides

Item	Part Number	Description	Length Formula
4	380900–LLLLL	Z Frame Section L2 Cleated Sidewall Guide	LLLLL = (LLLL * 12) – 00443
5	380900–LLLLL	Z Frame Section L3 Cleated Sidewall Guide	LLLLL = (LLLL * 12) – 01000

P Frame Nose Over Cleated Sidewall Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

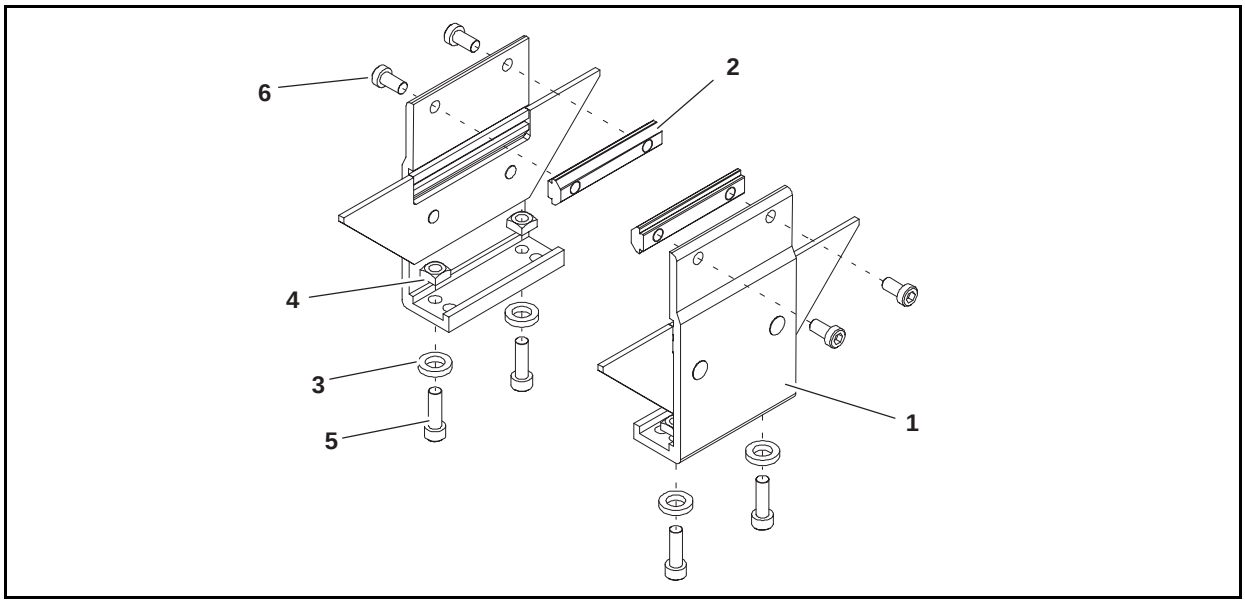
Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

Guides

Item	Part Number	Description	Length Formula
4	380900–LLLLL	Z Frame Section L1 Cleated Sidewall Guide	LLLLL = (LLLL * 12) – 00175
5	380900–LLLLL	Z Frame Section L2 Cleated Sidewall Guide	LLLLL = (LLLL * 12) – 00226

Service Parts

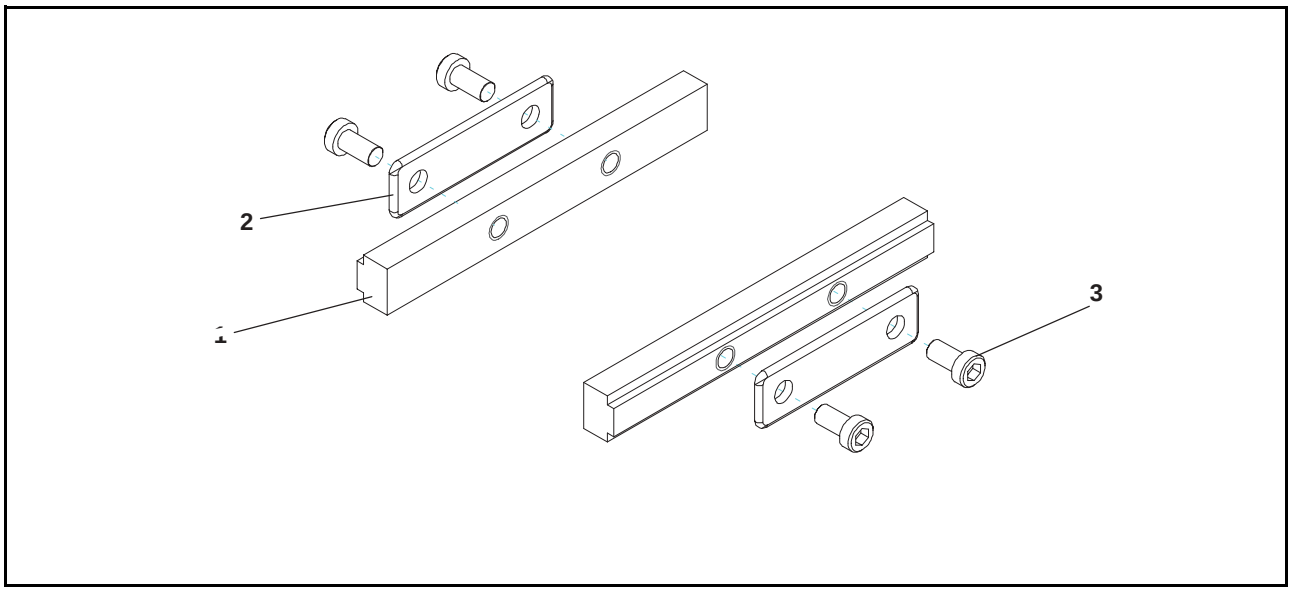
Cleated Belt Mounting Brackets



Item	Part Number	Description
1	240836	Cleated Mounting Assembly
2	300150M	Drop–In Tee Bar
3	605279P	Washer

Item	Part Number	Description
4	807–920	Square Nut M6 5 mm x 10 mm
5	920620M	Socket Head Screw M6 x 20 mm
6	950612M	Low Head Cap Screw M6 x 12 mm

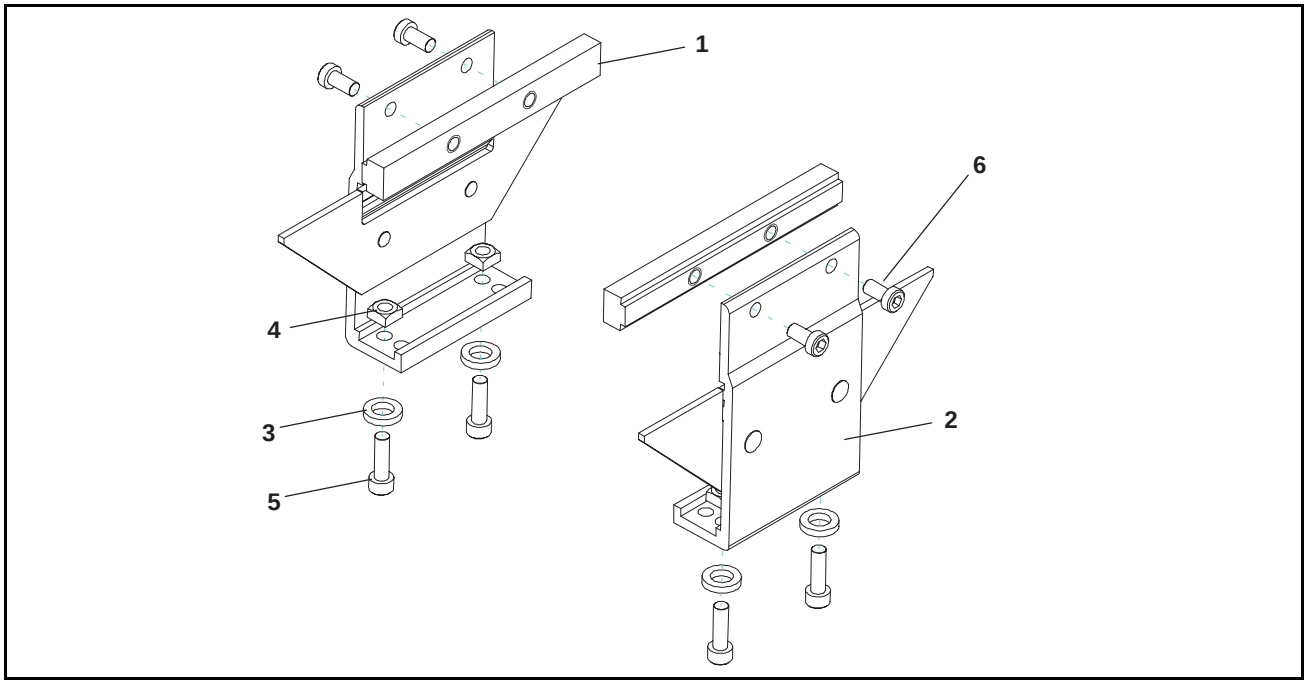
Connecting Assembly without Stand Mount



Item	Part Number	Description
1	240858	Frame Bar Connector
2	240859	Intermediate Clamp Plate

Item	Part Number	Description
3	950612M	Low Head Cap Screw M6 x 12 mm

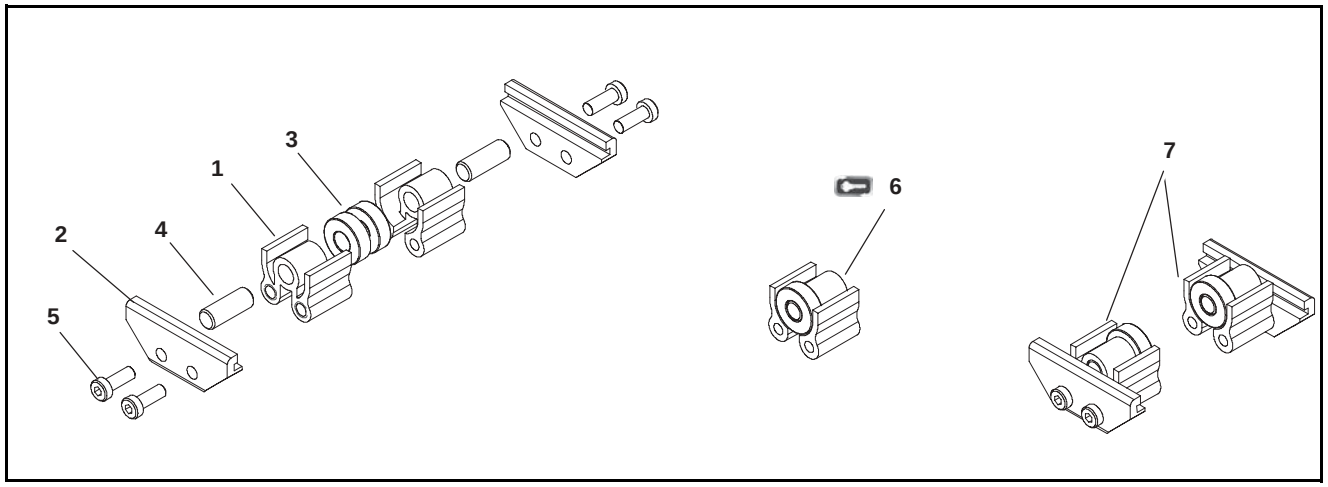
Cleated Belt Connecting Assembly with Stand Mount



Item	Part Number	Description
1	240858	Frame Connector Bar
2	240846	Cleat Stand Bracket Assembly
3	605279P	Washer

Item	Part Number	Description
4	807–920	Square Nut M6 5 mm x 10 mm
5	920620M	Socket Head Screw M6 x 20 mm
6	950612M	Low Head Cap Screw M6 x 12 mm

4” (102 mm) to 24” (610 mm) Cleated Belt Return Roller



Item	Part Number	Description
1	240855	Return Roller Guard – Short
2	240828	Return Roller Clip
3	802–027	Bearing
4	913–108	Dowel Pin

Item	Part Number	Description
5	950616M	Low Head Cap Screw M6 x 16 mm
6	240857	Roller Assembly (Includes Items 1, 3 and 4)
7	240856	4” (102mm) to 6” (152mm) Flat Belt Return Roller Assy

Service Parts

Conveyor Belt Part Number Configuration

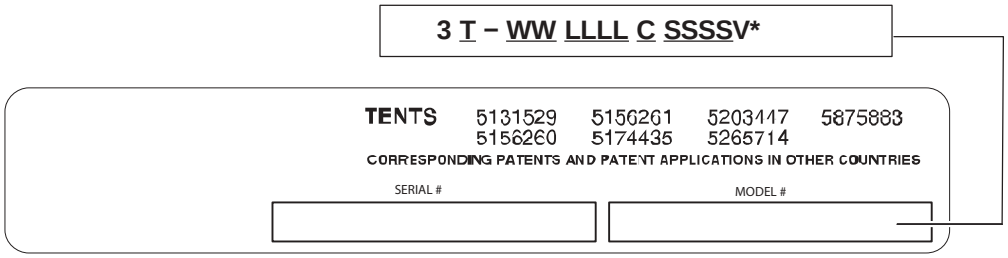


Figure 91

Cleated Belt Part Number Configuration

Refer to Dorner patent plate (Figure 91). From the model number determine, cleated belt ("T"), width ("WW"), length ("LLLL"), cleat type ("C"), and cleat spacing ("SSSS"). Use data to configure belt part number as indicated below. *Add "V" for V-guided belt.

3 T – WW LLLL C SSSS V*

3 _ – __ ____ C ____ V*
(Fill In)

Notes

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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