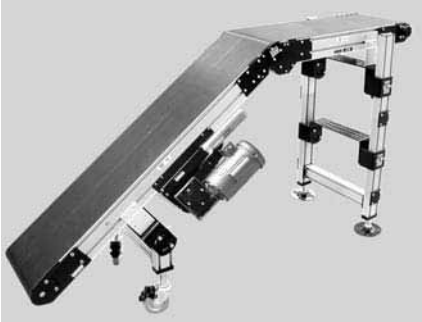
Flat Belt Center Drive LPZ Conveyors

Installation, Maintenance & Parts Manual



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851-518 Rev. E

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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.

Refer to Figure 1 for typical conveyor components.

A	Conveyor
B	Center Drive Module
C	Gearmotor
D	Guiding & Accessories
E	Mounting Brackets
F	Knuckle
G	Support Stand
H	Idler/Tension End

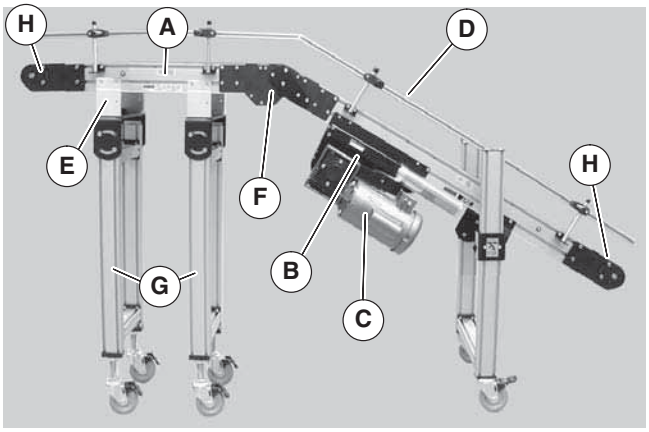


Figure 1

Specifications

Models

Flat Belt LPZ Series Center Drive Conveyor

3 E 1 5 M WW LLLL–LLLL–LLLL A PP BB

- **BB** — Belt Type*
- **PP** — Conveyor Profile*
- **A** — Output Shaft Position*
- **LLLL** — Conveyor Section Length Reference
- **LLLL** — Conveyor Section Length Reference
- **LLLL** — Conveyor Section Length Reference
- **WW** — Conveyor Width Reference
- **M** — Document Language, M = English
- **5** — Idler Pulley Type: Pneumatic Tensioning
  - 5 = 3” idler pulleys at both ends
  - 6 = Two 1” pulleys at infeed
  - 7 = Two 1” pulleys at discharge
  - 8 = Two 1” pulleys at both ends
- **1** — Idler Pulley Type: Manual Tensioning
  - 2 = 3” idler pulley at both ends
  - 3 = Two 1” pulleys at infeed
  - 4 = Two 1” pulleys at discharge
  - 9 = Two 1” pulleys at both ends
- **E** — Tracking and Supports
  - 1 = Manual tracking and supports
  - 2 = V-guide tracking and supports
  - 3 = Manual tracking
  - 4 = V–guide tracking
- **3** — Elevating / Declining
  - E = Elevating
  - D = Declining

* See Ordering and Specifications Catalog for details

Conveyor Supports:

Maximum Distances:

I = 24¨ (610 mm) (Drive End)

J = 12 ft (3658 mm)

K = 36¨ (914 mm) (Idler End)

Maximum Angle:

L = 0 to 35 degrees

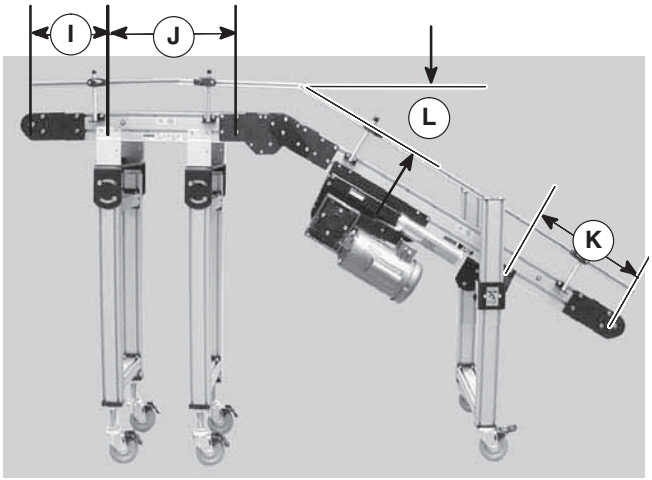
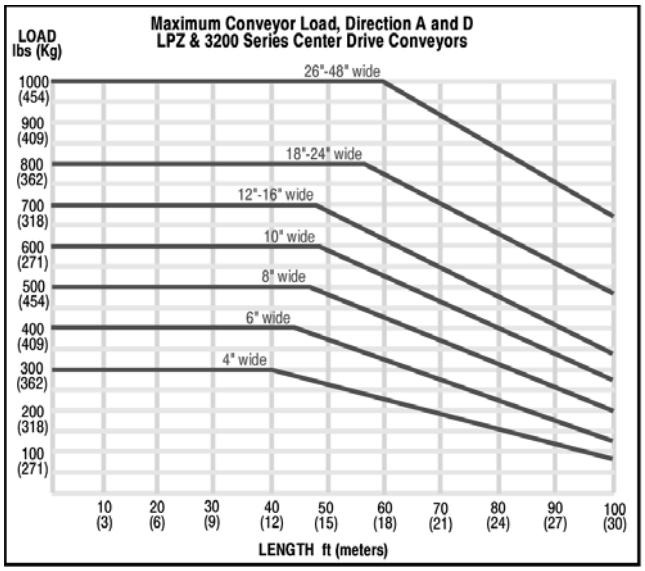
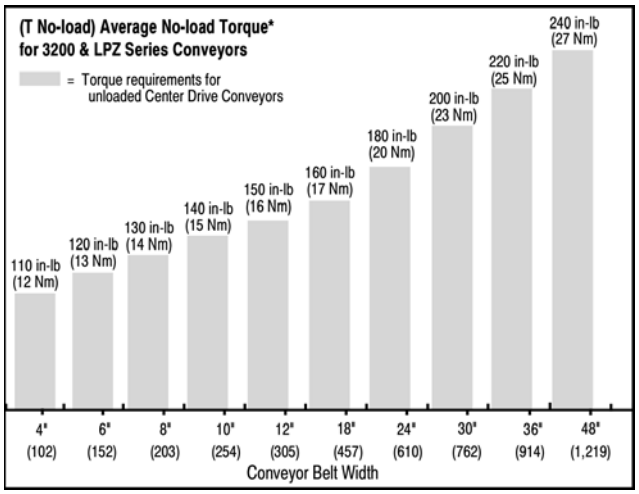


Figure 2

Specifications

Specifications





Conveyor Width Reference (WW)	04	06	08	10	12	18	24	30	36	48	
Conveyor Belt Width	3.75¨ (95mm)	6¨ (152 mm)	8¨ (203 mm)	10¨ (254 mm)	12¨ (305 mm)	18¨ (457 mm)	24¨ (609 mm)	30¨ (762 mm)	36¨ (915 mm)	48¨ (1220 mm)	
Conveyor Length Reference (LLLL)	0300 to 9900 in 0001 increments										
Conveyor Length	4 ft (1219mm) to 99 ft (30175mm) in 0.12" (0.31mm) increments										
Belt Travel	18.8¨ (478 mm) per revolution of pulley										
Maximum Belt Speed*	600 ft/minute (183 m/minute)										
Belt Takeup	16" (407 mm) of Belt Takeup										

* See Ordering and Specifications Catalog for details.

NOTE

Maximum conveyor loads based on:

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

Table 1: Belt Speeds for Variable Speed 90° VDC Gearmotors

Standard Load Gearmotors				Belt Speed	
Part Number	RPM	In-lb	N-m	Ft/min	M/min
32M100HHD9DEN	25	630	71	4.0–40.0	1.2–12.2
32M080HHD9DEN	31	575	65	5.0–50.0	1.5–15.2
32M060HHD9DEN	42	469	53	6.7–66.7	2.0–20.3

(vp) = voltage and phase

11 = 115 V, 1-phase

23 = 208 – 230/460 V, 3-phase

Table 2: Belt Speeds for Fixed Speed 90 Gearmotors

Standard Load Gearmotors				Belt Speed	
Part Number	RPM	In-lb	N-m	Ft/min	M/min
32M100HHvpfN	17	913	103	27.6	8.4
32M080HHvpfN	22	833	94	34.5	10.5
32M060HHvpfN	29	680	77	46.0	14.0
32M050HHvpfN	35	1206	136	55.2	16.8
32M040HHvpfN	43	1023	116	69.0	21.0
32M030HHvpfN	58	1217	138	92.0	28.0
32M025HHvpfN	69	1069	121	110.4	33.7
32M020HHvpfN	86	1184	134	138.0	42.1
32M015HHvpfN	115	910	103	184.0	56.1
32M010HHvpfN	173	636	72	276.0	84.1
32M008HHvpfN	230	482	54	368.0	112.2

Table 3: Belt Speeds for Variable Speed 90° VFD Gearmotors

Standard Load Gearmotors				Belt Speed	
Part Number	RPM	In-lb	N-m	Ft/min	M/min
32M100HHvpfN	17	913	103	2.8–27.6	0.8–8.4
32M080HHvpfN	22	833	94	3.5–34.5	1.1–10.5
32M060HHvpfN	29	680	77	4.6–46.0	1.4–14.0
32M050HHvpfN	35	1206	136	5.5–55.2	1.7–16.8
32M040HHvpfN	43	1023	116	6.9–69.0	2.1–21.0
32M030HHvpfN	58	1217	138	9.2–92.0	2.8–28.0
32M025HHvpfN	69	1069	121	11.0–110.4	3.4–33.7
32M020HHvpfN	86	1184	134	13.8–138.0	4.2–42.1
32M015HHvpfN	115	910	103	18.4–184.0	5.6–56.1
32M010HHvpfN	173	636	72	27.6–276.0	8.4–84.1
32M008HHvpfN	230	482	54	36.8–368.0	11.2–112.2

Table 4: Belt Speeds for Variable Speed 90 VFD Integrated Motor Control Gearmotors

Standard Load Gearmotors				Belt Speed	
Part Number	RPM	In-lb	N-m	Ft/min	M/min
32M100HH411EC	17	913	103	4.6–36.7	1.4–11.2
32M060HH411EC	29	680	77	7.7–61.2	2.3–18.7
32M040HH411EC	43	1023	116	11.5–91.8	3.5–28.0
32M015HH411EC	69	712	80	18.4–146.8	5.6–44.8
32M020HH411EC	86	592	67	23.0–183.5	7.0–56.0
32M015HH411EC	115	455	51	30.7–244.7	9.4–74.6

(vp) = voltage and phase

11 = 115 V, 1-phase

23 = 208 – 230/460 V, 3-phase

NOTE

For belt speed other than those listed, contact factory for details.

Installation

⚠ DANGER

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 (M of Figure 3) for setup.

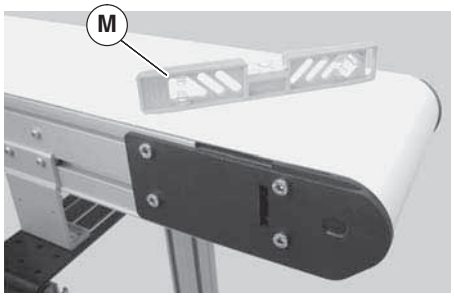


Figure 3

Required Tools

- Hex-key wrenches: 4 mm, 5 mm
- Level
- Torque wrench
- 8mm 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 20 for instructions)
- Attach conveyor to stands
- Install return rollers on conveyor (see page 10 for instructions)
- Mount gearmotor mounting package (see page 11 for instructions)
- Attach guides/accessories (see page 42 through page 48 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 10.

Conveyors Longer Than 13 ft (3962 mm)

1. Locate components (see Figure 4).

N	Conveyor frame with knuckle
O	Conveyor frame with idler end
P	Belt
Q	Knuckle
R	Intermediate Conveyor Frame (required for conveyor sections over 13' (3962 mm) long)

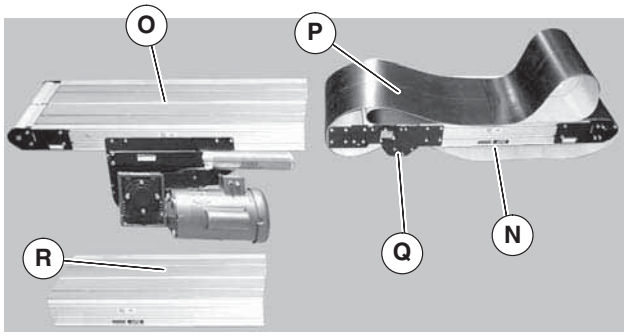


Figure 4

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

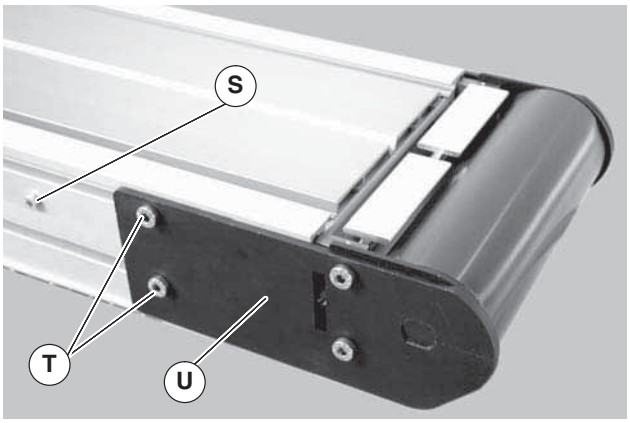


Figure 5

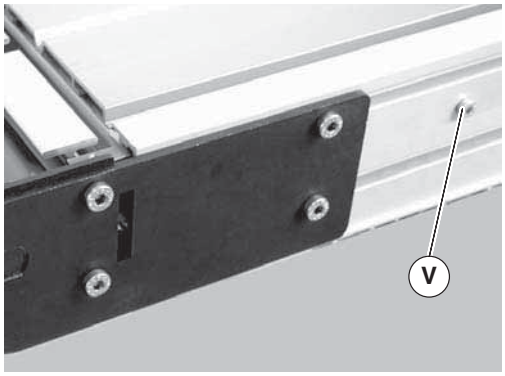


Figure 6

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

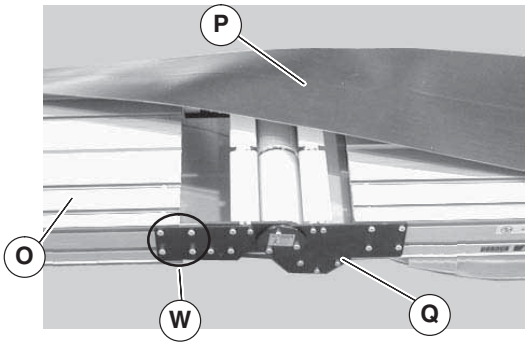


Figure 7

4. Join additional conveyor sections if necessary and install connector brackets (Figure 8, item X) or connector/mount brackets (XA) and screws (Y) on both sides as indicated. Tighten screws to 60 in-lb (7 Nm).

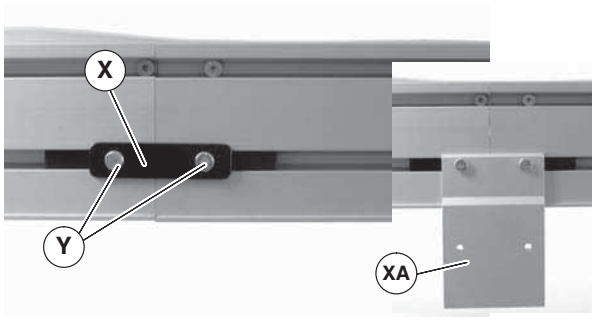


Figure 8

5. Slide belt (Figure 9, item P) over assembled conveyor sections (Z).

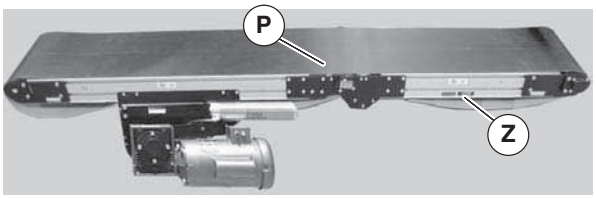


Figure 9

6. Tension conveyor belt, refer to “Conveyor Belt Tensioning” on page 17.
7. Install mounting brackets and return rollers. Refer to “Mounting Brackets” on page 9 and “Return Roller” on page 10.
8. Adjust conveyor angle. See “Conveyor Angle Adjustment” on page 20.

Mounting Brackets

1. Locate brackets. Exploded views shown in Figure 10.

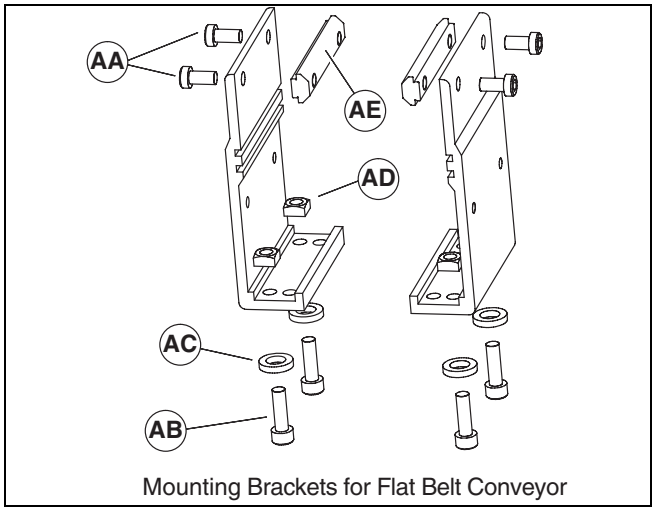


Figure 10

2. Remove screws (Figure 10, item AA & AB), washers (AC), nuts (AD) and T-bars (AE) from brackets.
3. Insert T-bars (Figure 10, item AE) into conveyor side slots (Figure 11, item AE). Fasten brackets (Figure 11, item AF) to conveyor with mounting screws (AA).

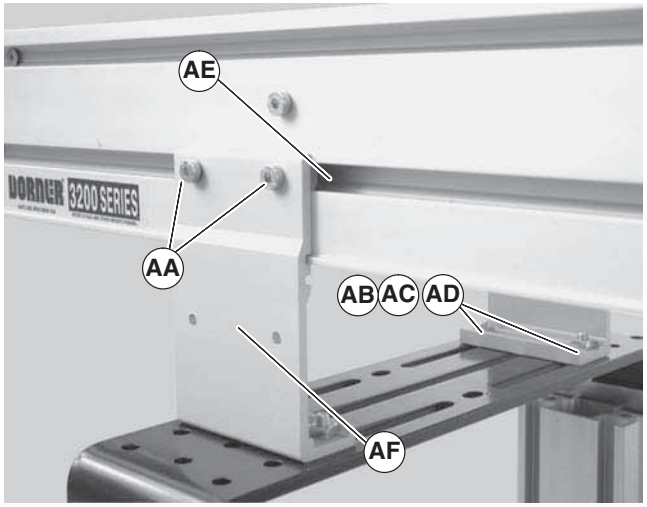


Figure 11

4. Fasten brackets to support stand with mounting screws (Figure 11, item AB), washers (AC) and nuts (AD).
5. Tighten screws (Figure 11, item AA & AB) to 60 in-lb (7 Nm).

Return Rollers

4–6" (102–152 mm) Wide Flat Belt Conveyors

1. Locate return rollers. Exploded view shown in Figure 12.

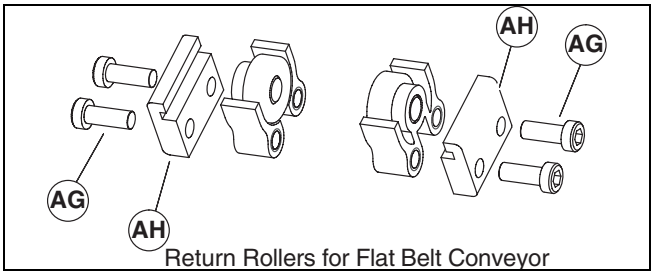


Figure 12

2. Remove screws (Figure 12, item AG) and clips (AH) from roller assembly.
3. Install roller assemblies (Figure 13, item AI) as shown. Tighten screws (AG) to 60 in-lb (7 Nm).

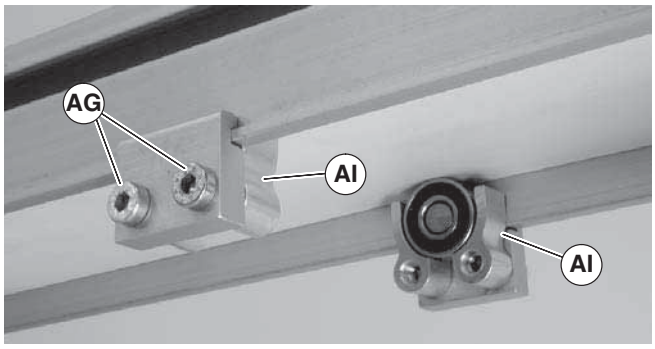


Figure 13

8–48" (203–1219 mm) Wide Flat Belt Conveyors

1. Locate return rollers. Exploded view shown in Figure 14.

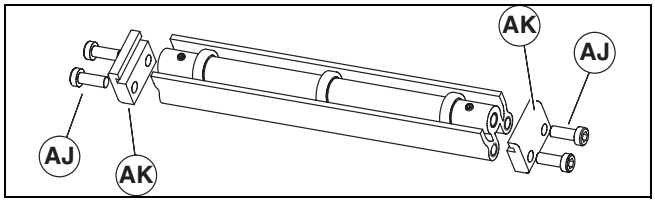


Figure 14

2. Remove screws (Figure 14, item AJ) and clips (AK) from roller assembly.
3. Install roller assembly as shown (Figure 15, item AL). Tighten screws (AJ) to 60 in-lb (7 Nm).

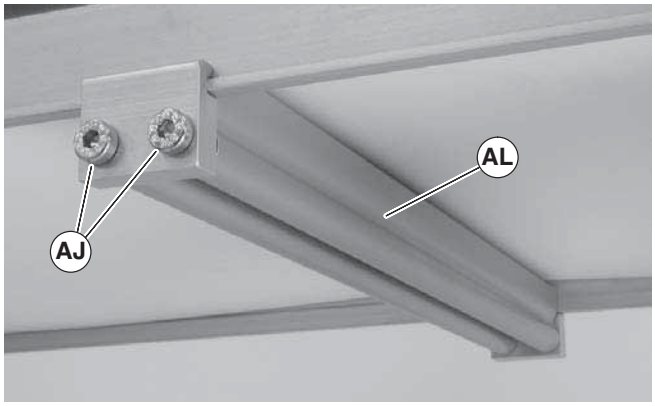


Figure 15

Gearmotor Installation

Required Tools

- Hex key wrenches:
  2 mm, 2.5 mm, 3 mm, 5 mm
- Torque wrench

Mounting

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Locate components in Figure 16.

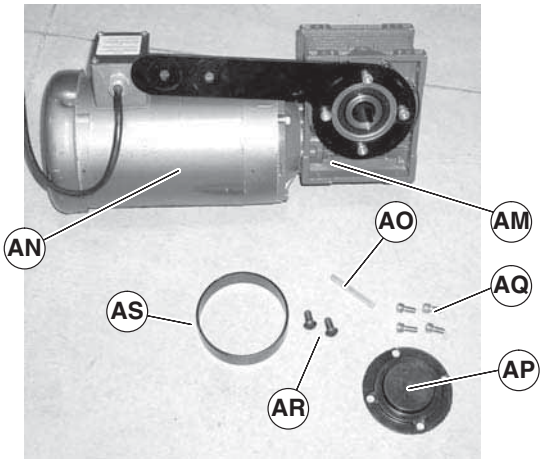


Figure 16

Gearmotor Installation Component List	
AM	Gearhead with mounting bracket
AN	Motor
AO	Gear Reducer Key
AP	Cover
AQ	Cover Bolts
AR	Motor Mount Bolts
AS	Spacer Ring

NOTE

Gearmotor may be operated in positions 1, 3 or 4 (Figure 17).

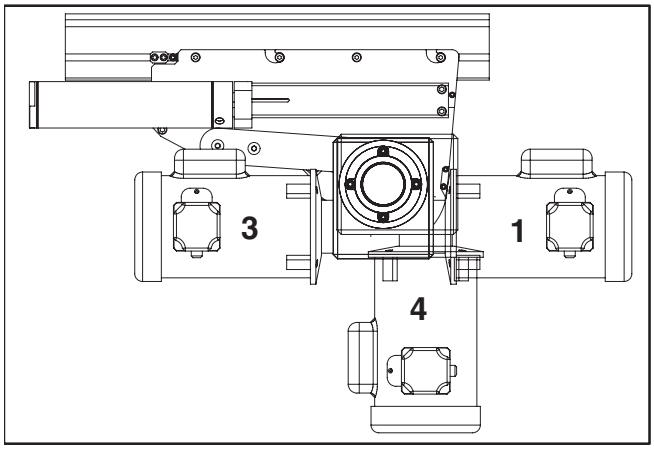


Figure 17

2. If required, change gearmotor position by removing four (4) screws (Figure 18, item AT). Rotate gearmotor mounting plate to other position and replace screws (AT). Tighten to 200 in-lb (22.5 Nm).

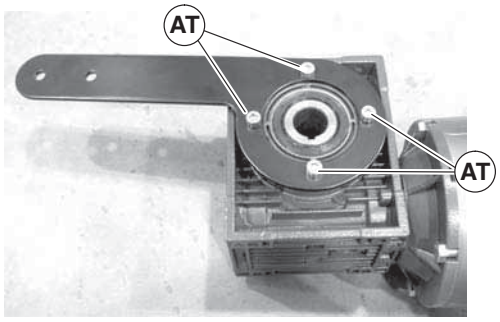


Figure 18

⚠ DANGER

Drive shaft keyway may be sharp.

HANDLE WITH CARE.

3. Install key (Figure 19, item AO) on drive shaft(AU). Install cover (AP) over bearing housing (AV)

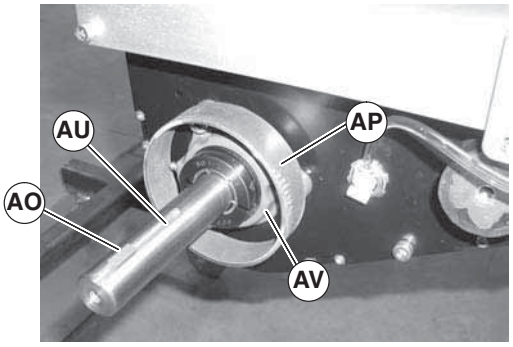


Figure 19

4. Install cover (Figure 20, item AP) with four (4) screws (AQ).

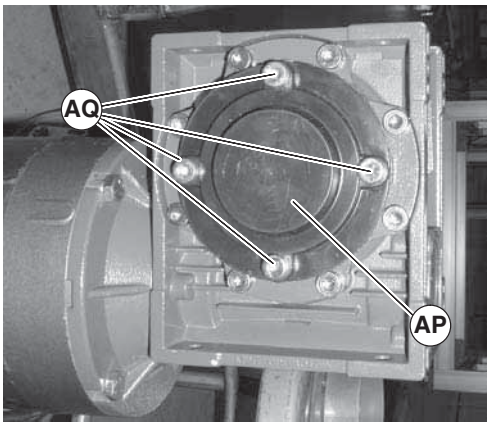


Figure 20

5. Slide gearmotor (Figure 21, item AM) on to drive shaft (Figure 19, item AU). Tighten mounting screws (AR) to 200 in–lbs (22.5 N–m).

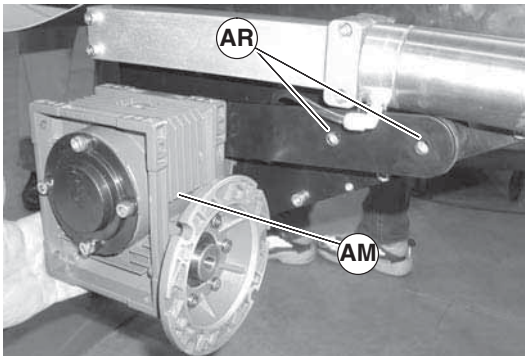


Figure 21

Required Tools

Standard Tools

- Hex key wrenches:
  2.5 mm, 4 mm, 5 mm
- 8mm 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

1. Remove air supply and remove hose (Figure 22, item AW) from center drive.

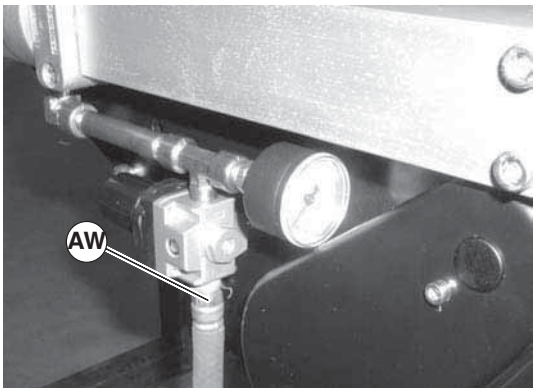


Figure 22

2. If equipped, remove return rollers and guiding and accessories from one side of conveyor.
3. Temporarily support idler guard assembly (Figure 23, item AX). Remove screws (AY).

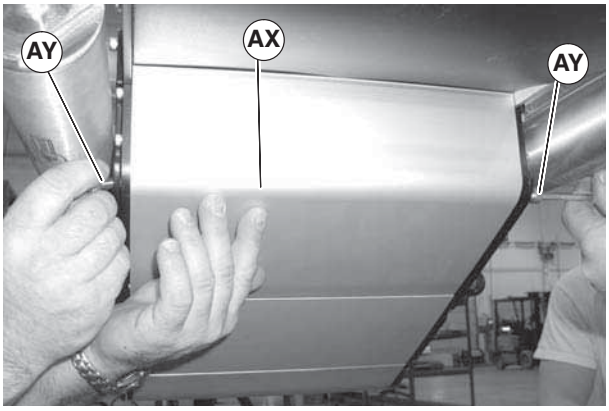


Figure 23

4. Swing down idler guard assembly (Figure 24, item AX). Remove screw (AZ) from both sides of center drive and remove idler guard assembly (AX).

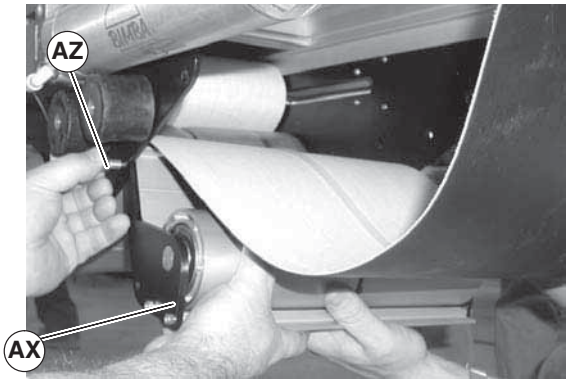


Figure 24

5. Remove screws (Figure 25, item BA) and tensioning guards (BB) from both sides of center drive.

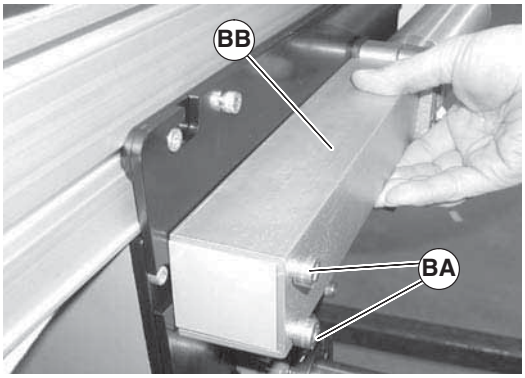


Figure 25

6. Temporarily support the tensioning roller guard (Figure 26, item BD). Remove screws (Figure 26, item BC) on both sides of center drive and remove tensioning roller guard (Figure 26, item BD) and (Figure 27, item BD).

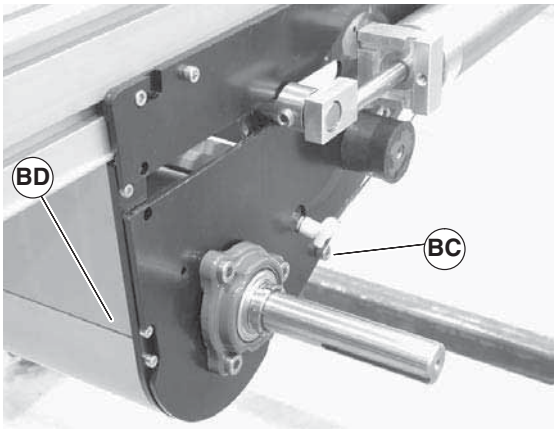


Figure 26

7. Loosen tensioning roller set screws (Figure 27, item BE).

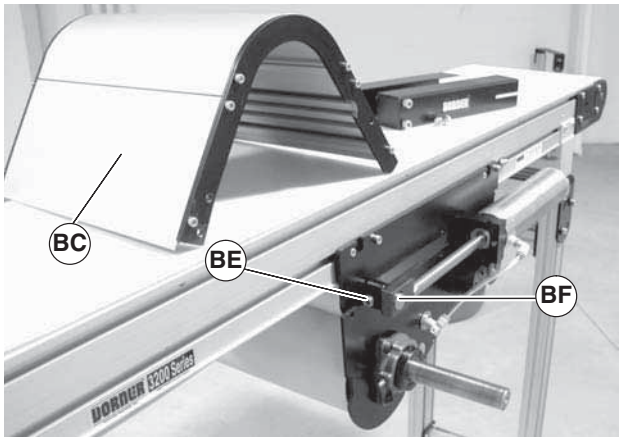


Figure 27

8. Push shaft (Figure 27, item BF) through block, slide block (Figure 28, item BG) towards air cylinder (BH).

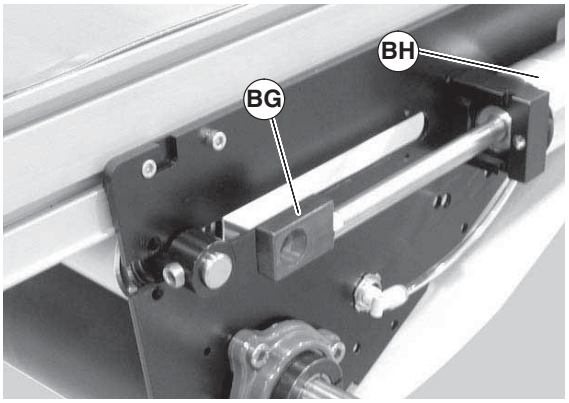


Figure 28

9. Push shaft (Figure 29, item BF) through block (BG) on opposite side of center drive, slide block toward air cylinder (BH).

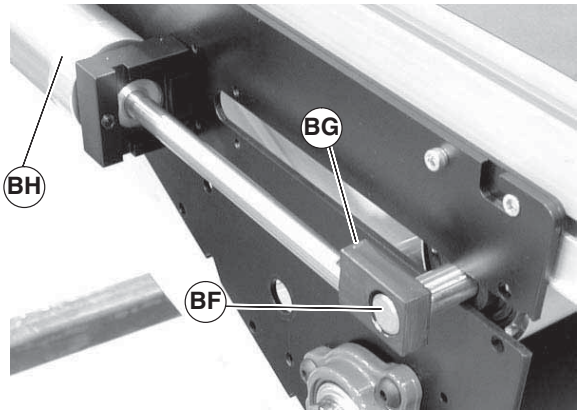


Figure 29

10. Slide out tensioning roller (Figure 30, item BI).

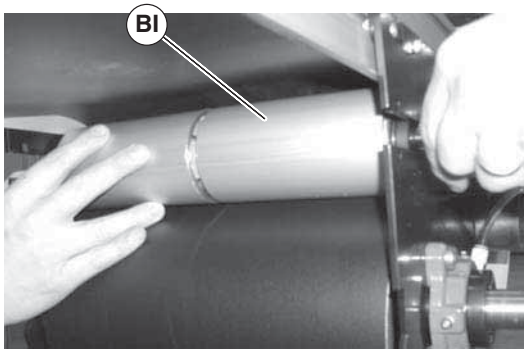


Figure 30

11. Remove belt (Figure 31, item BJ) from center drive module (B) and conveyor.

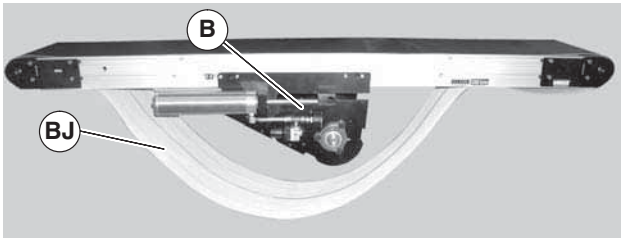


Figure 31

12. Remove screws (BK of (Figure 32, item) on both sides of knuckle and remove guard (BL).

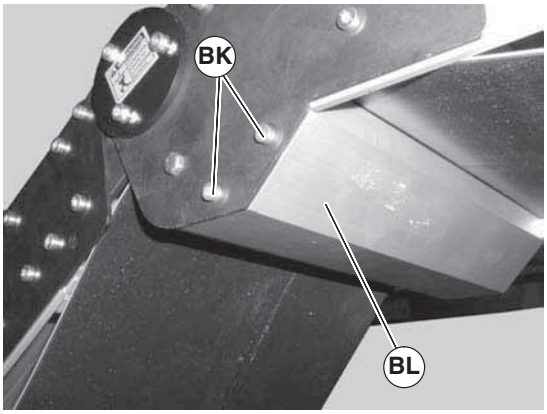


Figure 32

13. Push in hex posts (Figure 33, item BM) and remove roller (BN).

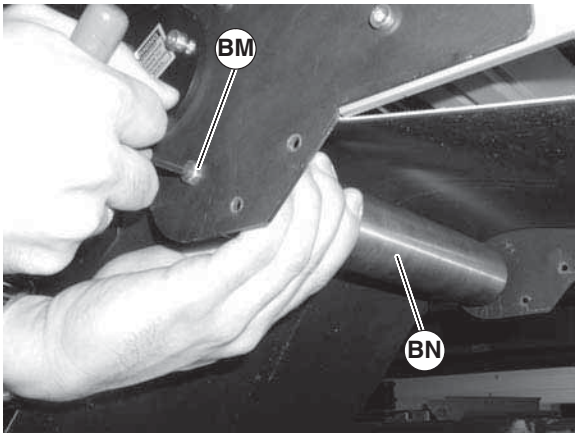


Figure 33

14. Remove belt (Figure 34, item BJ) from conveyor.

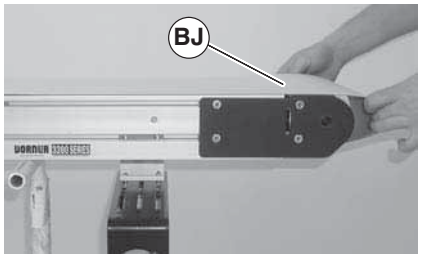


Figure 34

Belt Removal for Conveyor With Stands

⚠ 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.

1. Place temporary support stands (Figure 37, item BO) at both ends of the conveyor. See WARNING.

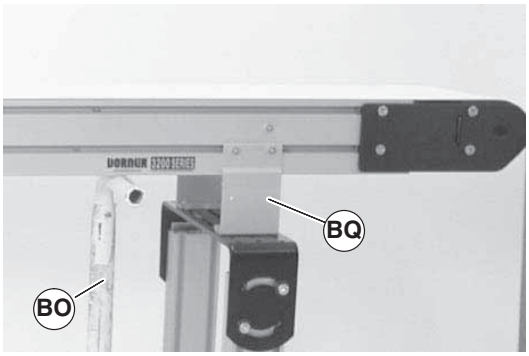


Figure 35

2. If equipped, remove return rollers, guiding and accessories from one side of conveyor.
3. Repeat steps 1 thru 13 of the “Belt Removal for Conveyors Without Stands” section on page 13.
4. Remove first mounting brackets (Figure 37, item BQ) from one side of conveyor. (Reverse steps 3 & 4 of “Mounting Brackets” section on page 9).
5. Remove belt (Figure 36, item BJ) from conveyor, one stand at a time. Start on one end of conveyor and work down to opposite end.

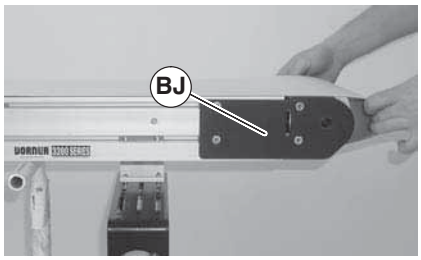


Figure 36

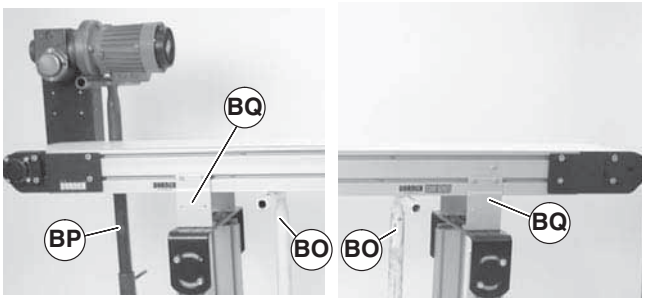


Figure 37

Belt Installation for Conveyor without Stands

1. Orient belt so splice leading fingers (Figure 40, item BR) point in the direction of belt travel as identified by the conveyor directional label (BS).

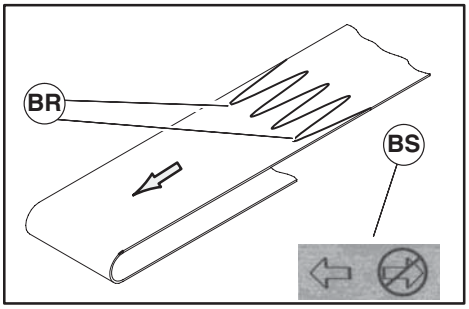


Figure 38

2. Slide belt onto the conveyor frame assembly.
3. Reverse steps 1 thru 13 of the “Belt Removal for Conveyors Without Stands” section on page 13.
4. If equipped, install wipers, return rollers and guiding.
5. Reattach air supply (Figure 39, item AW) to center drive. Refer to “Conveyor Belt Tensioning” section on page 17 for more information.

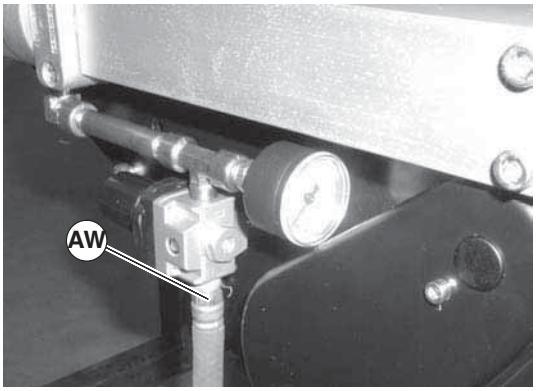


Figure 39

6. Track conveyor and center drive if required. See “Center Drive Module Tracking“ section on page 19 and “Conveyor Belt Tracking” section on page 18.

Belt Installation for Conveyor with Stands

⚠ 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.

1. Ensure temporary support stands (Figure 37, item BO) are placed at both ends of the conveyor. See WARNING.
2. Orient belt so splice leading fingers (Figure 40, item BR) point in the direction of belt travel as identified by the conveyor directional label (BS).

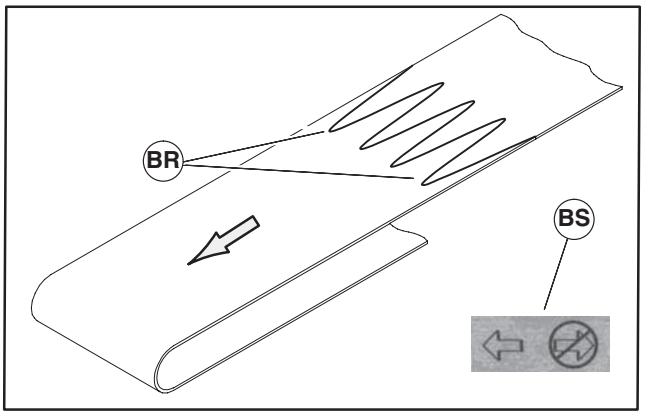


Figure 40

3. Install belt (Figure 40, item BJ) on conveyor. Lift conveyor slightly to avoid pinching belt on temporary support stands.

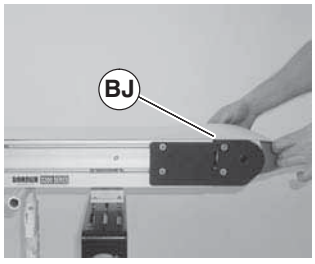


Figure 41

4. Re-install conveyor mounting brackets. Refer "Mounting Brackets" on page 9, steps 3 through 5.
5. Reverse steps 1 thru 13 of the "Belt Removal for Conveyors Without Stands" section on page 13.
6. If equipped, install wipers, return rollers and guiding.
7. Reattach air supply (Figure 39, item AW) to center drive. Refer to "Conveyor Belt Tensioning" section on page 17 for more information.

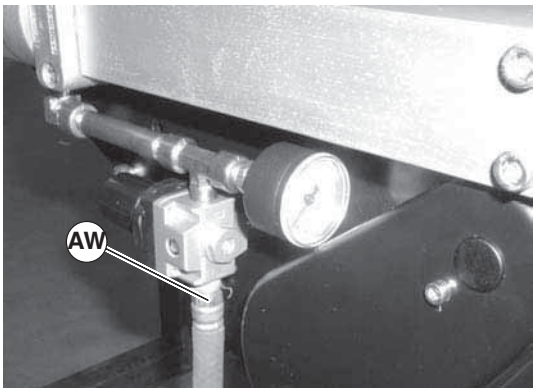


Figure 42

8. Track conveyor and center drive if required. See "Center Drive Module Tracking" section on page 19 and "Conveyor Belt Tracking" section on page 18.

Conveyor Belt Tensioning

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

A - With Pneumatic Tensioning

1. Connect air supply (Figure 43, item AW) to regulator (BT).
2. Adjust regulator (Figure 43, item BT) until gage reads the appropriate pressure. See following table for suggested pressures.

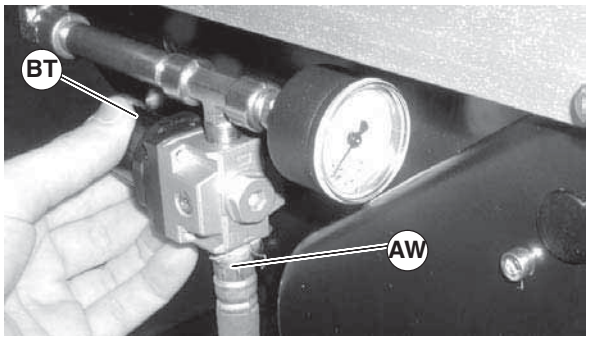


Figure 43

Suggested Tensioning Air Pressure for LPZ & 3200 Series Flat Belt Center Drive Conveyors	
Width	**Pressure**
4” (95 mm)	20 psi (138 kPa)
6” (152 mm)	30 psi (207 kPa)
8” (203 mm)	40 psi (276 kPa)
10” (254 mm)	50 psi (345 kPa)
14” (356 mm)	60 psi (414 kPa)
18” (457 mm)	70 psi (483 kPa)
24” (610 mm) & wider	80 psi (552 kPa)

3. If proper belt tension cannot be achieved before the out of tension indicator (Figure 44, item BU) begins to turn red, the belt must be replaced.

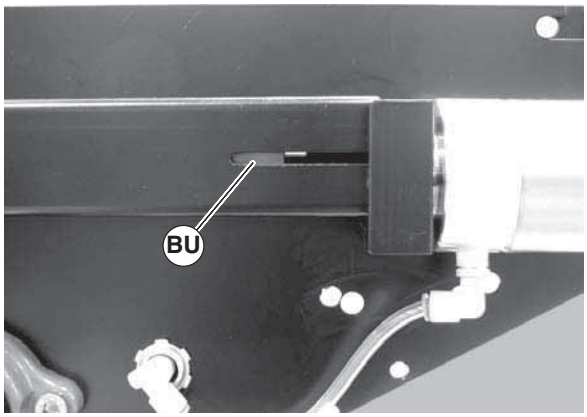


Figure 44

4. If belt tracking is necessary, refer to “Conveyor Belt Tracking” on page 18 and “Center Drive Module Tracking” on page 19.

B - With Manual Tensioning

1. Turn knurled knob (Figure 45, item BW) on each side of center drive unit clockwise until tensioning spring (BX) is completely behind spring cover (BY). There should be approximately 1/8” gap () between hand knob (BZ) and spring cover (BY).

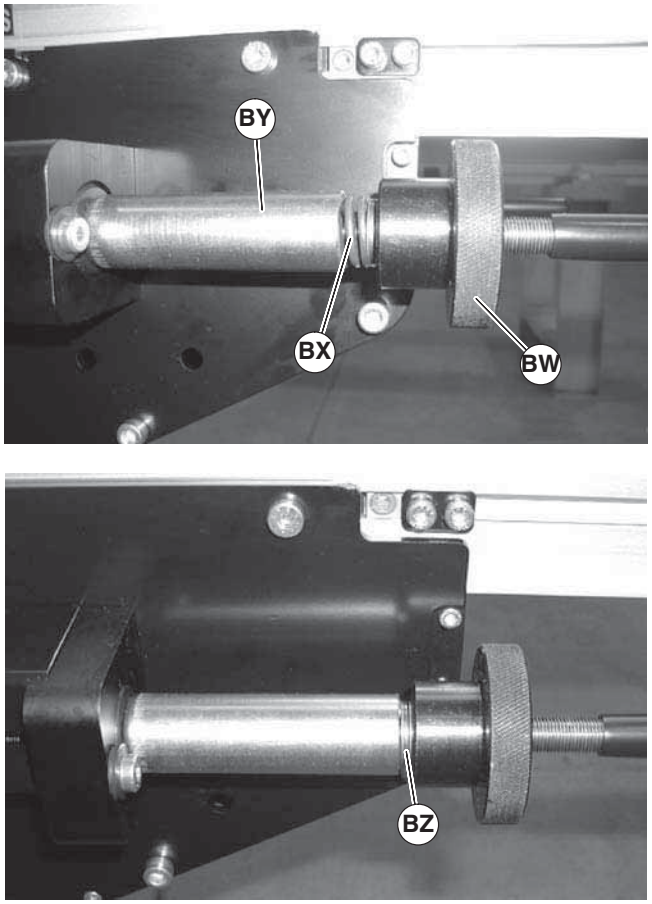


Figure 45

2. As normal belt stretch occurs over time, the spring (Figure 45, item BX) will be exposed out of the spring cover (BY). When the spring is exposed over 1/2” or if conveyor belt slippage occurs, retighten knurled hand knob (BW) on each side of center drive unit clockwise until tensioning spring is completely behind spring cover.
3. If proper belt tension cannot be achieved before the out of tension indicator (Figure 44, item BU) begins to turn red, the belt must be replaced.
4. If belt tracking is necessary, refer to “Conveyor Belt Tracking” on page 18 and “Center Drive Module Tracking” on page 19.

Conveyor Belt Tracking

V-Guided Belts

V-guided belts do not require tracking adjustment.

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. On the side of conveyor which the belt is tracking towards, loosen the head plate fastening screws (Figure 46, item CA).

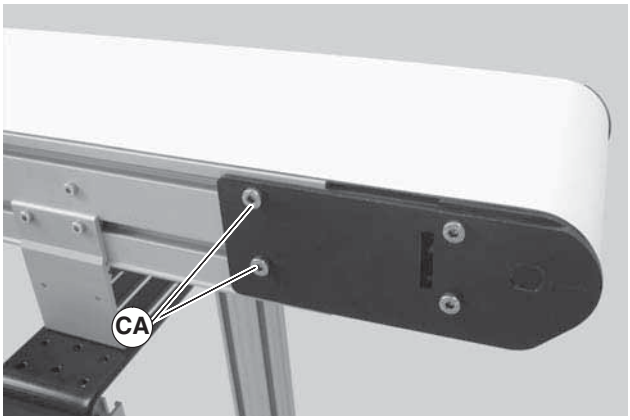


Figure 46

2. With the conveyor running, use wrench (Figure 47, item CB) to rotate the tracking screw (Figure 48, item CC) in small increments until the belt tracks in the center of the conveyor.

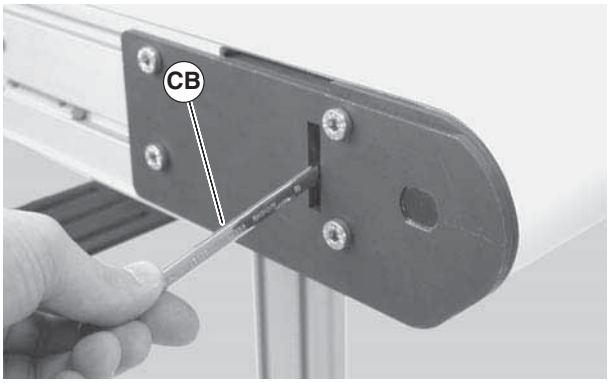


Figure 47

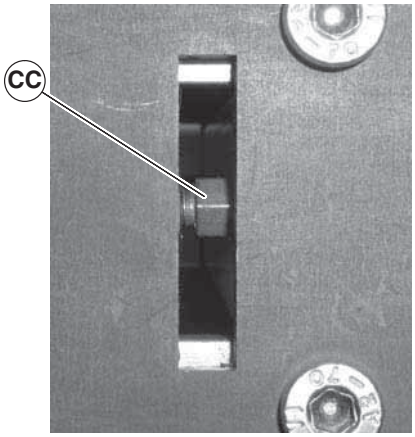


Figure 48

3. Re-tighten the head plate fastening screws (Figure 46, item CA) with a 5 mm hex-key wrench to 146 in-lb (16.5 Nm).

Center Drive Module Tracking

V-Guided Belts

V-guided belts do not require tracking adjustment.

Non V-Guided Belts

Non V-guided belt center drives are equipped with cam tracking assemblies.

To adjust center drive tracking, with the conveyor running:

1. Inspect belt as it exits the center drive:
   (Figure 49) – Normally tracked belt, do nothing
   (Figure 50) – Tracking necessary, adjust tight side cam

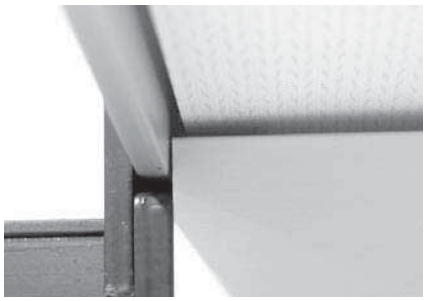


Figure 49

Figure 50

2. If necessary, adjust the tracking cam: loosen the center drive fastening screws (Figure 51, item CD) on the side of center drive to be tracked.

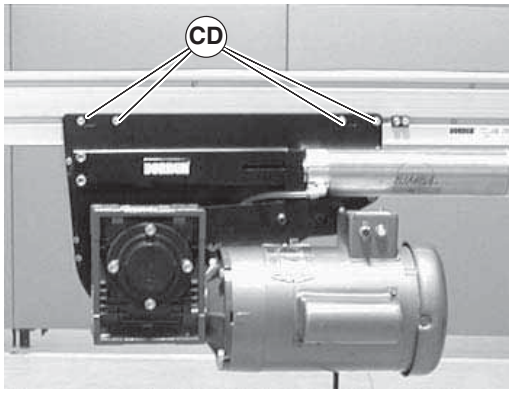


Figure 51

3. Rotate the tracking cam (Figure 52, item CE) in small increments, each time inspecting the belt as it exits the center drive. Continue to rotate the tracking cam until conveyor belt is tracking normally.

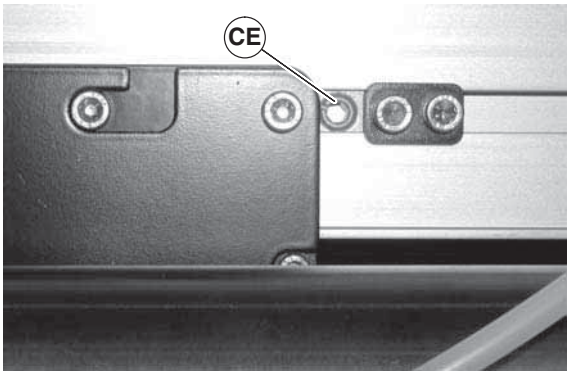


Figure 52

4. Tighten the center drive fastening screws (Figure 51, item CD) to 146 in–lbs (16.5 N–m).

Conveyor Angle Adjustment

⚠ WARNING

Removing mounting brackets or adjustment screws without support under gearmotor and conveyor will cause conveyor to tip or drop, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN ADJUSTING THE CONVEYOR ANGLE

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Place temporary support (Figure 53, item CF) under conveyor sections.

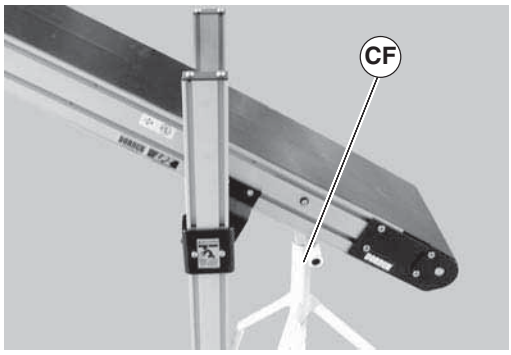


Figure 53

2. Loosen screws (Figure 54, item CG) on both sides of knuckle.

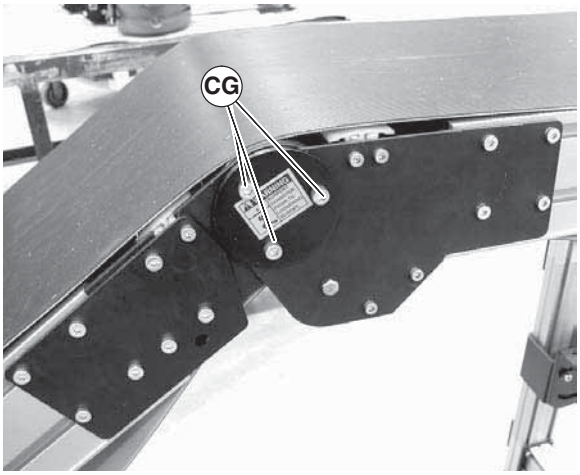


Figure 54

3. Move conveyor to desired angle as indicated by angle label (Figure 55, item CH).

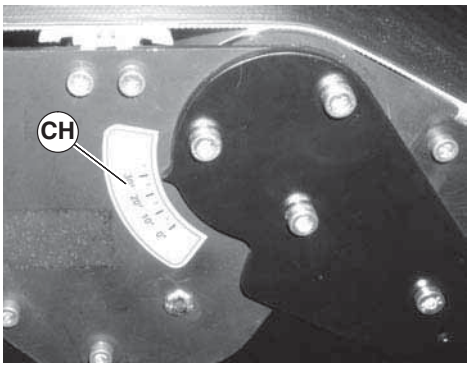


Figure 55

4. Tighten screws (Figure 54, item CG) on both sides of knuckle to 100 in–lbs (12 N–m).

End and Knuckle Pulley Removal

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

⚠ WARNING

Exposed moving parts can cause severe injury.

REMOVE COMPRESSED AIR SUPPLY before removing guards or performing maintenance.

1. Remove air supply and remove hose (Figure 56, item AW) from center drive.

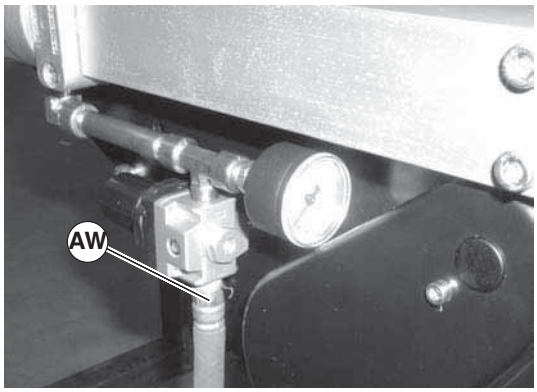


Figure 56

2. Temporarily support idler guard assembly (Figure 23, item AX). Remove screws (AY).

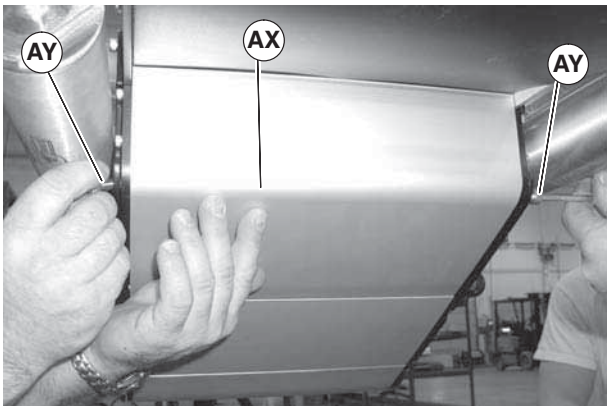


Figure 57

3. Swing down idler guard assembly (Figure 58, item AX).

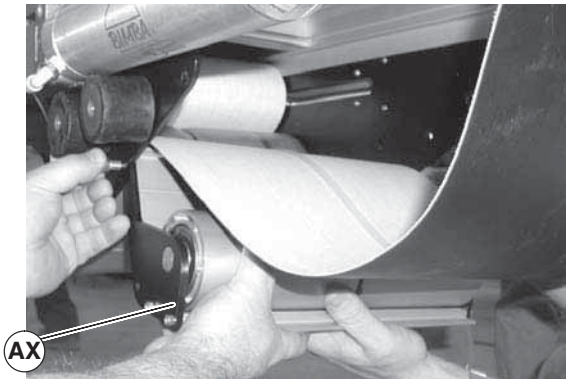


Figure 58

Remove the desired pulley following the corresponding instructions below:

- A – Idler Pulley Removal
- B – Transfer Tail Pulley Removal
- C – Knuckle Idler Pulley Removal
- D – Knuckle Return Roller Removal

A – Idler Pulley Removal

1. Temporarily support the idler pulley.

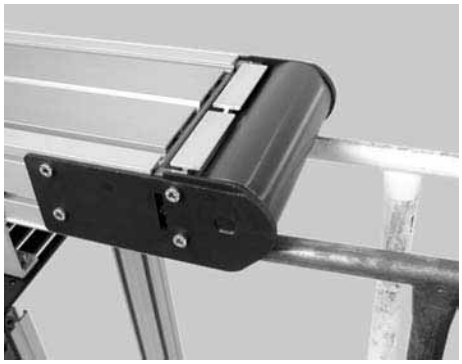


Figure 59

2. On one side of conveyor, loosen the two (2) back fastening screws (Figure 60, item T) and remove two (2) front fastening screws (CI).

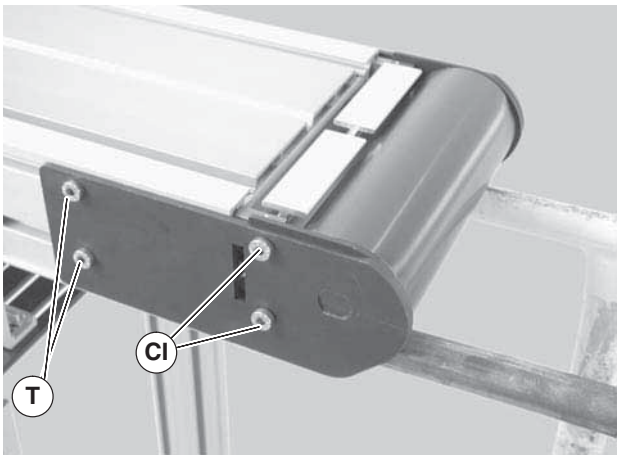


Figure 60

3. Pull back the outer headplate (Figure 61, item U) and remove the inner spacer (CJ).

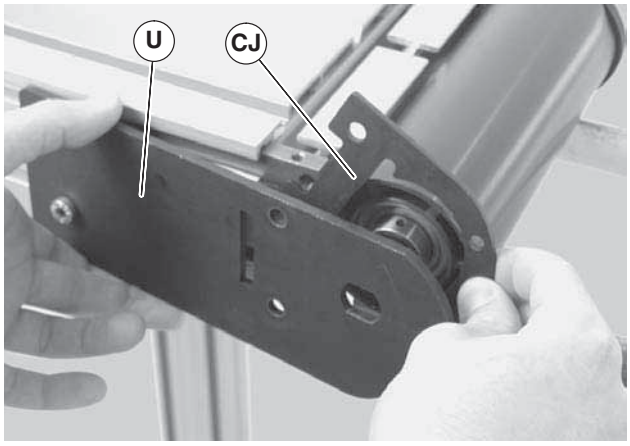


Figure 61

4. Slide the idler pulley assembly (Figure 62, item CK) out of the headplate on the opposite side.

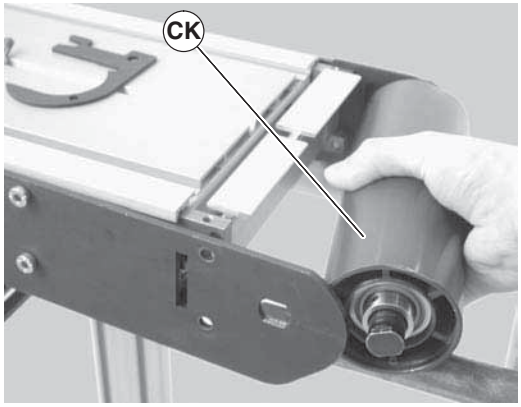


Figure 62

5. Remove the pulley shaft assembly: remove the clip ring (Figure 63, item CL) and washer (CM) from one side of the pulley assembly.

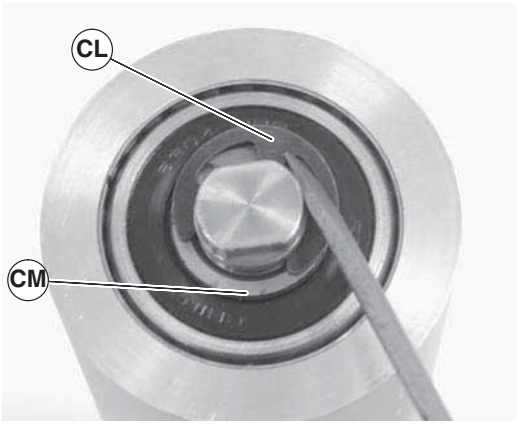


Figure 63

6. Slide the shaft assembly (Figure 64, item CN) out of the pulley (CK).

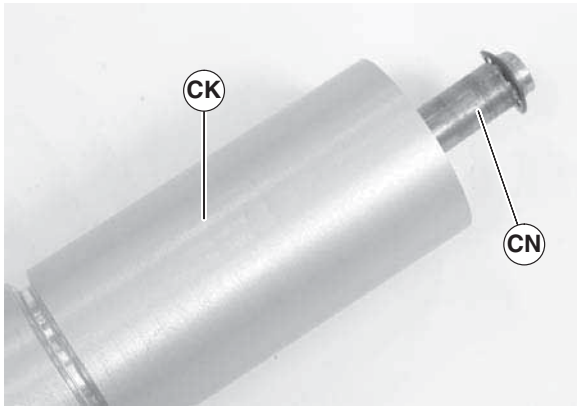


Figure 64

B – Transfer Tail Pulley Removal

1. Temporarily support the transfer tail assembly.

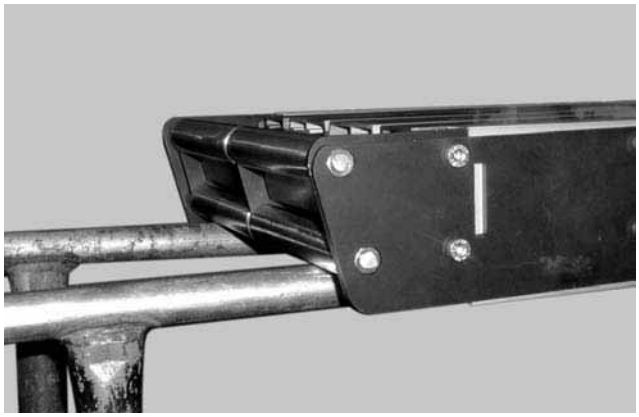


Figure 65

2. On one side of conveyor, loosen the two (2) back fastening screws (Figure 66, item T), and remove the two (2) front fastening screws (CI).

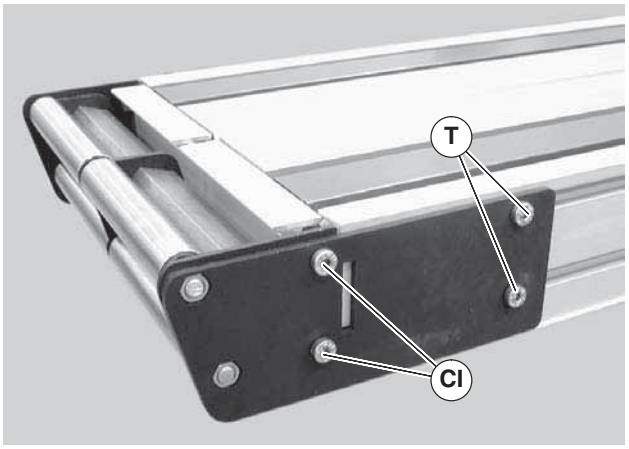


Figure 66

3. Pull back the outer headplate (Figure 67, item U) and remove the inner spacer (CJ).

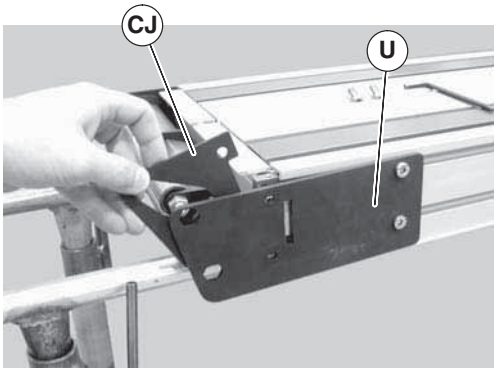


Figure 67

4. Slide the transfer tail pulley assembly (Figure 68, item CO) out of the headplate on the opposite side.

NOTE

Transfer tail assembly must be removed as on piece. Removal may require removing screws T of Figure 66 and headplate U of Figure 67 as shown in Figure 68

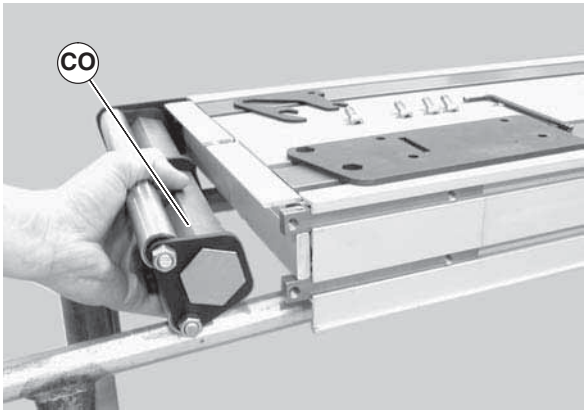


Figure 68

5. Remove hex nuts (Figure 69, item CP).

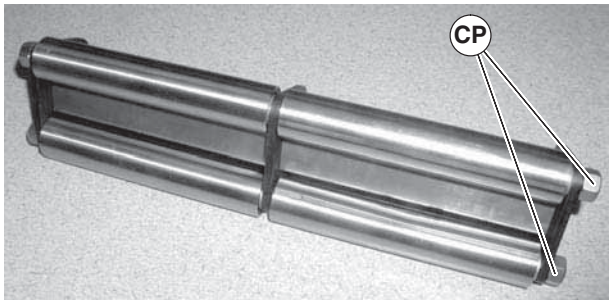


Figure 69

6. Remove support plates (Figure 70, item CQ) and washers (CR).

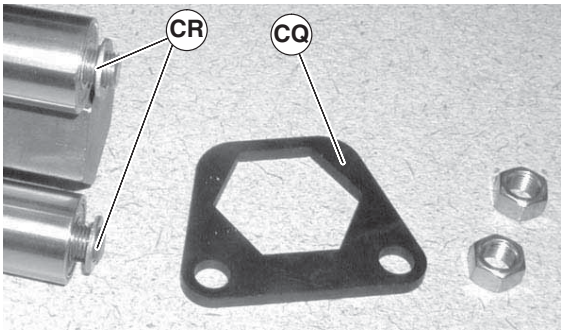


Figure 70

7. Remove pulleys (Figure 71, item CS) and additional washers (CT).

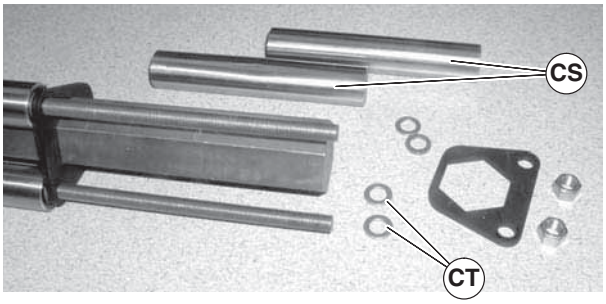


Figure 71

8. To remove additional pulleys, repeat steps 6 through 7.

C – Knuckle Idler Pulley Removal

1. Remove knuckle return roller and guard see “Knuckle Return Roller Removal” on page 25.
2. Temporarily support the knuckle idler pulley.

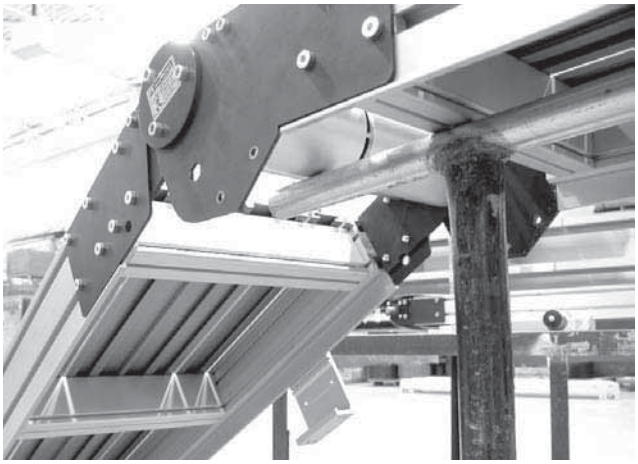


Figure 72

3. On one side of knuckle, remove screws (Figure 73, item CU) and knuckle plate assembly (CV).

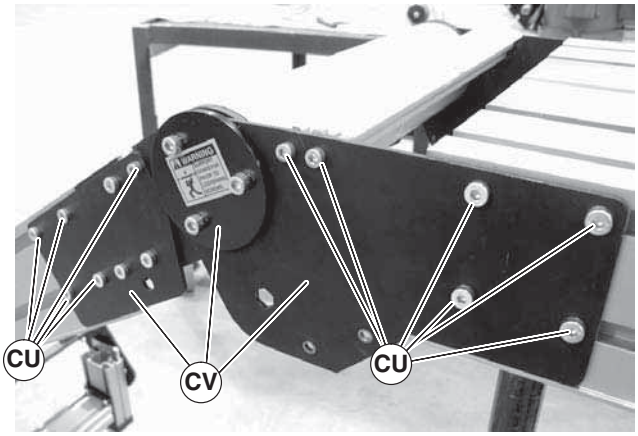


Figure 73

4. Slide the idler pulley assembly (Figure 74, item CW) out of the knuckle plate on the opposite side.

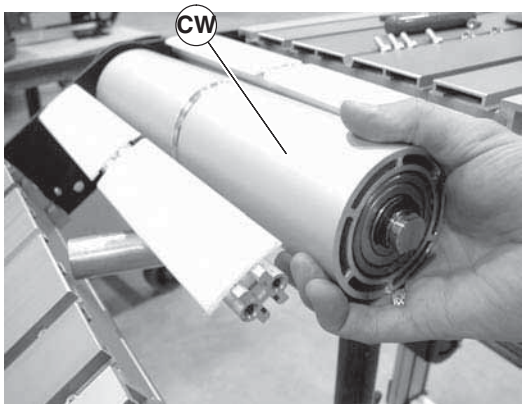


Figure 74

5. Remove the pulley shaft assembly: remove the clip ring (Figure 75, item CL) and washer (CM) from one side of the pulley assembly.

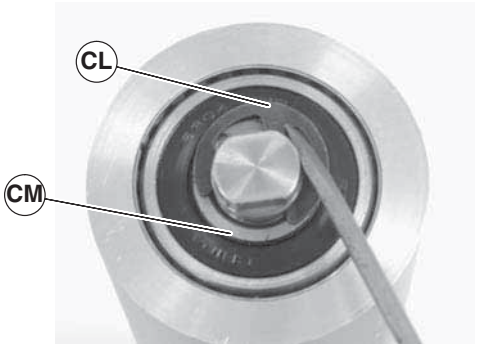


Figure 75

6. Slide the shaft assembly (Figure 64, item CN) out of the pulley (CW).

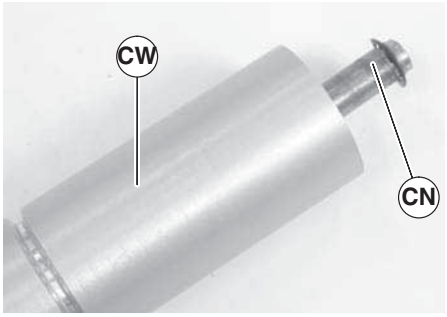


Figure 76

D – Knuckle Return Roller Removal

1. Remove screws (Figure 77, item BK) on both sides of knuckle and remove guard (BL).

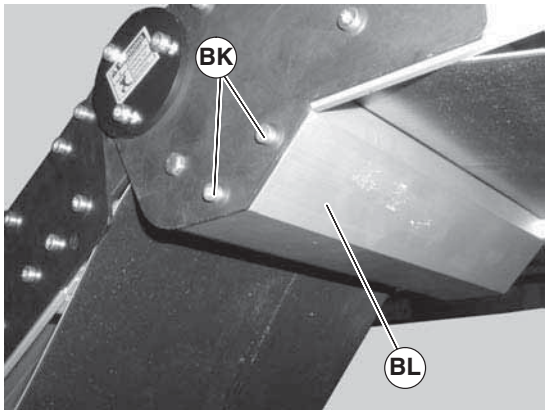


Figure 77

2. Push in hex posts (Figure 78, item BM) and remove pulley (BN).

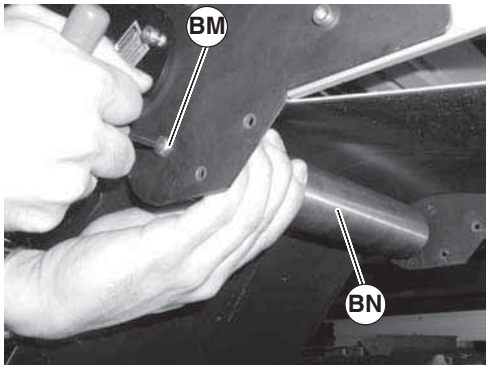


Figure 78

Center Drive Pulleys Removal

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

⚠ WARNING

Exposed moving parts can cause severe injury.

REMOVE COMRESSED AIR SUPPLY before removing guards or performing maintenance.

- A – Tensioner Pulley Removal
- B – Idler Pulley Removal
- C – Drive Pulley Removal

A – Tensioner Pulley Removal

1. Remove air supply and remove hose (Figure 79, item AW) from center drive.

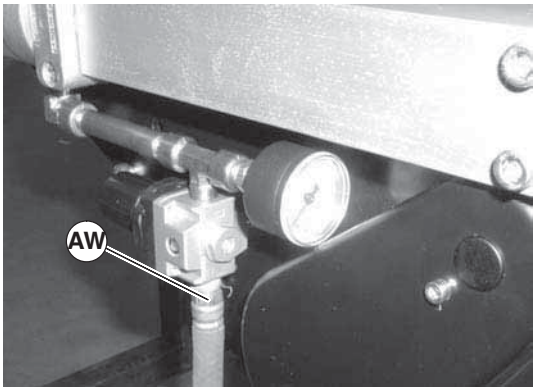


Figure 79

2. Remove screws (Figure 80, item BA) and tensioning guards (BB) from both sides of center drive.

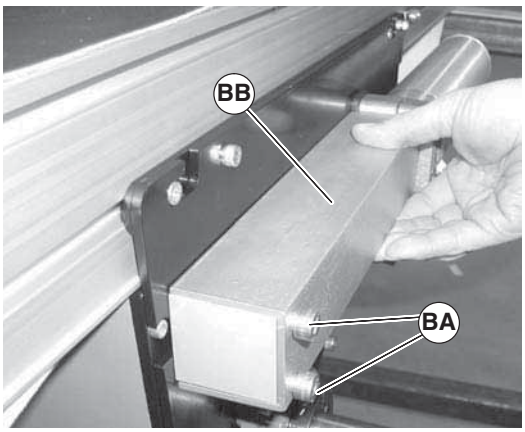


Figure 80

3. Temporarily support the tensioning roller guard (Figure 81, item BD). Remove screws (BC) on both sides of center drive and remove tensioning roller guard (Figure 81, item BD) and (Figure 82, item BD).

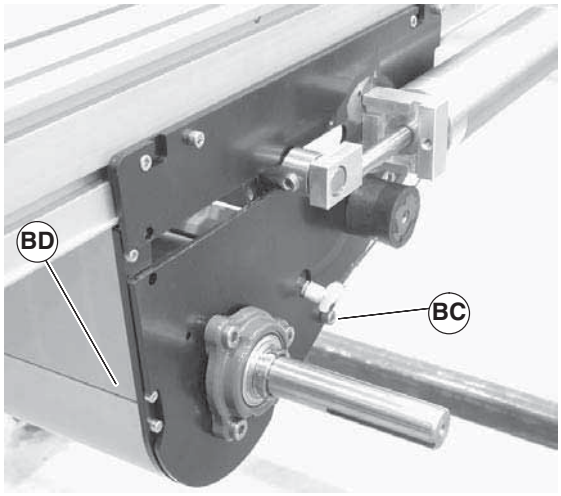


Figure 81

4. Loosen tensioning roller set screws (Figure 82, item BE) on one side of center drive.

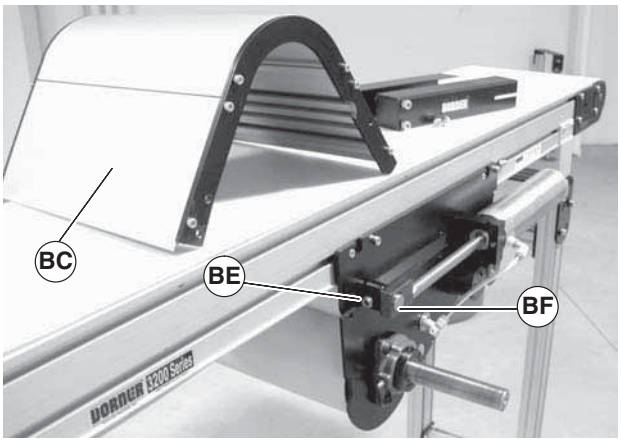


Figure 82

5. Push shaft (Figure 81, item BF) through block, slide block (Figure 83, item BG) towards air cylinder (BH).

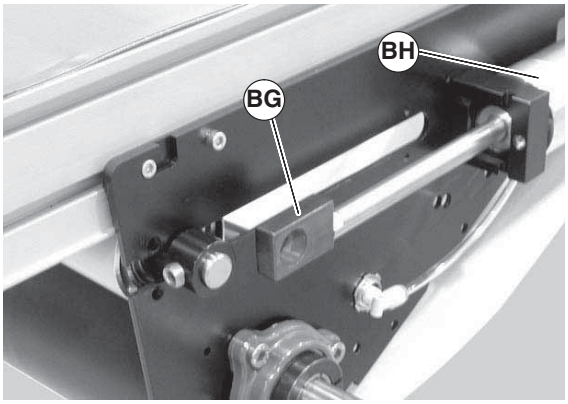


Figure 83

6. Push shaft (Figure 84, item BF) through block (BG) on opposite side of center drive, slide block toward air cylinder (BH).

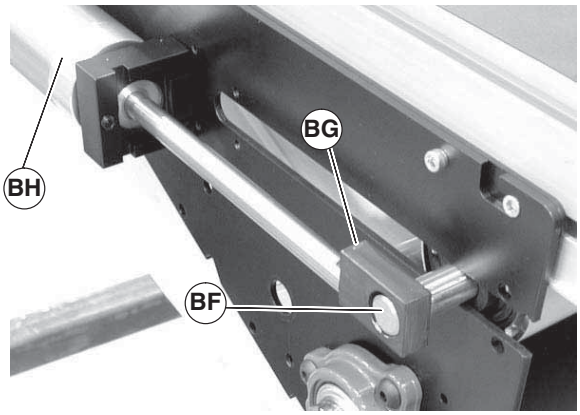


Figure 84

7. Slide out tensioning pulley (Figure 85, item BI).

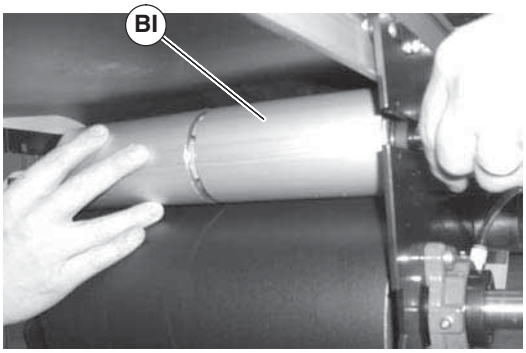


Figure 85

8. Remove the tension pulley locking collar (Figure 86, item CX), spacer (CY) and pulley shaft (CZ) from the roller pulley shaft assembly.

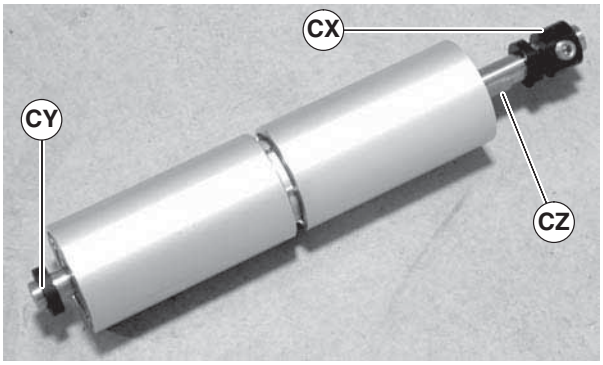


Figure 86

B – Idler Pulley Removal

1. Remove air supply and remove hose (Figure 87, item AW) from center drive.

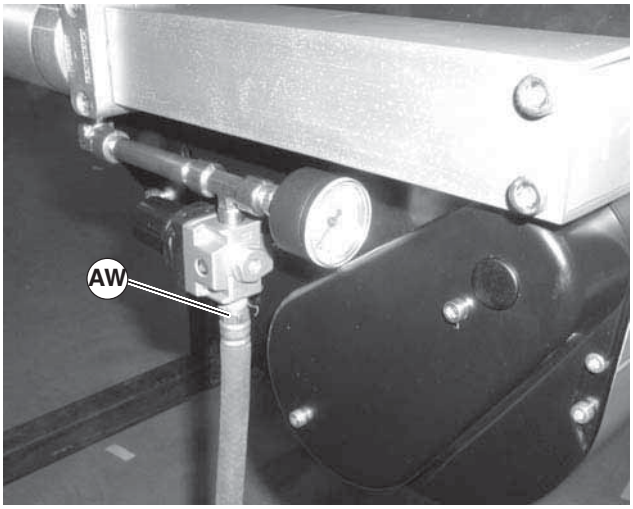


Figure 87

2. Temporarily support idler guard assembly (Figure 88, item AX). Remove screws (AY).

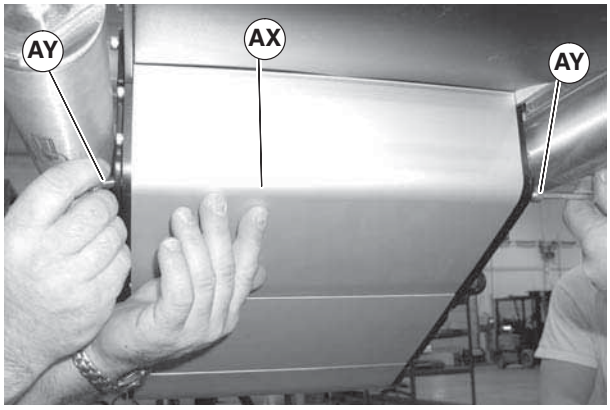


Figure 88

3. Swing down idler guard assembly (Figure 89, item AX). Remove screw (AZ) from both sides of center drive and remove idler guard assembly (AX).

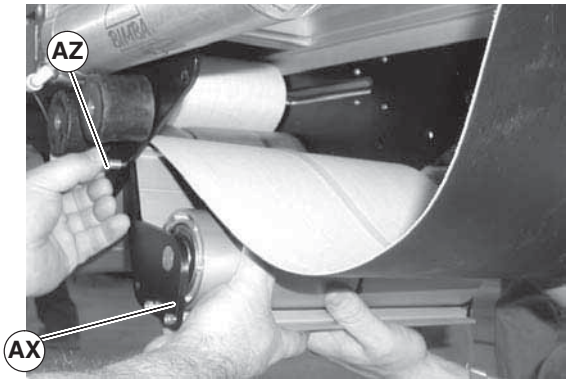


Figure 89

4. Remove screws (Figure 90, item DA) and idler guide side plate (DB).

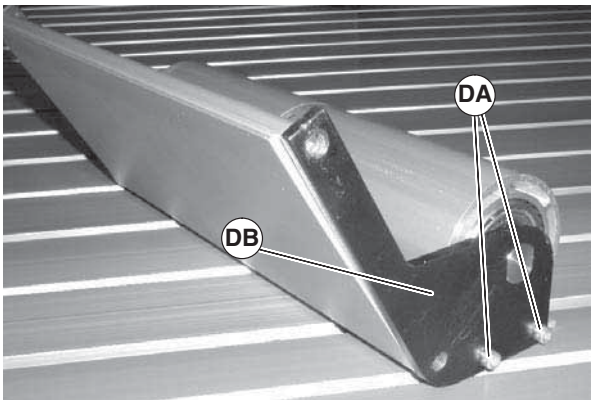


Figure 90

5. Slide the idler pulley assembly (Figure 91, item DC) out of the idler guide side plate on the opposite side.

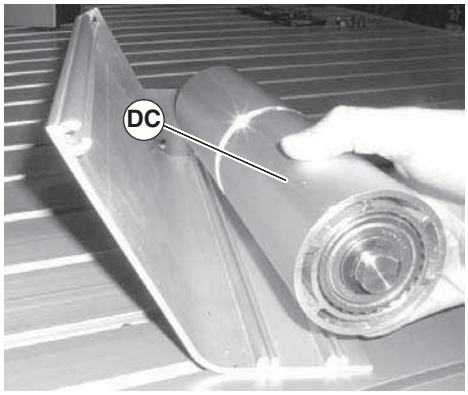


Figure 91

6. Remove the pulley shaft assembly: remove the clip ring (Figure 92, item CL) and washer (CM) from one side of the pulley assembly.

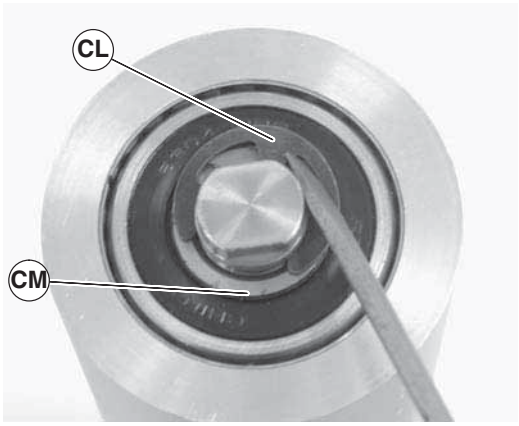


Figure 92

7. Slide the shaft assembly (Figure 93, item CN) out of the pulley (CK).

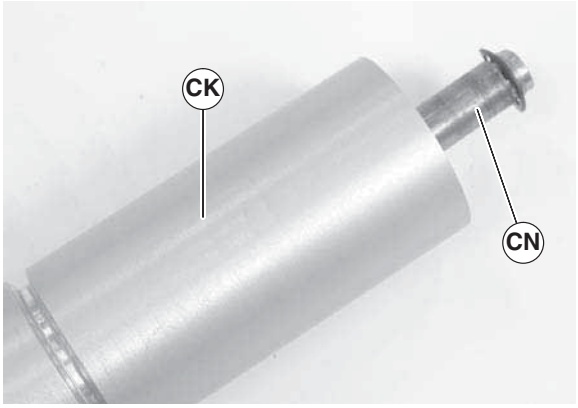


Figure 93

C – Drive Pulley Removal

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Remove air supply and remove hose (Figure 94, item AW) from center drive.

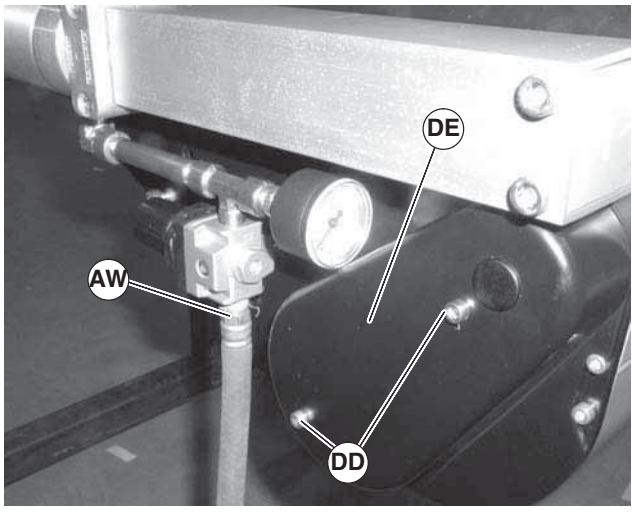


Figure 94

2. Remove screws (Figure 94, item DD) and guard (DE).
3. Remove screws (Figure 95, item DF) and remove gearmotor (DG) (Gearhead shown with motor removed for clarity, motor can remain attached to gearhead).

NOTE

Gearhead shown with motor removed for clarity, motor can remain attached to gearhead.

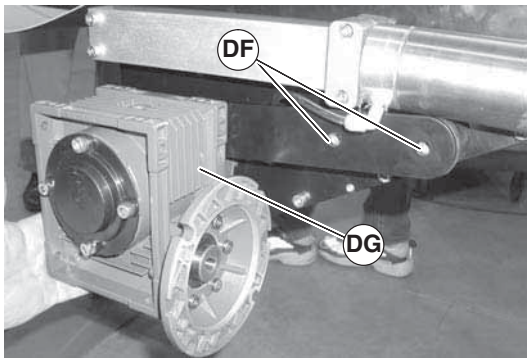


Figure 95

4. Remove spacer ring (Figure 96, item AS) and key (AO).
5. Reverse steps 3 thru 10 of the "Belt Removal for Conveyors Without Stands" section on page 13.

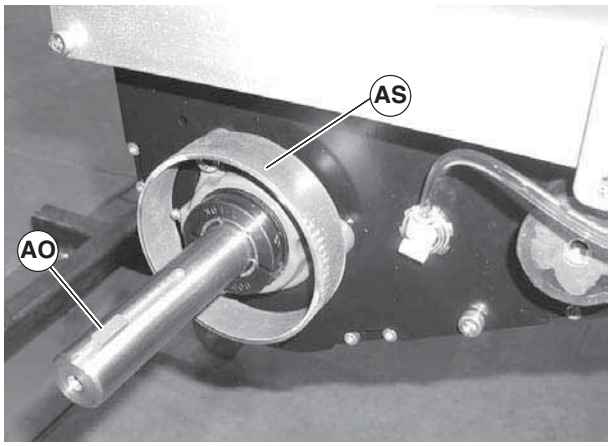


Figure 96

6. Loosen clamp screw (Figure 97, item DH) and remove bearing collar (DI).

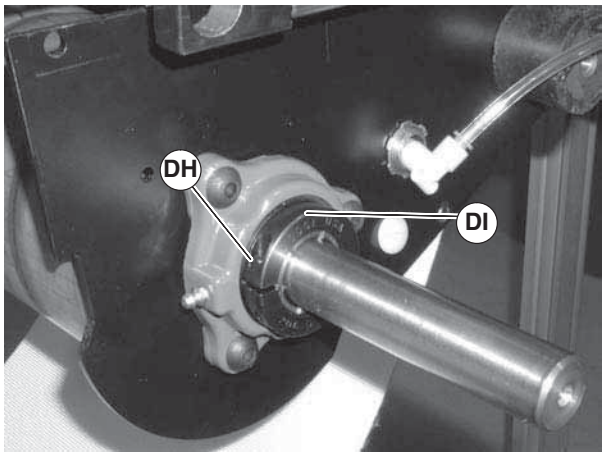


Figure 97

7. Disconnect flexible air hose (Figure 98, item DJ) from fitting (DK).

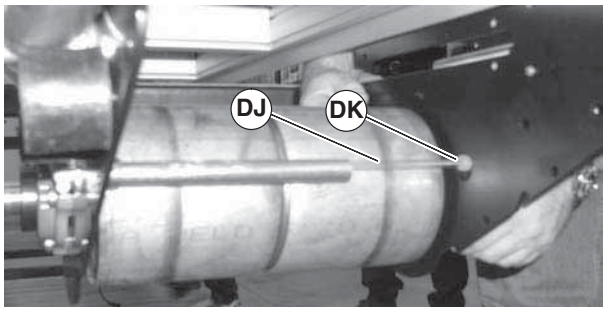


Figure 98

8. Temporarily support the drive pulley (Figure 99, item DL).

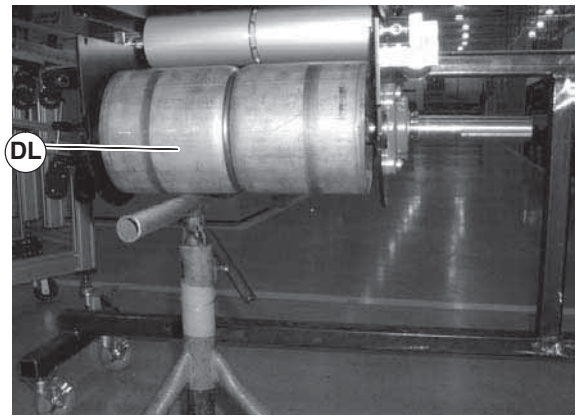


Figure 99

9. Loosen clamp screw (Figure 100, item DH) and remove bearing collar (DI).

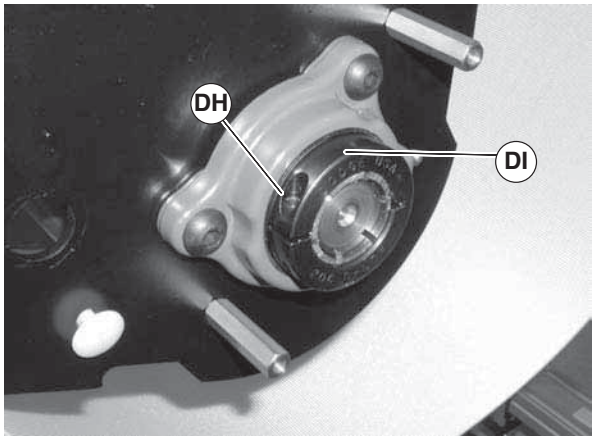


Figure 100

10. Remove screws (DM) and pull side plate assembly (DN) off conveyor.

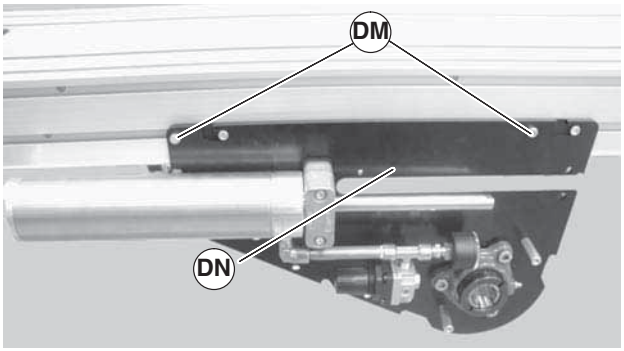


Figure 101

11. Slide drive pulley (Figure 102, item DL) out of attached side plate.

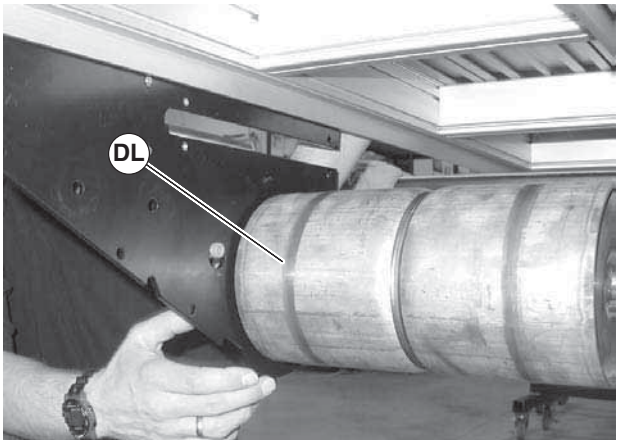


Figure 102

Bearing Replacement

⚠ WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

⚠ WARNING

Exposed moving parts can cause severe injury.

REMOVE COMPRESSED AIR SUPPLY before removing guards or performing maintenance.

- A – Idler Bearing
- B – Drive Bearing
- C – Transfer Tail Bearing
- D – 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

⚠ WARNING

Drive shaft keyway may be sharp.

HANDLE WITH CARE.

Drive Side Bearing

1. Remove air supply (Figure 103, item AW) from center drive module.

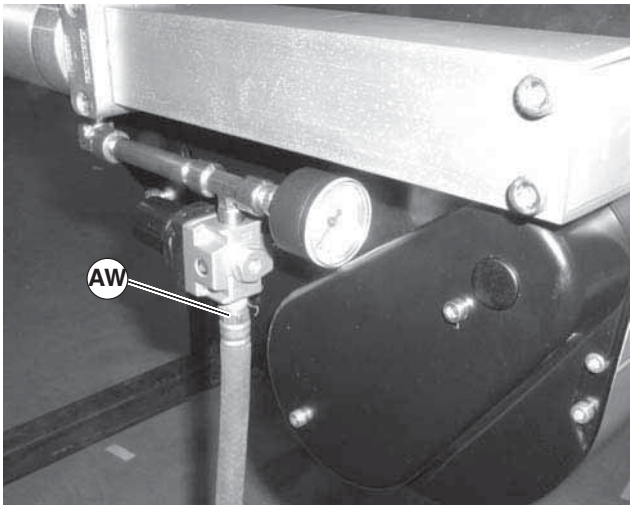


Figure 103

2. Remove screws (Figure 104, item DF) and remove gearmotor (DG) (Gearhead shown with motor removed for clarity, motor can remain attached to gearhead).

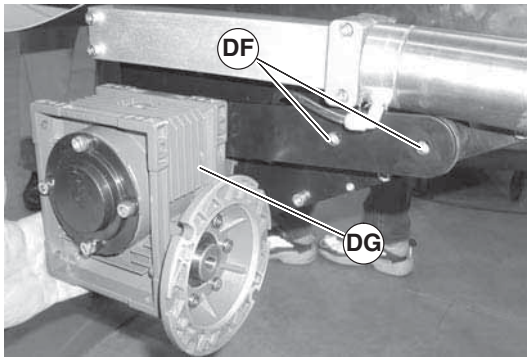


Figure 104

3. Remove spacer ring (Figure 105, item AS) and key (AO). Loosen clamp screw (DH) and remove bearing collar (DI).

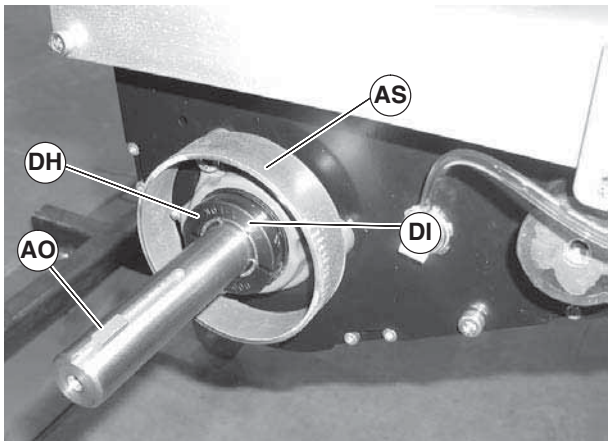


Figure 105

4. Remove the three (3) mounting screws (Figure 106, item DO).

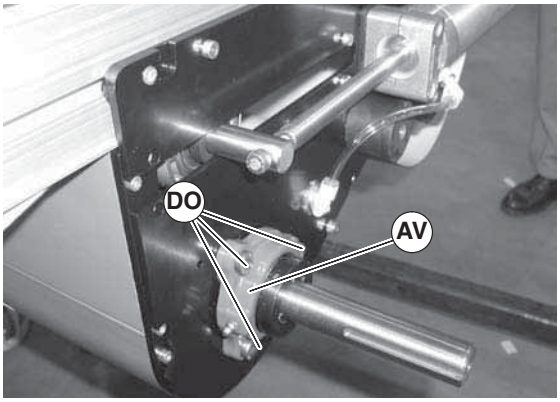


Figure 106

5. Remove and replace bearing housing assembly (Figure 106, item AV).
6. Tighten three (3) mounting screws (Figure 107, item DO) to 200 in–lbs (22.5 N–m).

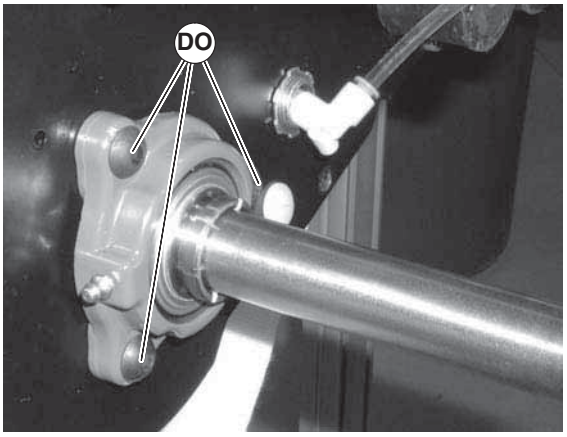


Figure 107

7. Reinstall bearing collar (Figure 105, item DI). Tighten clamp screw (DH) to 95 in–lbs (11 N–m).
8. Reinstall key (Figure 105, item AO).
9. Reinstall spacer ring (Figure 108, item AS) and gearmotor (DG). Tighten screws (Figure 104, item DF) to 150 in–lbs (17 N–m).

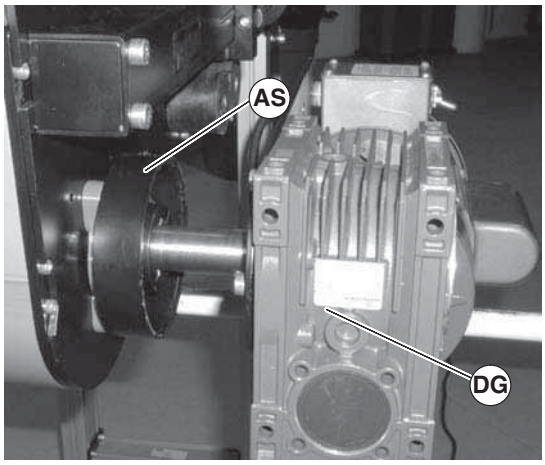


Figure 108

Idler Side Bearing

1. Remove air supply (Figure 109, item AW) from center drive module.

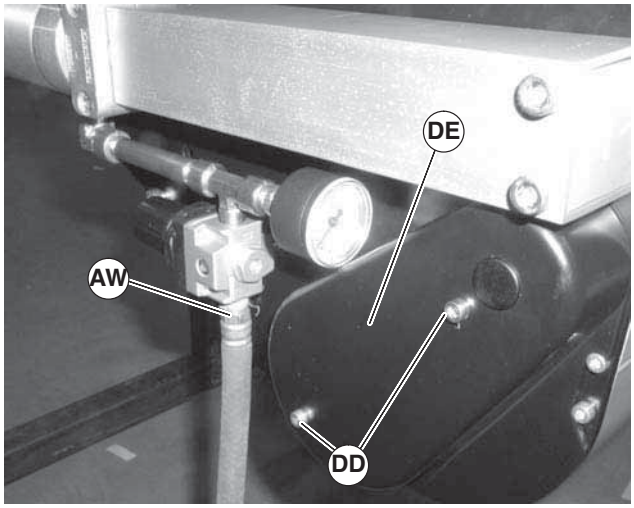


Figure 109

2. Remove screws (Figure 109, item DD) and cover (DE).
3. Loosen clamp screw (Figure 110, item DH) and remove bearing collar (DI).

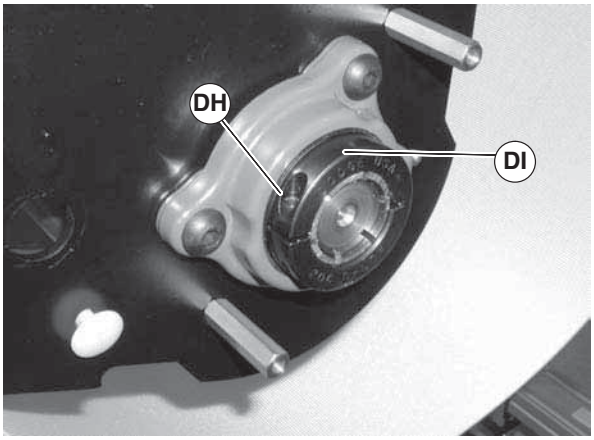


Figure 110

4. Remove the three (3) mounting screws (Figure 111, item DO).

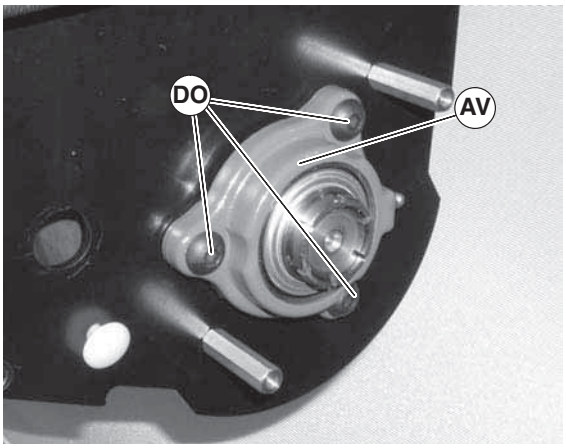


Figure 111

5. Remove and replace housing assembly (Figure 111, item AV).
6. Tighten three (3) mounting screws (Figure 111, item DO) to 200 in–lbs (22.5 N–m).
7. Reinstall bearing collar (Figure 110, item DI). Tighten clamp screw (DH) to 95 in–lbs (11 N–m).
8. Reinstall cover (Figure 109, item DE). Tighten screws (DD) to 69 in–lbs (8 N–m).

C – Transfer Tail Bearing Replacement

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

D – Knuckle Idler Bearing Replacement

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

E – Knuckle Return Roller Bearing Replacement

The bearings in a 3200 Series Knuckle Return Roller can not be removed. Replace the entire roller assembly when worn.

Pulley Replacement

Idler Pulley

To replace the idler pulley, reverse the “Idler Pulley Removal” procedure on page 21.

Drive Pulley

To replace the drive pulley, reverse the “Drive Pulley Removal” procedure on page 28.

Transfer Tail Pulley

To replace the transfer tail pulley, reverse the “Transfer Tail Pulley Removal” procedure on page 22.

Knuckle Pulley

To replace the knuckle pulley, reverse the “Knuckle Pulley Removal” procedure on page 24.

Knuckle Return Roller

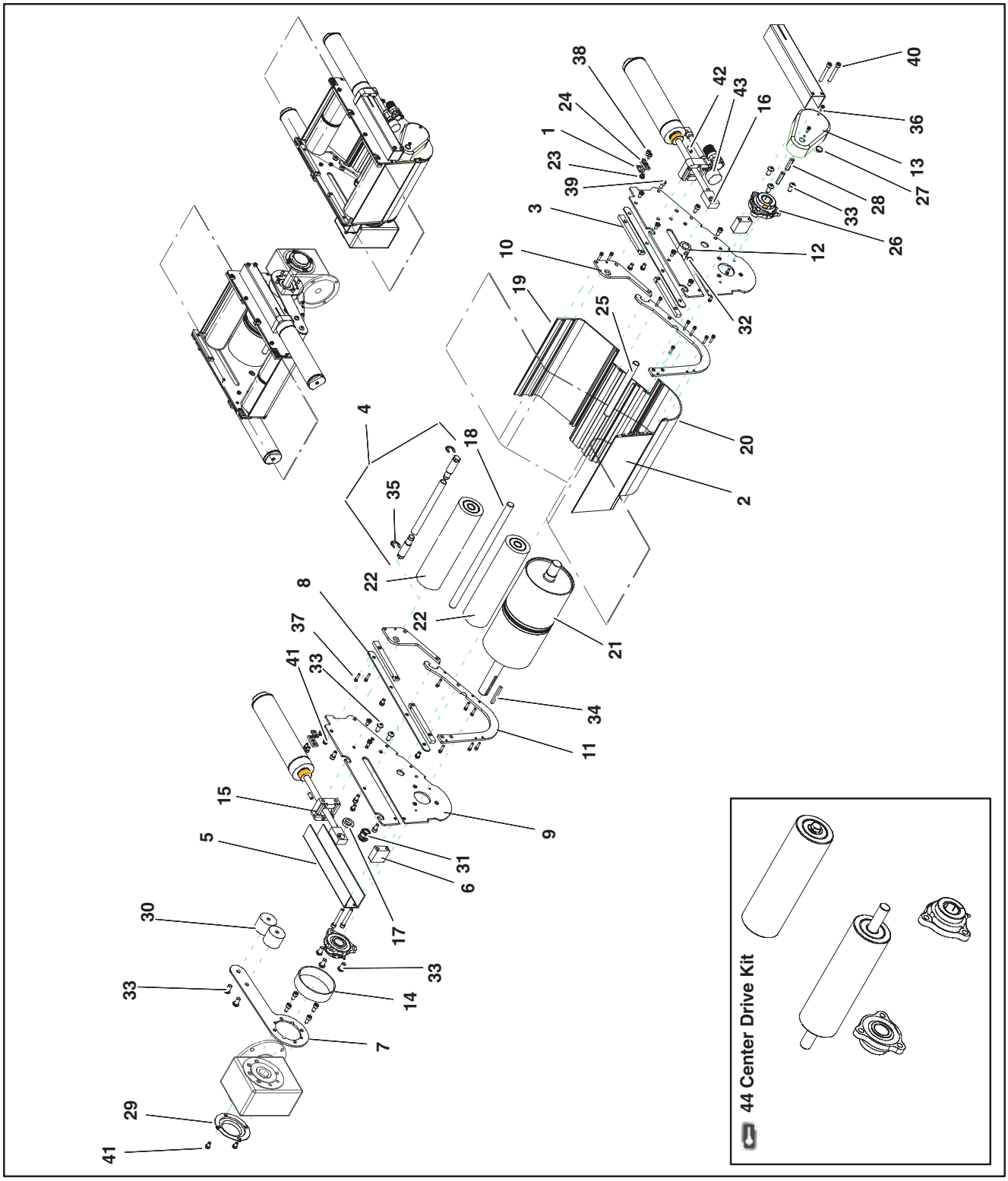
To replace the knuckle return roller, reverse the “Knuckle Return Roller Removal” procedure on page 25.

Notes

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.

Center Drive Assembly



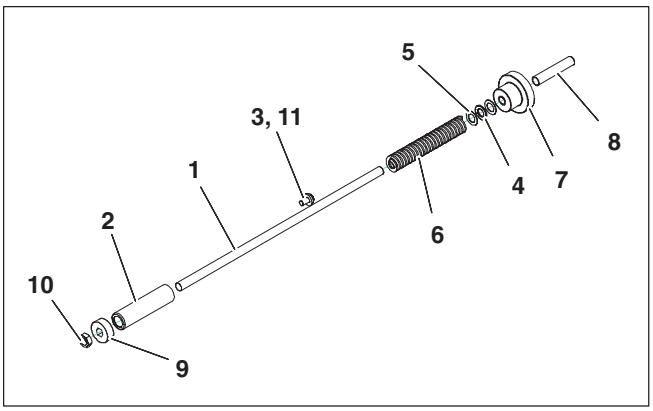
Item	Part Number	Description
1	200038	Cam Clamping Plate
2	See Table 1	Flat Guard
3	301088	Tail Clamping Bar
4	3227WW	Wand Assy for 3” Idler Roller
5	301214	Cylinder Channel Guard
6	301216	Cylinder Guard Mounting Block
7	301217	Torsion Arm Plate
8	301218	Side Plate Spacer
9	301219	Center Drive Side Plate
10	301220	End Roller Mounting Plate
11	301221	Horseshoe Guard Mount Plate
12	301222	Center Drive Tension Pulley Spacer
13	301278	Center Drive Bearing Guard
14	301281	Pipe Guard
15	301355	Cylinder Mounting Block
16	301356	Cylinder–Rod Mounting Block
17	301357	Tension Pulley Spacer
18	3242WW	Tension Pulley Axle Shaft
19	3243WW	Bottom End Guard
20	3244WW	Bottom Corner Guard
21	3287WW	6” Diameter Pulley
22	3290WW	3” Center Drive Pulley
23	200039P	Belt Tracking Cam
24	200341M	Cam Retaining Block
25	See Table 1	Inner Shaft Tube
26	802–138	3 Bolt Bearing
27	807–226	Snap Out Plastic Plug
28	807–1162	Hex Stand Off
29	807–1167	Gearhead Cover
30	812–061	Anti–rotation Bushing
31	824–331	1/2” EMT Steel Connector
32	825–160	1/4” BSPT Pipe Plug
33	911020M	Button Head Screw M10 x 20mm
34	912–111	Square Key
35	915–265	E Retaining Ring
36	920512M	Socket Head Screw M5 x 12mm
37	920520M	Socket Head Screw M5 x 20mm
38	920610M	Socket Head Screw M6 x 10mm
39	920816M	Socket Head Screw M8 x 16mm
40	920860M	Socket Head Screw M8 x 60mm
41	920892M	Low Head Screw M8 x 12mm
42	970820M	Cup Set Screw M8 x 20mm
43	301213	Pneumatic Tension Assy
44	32CD-WW	Center Drive Kit (includes items 4, 18, 22 and 26)
WW = Conveyor width reference: 04 – 60 in 02 increments		

Table 1 – Part Number Per Conveyor Width		
Conveyor Width	Item 2 – Flat Guard	Item 25 – Inner Shaft Tube
4”	300895–00374	301164
6”	300895–00599	301198–00209
8”	300895–00799	301198–00409
10	300895–00999	301198–00609
12	300895–01199	301198–00809

Table 1 – Part Number Per Conveyor Width		
Conveyor Width	Item 2 – Flat Guard	Item 25 – Inner Shaft Tube
14	300895–01399	301198–01009
16	300895–01599	301198–01209
18	300895–01799	301198–01409
20	300895–01999	301198–01609
22	300895–02199	301198–01809
24	300895–02399	301198–02009
26	300895–02599	301198–02209
28	300895–02799	301198–02409
30	300895–02999	301198–02609
32	300895–03199	301198–02809
34	300895–03399	301198–03009
36	300895–03599	301198–03209
38	300895–03799	301198–03409
40	300895–03999	301198–03609
42	300895–04199	301198–03809
44	300895–04399	301198–04009
46	300895–04599	301198–04209
48	300895–04799	301198–04409
50	300895–04999	301198–04609
52	300895–05199	301198–04809
54	300895–05399	301198–05009
56	300895–05599	301198–05209
58	300895–05799	301198–05409
60	300895–05999	301198–05609

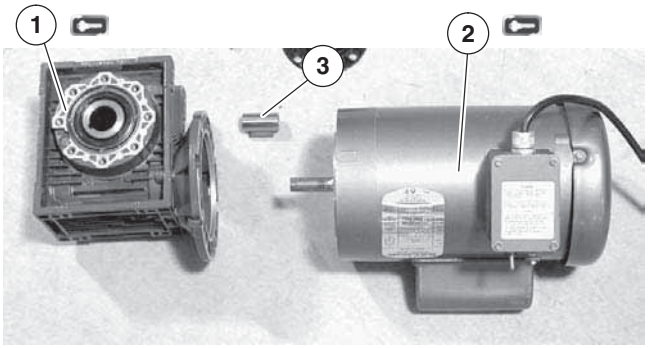
Service Parts

Center Drive Manual Tensioner



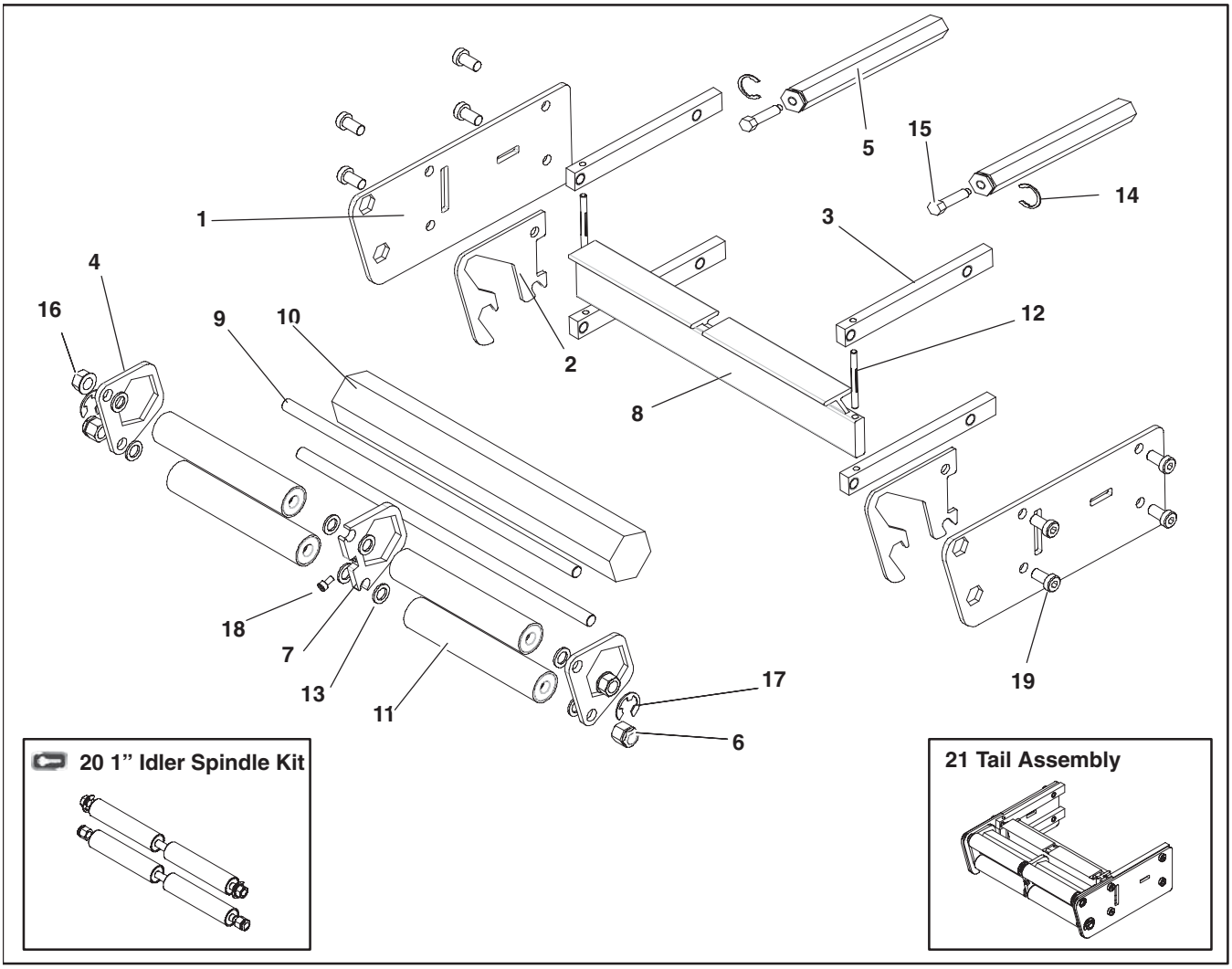
Item	Part Number	Description
1	301410	Threaded Rod 1/2" x 17" Long
2	3015WW	Spring Cage (04" through 24" Wide Conveyor)
	301524	Spring Cage (26" through 60" Wide Conveyor)
3	605280P	Hard Washer
4	802–139	Thrust Bearing Cage
5	802–140	Thrust Bearing Washer
6	807–1182	Spring – Blue (04" through 08" Wide Conveyor)
	807–1183	Spring – Red (10" through 12" Wide Conveyor)
	807–1184	Spring – Bronze (14" through 60" Wide Conveyor)
7	807–1185	Knurled Knob
8	807–1186	End Cap
9	807–1187	Threaded Plug
10	910–081	Hex Jam Nut 1/2"–20
11	920893M	Low Head Cap Screw M8 x 16mm
WW = Conveyor width reference: 04 – 60 in 02 increments		

3200 Center Drive 90º Industrial Gearmotors



Item	Part No.	Part Description
1	32M008HH	Gear Reducer, 7.5:1 NEMA 140TC
	32M010HH	Gear Reducer, 10:1 NEMA 140TC
	32M015HH	Gear Reducer, 15:1 NEMA 140TC
	32M020HH	Gear Reducer, 20:1 NEMA 140TC
	32M025HH	Gear Reducer, 25:1 NEMA 140TC
	32M030HH	Gear Reducer, 30:1 NEMA 140TC
	32M040HH	Gear Reducer, 40:1 NEMA 140TC
	32M050HH	Gear Reducer, 50:1 NEMA 140TC
	32M060HH	Gear Reducer, 60:1 NEMA 56C Gear
	32M080HH	Reducer, 80:1 NEMA 56C Gear
	32M100HH	Reducer, 100:1 NEMA 56C
2	62MS411FN	Motor, 0.25hp (0.19Kw), 115/230 Volts, 60 Hz, 1-Phase
	62MH411	Motor, 0.5hp (0.37Kw), 115/230 Volts, 60Hz, 1–Phase
	62MH423	Motor, 0.5hp (0.37Kw) 208–230/460 Volts, 60Hz, 3 Phase
	32MHH423FN10	Motor, 1 hp (0.75Kw), 230 Volts, 3 Phase
	32MS423EN	Motor, 0.5hp (0.37Kw), 230 Volts, 3 Phase Inverter Duty
	32MHH423EN10	Motor, 1hp (0.75Kw), 230 Volts, 3 Phase Inverter Duty
	32MHH423EN15	Motor, 1.5hp (1.1Kw), 230 Volts, 3 Phase Inverter Duty
	32MHH423FN15	Motor, 1.5hp (1.1Kw), 230 Volts, 3 Phase
	62MHD9DEN	Motor, 0.5hp (0.37Kw), 90 Volts DC
	62MHD9DEN75	Motor, 0.75hp (0.56Kw), 90 Volts DC
	32MHH423EN20	Motor, 2.0hp (1.5Kw), 230 Volts, 3 Phase Inverter Duty
	32MHH423FN20	Motor, 2.0hp (1.5Kw), 230 Volts, 3 Phase
	32MHH411EC10	Motor, 1.0hp (0.75Kw), 115 Volts, Integrated Controller
	32MHH411EC05	Motor, 0.5hp (0.37Kw), 115 Volts, Integrated Controller
3	820–329	Bushing Shaft Adapter, 56C to 140TC

Transfer Tail Assembly

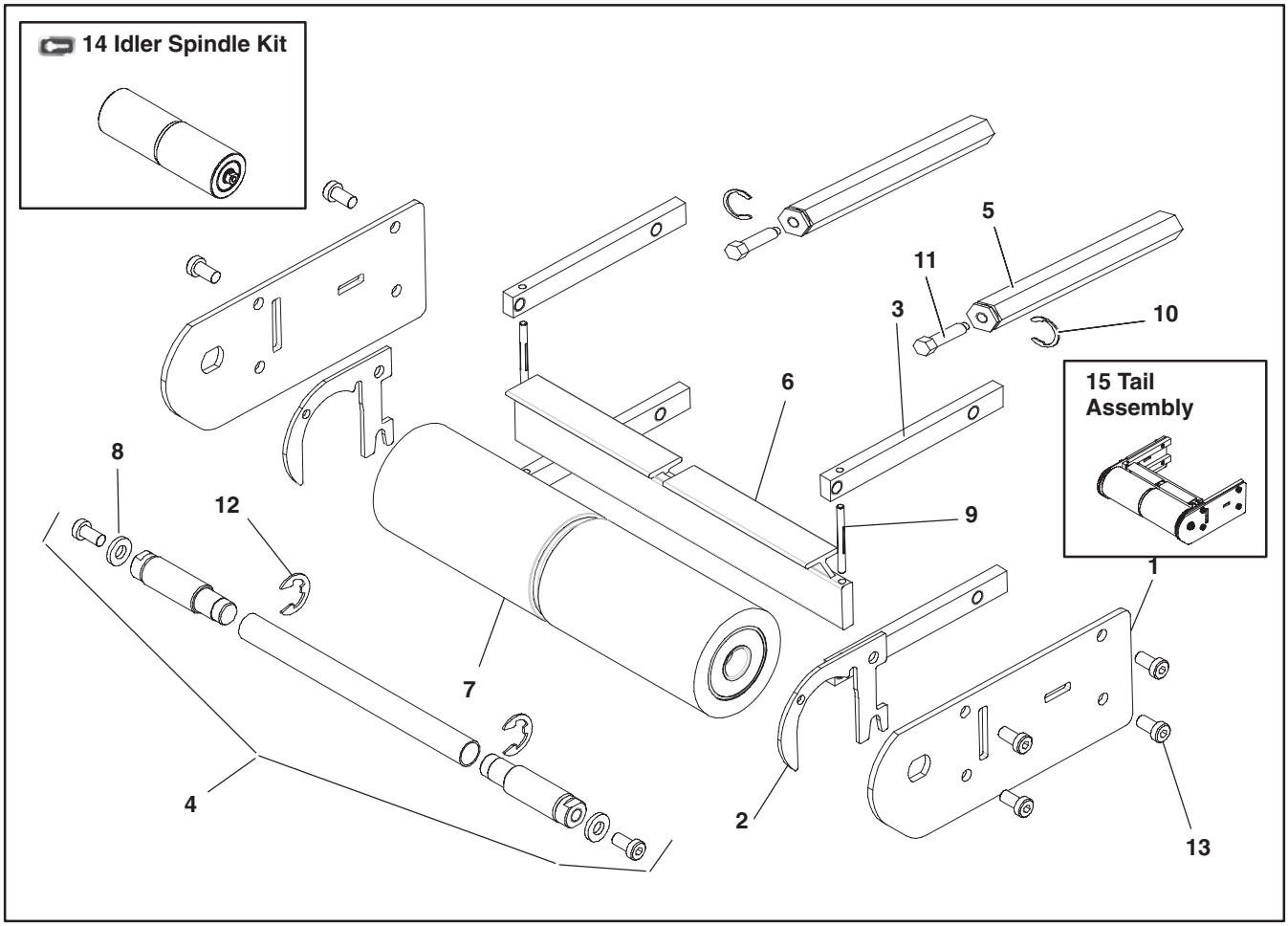


Item	Part Number	Description
1	301082	Nosebar Cover Plate
2	301084	1" Inner Tail Plate
3	301088	Tail Bar Clamp
4	301090	Transfer Tail Support Plate
5	301196	Hex Tension Tracking Shaft
6	301352	Nut, E–ring, Brace
7	301354	Inner Transfer Tail Support Plate
8	3202WW	Tail Articulation Bar
9	3217WW	1" Idler Tail Axle Shaft
10	3219WW	Roller Assy Support Bar
11	3237WW	Transfer Tail Roller – (Qty. = 4 for 04–24 Wide, 8 for 26–48 Wide)
12	807–1125	Groove Pin
13	807–1136	Washer
14	807–1151	Retaining Ring
15	807–1152	Hex Head Cap Screw M6 x 20mm
16	910–203	3/8" Hex Nut
17	915–319	Retaining Ring
18	920408M	Hex Head Cap Screw M4 x 8mm

Item	Part Number	Description
19	920893M	Low Head Socket Screw M8 x 16mm
20	32T1-WW	1" Idler Spindle Kit (includes items 6, 9, 11, 13, 16 and 17)
21	32TT1-WW	Tail Assembly (includes items 1, 2, 3, 8, 10, 12 and 19)
WW = Conveyor width reference: 04 – 48 in 02 increments		

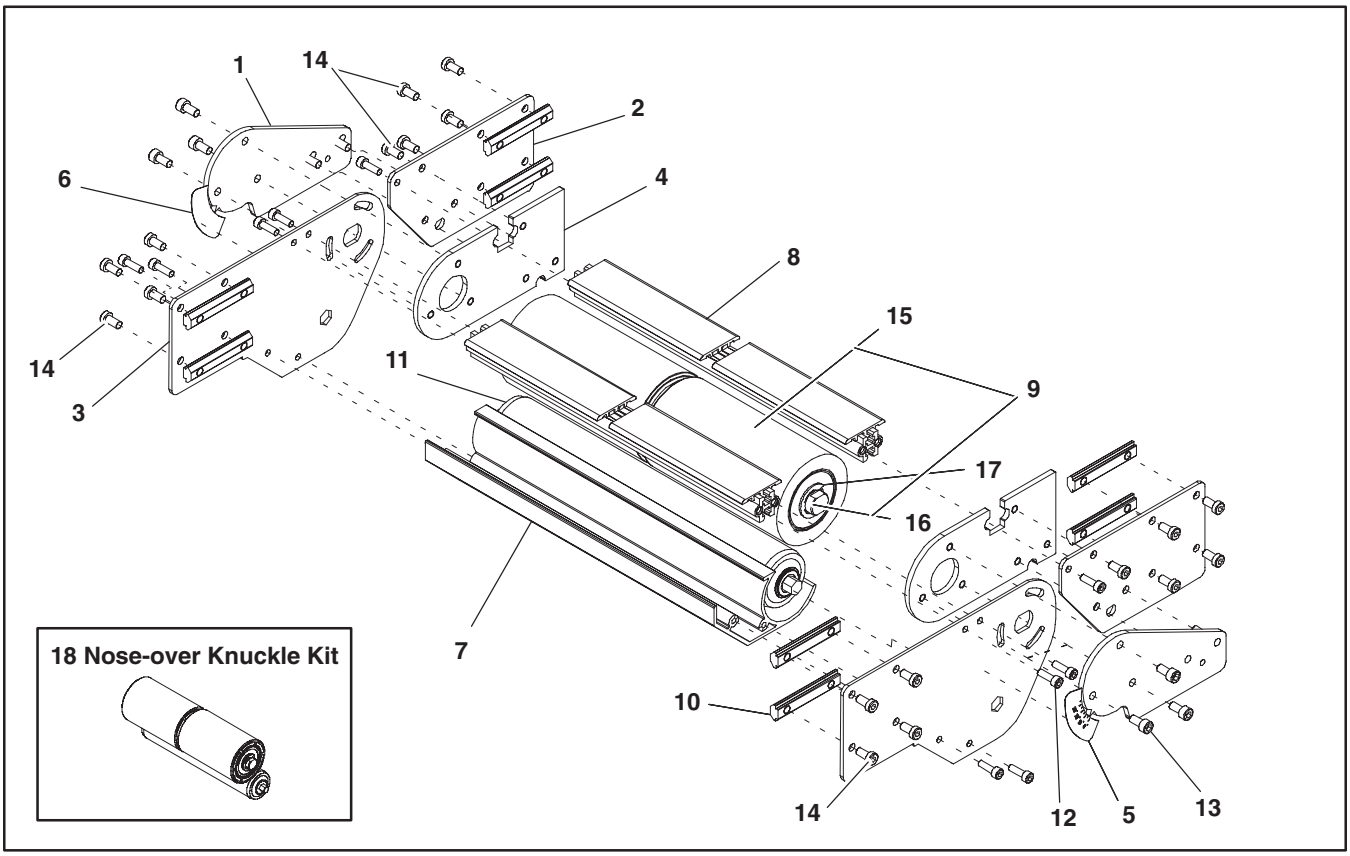
Service Parts

Idler End Tail 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 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
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 (includes items 1 through 4, 6, 7, 9 and 13)
WW = Conveyor width reference: 04 – 48 in 02 increments		

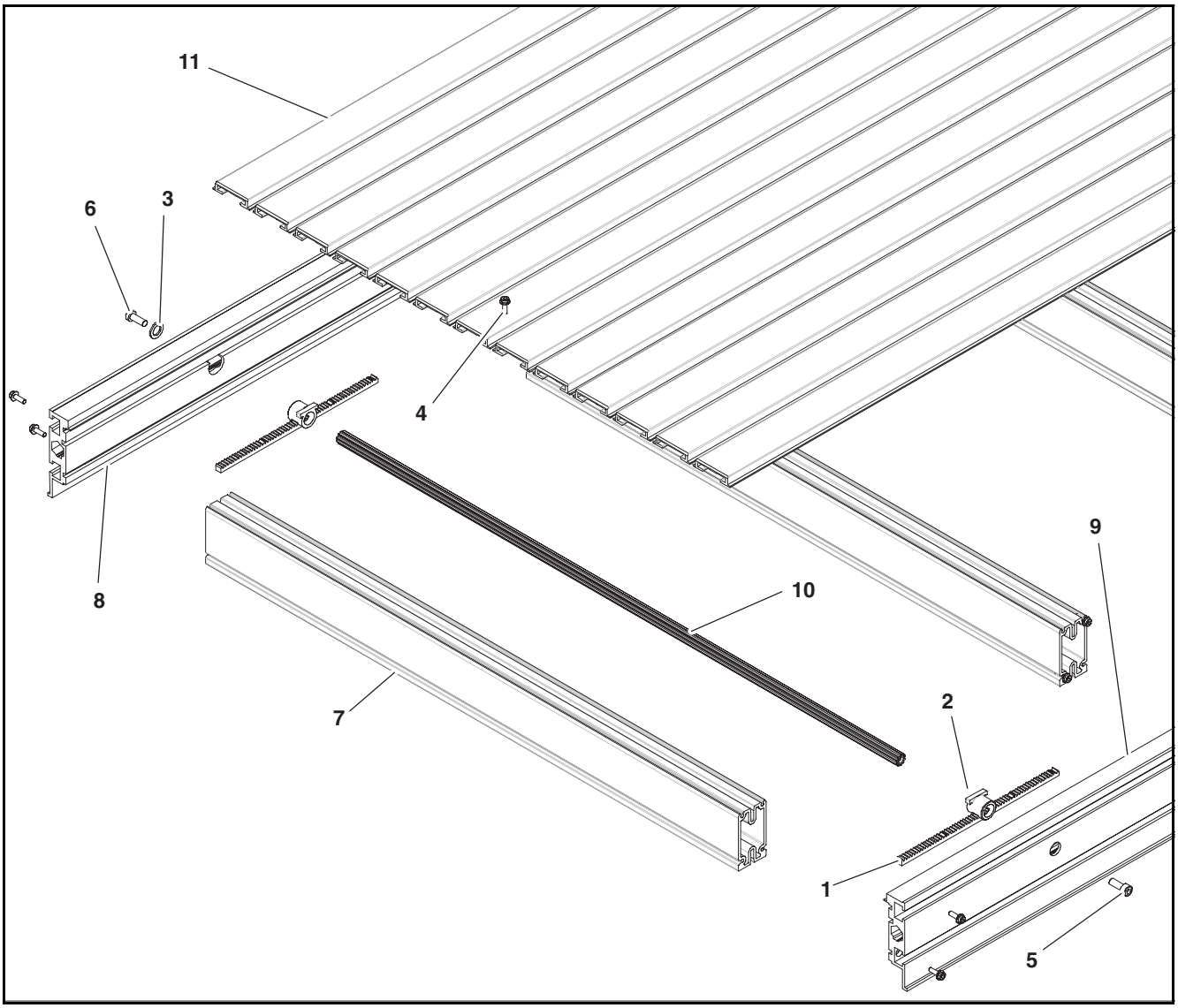
Knuckle Assembly



Item	Part Number	Description
1	300657	Slots Pointer Cover Disc
2	301155	Short LPZ Cover Plate
3	301156	Flat Upper Outside Plate
4	301160	LPZ Inside Pivot Plate
5	301223	LH Angle Label 0–35
6	301224	RH Angle Label 0–35
7	3225WW	Return Roller Cover
8	3276WW	Belt Support Rail Assy
9	3285WW	LPZ–CD Idler Pulley Assy (includes items 15 and 16)
10	300150M	Drop In Tee Bar
11	3252WW	Return Roller
12	920516M	Socket Head Screw M5 x 16mm
13	920612M	Socket Head Screw M6 x 12mm
14	920692M	Socket Low Head Screw M6 x 12mm
15	3289WW	3” Idler Pulley
16	3283WW	Idler Shaft Assembly
17	915–235	Retaining Ring
18	LPZNO-WW	Nose Over Knuckle Kit (includes items 11, 15 and 16)
WW = Conveyor width reference: 04 – 48 in 02 increments		

Service Parts

Frame Assembly



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

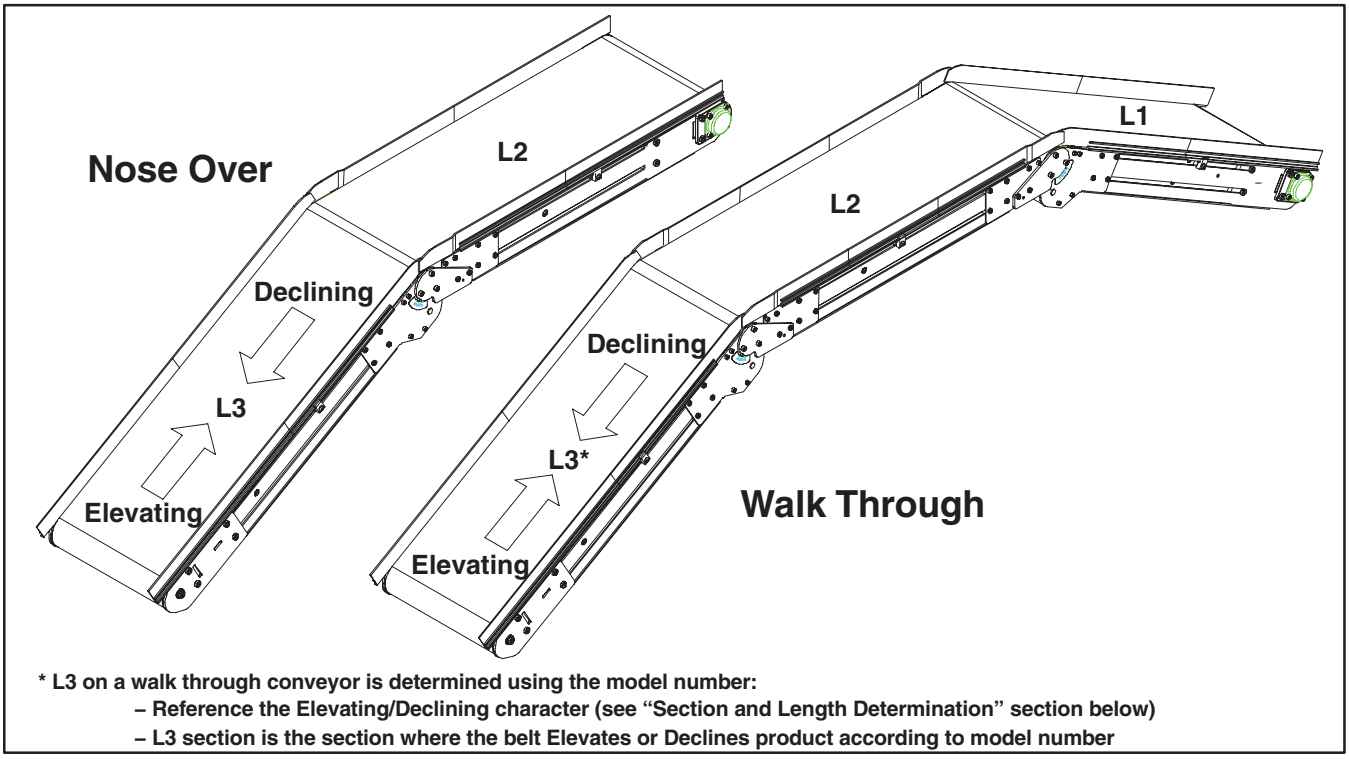
Frame LLLLL = (Conveyor Length LLLL X 12 – Tail Adder) / # of Sections of Conveyor

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”

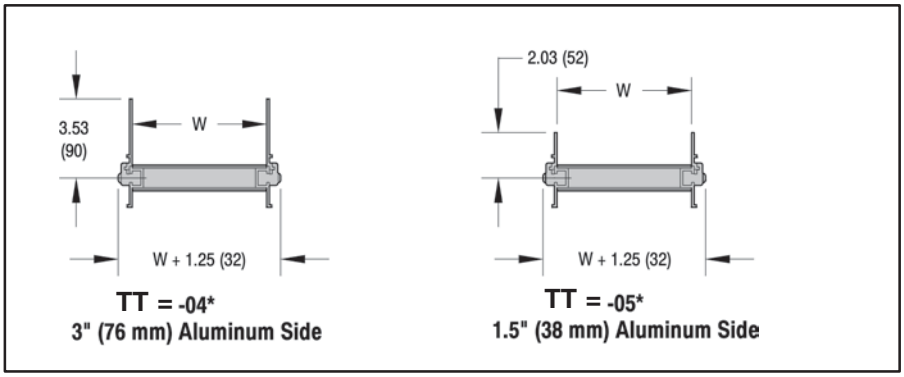
Service Parts

Conveyor Configurations



*** L3 on a walk through conveyor is determined using the model number:**
- **Reference the Elevating/Declining character (see "Section and Length Determination" section below)**
- **L3 section is the section where the belt Elevates or Declines product according to model number**

Guiding Options (TT)



Section and Length Determination

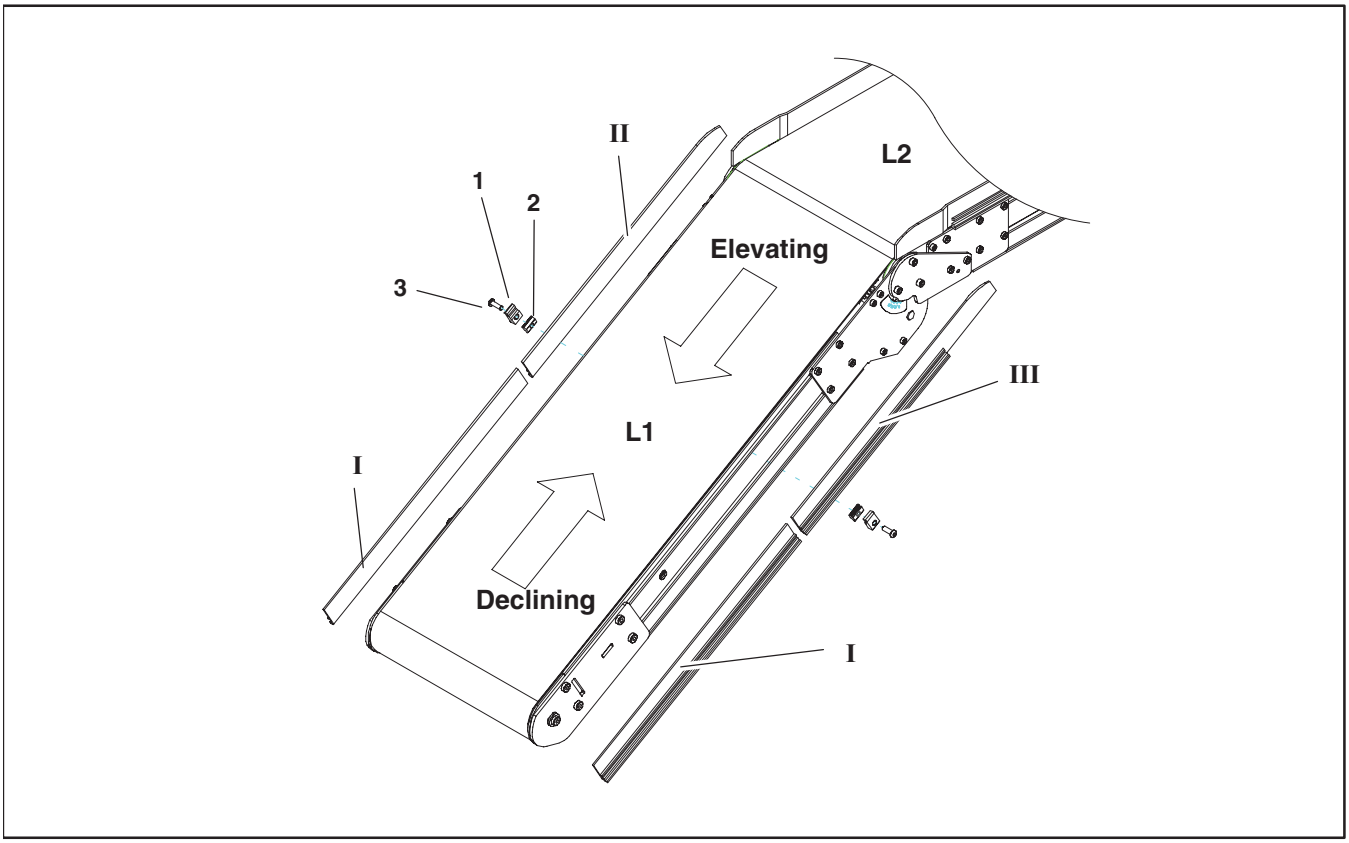
Model Number

3 E 1 0 M WW LLLL–LLLL–LLLL A PP BB

- **LLLL – Conveyor Section L3 Length Reference**
- **LLLL – Conveyor Section L2 Length Reference**
- **LLLL – 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 45 for length formulas per section)

Walk Through Frame – Section L1



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

Elevating Belt Travel

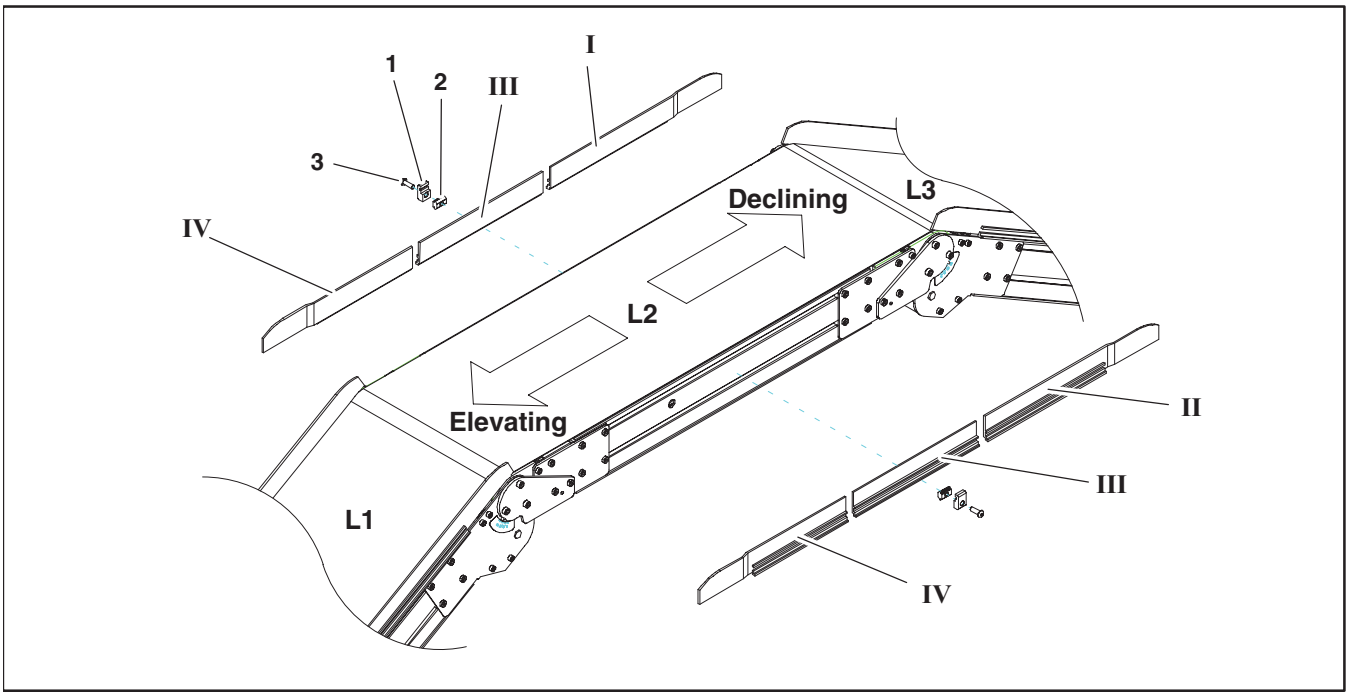
Section L1 Length – LLLL	I	II	III
0200	No Guiding Section	38TT17	38TT18
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT17–LLLLL LLLLL = (LLLL x 6) + 00038	38TT18–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up	38TT00–LLLLL LLLLL = (LLLL x 12) – 02400	38TT17	38TT18
For TT options see “Guide Options” section on page 42			

Declining Belt Travel

Section L1 Length – LLLL	I	II	III
0200	No Guiding Section	38TT15	38TT16
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT15–LLLLL LLLLL = (LLLL x 6) + 00038	38TT16–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up	38TT00–LLLLL LLLLL = (LLLL x 12) – 02400	38TT15	38TT16
For TT options see “Guide Options” section on page 42			

Service Parts

Walk Through Frame – Section L2



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

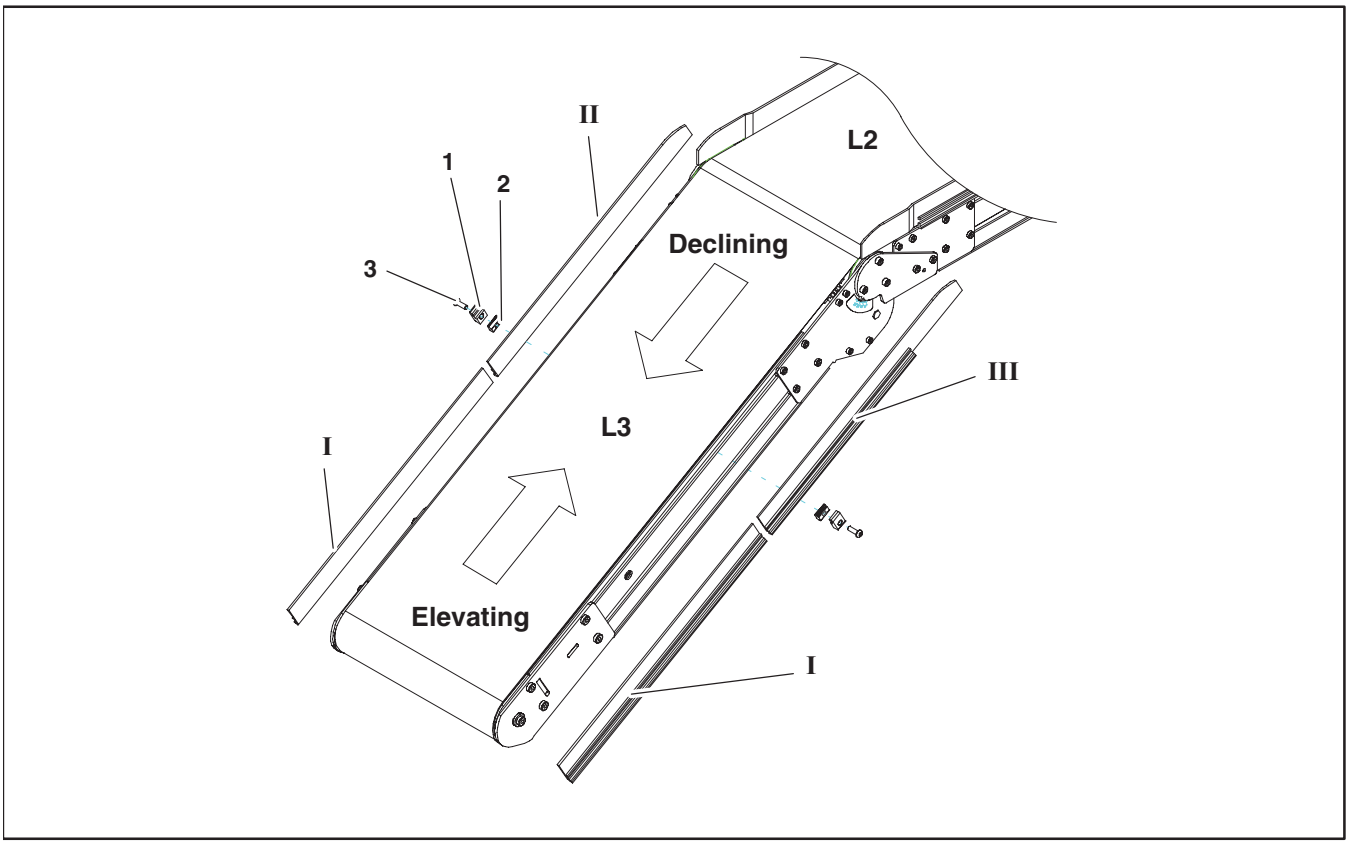
Elevating Belt Travel

Section L2 Length – LLLL	I	II	III	IV	V
0200 – 0383	38TT17–LLLLL LLLLL = (LLLL x 6) + 00075	38TT18–LLLLL LLLLL = (LLLL x 6) + 00075	No Guiding Section	38TT15–LLLLL LLLLL = (LLLL x 6) + 00075	38TT16–LLLLL LLLLL = (LLLL x 6) + 00075
0384 – 0600	38TT17–LLLLL LLLLL = (LLLL x 4) + 00050	38TT18–LLLLL LLLLL = (LLLL x 4) + 00050	38TT00–LLLLL LLLLL = (LLLL x 4) + 00050	38TT15–LLLLL LLLLL = (LLLL x 4) + 00050	38TT16–LLLLL LLLLL = (LLLL x 4) + 00050
0601 and up	38TT17	38TT18	38TT00–LLLLL LLLLL = (LLLL x 12) – 04600	38TT15	38TT16
For TT options see “Guide Options” section on page 42					

Declining Belt Travel

Section L2 Length – LLLL	I	II	III	IV	V
0200 – 0373	38TT15–LLLLL LLLLL = (LLLL x 6) + 00075	38TT16–LLLLL LLLLL = (LLLL x 6) + 00075	No Guiding Section	38TT17–LLLLL LLLLL = (LLLL x 6) + 00075	38TT18–LLLLL LLLLL = (LLLL x 6) + 00075
0373 – 0600	38TT15–LLLLL LLLLL = (LLLL x 4) + 00050	38TT16–LLLLL LLLLL = (LLLL x 4) + 00050	38TT00–LLLLL LLLLL = (LLLL x 4) + 00050	38TT17–LLLLL LLLLL = (LLLL x 4) + 00050	38TT18–LLLLL LLLLL = (LLLL x 4) + 00050
0601 and up	38TT15	38TT16	38TT00–LLLLL LLLLL = (LLLL x 12) – 04600	38TT17	38TT18
For TT options see “Guide Options” section on page 42					

Walk Through Frame – Section L3



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

Elevating Belt Travel

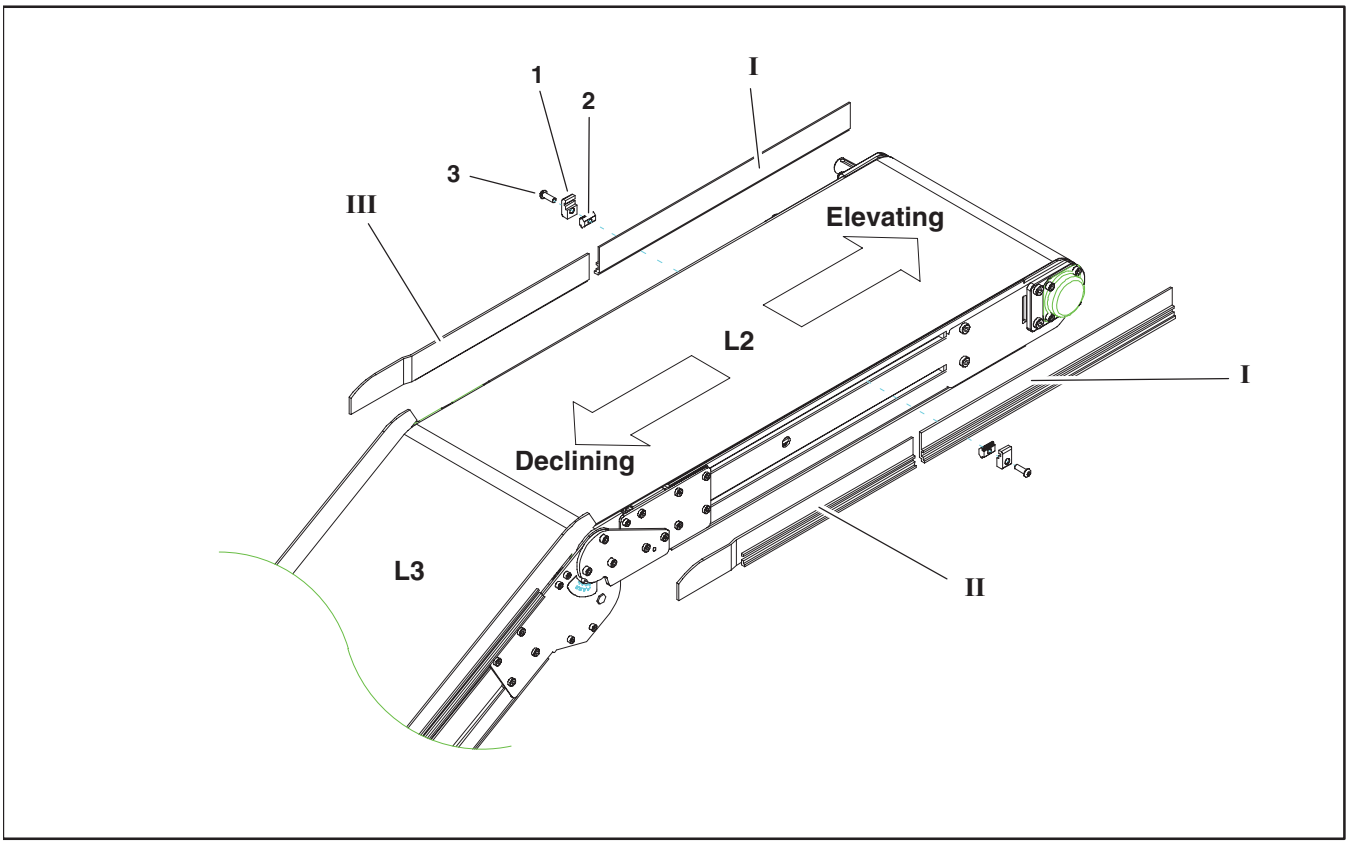
Section L3 Length – LLLL	I	II	III
0200	No Guiding Section	38TT15	38TT16
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT15–LLLLL LLLLL = (LLLL x 6) + 00038	38TT16–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up	38TT00–LLLLL LLLLL = (LLLL x 12) – 02400	38TT15	38TT16
For TT options see “Guide Options” section on page 42			

Declining Belt Travel

Section L3 Length – LLLL	I	II	III
0200	No Guiding Section	38TT17	38TT18
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT17–LLLLL LLLLL = (LLLL x 6) + 00038	38TT18–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up	38TT00–LLLLL LLLLL = (LLLL x 12) – 02400	38TT17	38TT18
For TT options see “Guide Options” section on page 42			

Service Parts

Nose Over Frame – Section L2



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

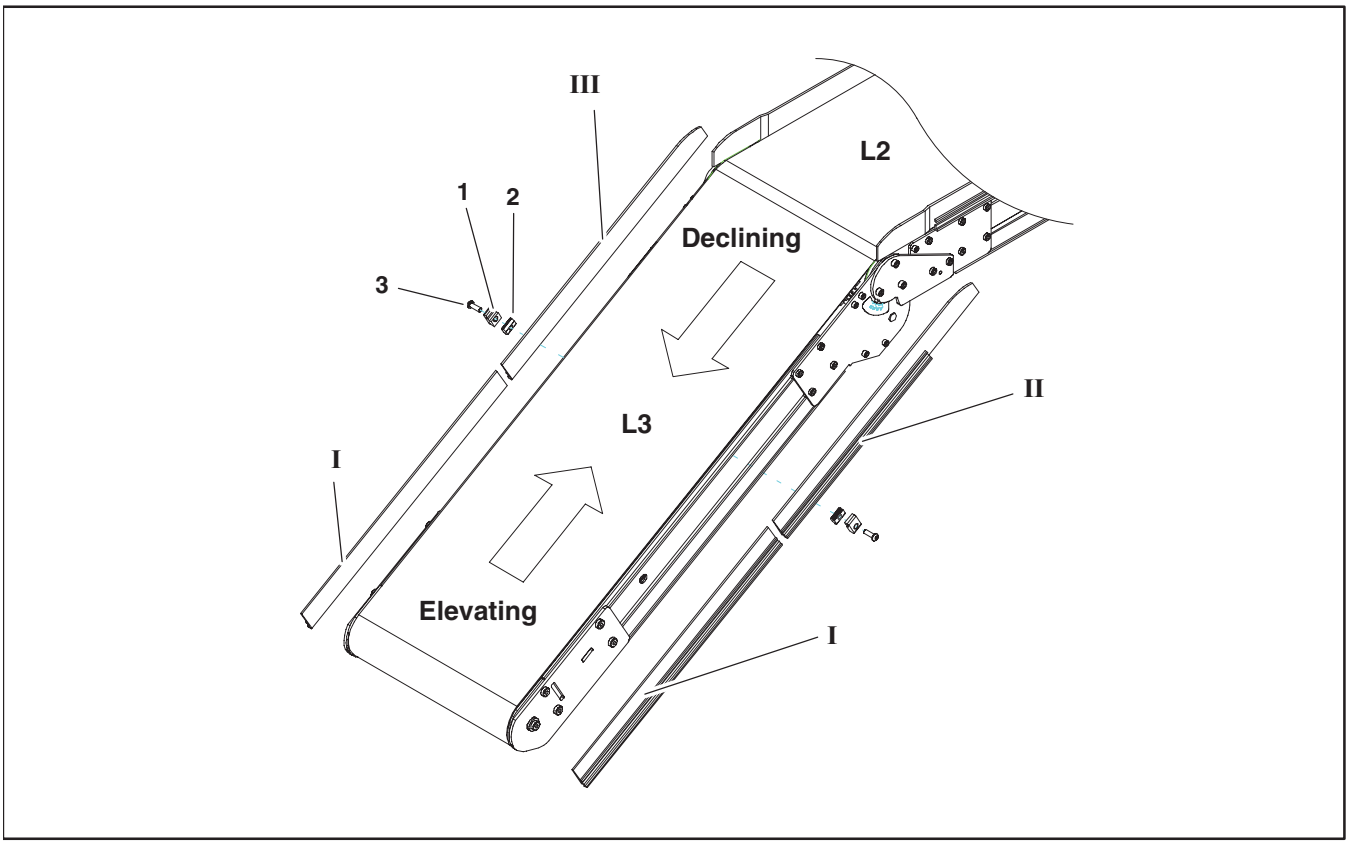
Elevating Belt Travel

Section L2 Length – LLLL	I	II	III
0200	No Guiding Section	38TT17	38TT18
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT17–LLLLL LLLLL = (LLLL x 6) + 00038	38TT18–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up	38TT00–LLLLL LLLLL = (LLLL x 12) – 02400	38TT17	38TT18
For TT options see “Guide Options” section on page 42			

Declining Belt Travel

Section L2 Length – LLLL	I	II	III
0200	No Guiding Section	38TT15	38TT16
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT15–LLLLL LLLLL = (LLLL x 6) + 00038	38TT16–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up	38TT00–LLLLL LLLLL = (LLLL x 12) – 02400	38TT15	38TT16
For TT options see “Guide Options” section on page 42			

Nose Over Frame – Section L3



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

Elevating Belt Travel

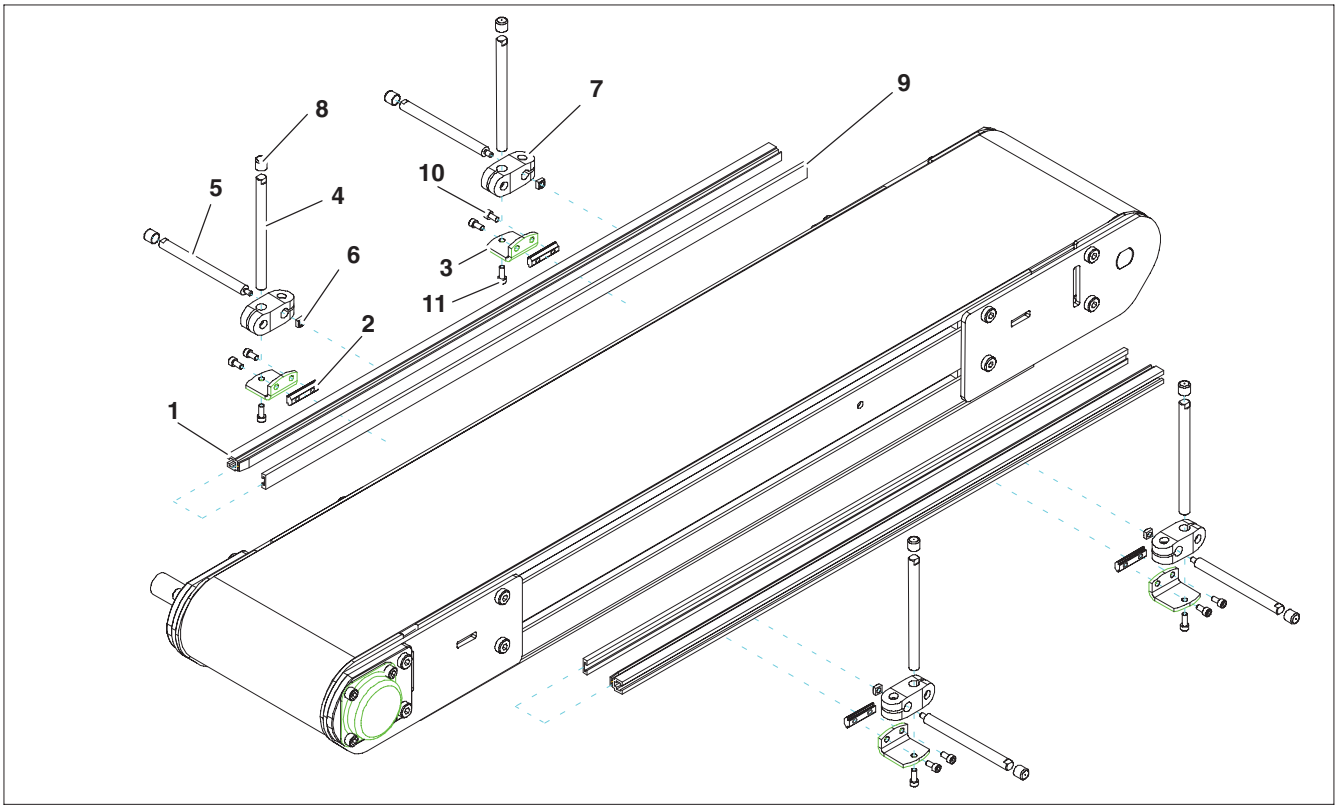
Section L3 Length – LLLL	I	II	III
0200	No Guiding Section	38TT15	38TT16
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT15–LLLLL LLLLL = (LLLL x 6) + 00038	38TT16–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up	38TT00–LLLLL LLLLL = (LLLL x 12) – 02400	38TT15	38TT16
For TT options see “Guide Options” section on page 42			

Declining Belt Travel

Section L3 Length – LLLL	I	II	III
0200	No Guiding Section	38TT17	38TT18
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT17–LLLLL LLLLL = (LLLL x 6) + 00038	38TT18–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up	38TT00–LLLLL LLLLL = (LLLL x 12) – 02400	38TT17	38TT18
For TT options see “Guide Options” section on page 42			

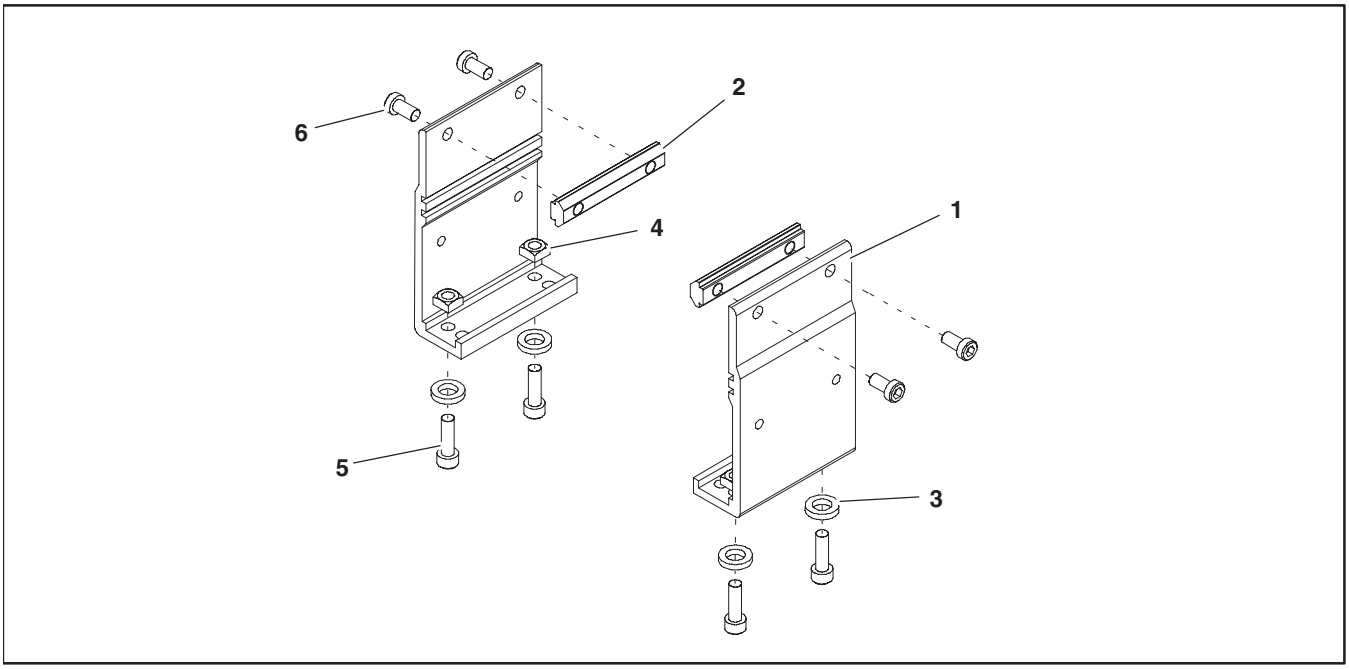
Service Parts

–13 Adjustable Guiding



Item	Part Number	Description
1	202983	Aluminum Profile Guide 2’ (610mm)
	202984	Aluminum Profile Guide 3’ (914mm)
	202985	Aluminum Profile Guide 4’ (1219mm)
	202986	Aluminum Profile Guide 5’ (1524mm)
	202987	Aluminum Profile Guide 6’ (1829mm)
	202988	Aluminum Profile Guide 7’ (2134mm)
	202989	Aluminum Profile Guide 8’ (2438mm)
	202990	Aluminum Profile Guide 9’ (2743mm)
	202991	Aluminum Profile Guide 10’ (3048mm)
	202992	Aluminum Profile Guide 11’ (3353mm)
	202993	Aluminum Profile Guide 12’ (3658mm)
	202994	Aluminum Profile Guide 13’ (3962mm)
2	200830M	Drop–In Tee Bar
3	202004	Mounting Bracket
4	202027M	Guide Mounting Shaft Vertical
5	202028M	Guide Mounting Shaft Horizontal
6	674175MP	Square Nut
7	807–652	Cross Block
8	807–948	Vinyl Shaft Cap
9	614068P	Flat Extruded Guide (per foot)
10	920612M	Socket Head Screw M6 x 12mm
11	920616M	Socket Head Screw M6 x 16mm

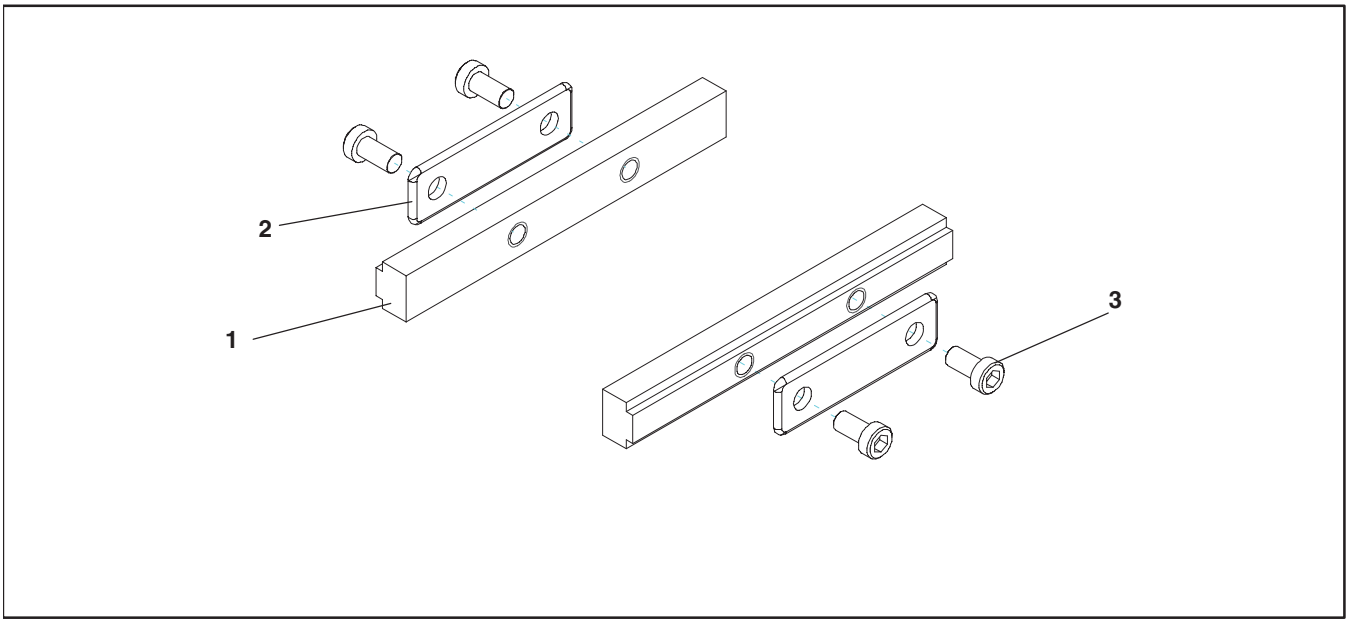
Flat Belt Mounting Brackets



Item	Part Number	Description
1	240831	Stand Mount
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

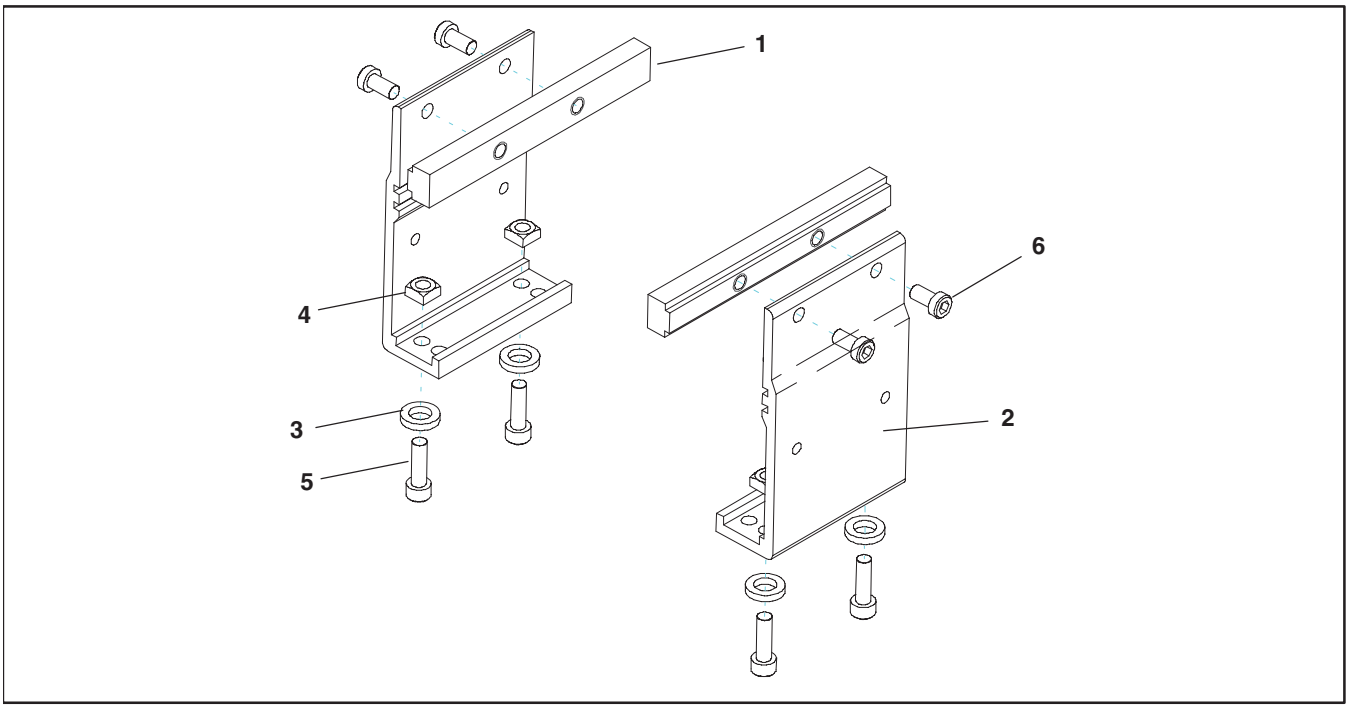
Connecting Assembly without Stand Mount



Item	Part Number	Description
1	240858	Frame Bar Connector
2	240859	Intermediate Clamp Plate
3	920692M	Socket Head Screw M6 x 12mm

Service Parts

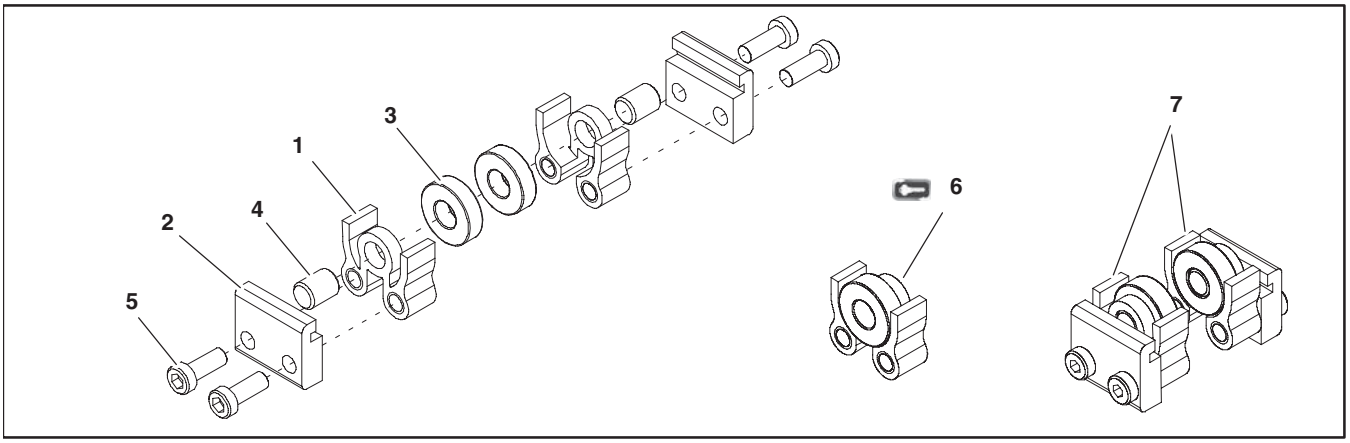
Flat Belt Connecting Assembly with Stand Mount



Item	Part Number	Description
1	240858	Frame Connector Bar
2	240837	Stand Mount Joint
3	605279P	Washer

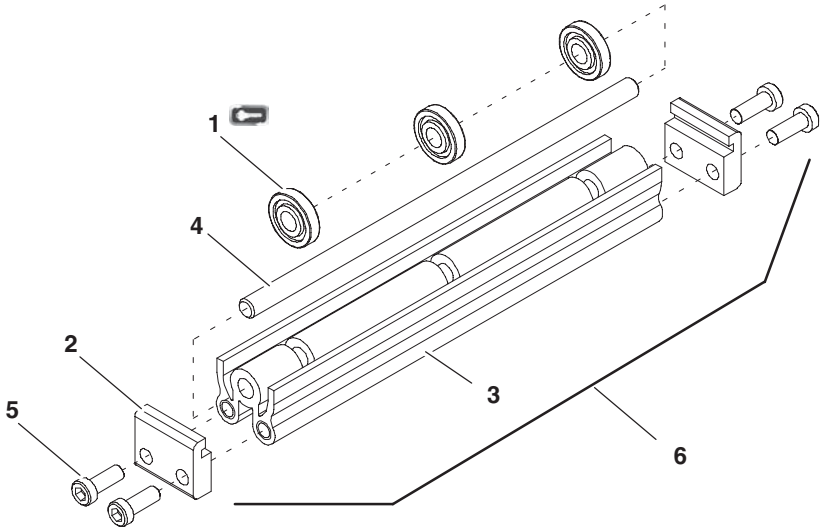
Item	Part Number	Description
4	807–920	Square Nut M6 5mm x 10mm
5	920620M	Socket Head Screw M6 x 20mm
6	920692M	Socket Head Screw M6 x 12mm

4” (102mm) to 6” (152mm) Flat Belt Return Roller



Item	Part Number	Description
1	240825	Return Roller Guard – Short
2	240827	Return Roller Clip
3	802–027	Bearing
4	913–100	Dowel Pin
5	920693M	Socket Low Head Screw M6 x 16mm
6	240840	Roller Assembly (Includes Items 1, 3 and 4)
7	240830	4” (102mm) to 6” (152mm) Flat Belt Return Roller Assy

8” (203mm) to 48” (1219mm) Flat Belt Return Roller



Return Roller Bearing Quantity Chart (Item 1)	
Width	Bearing Quantity
8” (203mm) – 12” (305mm)	3
14” (356mm) – 18” (457mm)	4
20” (508mm) – 24” (610mm)	5
26” (660mm) – 28” (711mm)	6
30” (762mm) – 34” (864mm)	7
36” (914mm) – 40” (1016mm)	8
42” (1067mm) – 46” (1168mm)	9
48” (1219mm)	10

Item	Part Number	Description
1	240826	Return Roller Bearing
2	240827	Return Roller Clip
3	2409WW	Return Roller Guard
4	2410WW	Return Roller Rod

Item	Part Number	Description
5	920693M	Socket Head Screw M6 x 16mm
6	2408WW	8” (203mm) – 48” (1219mm) Flat Belt Return Roller Assembly
WW = Conveyor width reference: 08 – 48 in 02 increments		

Conveyor Belt Part Number Configuration

Flat Belt Conveyor Model Number **3 T – WW LLLL / SBV***

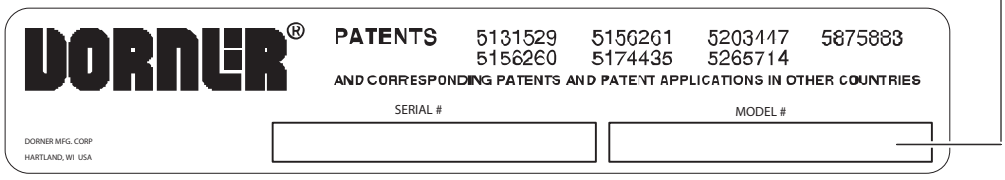


Figure 112

Flat Belt Part Number Configuration

Refer to Dorner patent plate (Figure 112). From the model number, determine tail type (“T”), width (“WW”), length (“LLLL”), splice type (“S”) and belt type (“B”). Use data to configure belt part number as indicated below. *Add “V” for V-guided belts.

3 T – WW LLLL / SBV*

3 _ – __ ____ / __V*
(Fill In)

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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851-518 Rev. E

Printed in U.S.A.