LPZ Series Cleated and Sidewall Cleated Belt Conveyors

Installation, Maintenance & Parts Manual

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851-520 Rev. F

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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, 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.

A	Conveyor
B	Gearmotor Mounting Package
C	Gearmotor
D	Mounting Brackets
E	Lower Knuckle
F	Upper Knuckle
G	Support Stand
H	Drive End
I	Idler/Tension End

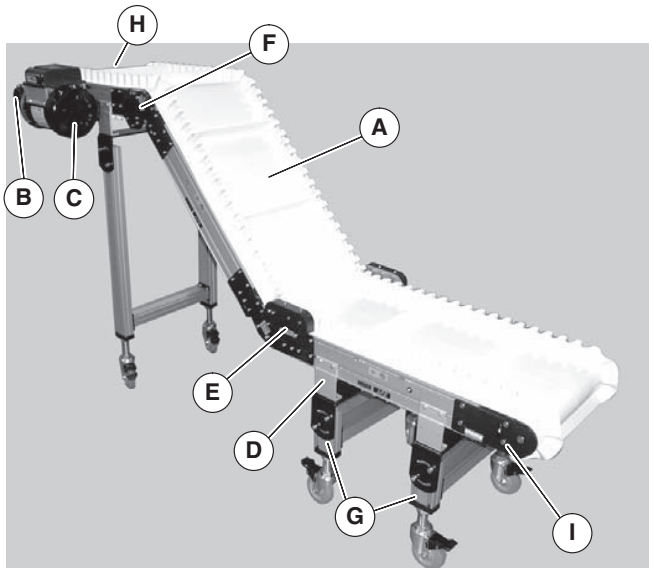

Figure 1

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:

K = 24” (610 mm) (Drive End)

L = 12 ft (3658 mm)

M = 36” (914 mm) (Idler End)

Maximum Angle:

N = 0 and 25 to 60 degrees

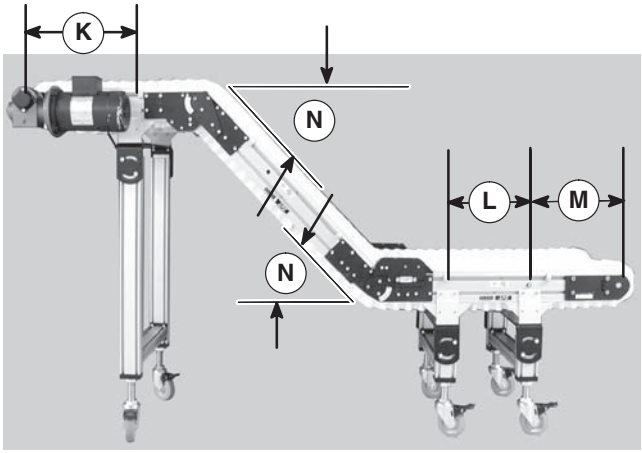

Figure 2

Specifications

Specifications:

Conveyor Width Reference (WW)	08	10	12	18	24
Conveyor Belt Width	8” (203mm)	10” (254mm)	12” (305mm)	18” (457mm)	24” (609mm)
Conveyor Startup Torque*	10 in-lb (1.1Nm)	13 in-lb (1.5Nm)	15 in-lb (1.7Nm)	25 in-lb (2.8Nm)	0 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 O) for setup.

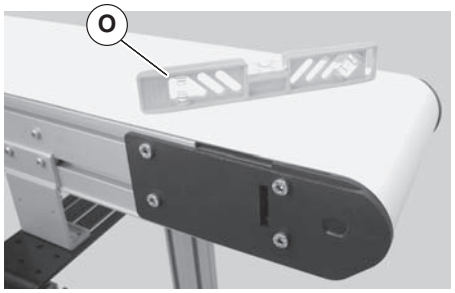

Figure 3

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:

E	Lower knuckle
F	Upper knuckle
P	Conveyor frame with upper knuckle
Q	Conveyor frame with idler end and lower knuckle
R	Belt
S	Conveyor frame with lower knuckle

1. Locate components (Figure 4).

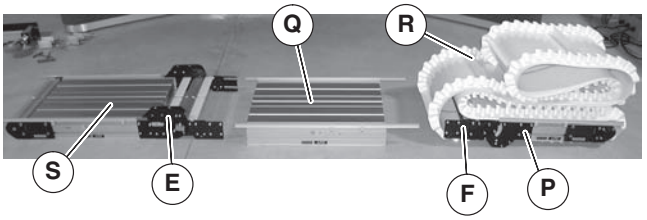

Figure 4

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

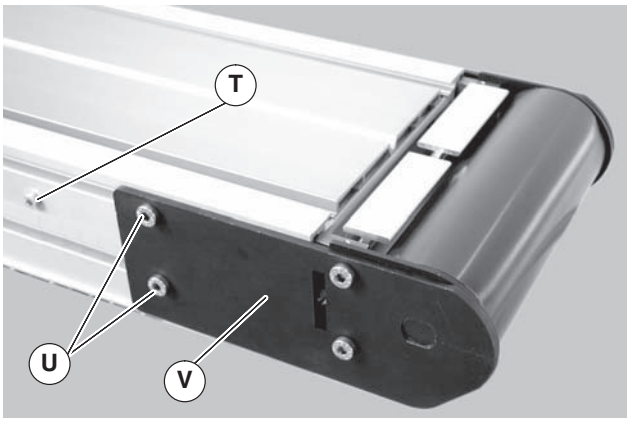

Figure 5

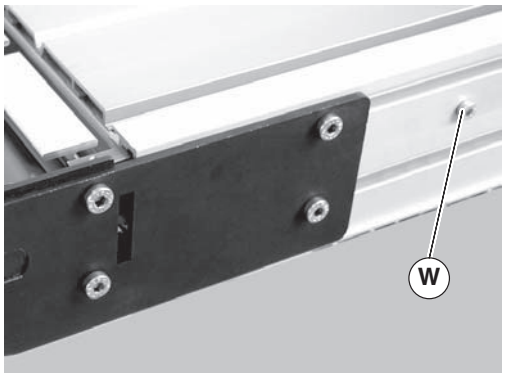

Figure 6

3. Roll out conveyor belt (Figure 7, item R). Loosen (4) screws (X) on both sides of knuckle (E). Slide frame (Q) into knuckle (E). Tighten screws (X) to 60 in-lb (7 N–m) on both sides of conveyor.

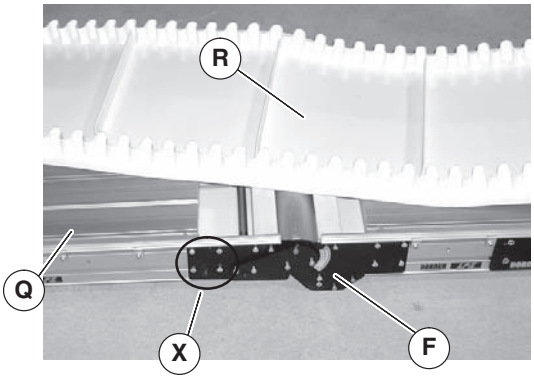

Figure 7

4. Slide frame (Figure 8, item Q) into lower knuckle (E). Tighten screws (X) to 60 in-lb (7 N–m) on both sides of conveyor.

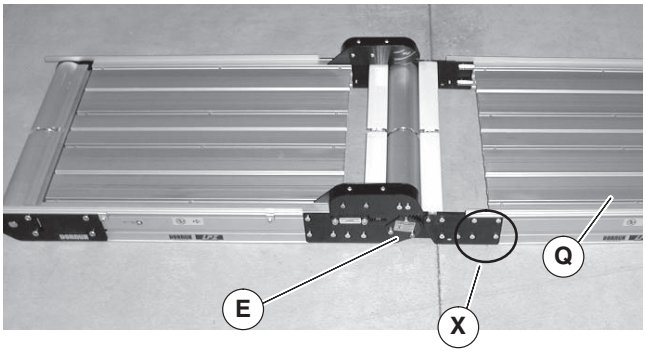

Figure 8

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

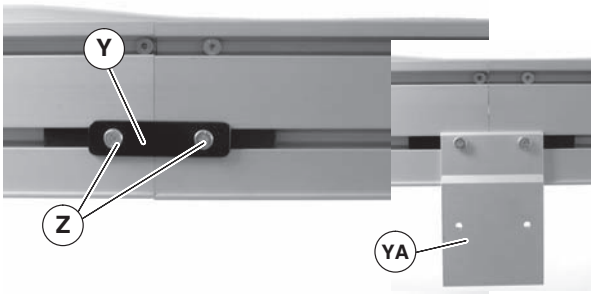

Figure 9

6. Slide belt (Figure 10, item R) over assembled conveyor sections (AA).

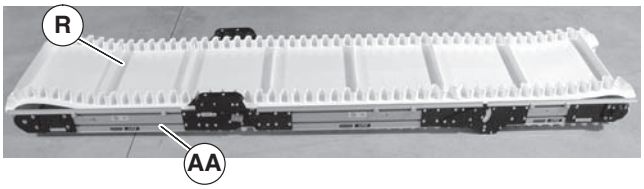

Figure 10

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.

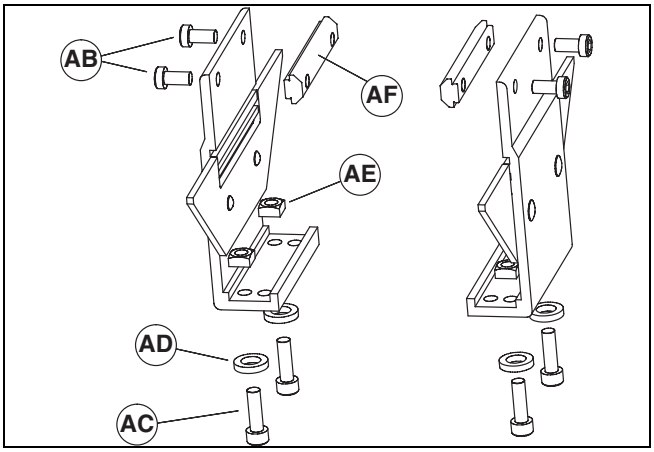

Figure 11

2. Remove screws (Figure 11, item AB & AC), washers (AD), nuts (AE) and T-bars (AF) from brackets.
3. Insert T-bars (Figure 11, item AF) into conveyor side slots (Figure 12, item AF). Fasten brackets (Figure 12, item AG) to conveyor with mounting screws (AB).

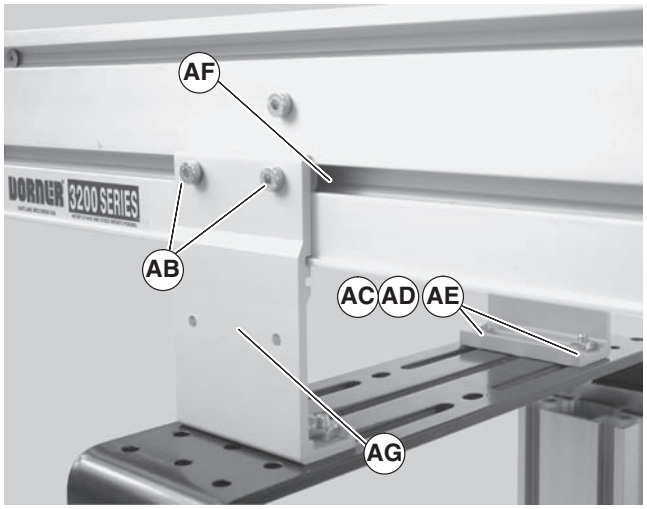

Figure 12

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

Return Rollers

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

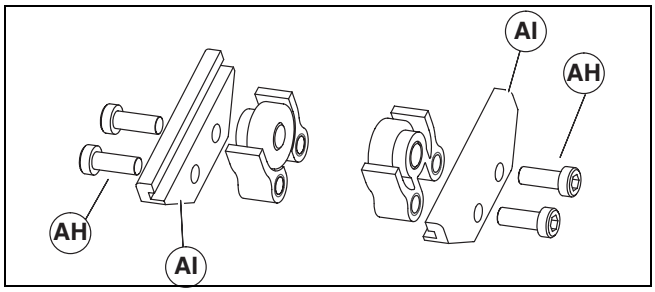

Figure 13

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

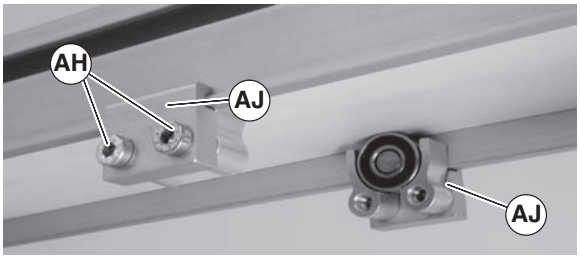

Figure 14

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 (part # 625619)
- 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

NOTE

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

Cleaning

IMPORTANT

Do not use belt cleaners that contain alcohol, acetone, Methyl Ethyl Ketone (MEK) or other harsh chemicals.

Use Dorner Belt Cleaner (part # 625619). 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 T), push in head plate assembly (V): Loosen the pinion locking screw (T), adjust the pinion torque screw (Figure 16, item W). On both sides of conveyor, loosen the two tail clamp bolts (Figure 15, item U), and push head plate assembly (V) inward.

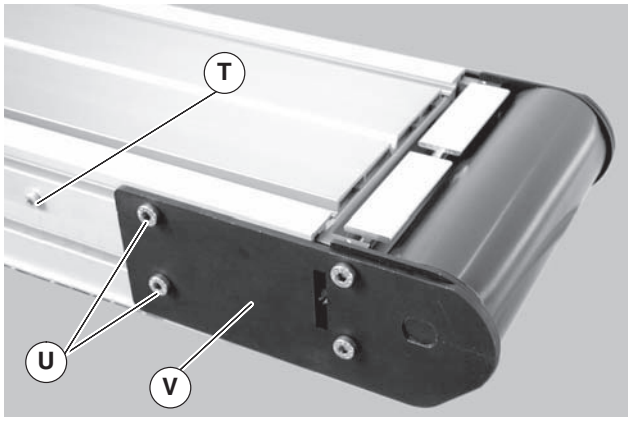

Figure 15

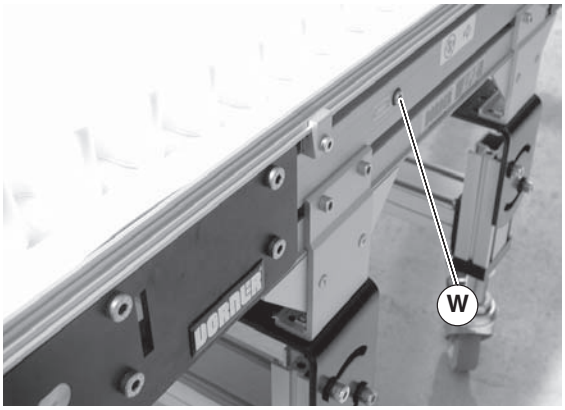

Figure 16

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

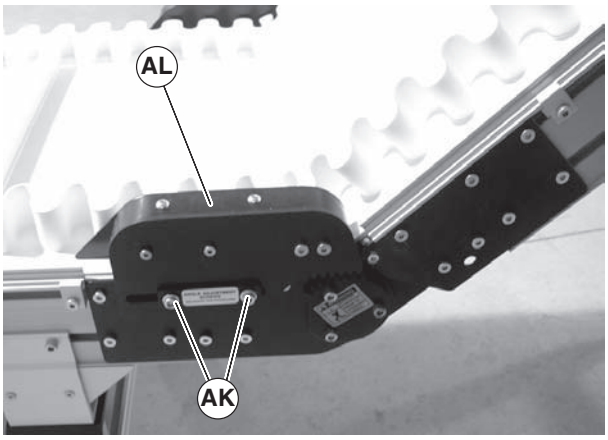

Figure 17

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

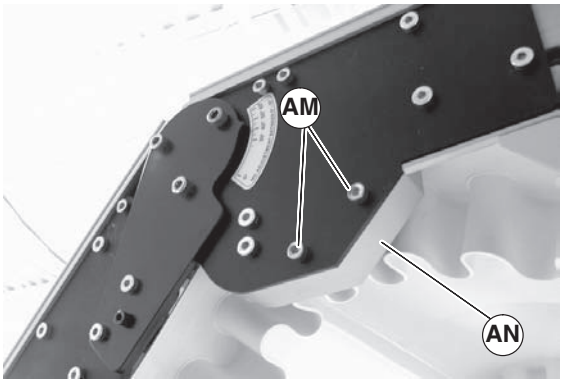

Figure 18

5. Remove screws (Figure 19, item AO) and remove roller bearing (AP).

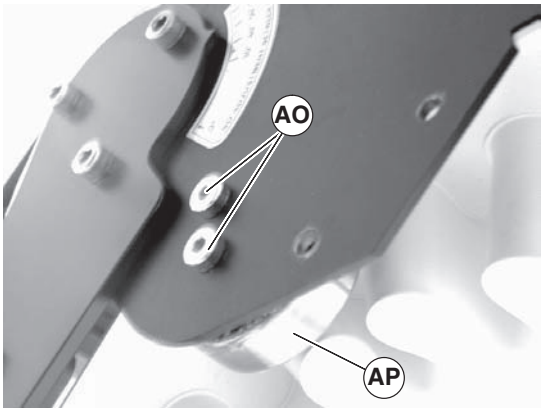

Figure 19

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

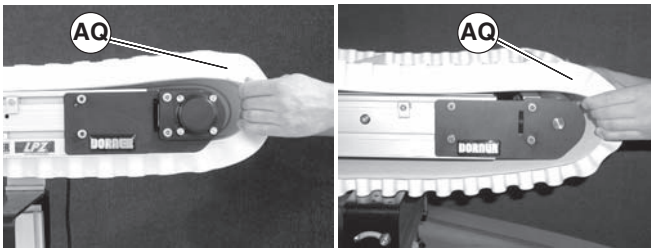

Figure 20

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 AR) at both ends of the conveyor. Place an additional support stand under the drive motor (AS), if equipped. See WARNING.

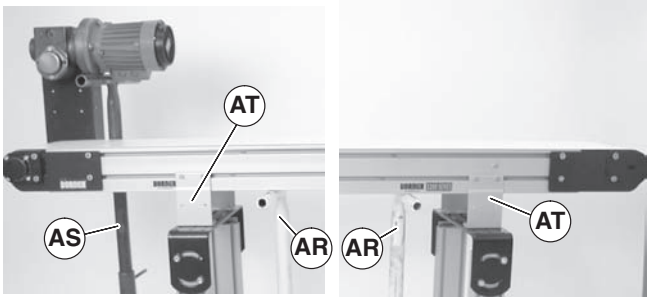

Figure 21

2. Remove mounting brackets (Figure 21, item AT) 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 T), push in head plate assembly (V): Loosen the pinion locking screw (T), adjust the pinion torque screw (Figure 23, item W). On both sides of conveyor, loosen the two tail clamp bolts (Figure 22, item U), and push head plate assembly (V) inward.

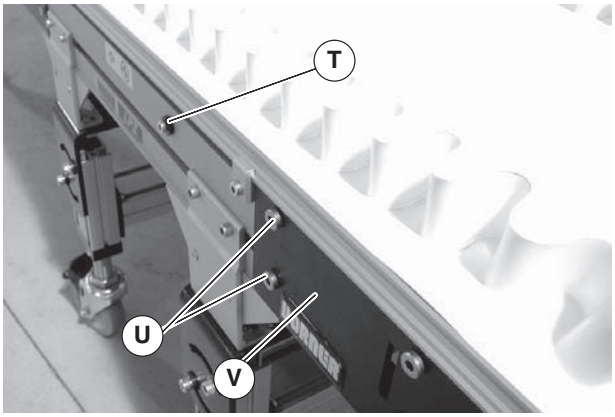

Figure 22

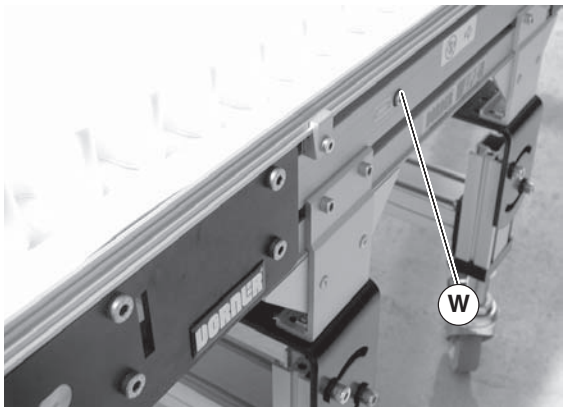

Figure 23

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

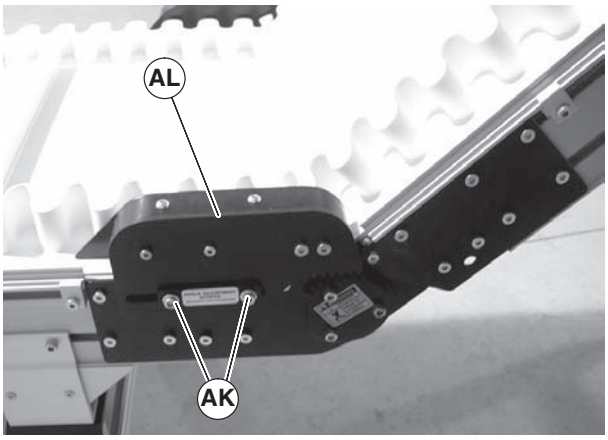

Figure 24

6. If equipped, remove screws (Figure 25, item AM) on both sides of knuckle and remove guard (AN).

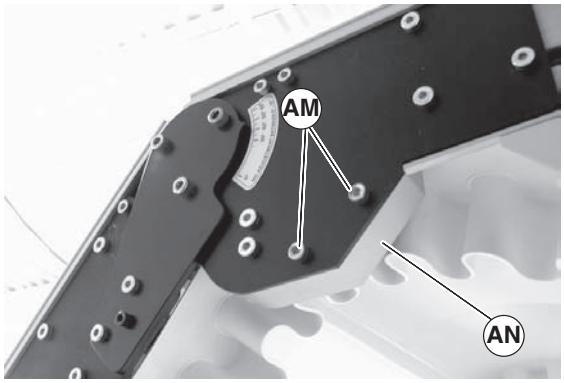

Figure 25

7. Remove screws (Figure 26, item AO) and remove roller bearing (AP).

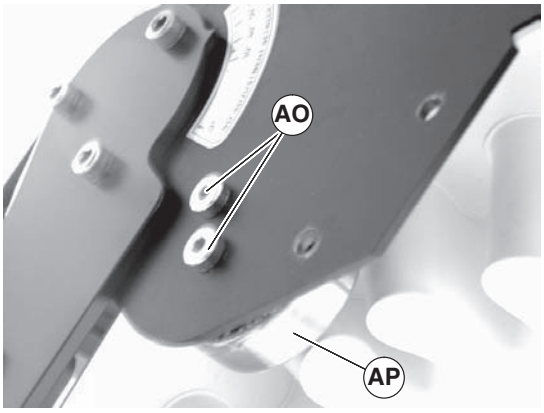

Figure 26

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

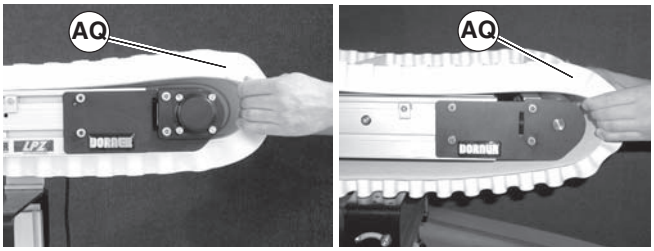

Figure 27

Belt Installation for Conveyor without Stands or Gearmotor Mounting Package

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

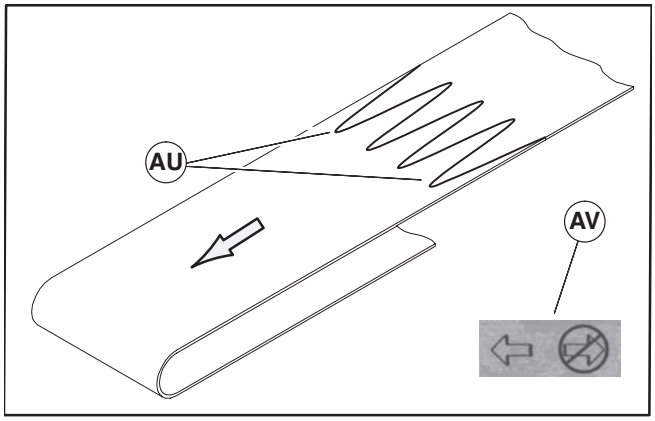

Figure 28

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

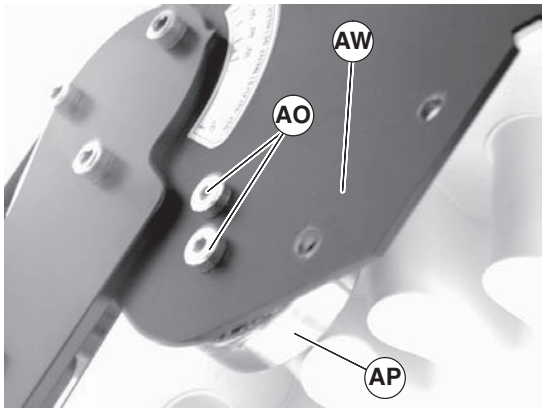

Figure 29

4. Install knuckle guard (Figure 30, item AN) on both sides of knuckle with screws (AM). Tighten screws to 25 in–lbs (3 N–m).

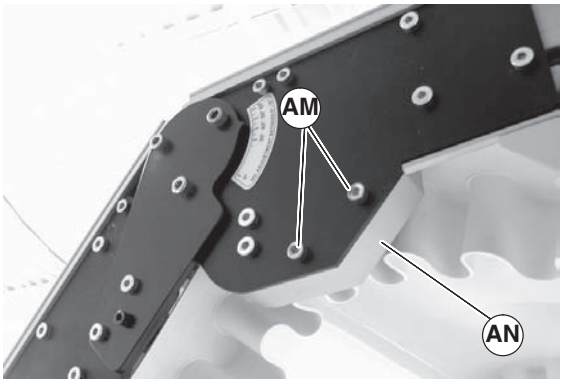

Figure 30

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

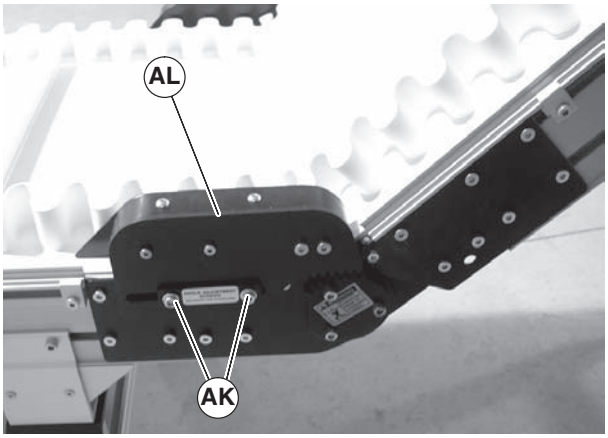

Figure 31

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

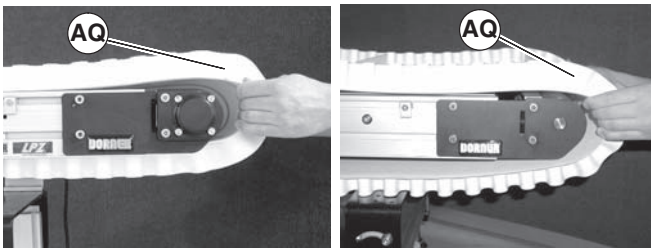

Figure 32

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 AP) into knuckle plate (AW) using screws (AO).

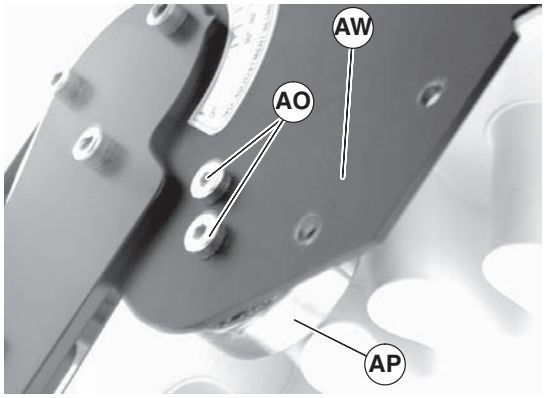

Figure 33

6. Install knuckle guard (Figure 34, item AN) on both sides of knuckle with screws (AM). Tighten screws to 25 in–lbs (3 N–m).

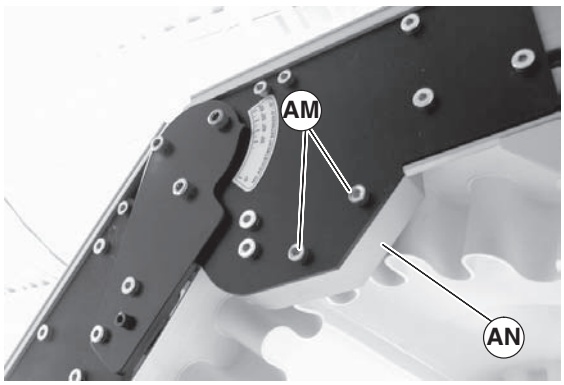

Figure 34

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

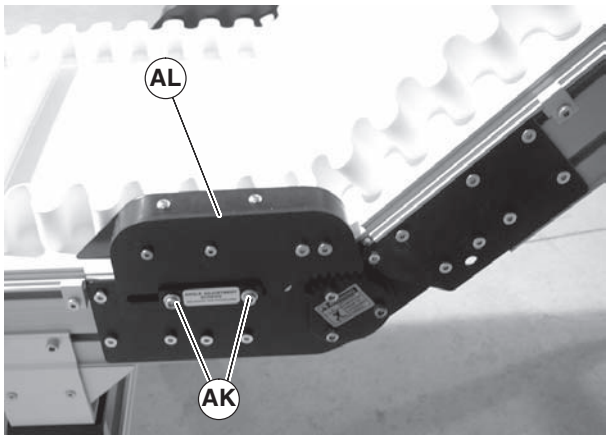

Figure 35

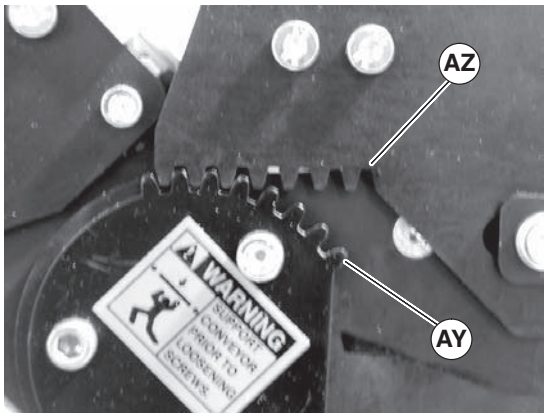

Figure 36

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 T), loosen the two tail clamp bolts (U), on both sides of conveyor.

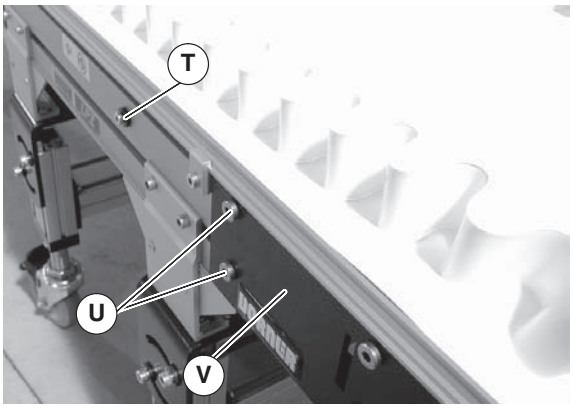

Figure 37

2. With 5mm hex wrench, hold pinion torque screw (Figure 38, item W). Loosen the pinion locking screw (Figure 37, item T) and turn the pinion torque screw (W) 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 18ð & 24ð (457 & 610 mm) width conveyors

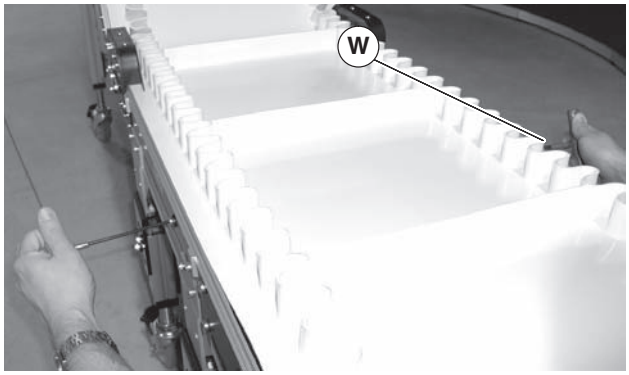

Figure 38

NOTE

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

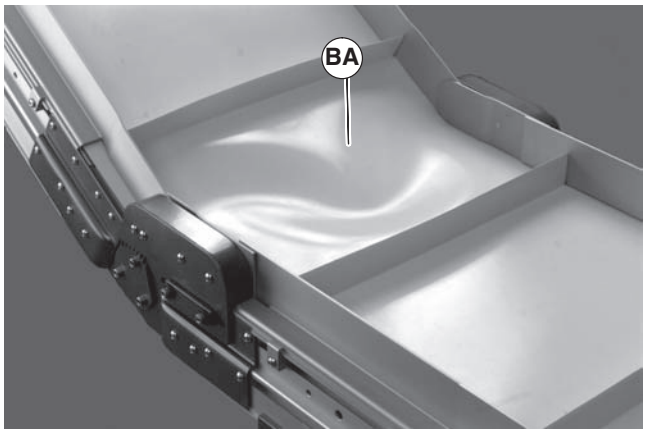

Figure 39

NOTE

On pinion gear, do not exceed a torque of 100 in-lb (11.3 N–m). 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 BB) the belt must be replaced.

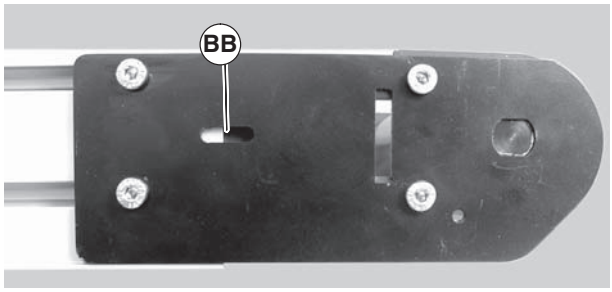

Figure 40

4. After adjusting proper tensioning, tighten the pinion locking screw (Figure 37, item T) to 69 in–lbs (7.8 N–m), and tighten tail clamp bolts (Figure 37, item U) 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.

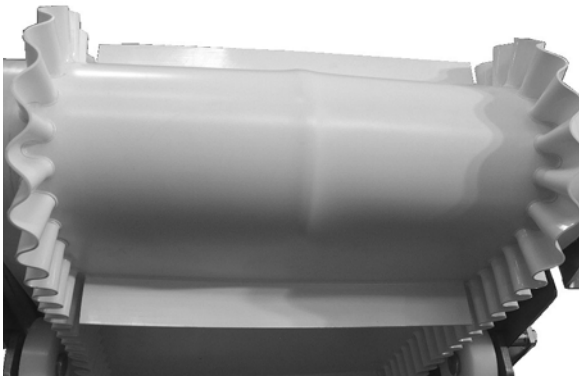

Figure 41

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 T) and rotate the pinion torque screw (Figure 38, item W) clockwise until contact with the head plate is made, then tighten the pinion locking screw (T) to 69 in–lbs (7.8 N–m)
2. On the side of conveyor to be adjusted, loosen two (2) tail clamp screws (Figure 42, item U).

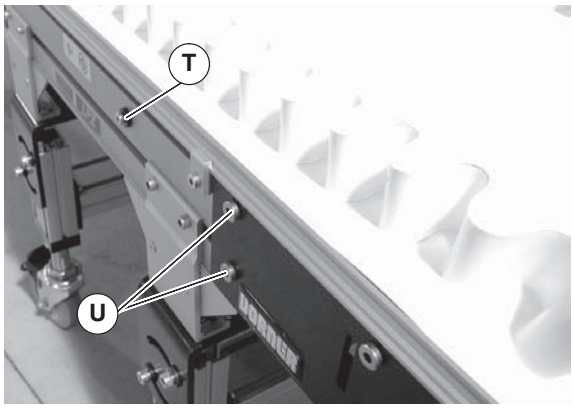

Figure 42

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

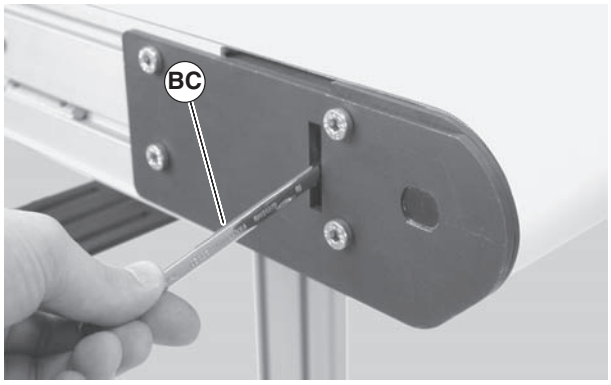

Figure 43

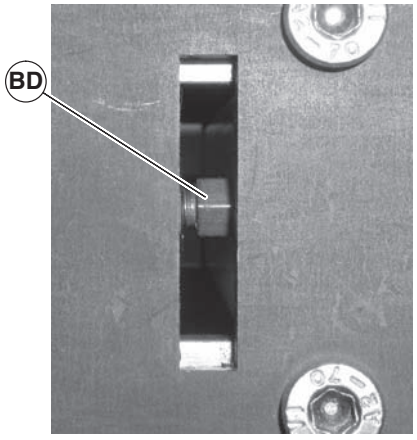

Figure 44

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

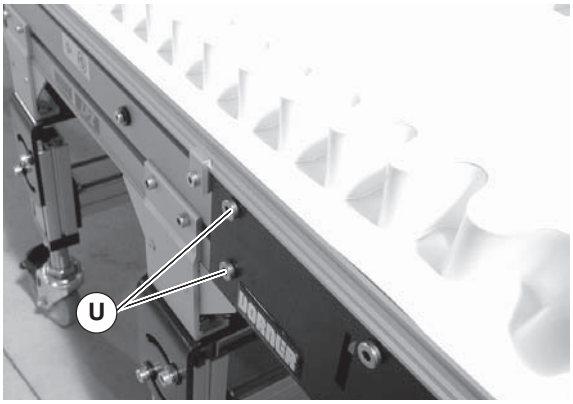

Figure 45

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 BE) on both sides of the conveyor.

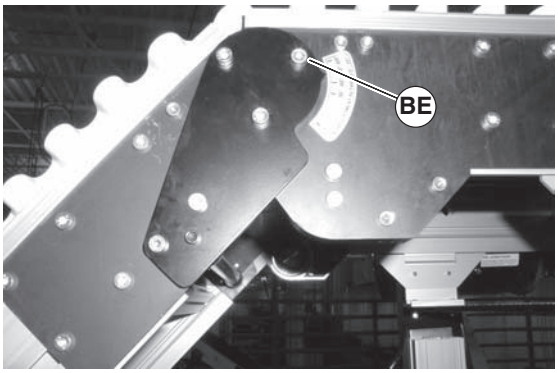

Figure 46

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

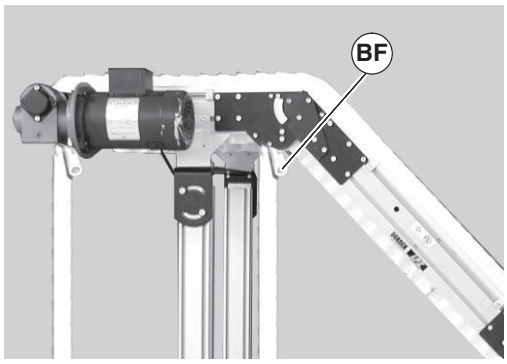

Figure 47

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

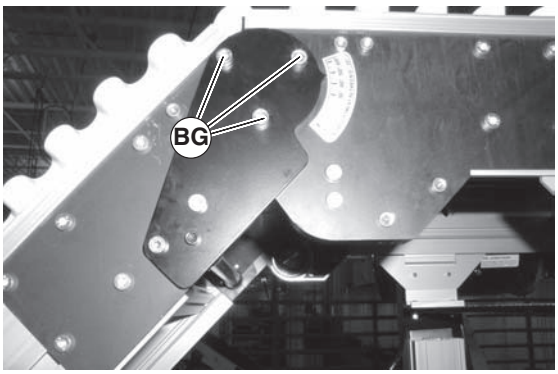

Figure 48

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

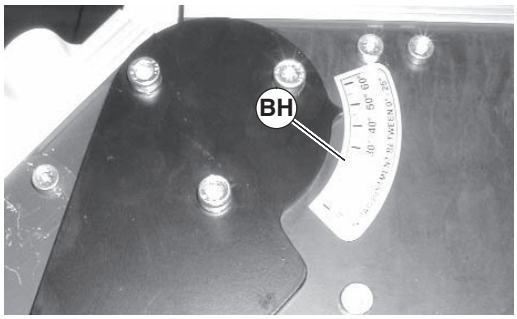

Figure 49

5. Tighten screws (Figure 48, item BG) on both sides of knuckle to 100 in–lbs (12 N–m). If applicable, replace the gold locking screw (Figure 46, item BE).

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 BE) on both sides of the conveyor.
2. Place temporary support (Figure 50, item BF) under conveyor sections.

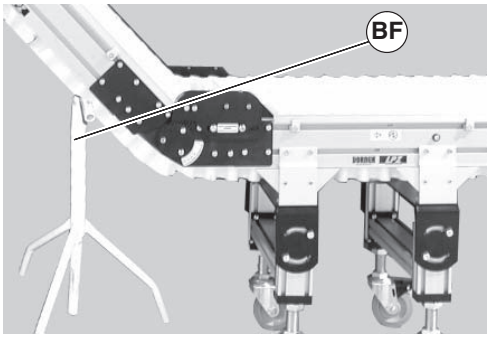

Figure 50

3. Loosen screws (Figure 51, item AK and BI) on both sides of knuckle.

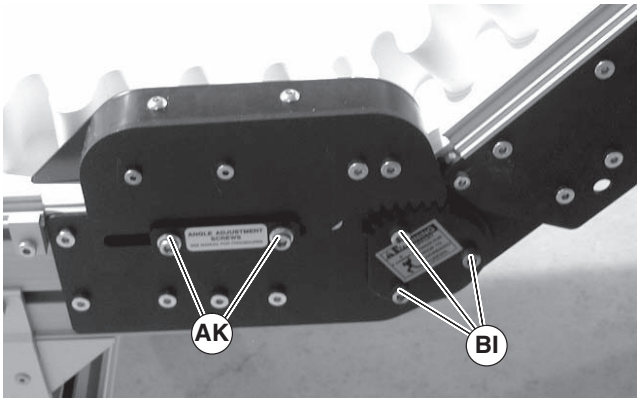

Figure 51

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

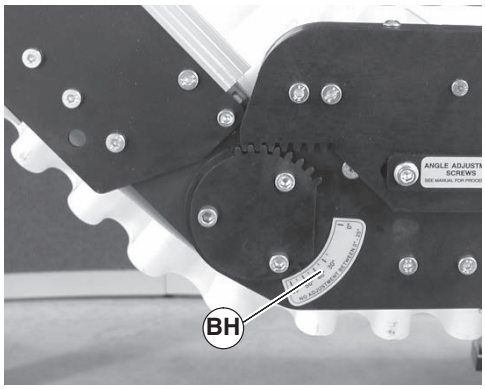

Figure 52

5. Tighten screws (Figure 48, item BG) on both sides of knuckle to 100 in–lbs (12 N–m).

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.

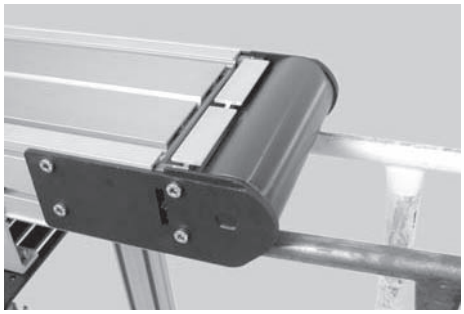

Figure 53

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

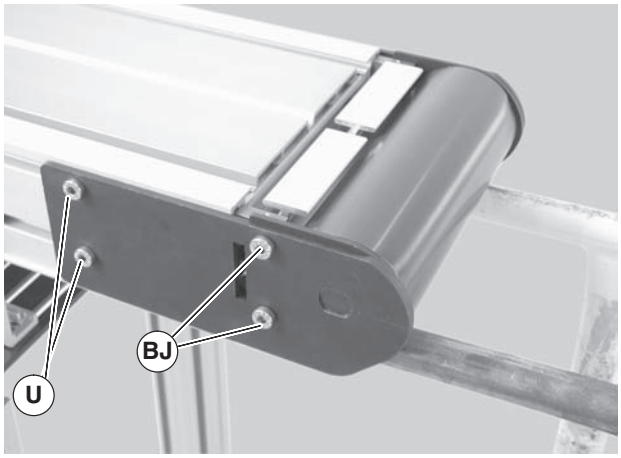

Figure 54

3. Pull back the outer headplate (Figure 55, item V) and remove the inner spacer (BK).

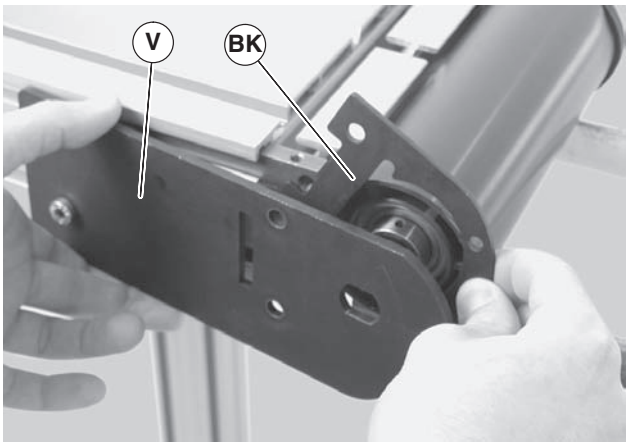

Figure 55

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

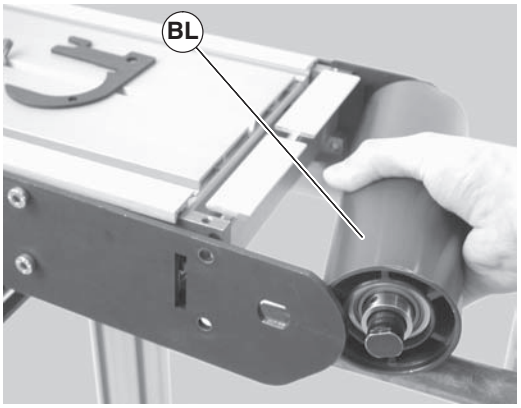

Figure 56

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

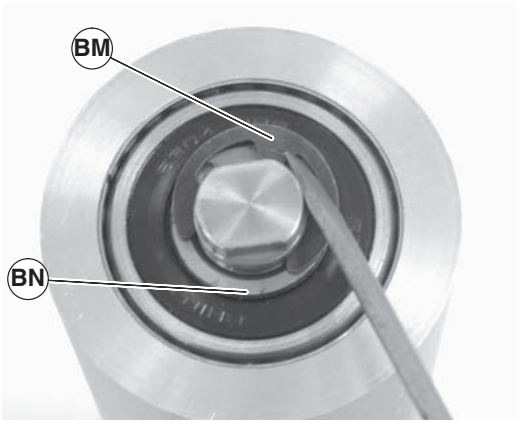

Figure 57

6. Slide the shaft assembly (Figure 58, item BO) out of the pulley (BL).

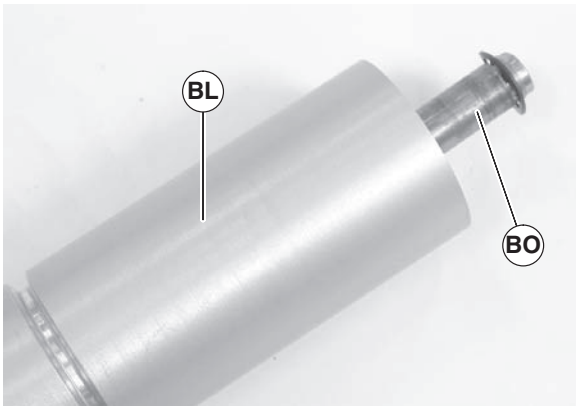

Figure 58

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 BP) to support Gearmotor.

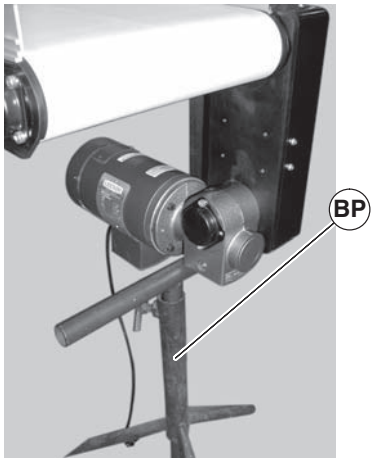

Figure 59

b. Remove four (4) screws (Figure 60, item BQ) and remove cover (BR).

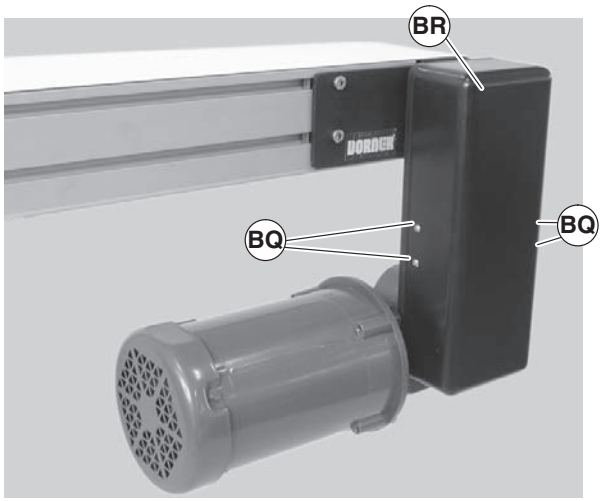

Figure 60

c. Loosen tensioner (Figure 61, item BS).

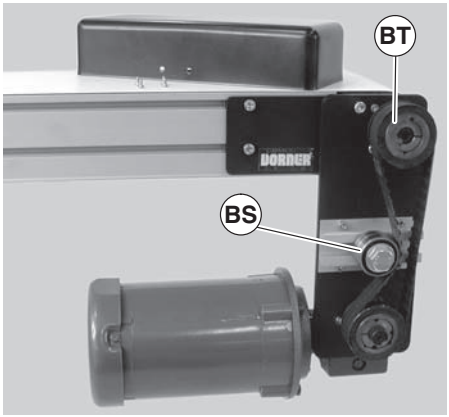

Figure 61

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

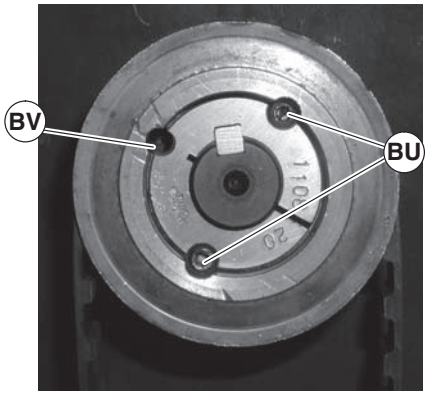

Figure 62

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

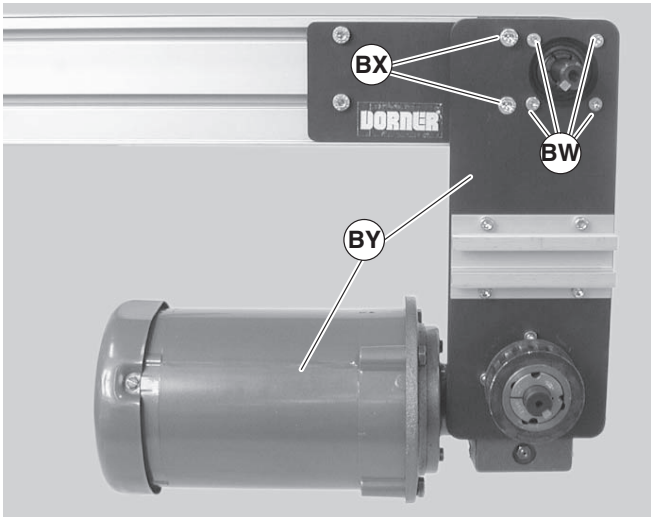

Figure 63

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

Side Mount Drives

a. Temporarily support Gearmotor

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

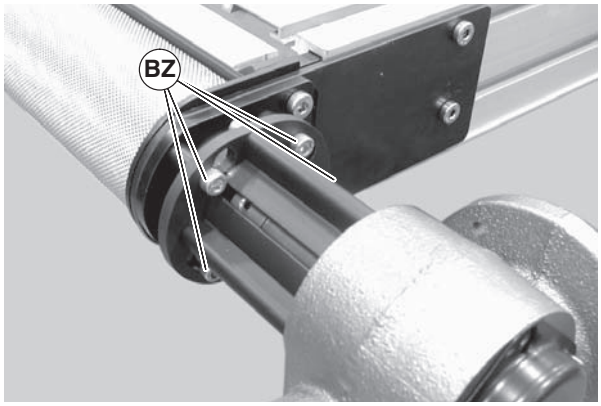

Figure 64

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

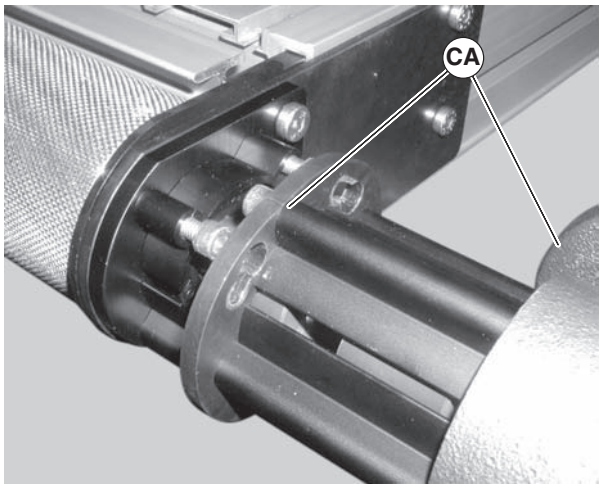

Figure 65

d. Remove the four (4) lock screws (Figure 66, item BZ) and the short side drive guard (CB).

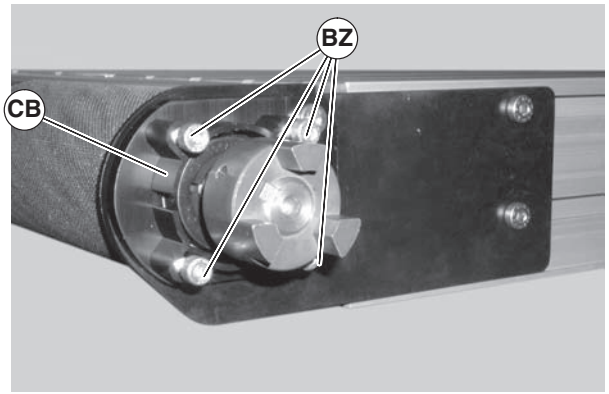

Figure 66

2. Temporarily support the drive pulley.

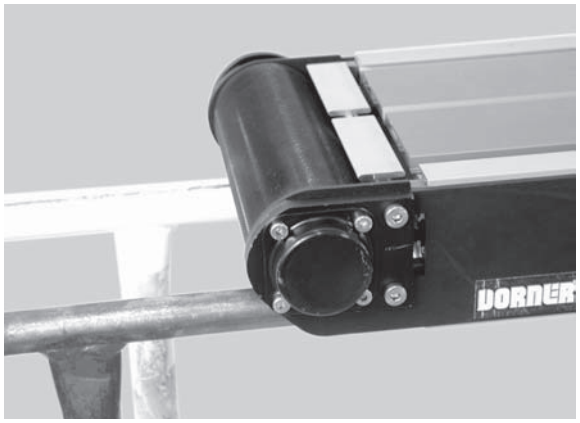

Figure 67

3. Remove four shaft cover screws (Figure 68, item CC). Remove the shaft cover (CD).

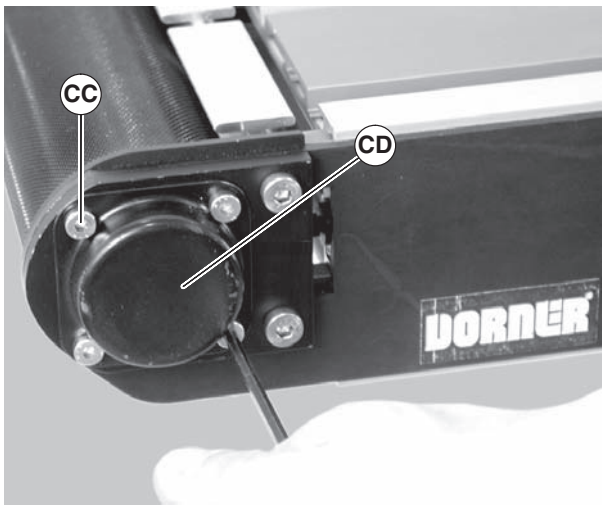

Figure 68

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

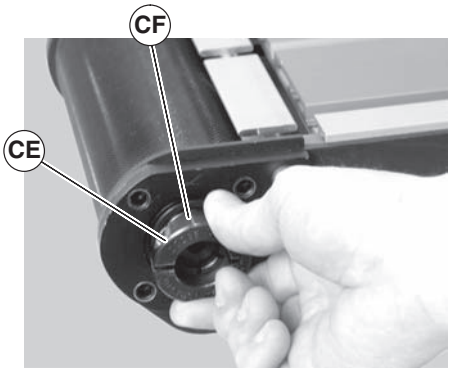

Figure 69

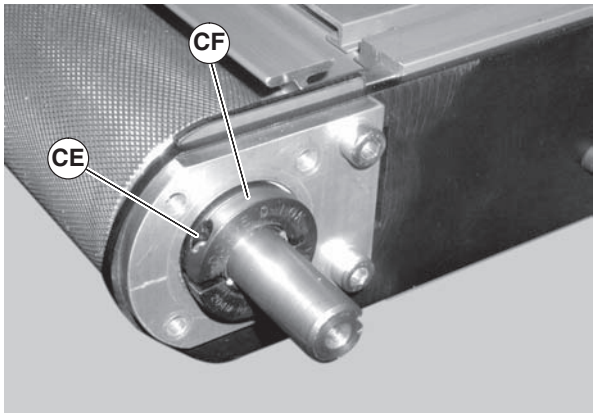

Figure 70

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

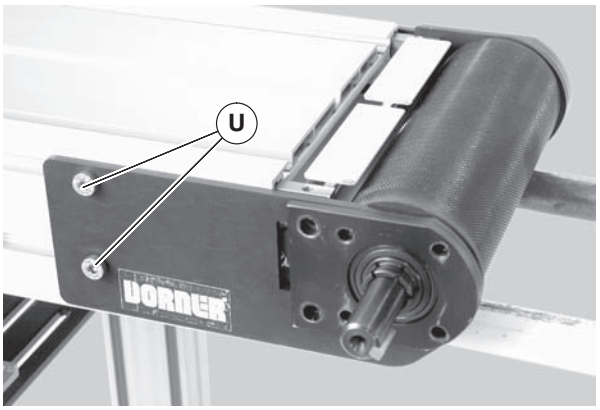

Figure 71

6. Remove the outer headplate assembly (Figure 72, item CG), and inner spacer (BK).

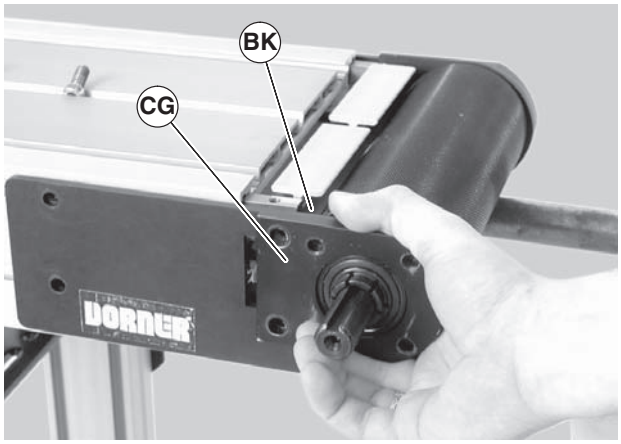

Figure 72

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

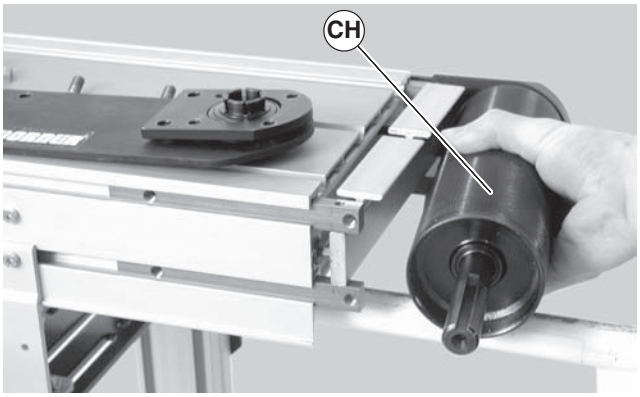

Figure 73

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.

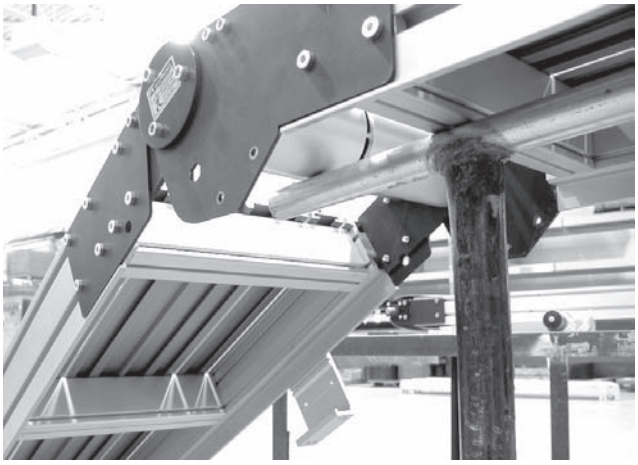

Figure 74

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

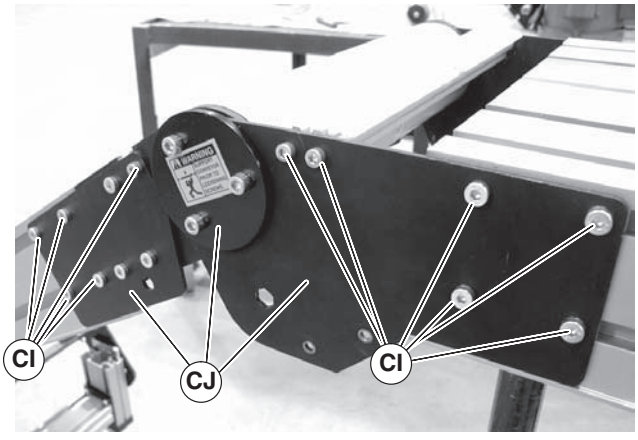

Figure 75

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

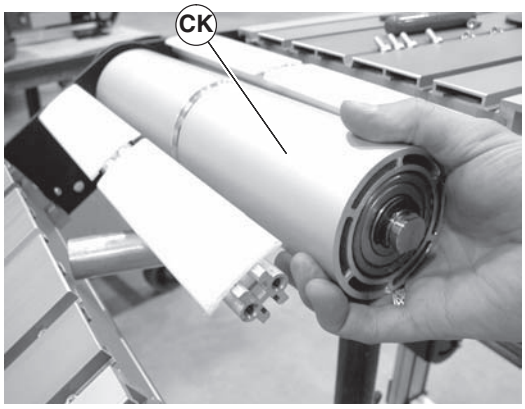

Figure 76

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

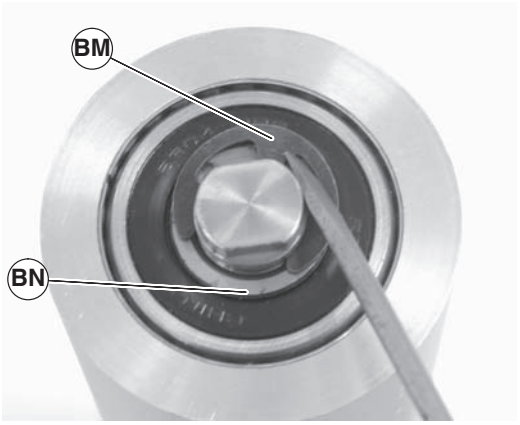

Figure 77

6. Slide the shaft assembly (Figure 78, item BO) out of the pulley (CK).

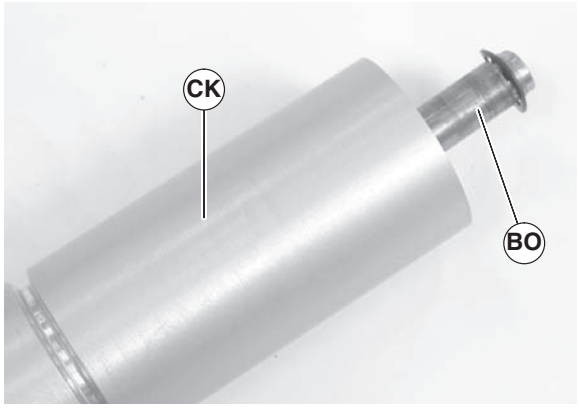

Figure 78

D – Lower Knuckle Idler Pulley Removal

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

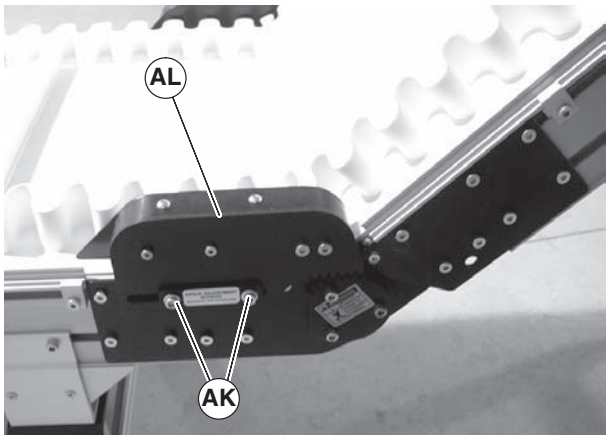

Figure 79

2. Temporarily support the knuckle idler pulley.

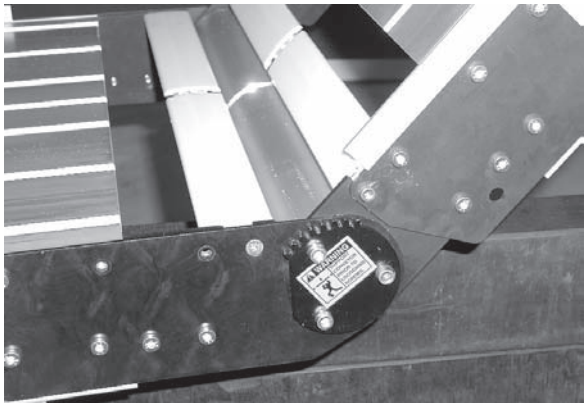

Figure 80

3. On one side of knuckle, remove screws (Figure 81, item CL) and knuckle plate assembly (CM).

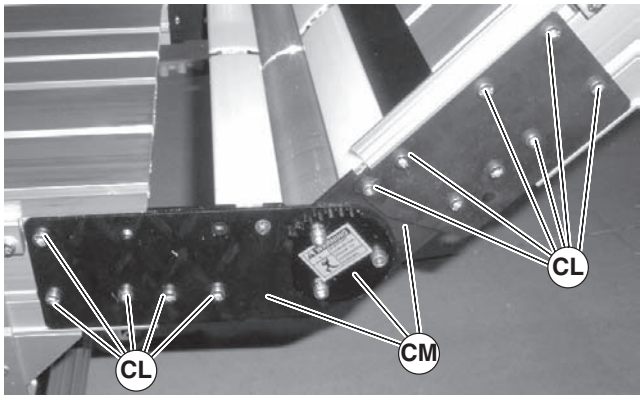

Figure 81

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

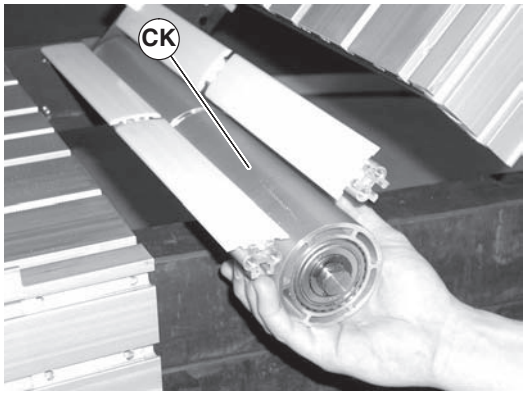

Figure 82

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

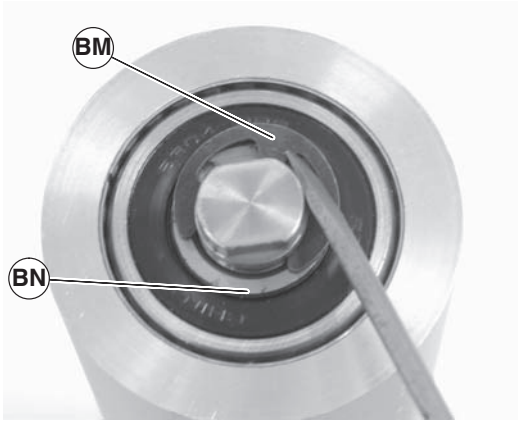

Figure 83

6. Slide the shaft assembly (Figure 84, item BO) out of the pulley (CK).

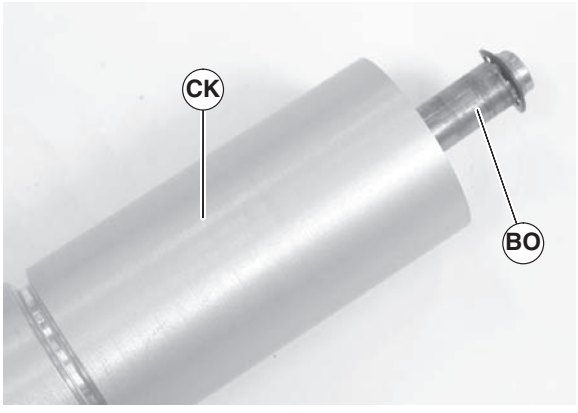

Figure 84

E – Knuckle Return Roller Removal

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

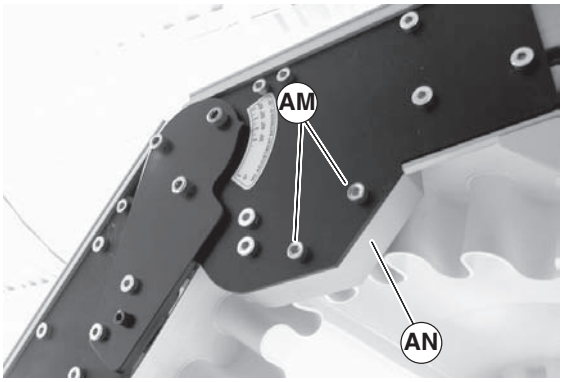

Figure 85

2. Remove screws (Figure 86, item AO) and remove roller bearing (AP).

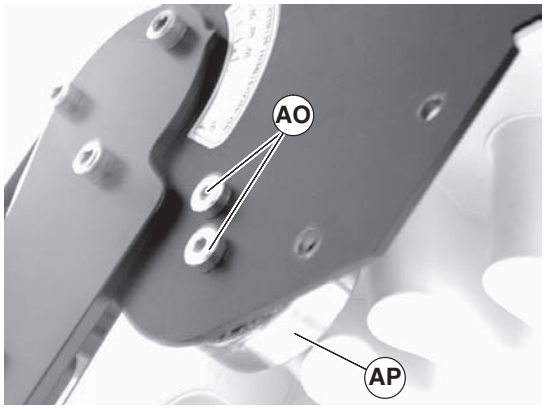

Figure 86

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 CN) to align with slots (CO) in bearing housing. Then remove bearing.

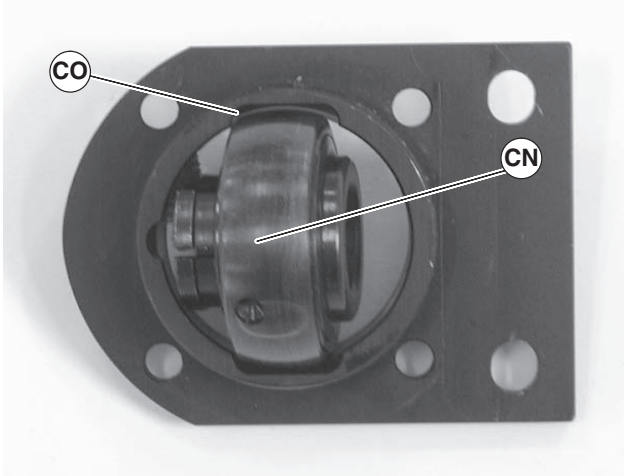

Figure 87

Replacement

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

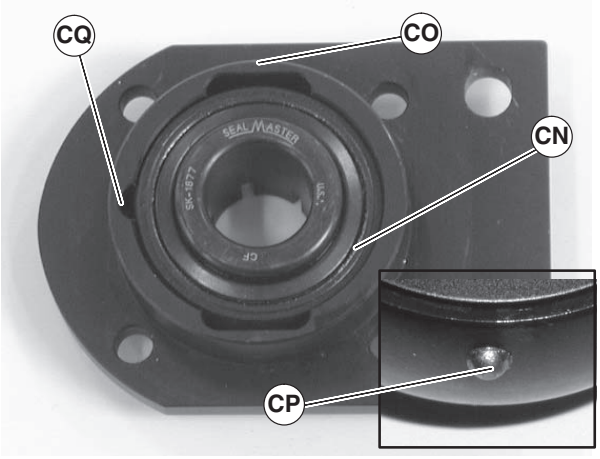

Figure 88

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 AM) on the worn bearing side of the knuckle and remove guard (AN).

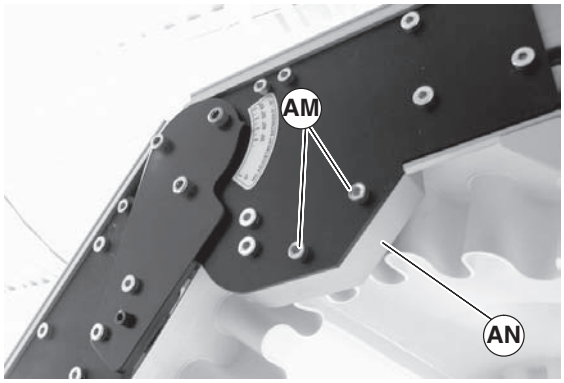

Figure 89

2. Remove screws (Figure 90, item AO) and remove worn roller bearing (AP).

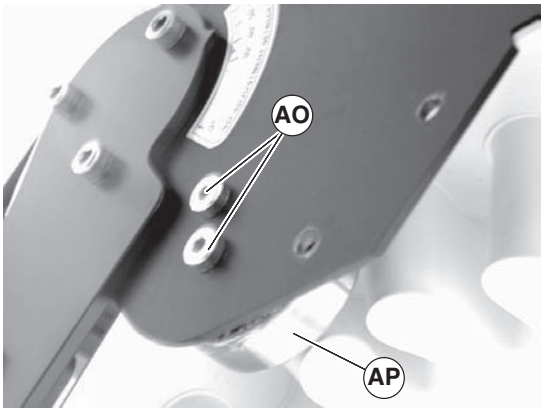

Figure 90

3. Replace worn bearing with new bearing, use screws (Figure 90, item AO) to attach new bearing.
4. Replace guard (Figure 89, item AN) and secure with screws (AM) 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

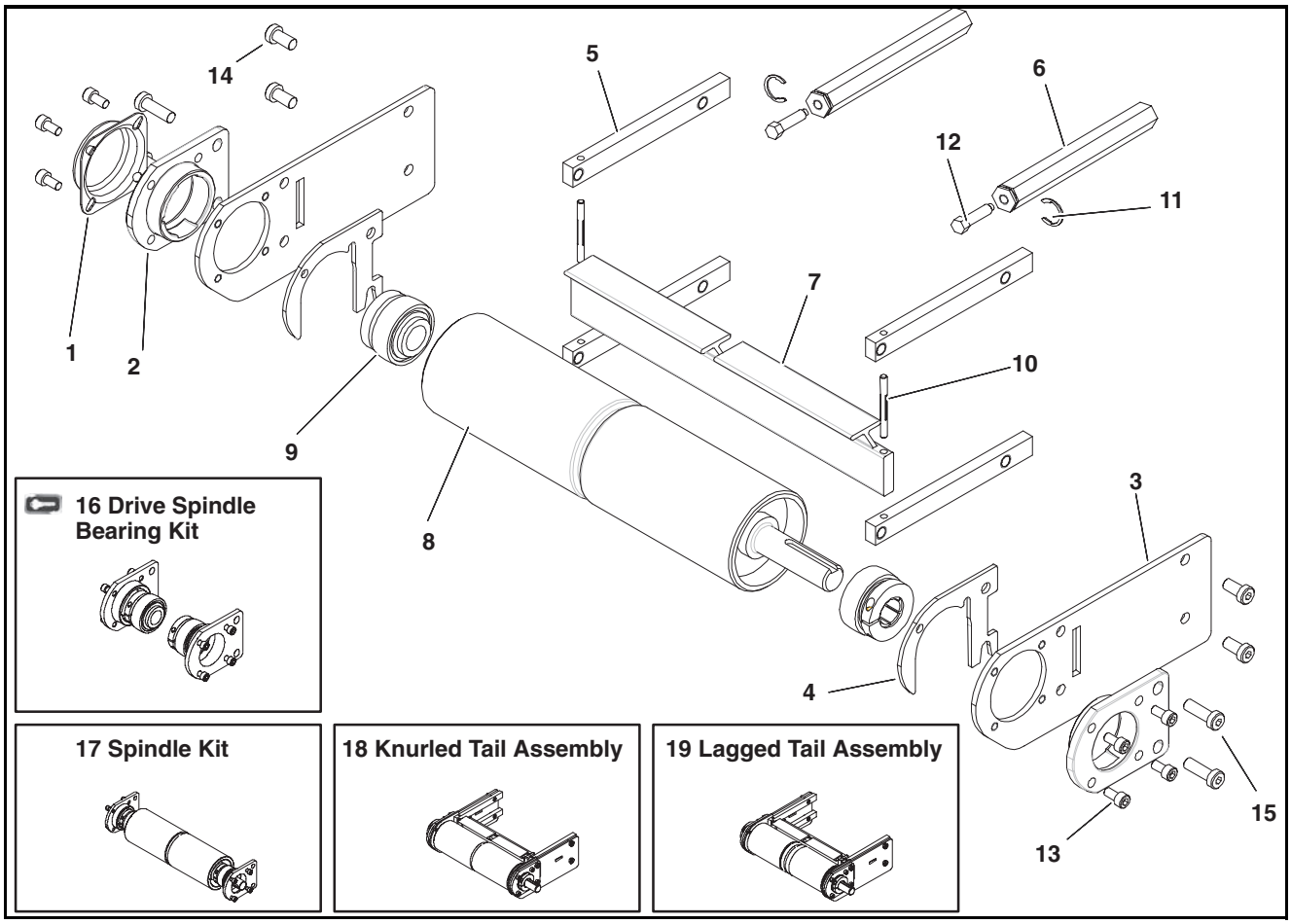

Figure 91

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	807–1125	Groove Pin
11	807–1151	Retaining Ring
12	807–1152	Hex Head Cap Screw M6 x 20mm
13	920612M	Socket Head Screw M6 x 12mm
14	920893M	Low Head Socket Screw M8x16mm
15	920895M	Low Head Socket Screw M8x25mm
16	32D	Drive Spindle Bearing Kit (Includes Items 2, 9 and 13)

Item	Part Number	Description
17	32KD–WW	Knurled Spindle Kit (Includes Items 2, 8, 9 and 13)
	32LD–WW	Lagged Spindle Kit (Includes Items 2, 8, 9 and 13)
18	32KDTA–WW	Knurled Tail Assy. Position A and B (Includes items 1 through 5, 7 through 10 and 13 through 15)
	32KDTD–WW	Knurled Tail Assy. Position C and D (Includes items 1 through 5, 7 through 10 and 13 through 15)
19	32LDTA–WW	Lagged Tail Assy. Position A and B (Includes items 1 through 5, 7 through 10 and 13 through 15)
	32LDTA–WW	Lagged Tail Assy. Position C and D (Includes items 1 through 5, 7 through 10 and 13 through 15)
WW = Conveyor width reference: 08 – 24 in 02 increments		

Idler End Assembly

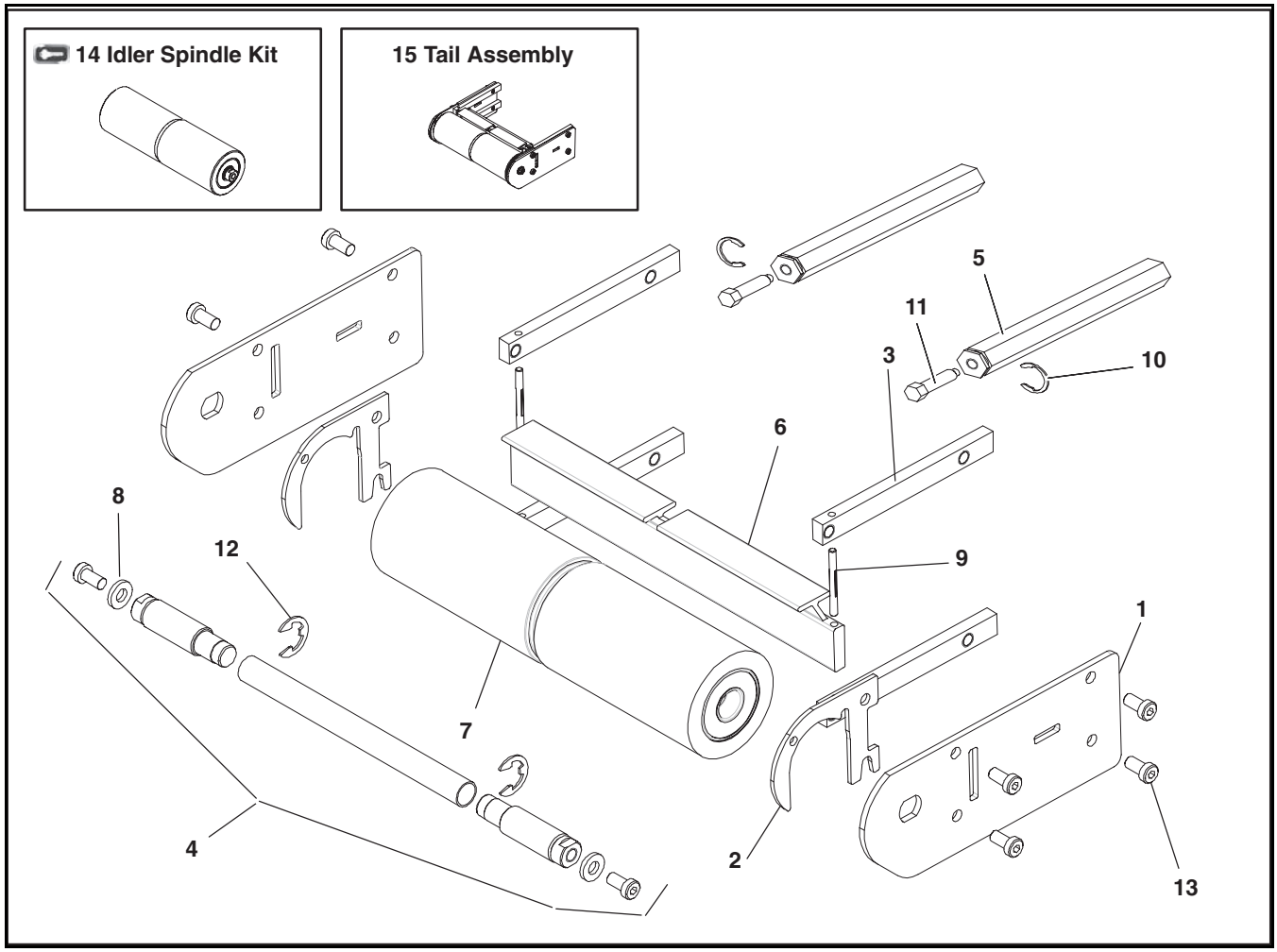

Figure 92

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 12)
5	301196	Hex Tension Tracking Shaft
6	3202WW	Tail Articulation Bar
7	3289WW	3” Idler Pulley
8	605280P	Hard Washer
9	807–1125	Groove Pin

Item	Part Number	Description
10	807–1151	Tracking Shaft Retaining Ring
11	807–1152	Hex Head Cap Screw M6 x 20mm
12	915–235	Stub Shaft Retaining Ring
13	920893M	Low Head Socket Screw M8 x 16mm
14	32T3–WW	Idler Spindle Kit (includes items 4 and 7)
15	32TT3–WW	Tail Assembly (including items 1 through 4, 6, 7, 9 and 13)
WW = Conveyor width reference: 08 – 24 in 02 increments		

Service Parts

Horizontal to Incline Knuckle Assembly

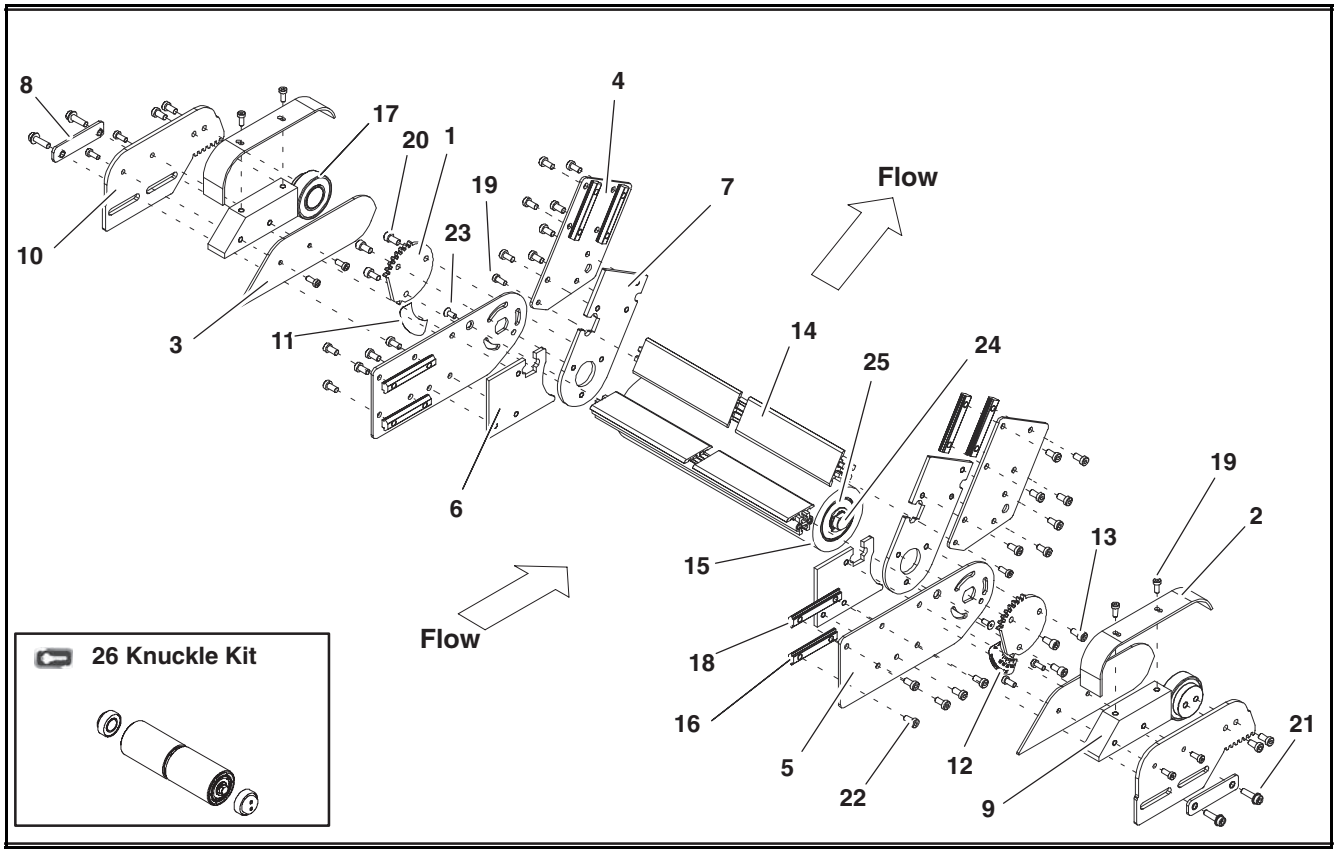

Figure 93

Item	Part Number	Description
1	300538	Top Roller Moving Pointer Gear
2	301147	Bearing Cover and Top Sidewall Guard (sidewall cleated belts)
	301149	Bearing Cover Offset Guide (cleated belts)
3	301148	Roller Cover Plate (sidewall cleated belts)
	301169	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	920592M	Socket Low Head Screw M5 x 12mm
20	920612M	Socket Head Screw M6 x 12mm
21	920684M	Flanged Socket Head Screw M6 x 20mm
22	920692M	Socket Head Screw M6 x 12mm
23	930512M	Flat Head Screw M5 x 12mm
24	3283WW	Shaft Assembly for 3” Idler
25	915–235	Retaining Ring
26	LPZ–WW	Knuckle Kit (includes items 15, 17 and 24)
WW = Conveyor width reference: 08 – 24 in 02 increments		

Nose Over Knuckle Assembly

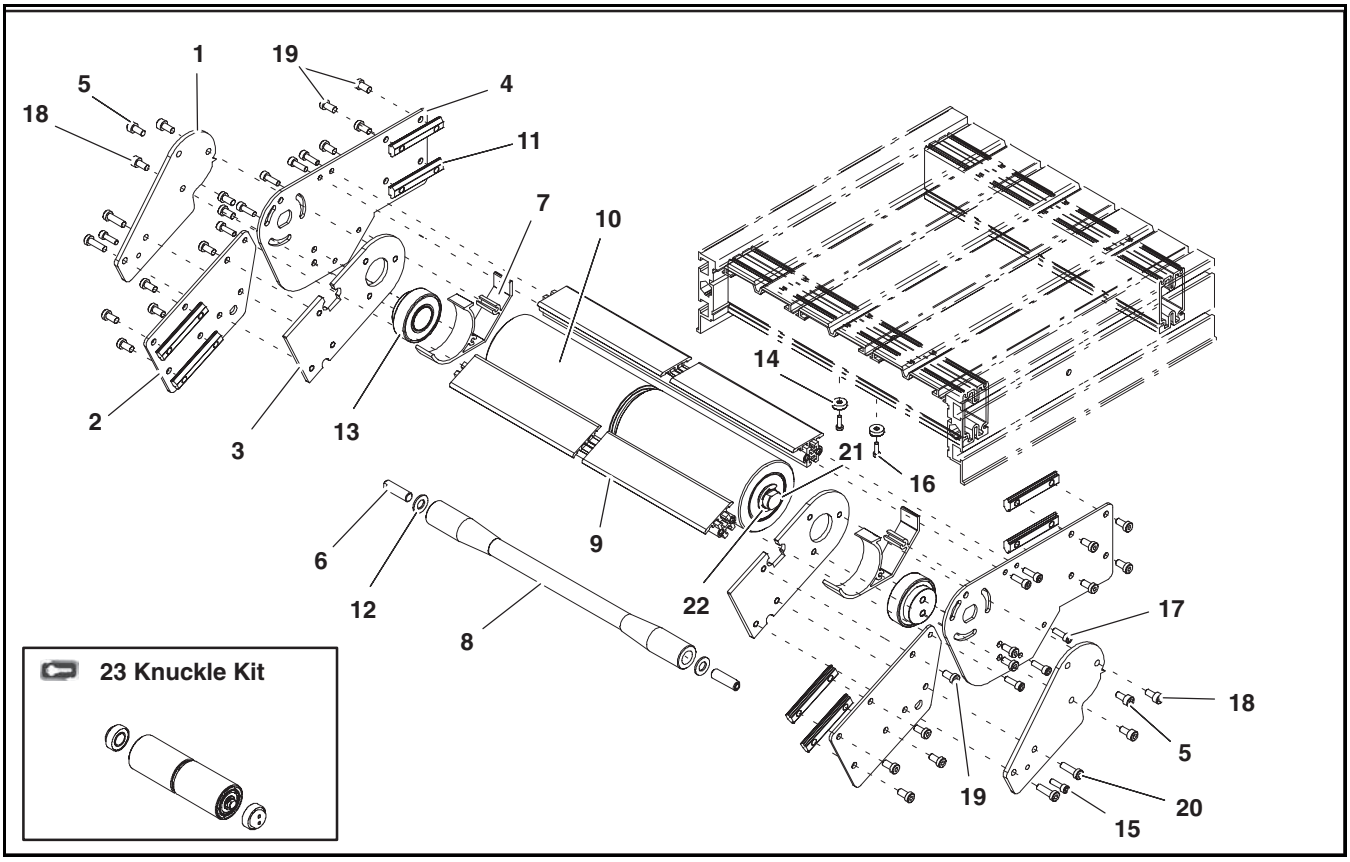

Figure 94

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 .62"
16	920492M	Socket Low Head Screw M4 x 12mm
17	920516M	Socket Head Screw M5 x 16mm
18	920612M	Socket Head Screw M6 x 12mm
19	920692M	Socket Low Head Screw M6 x 12mm
20	920694M	Socket Low Head Screw M6 x 20mm
21	3283WW	Idler Shaft Assembly
22	915–235	Retaining Ring
23	LPZ-WW	Knuckle Kit (includes items 10, 13 and 21)
WW = Conveyor width reference: 08 – 24 in 02 increments		

Service Parts

Frame Assembly

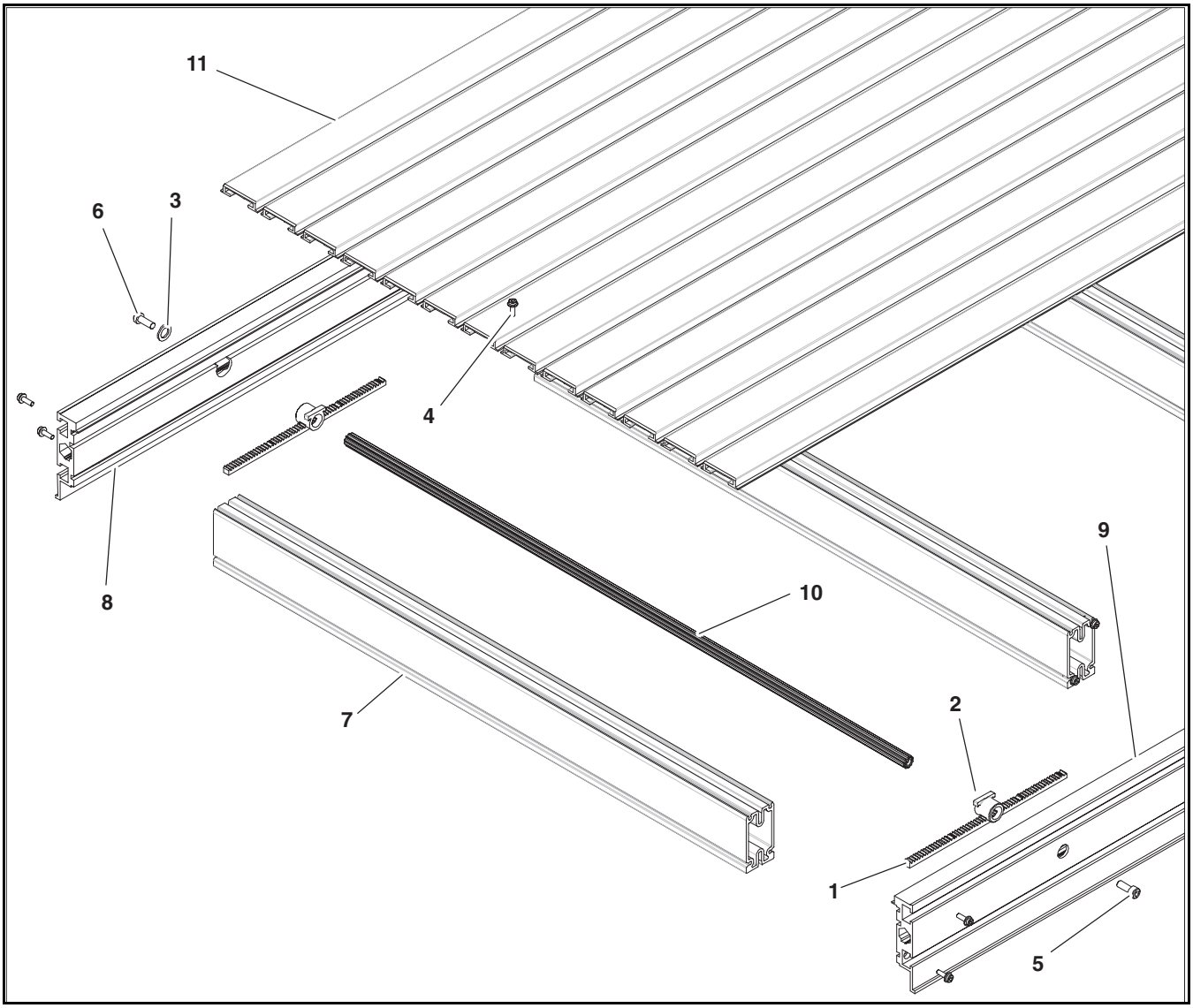

Figure 95

Item	Part Number	Description
1	240420	Rack Gear
2	301091	Pinion Bearing
3	605279P	Washer
4	920483M	Flange Socket Screw M4 x 16mm
5	920616M	Socket Head Screw M6 x 16mm
6	920693M	Low Head Socket Screw M6 x 16mm
7	3245WW	Cross Support Rail
8	301041–LLLLL	RH Side Rail
9	301042–LLLLL	LH Side Rail
10	3229WW	Pinion
11		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)	

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

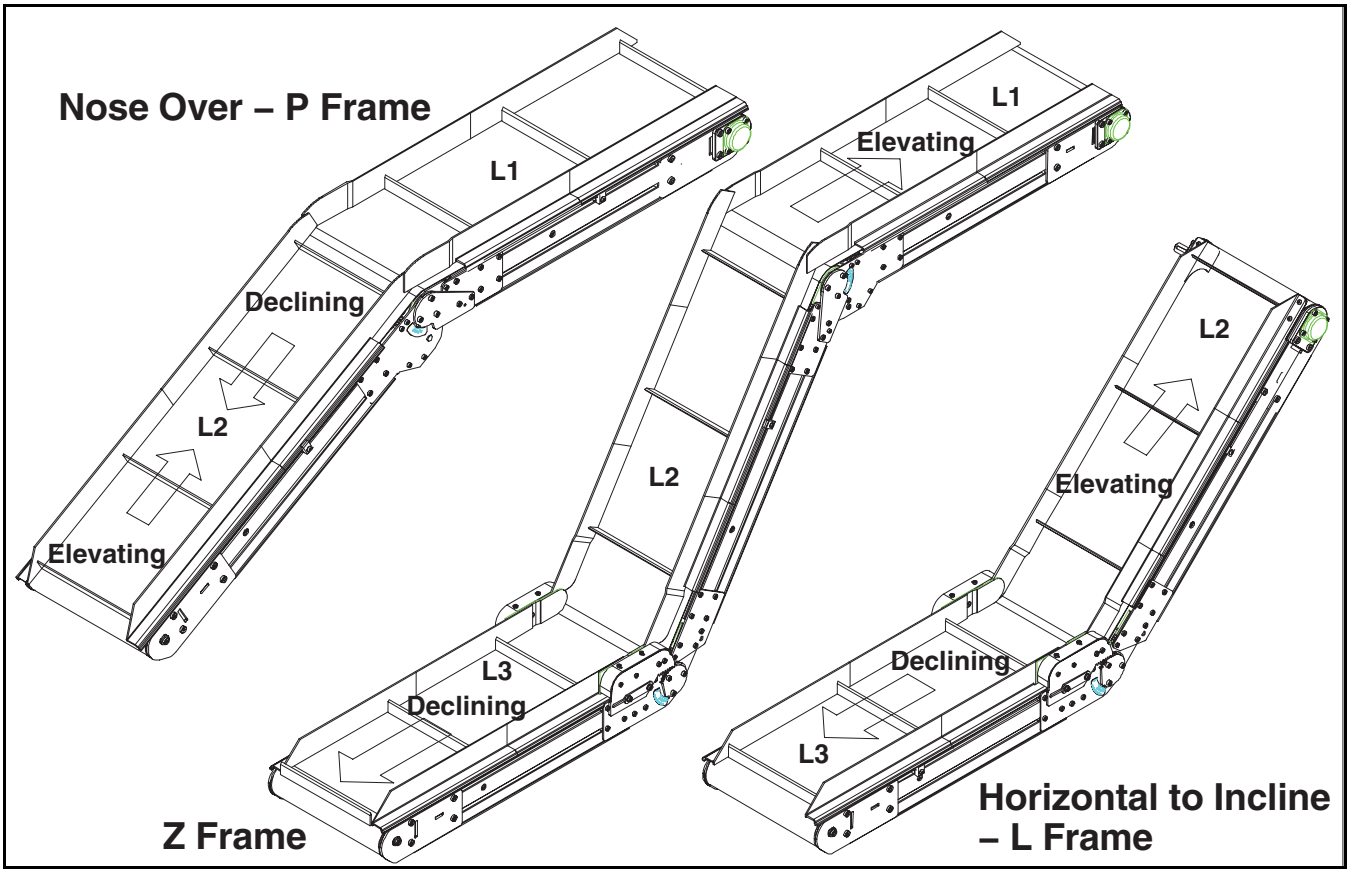

Figure 96

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

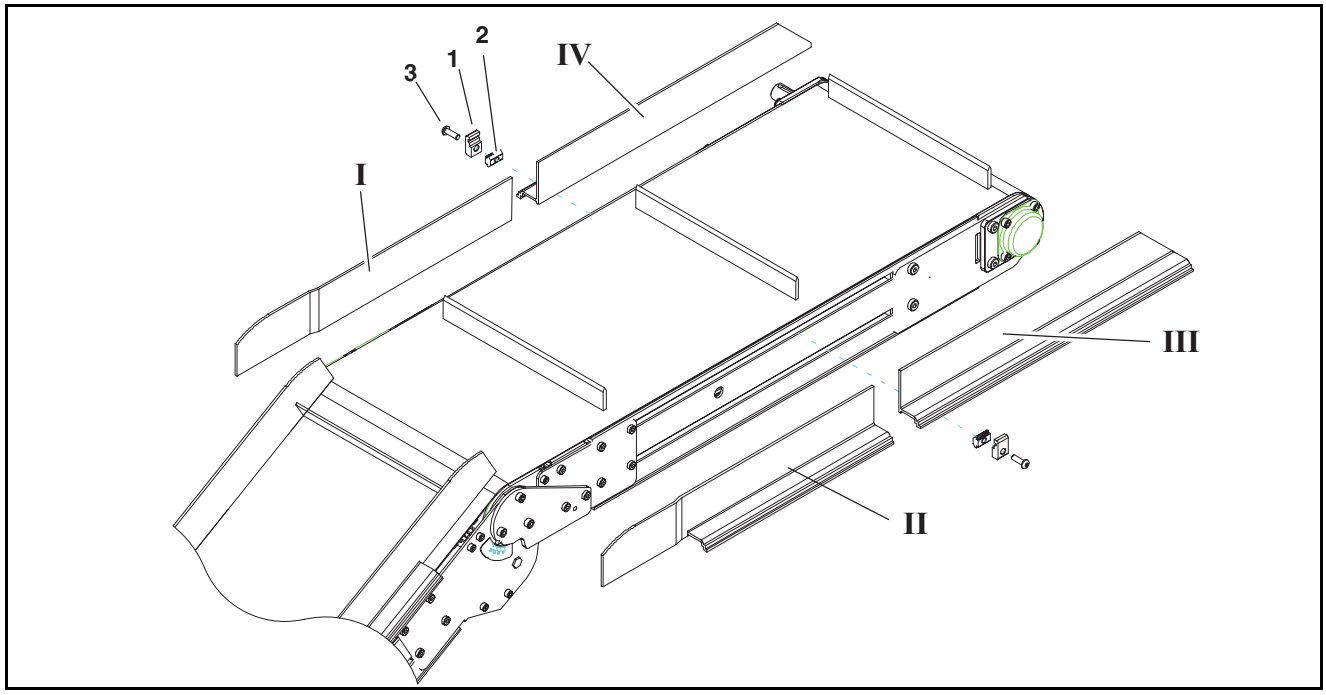

Figure 97

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

Item	Part Number	Description
3	920694M	Socket Head Screw M6 x 20mm

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

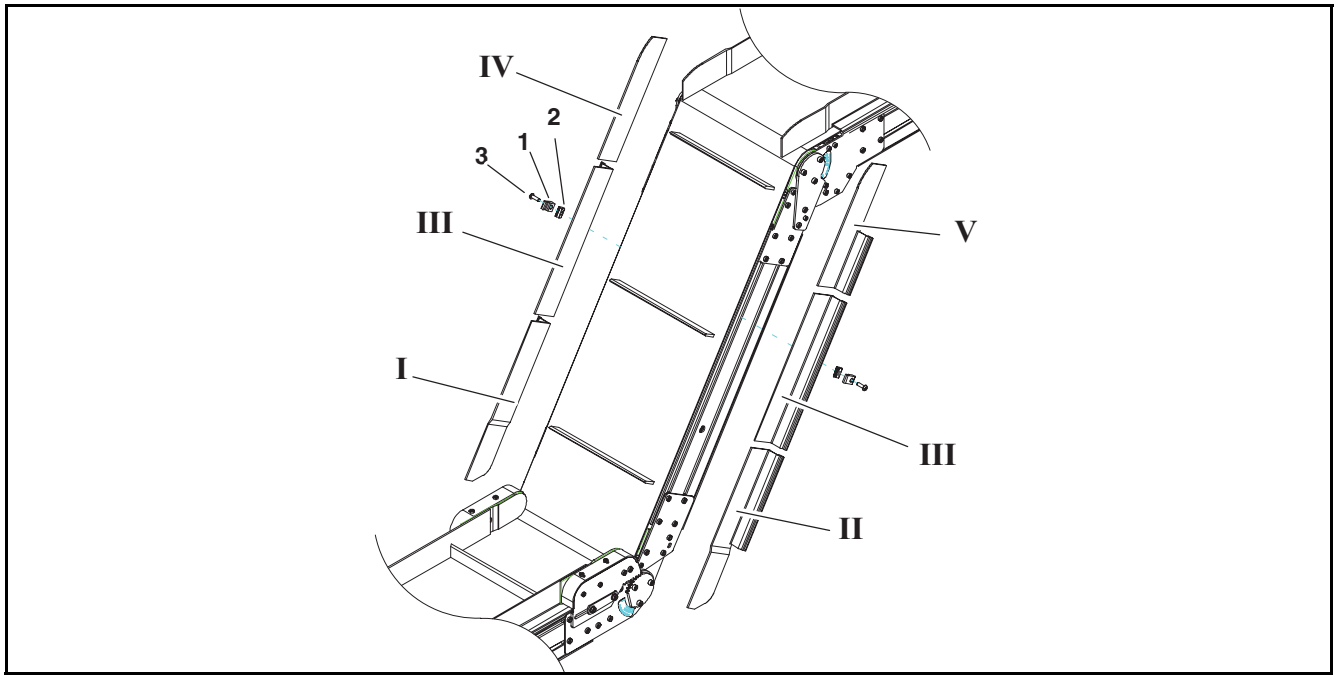

Figure 98

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

Item	Part Number	Description
3	920694M	Socket Head Screw M6 x 20mm

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

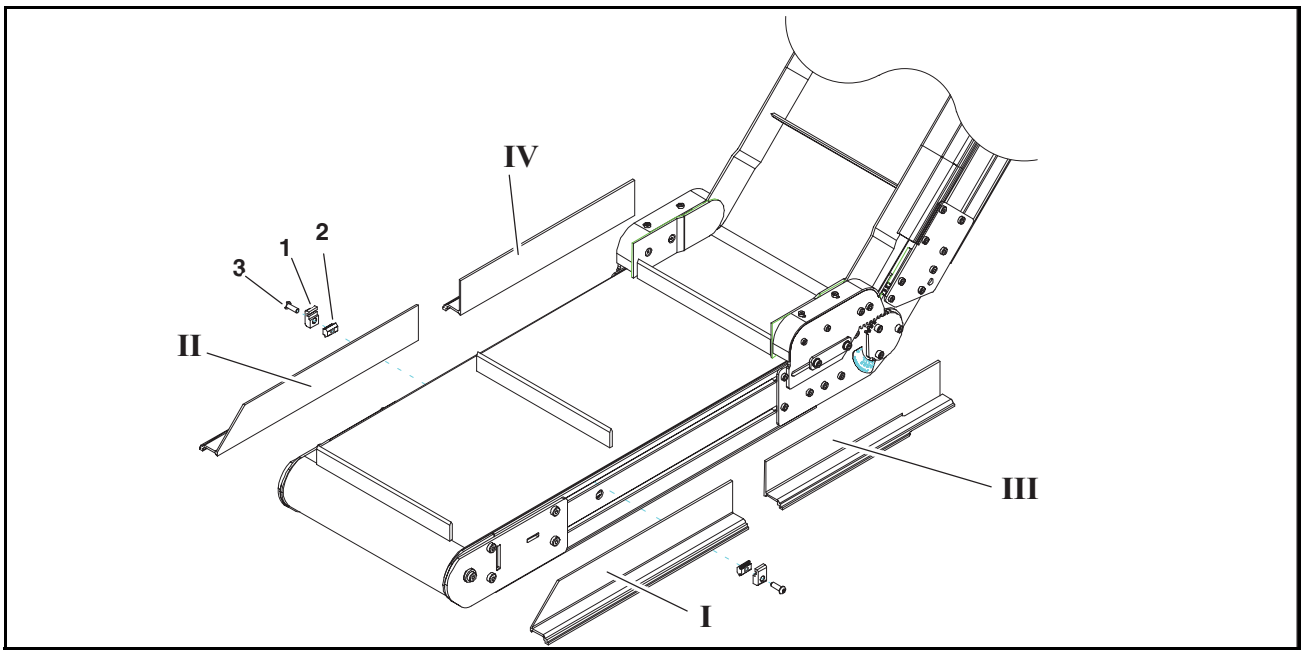

Figure 99

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

Item	Part Number	Description
3	920694M	Socket Head Screw M6 x 20mm

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

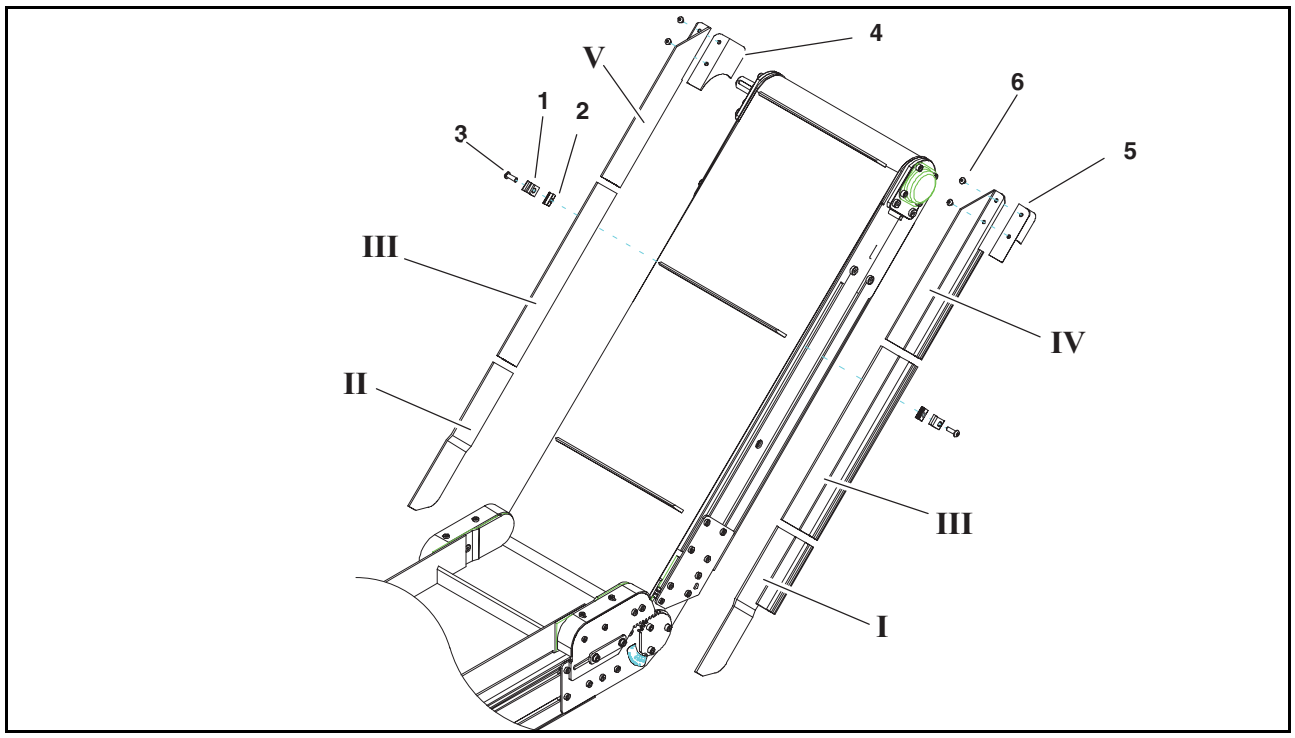

Figure 100

Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar
3	920694M	Socket Head Screw M6 x 20mm

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

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

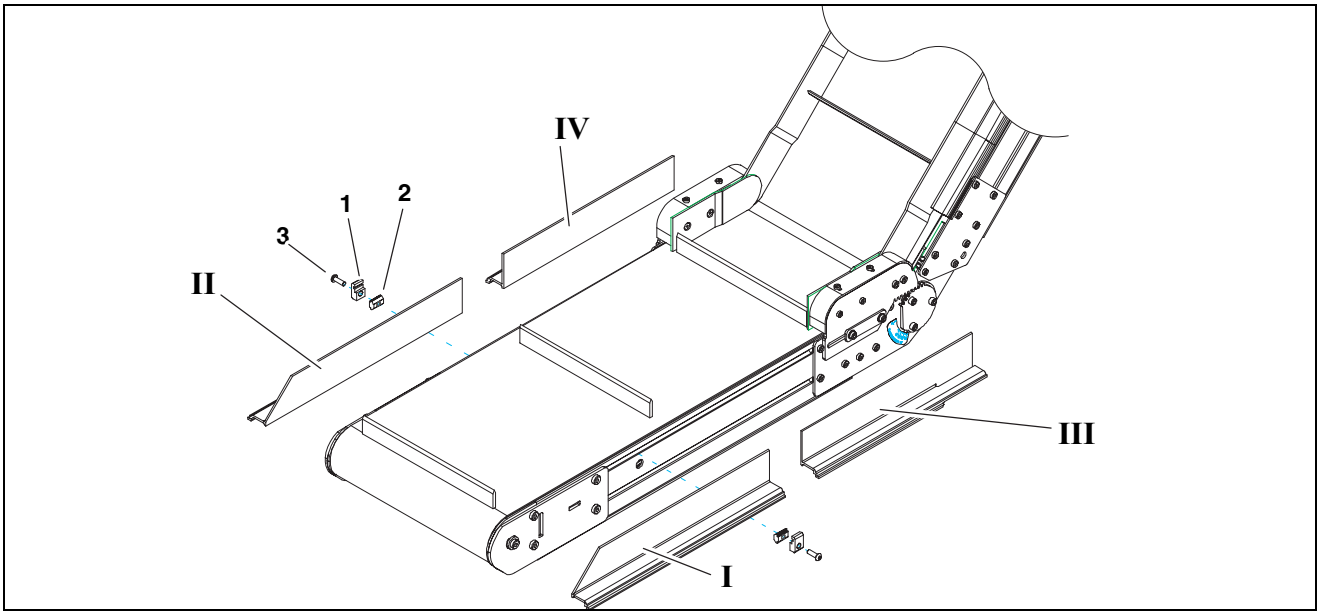

Figure 101

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

Item	Part Number	Description
3	920694M	Socket Head Screw M6 x 20mm

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

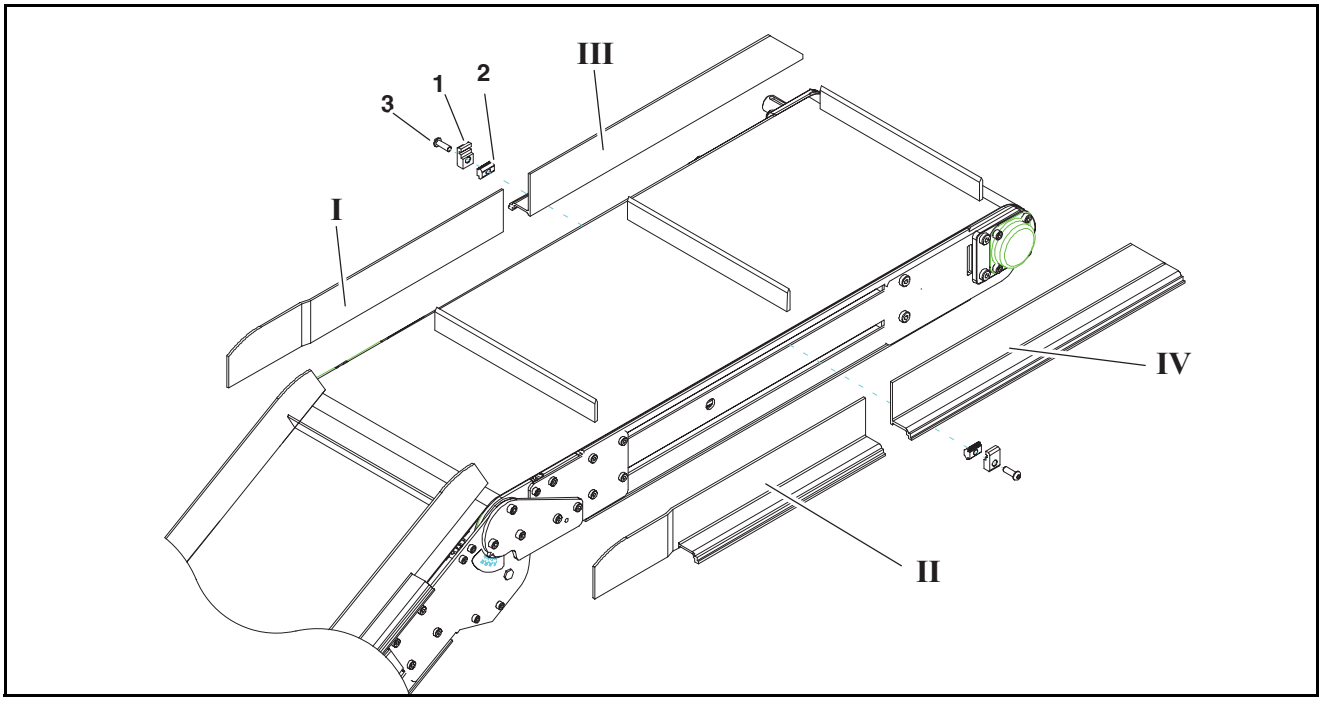

Figure 102

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

Item	Part Number	Description
3	920694M	Socket Head Screw M6 x 20mm

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

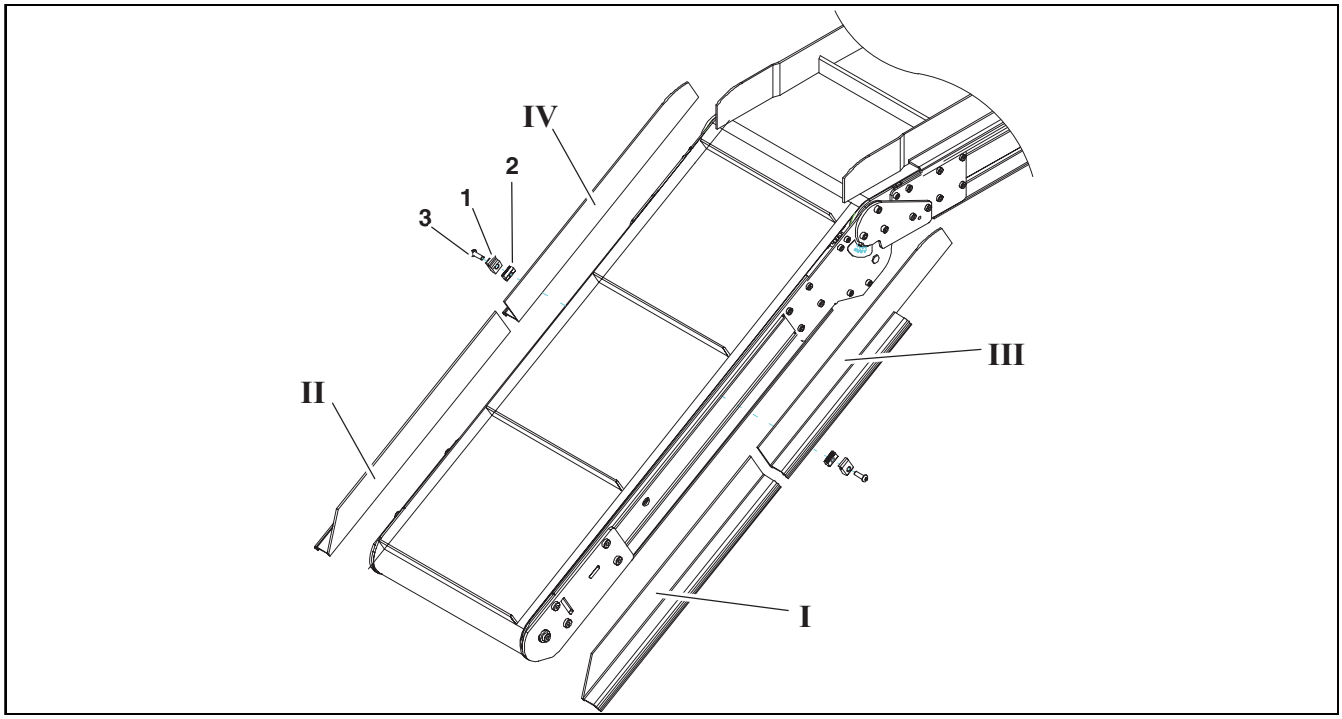

Figure 103

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

Item	Part Number	Description
3	920694M	Socket Head Screw M6 x 20mm

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

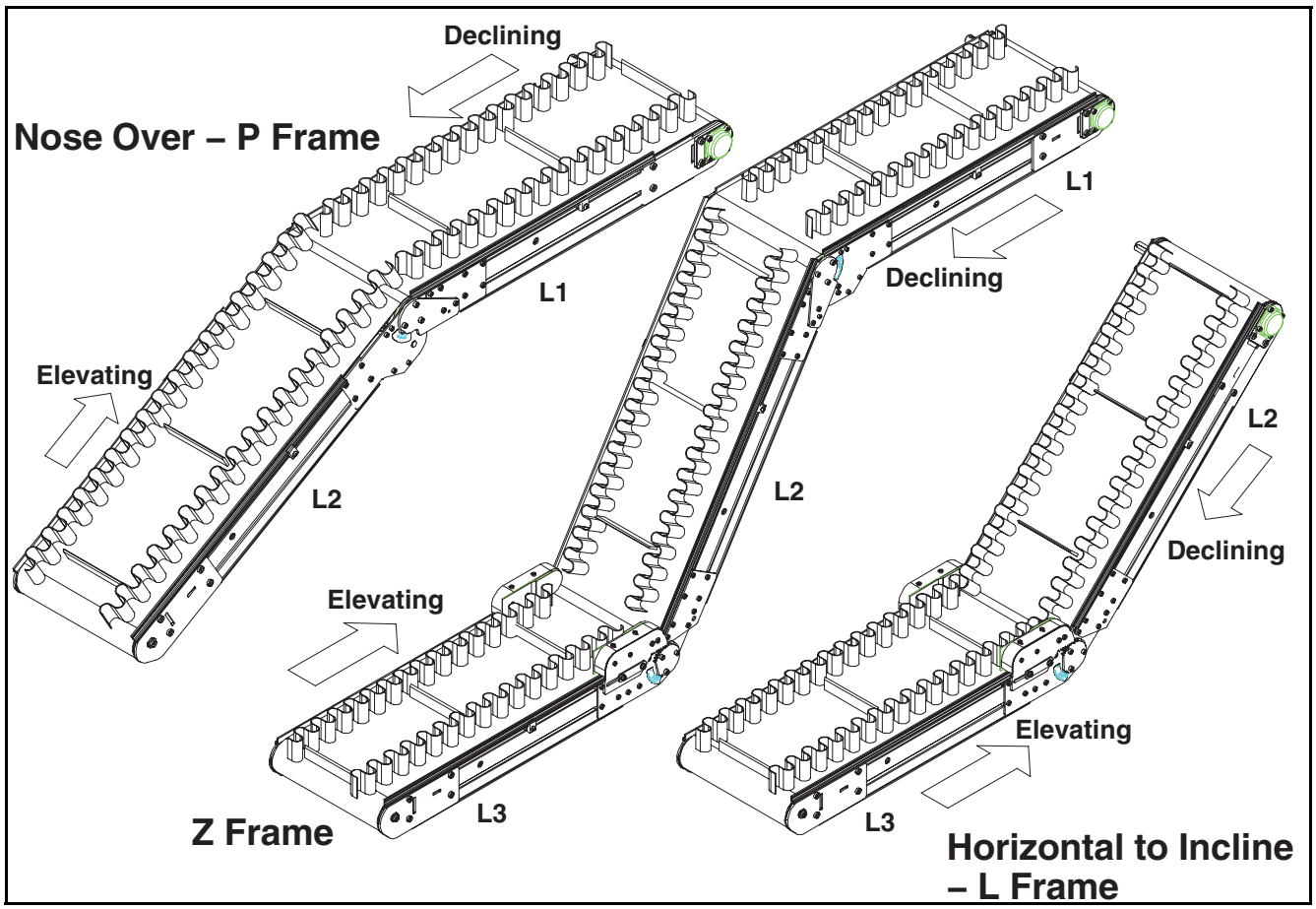

Figure 104

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

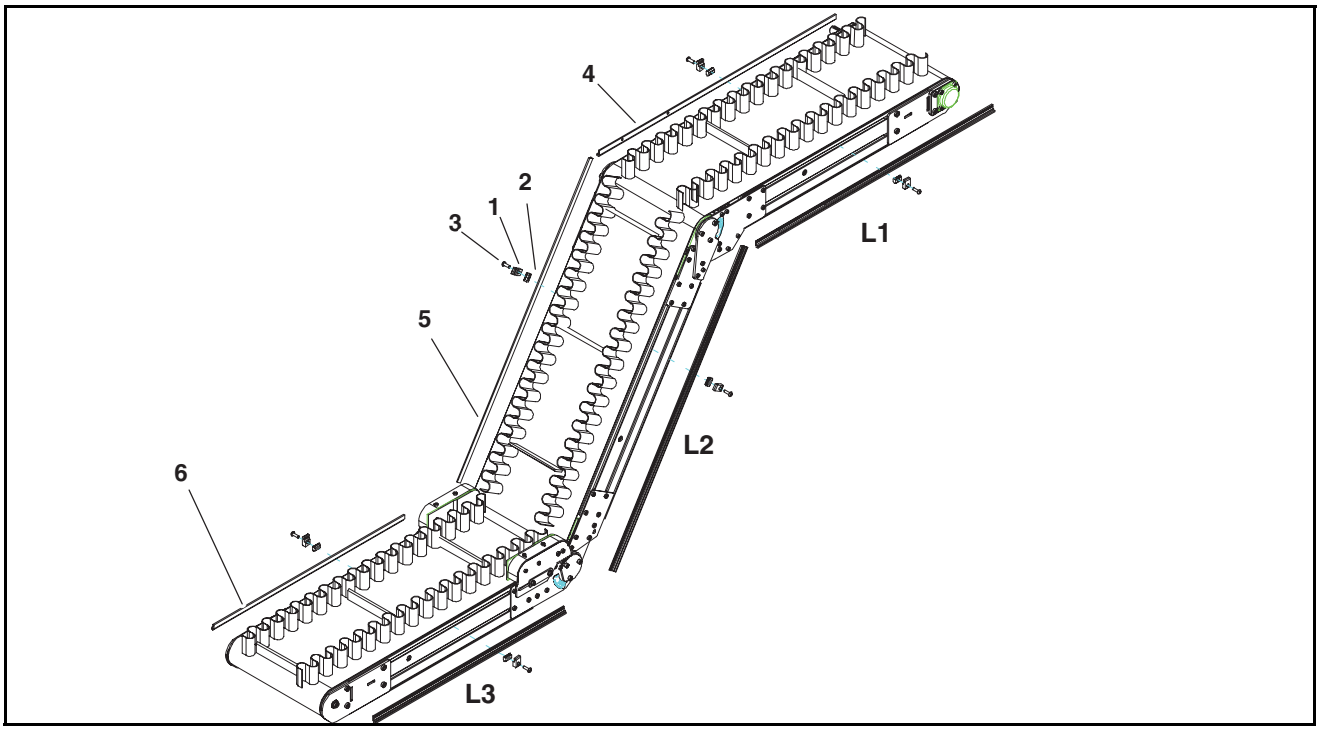

Figure 105

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

Item	Part Number	Description
3	920694M	Socket Head Screw M6 x 20mm

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

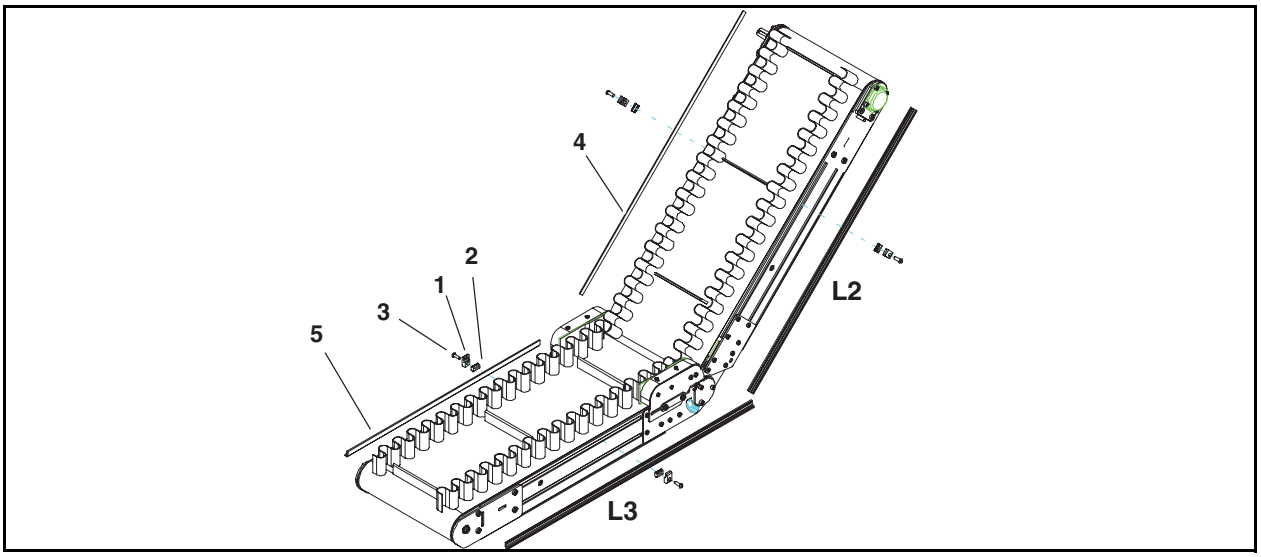

Figure 106

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

Item	Part Number	Description
3	920694M	Socket Head Screw M6 x 20mm

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

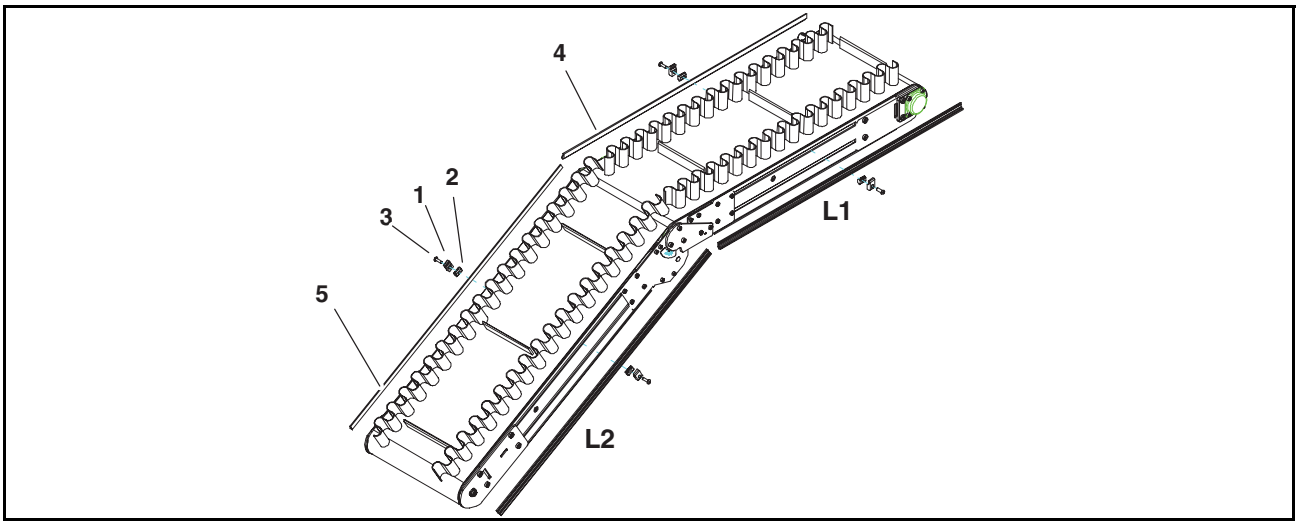

Figure 107

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

Item	Part Number	Description
3	920694M	Socket Head Screw M6 x 20mm

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

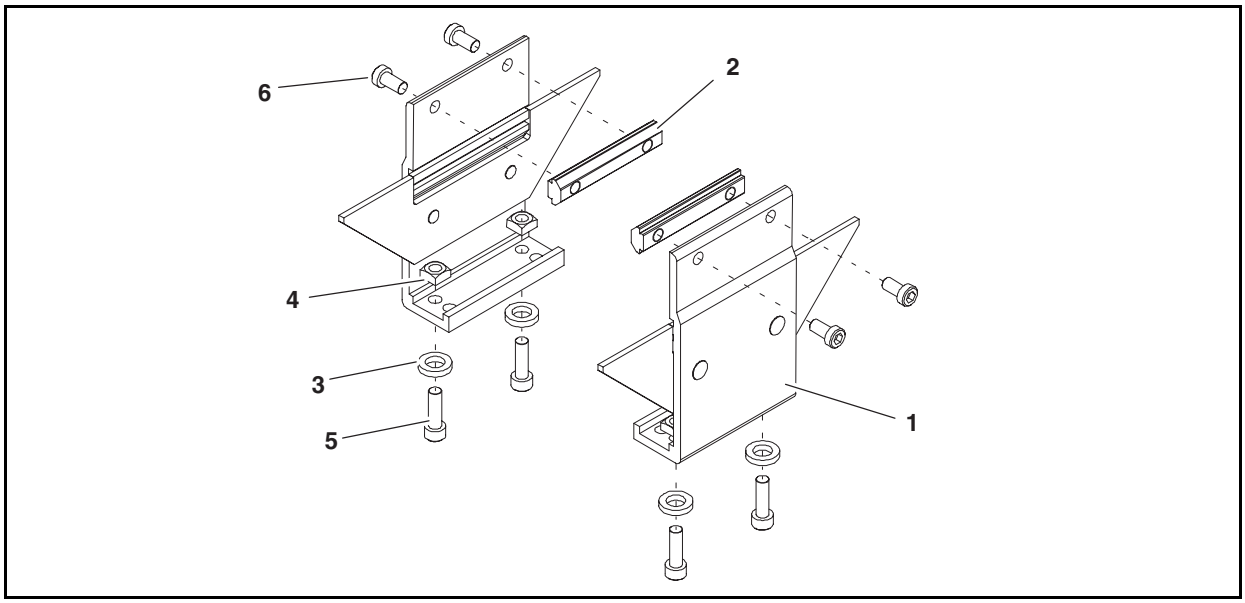

Figure 108

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 5mm x 10mm
5	920620M	Socket Head Screw M6 x 20mm
6	920692M	Socket Head Screw M6 x 12mm

Connecting Assembly without Stand Mount

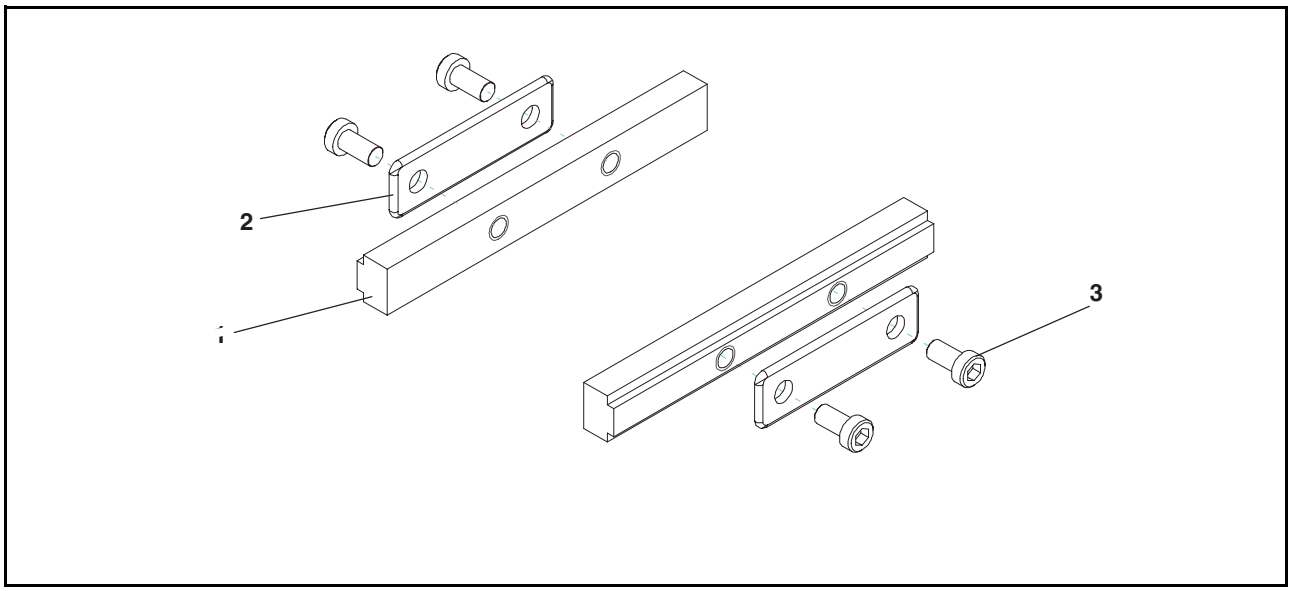

Figure 109

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

Item	Part Number	Description
3	920692M	Socket Head Screw M6 x 12mm

Cleated Belt Connecting Assembly with Stand Mount

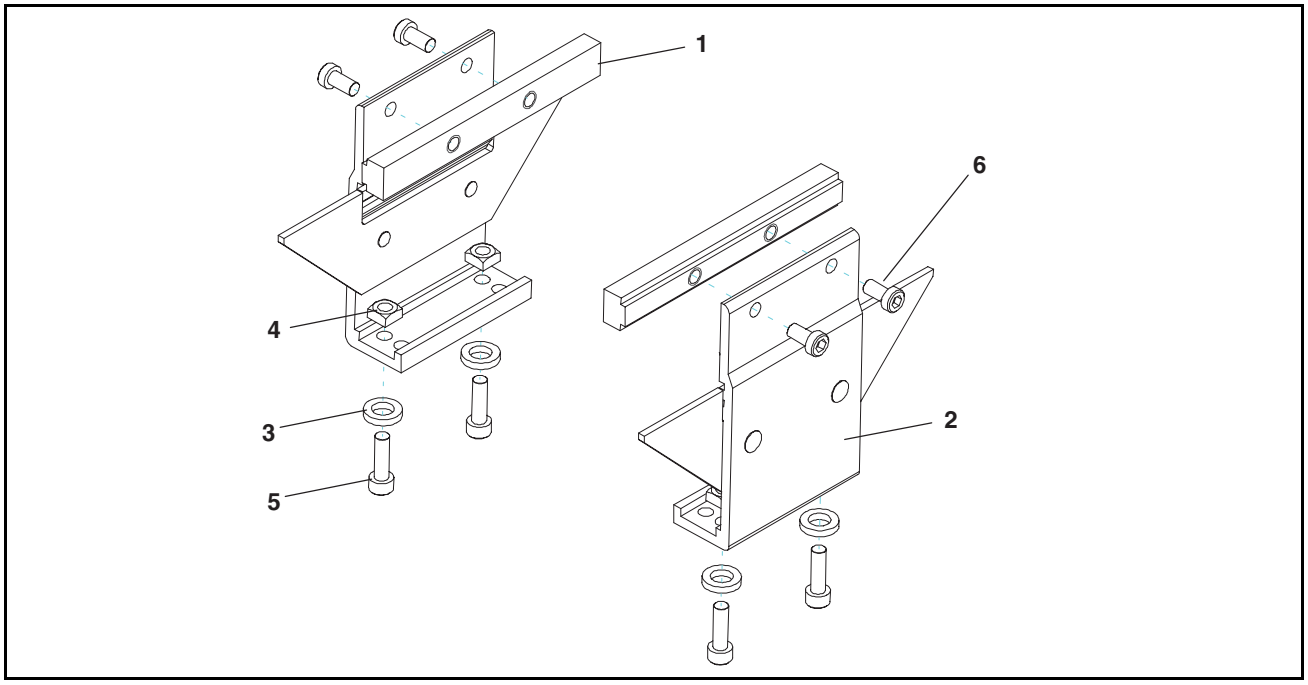

Figure 110

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 5mm x 10mm
5	920620M	Socket Head Screw M6 x 20mm
6	920692M	Socket Head Screw M6 x 12mm

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

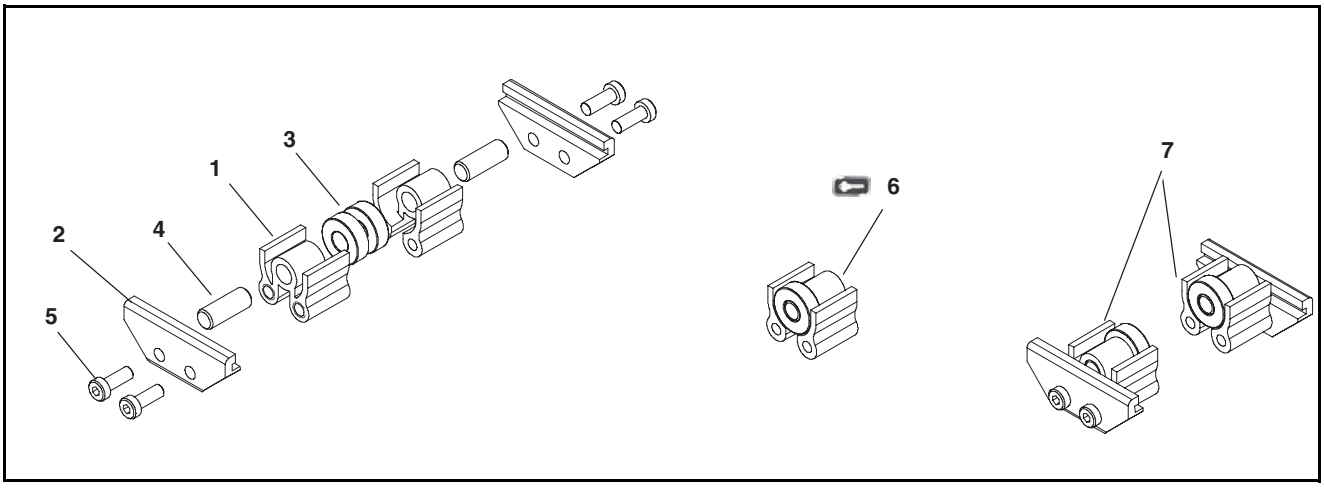

Figure 111

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	920693M	Socket Low Head Screw M6 x 16mm
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

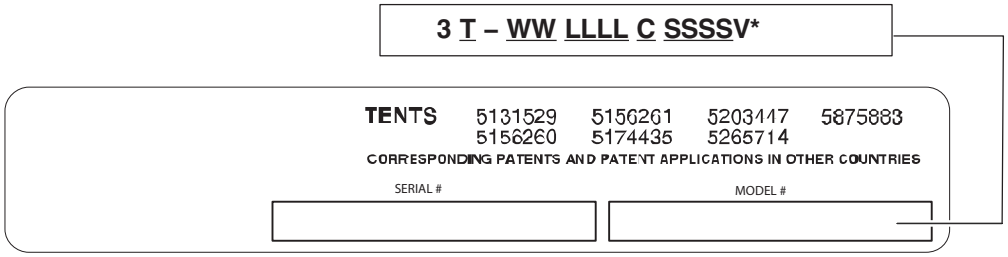

Figure 112

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.

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

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

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

Returns will not be accepted after 60 days from original invoice date.

The return charge covers inspection, cleaning, disassembly, disposal and reissuing of components to inventory.

If a replacement is needed prior to evaluation of returned item, a purchase order must be issued. Credit (if any) is issued only after return and evaluation is complete.

Dorner has representatives throughout the world. Contact Dorner for the name of your local representative. Our Technical Sales, Catalog Sales and Service Teams will gladly help with your questions on Dorner products.

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

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

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