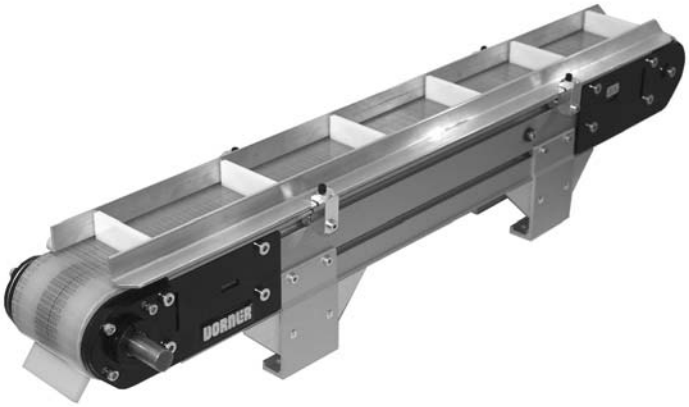
3200 Series Precision Move Conveyors

Installation, Maintenance & Parts Manual

Fixtured Conveyor



Cleated Belt Conveyor

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Introduction

IMPORTANT

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

Upon receipt of shipment:

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

Dorner's Limited Warranty applies.

Dorner 3200 series conveyors are covered by Patent Numbers 5,156,260, 6,871,737B2, 6,910,571B1, 6,971,509B2, 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 .

⚠ 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

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

⚠ WARNING

Gearmotors may be HOT.

DO NOT TOUCH Gearmotors.

⚠ 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.

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

⚠ WARNING

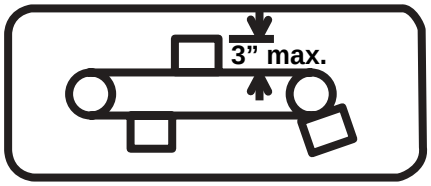
Moving parts can cut or crush. Keep hands clear. INSTALL GUARDING PRIOR TO OPERATION.

Due to the wide variety of set ups and applications, point of installation guarding is the responsibility of the end user.

⚠ WARNING

Moving parts can cut or crush.

DO NOT exceed 3” high fixtures.



Product Description

Refer to Figure 1 for typical components.

Typical Components:

1	Conveyor
2	Gearmotor Mounting Package
3	Gearmotor
4	Guiding & Accessories
5	Mounting Brackets
6	Return Rollers
7	Support Stand
8	Drive End
9	Idler/Tension End

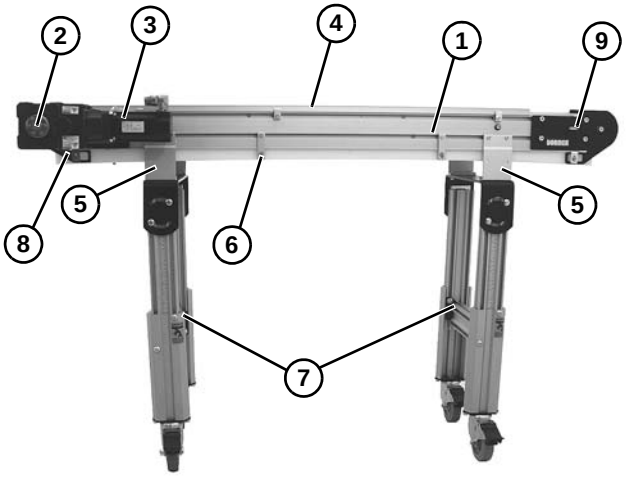
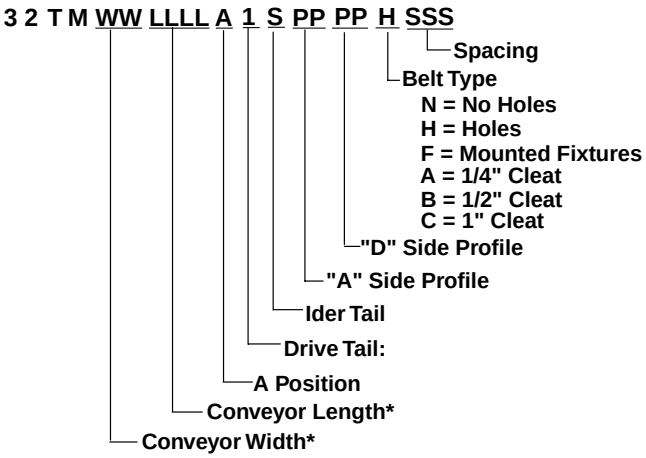


Figure 1

Specifications

Models:



* See Ordering and Specifications Catalog for details.

Center drive location to be at center of first frame section. Minimum center drive conveyor length is 36” (91 cm).

Adding Pallets to Belt

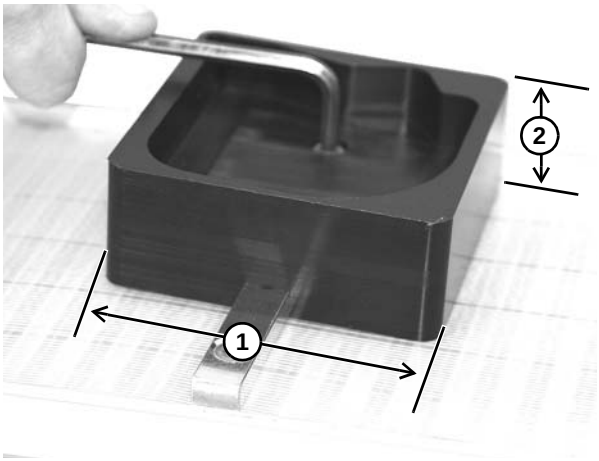


Figure 2

- Maximum width of Pallet = 3” **(Figure 2, item 1)**
- Maximum height of Pallet = 3” **(Figure 2, item 2)**
- Maximum weight of Empty Pallet = 1.00 lb per belt insert
- Maximum speed of pallet around end roller = 270 ft/min.

Conveyor Supports:

Maximum Distances:

1 = 24” (610 mm) (Drive End)

2 = 12 ft (3658 mm)

3 = 36” (914 mm) (Idler End)

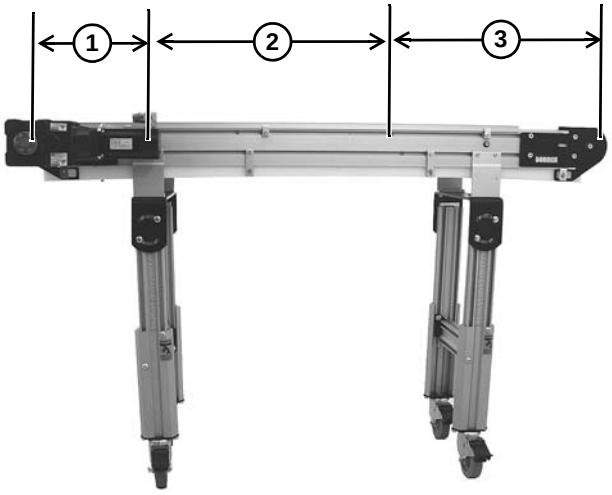


Figure 3

Specifications:

Conveyor Width Reference (WW)	04	06	08	10	12	14	16	18
Conveyor Belt Width	3.75” (95 mm)	6” (152 mm)	8” (203 mm)	10” (254 mm)	12” (305 mm)	14” (355 mm)	16” (406 mm)	18” (457 mm)
Maximum Conveyor Load* (See NOTE Below)	200 lb (91 kg)	480 lb (217 kg)	480 lb (217 kg)	480 lb (217 kg)	750 lb (340 kg)	750 lb (340 kg)	750 lb (340 kg)	750 lb (340 kg)
Conveyor Startup Torque*	8 in-lb (0.9 Nm)	10 in-lb (1.1 Nm)	12 in-lb (1.4 Nm)	15 in-lb (1.7 Nm)	18 in-lb (2.0 Nm)	21 in-lb (2.4 Nm)	24 in-lb (2.7 Nm)	27 in-lb (3.1 Nm)
Conveyor Length Reference (LLLL)	0300 to 5000 in 0001 increments							
Conveyor Length	3 ft (914mm) to 50 ft (15240 mm) in 0.12” (0.31mm) increments							
Belt Travel	10.5” (266 mm) per revolution of pulley							
Maximum Belt Speed*	517 ft/minute (157 m/minute) for flat belt and 270 ft/minute (82 m/minute) for fixtured belt							
Drive Sprocket	0.5” pitch, 21 tooth, 3.3423” pitch diameter							

* See Ordering and Specifications Catalog for details.

NOTE

Maximum conveyor loads based on:

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

Installation

NOTE

Conveyor MUST be mounted straight, flat and level within confines of conveyor. Use a level ***(Figure 4, item 1)*** *for setup.*

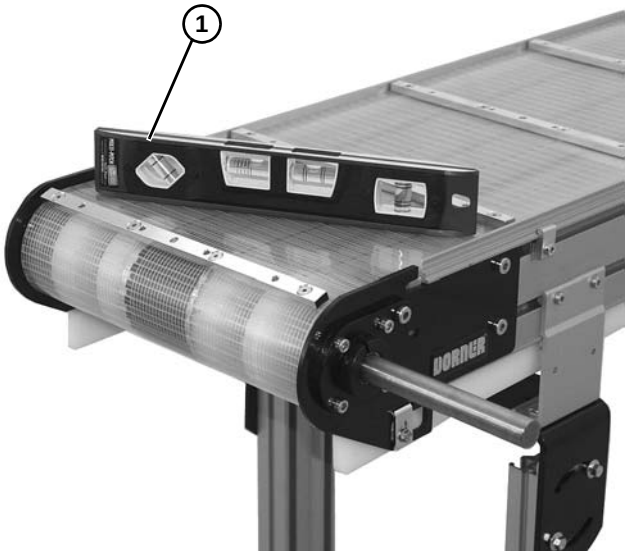


Figure 4

Required Tools

- Hex-key wrenches:
  - 4 mm, 5 mm
- Level
- Torque wrench

Recommended Installation Sequence

- Install support stands (see accessory instructions)
- Assemble conveyor (if required)
- Attach mounting brackets to conveyor
- Attach conveyor to stands
- Install return rollers on conveyor (optional)
- Mount gearmotor mounting package (see accessory instructions)
- Attach guides/accessories (see page 22 through 38 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 8 and "Return Rollers" on page 10.

Conveyors Longer Than 13 ft (3962 mm)

Installation Component List:

1	Conveyor frame
2	Section Label

1. Locate and arrange conveyor sections by section labels **(Figure 5, item 2)**.

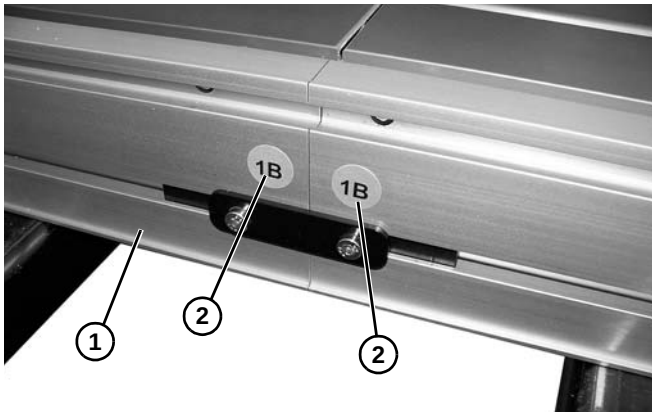


Figure 5

2. On tension end of the conveyor, identified by the pinion locking screw **(Figure 6, item 1)**, push in head plate assembly **(Figure 6, item 2)**: Loosen the pinion locking screw **(Figure 6, item 1)**, adjust the pinion torque screw on opposite side with a hex wrench **(Figure 6, item 3)**. On both sides of conveyor, loosen the two tail clamp bolts **(Figure 6, item 4)**, and push head plate assembly **(Figure 6, item 2)** inward.

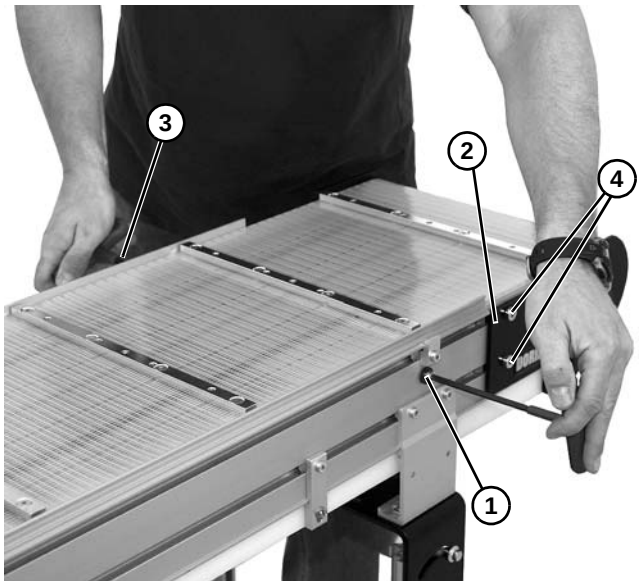


Figure 6

3. Roll out conveyor belt and place conveyor frame sections **(Figure 7, item 1)** into belt loop.

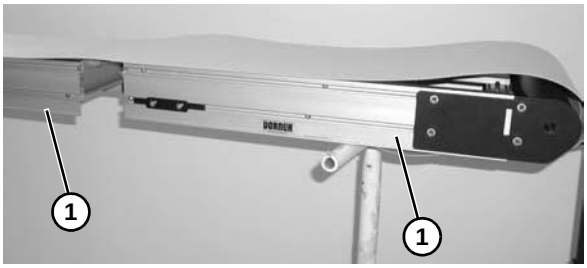


Figure 7

⚠ WARNING

SUPPORT CONVEYOR SECTIONS PRIOR TO CONNECTING FRAME SECTIONS.

4. Join conveyor sections and install connector brackets **(Figure 8, item 1)** or connector/mount brackets **(Figure 8, item 2)** and screws **(Figure 8, item 3)** on both sides as indicated. Tighten screws to 60 in-lb (7 Nm).

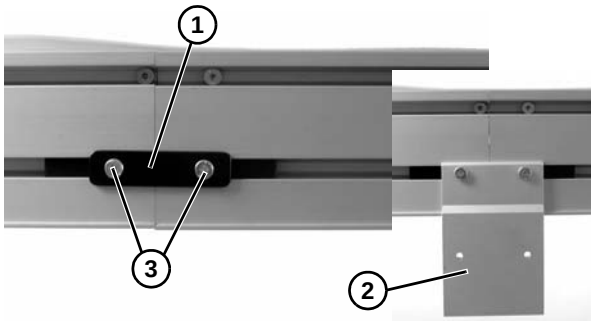


Figure 8

NOTE

*For Conveyors longer than 20 ft (6096 mm) use the process outlined in the "Conveyor Belt Tensioning" section on page 14. Extend the Drive End Tail Assembly to the zero mark of the tension indicator **(Figure 9, item 1)** before proceeding to step 5. The zero mark for the tension indicator is when the indicator begins to turn black.*

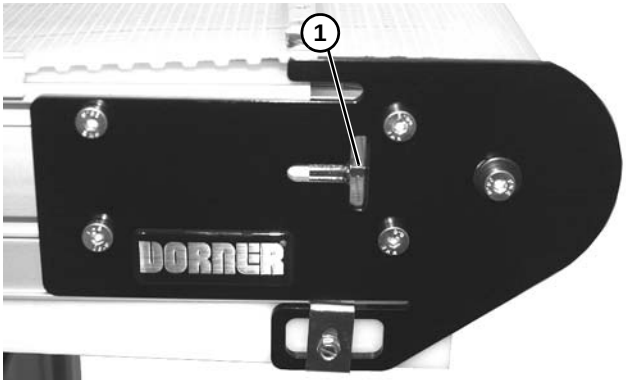


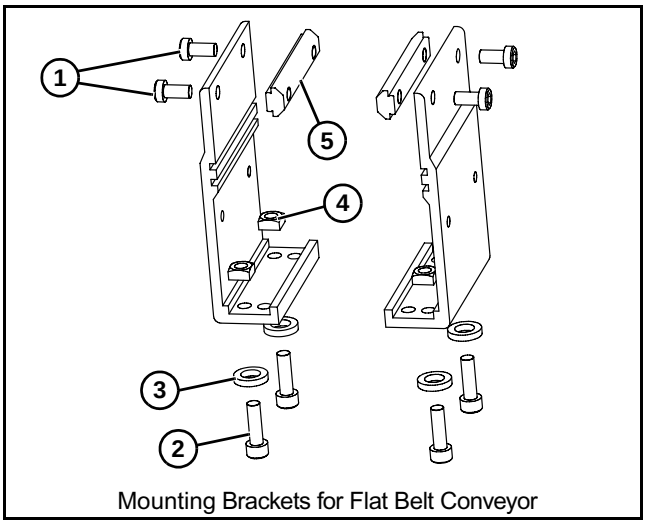
Figure 9

5. Tighten conveyor belt, refer to "Conveyor Belt Tensioning" on page 14.
6. Install mounting brackets and return rollers. Refer to "Mounting Brackets" on page 8 and "Return Roller" on page 10.

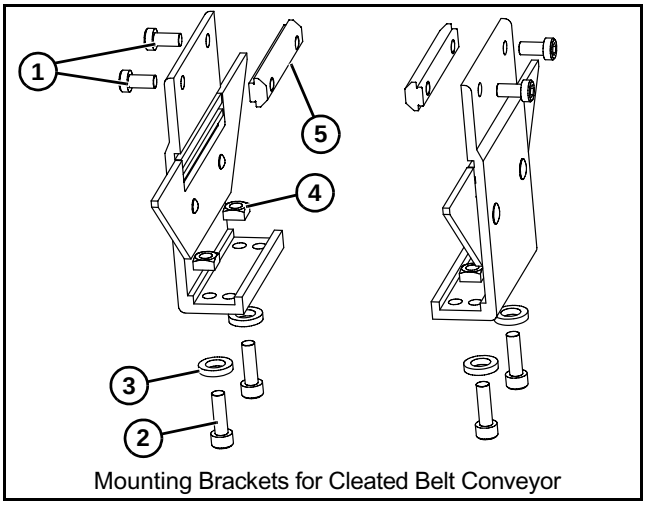
Installation

Mounting Brackets

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



Mounting Brackets for Flat Belt Conveyor



Mounting Brackets for Cleated Belt Conveyor

Figure 10

2. Remove screws **(Figure 10, item 1 & 2)**, washers **(Figure 10, item 3)**, nuts **(Figure 10, item 4)** and T-bars **(Figure 10, item 5)** from brackets.
3. Insert T-bars **(Figure 10, item 5)** into conveyor side slots **(Figure 11, item 1)**. Fasten brackets **(Figure 11, item 2)** to conveyor with mounting screws **(Figure 11, item 3)**.

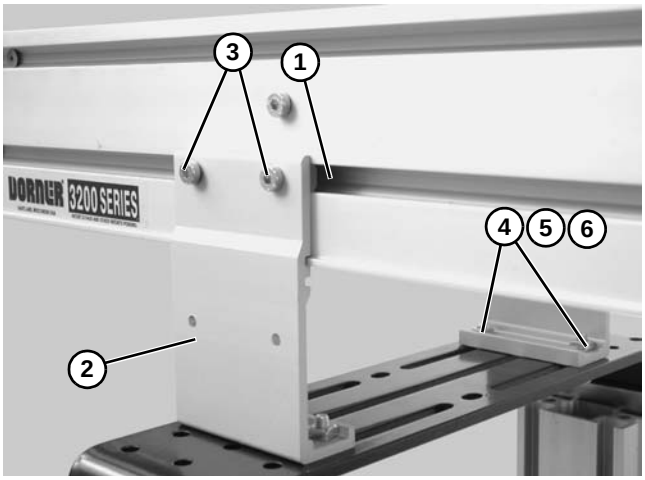


Figure 11

NOTE

Mounting brackets for flat belt conveyors shown.

⚠ WARNING

Moving parts can cut or crush. Keep hands clear when raising conveyor frame onto stands.

4. Fasten brackets to support stand with mounting screws **(Figure 11, item 4)**, washers **(Figure 11, item 5)** and nuts **(Figure 11, item 6)**.
5. Tighten screws **(Figure 11, item 3 & 4)** to 60 in-lb (7 Nm).

Installation of Pallet to the Belt

There are two methods available to mount pallets to the belt:

- Using Fixture Mounting Bars
- Attaching Directly to the Conveyor Belt

Using Fixture Mounting Bars

1. Loosen conveyor belt.
2. Install inserts **(Figure 12, item 1)** from underside of belt.

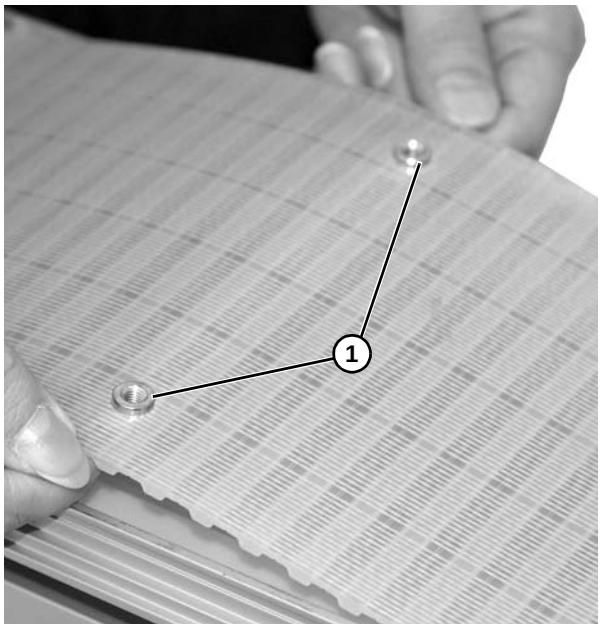


Figure 12

3. Install belt fixture **(Figure 13, item 1)**.
4. Attach with M5 flat head screws **(Figure 13, item 2)**. Tighten to 35 in-lb (4 Nm).

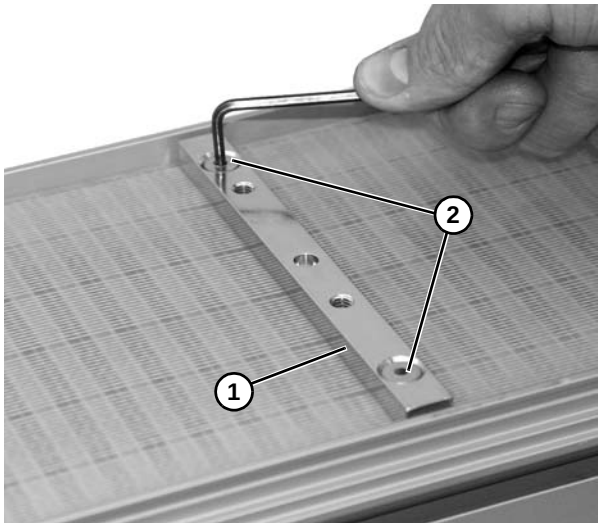


Figure 13

5. Install pallet **(Figure 14, item 1)** onto belt fixture **(Figure 14, item 2)**. Attach with M6 screw(s) **(Figure 14, item 3)**. Tighten to 60 in-lb (7 Nm).

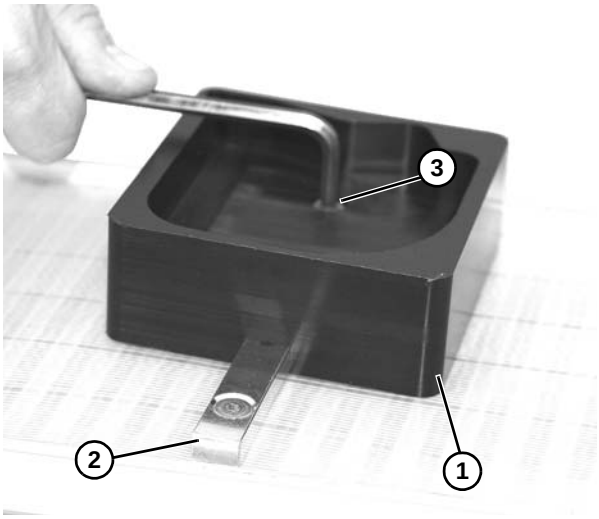


Figure 14

6. Re-tighten conveyor belt.

NOTE

Confirm that the cut out in the pallet is properly sized so the pallet sits flat and contacts the conveyor belt. Contact factory for exact slot dimensions.

Attaching Directly to the Conveyor Belt

1. Loosen conveyor belt.
2. Install inserts **(Figure 15, item 1)** from underside of belt.

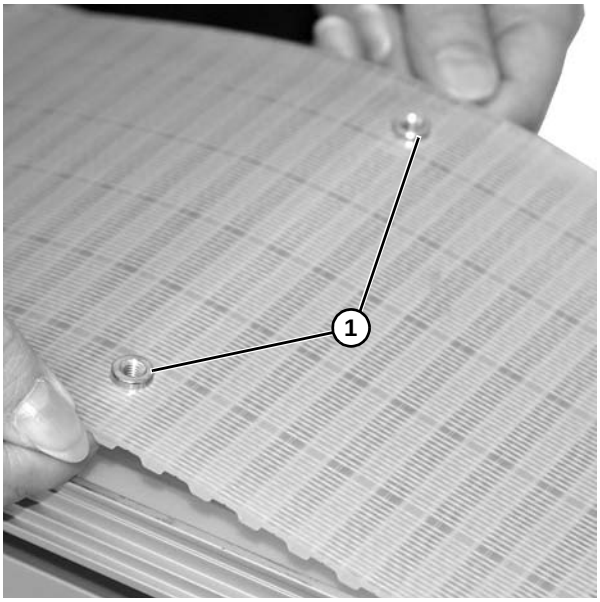


Figure 15

NOTE

Confirm that the pallet contacts counterbores for the belt inserts. The pallet must sit flat and contact the conveyor belt. Contact factory for exact slot dimensions.

3. Install pallet **(Figure 16, item 1)** onto mounting inserts, and secure with M5 hex screws **(Figure 16, item 2)**. Tighten M5 screws to 35 in-lb (4 Nm).

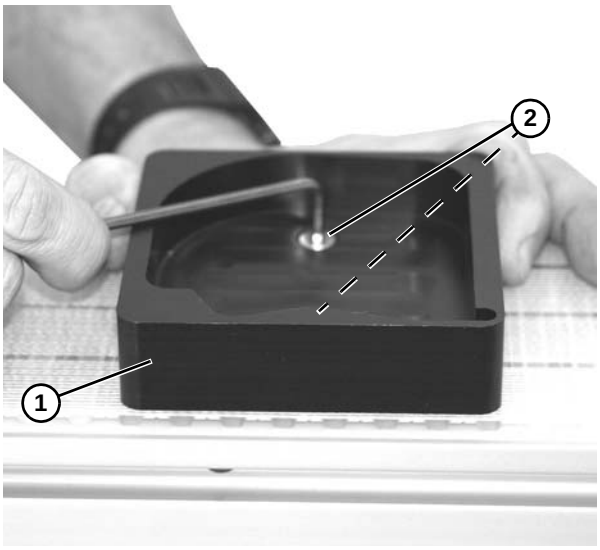


Figure 16

4. Re-tighten conveyor belt.

Return Rollers

Cleated Belt and 4–18" (101–457 mm) Wide & Flat Belt Conveyors

1. Locate return rollers. Exploded views shown in Figure 17 & Figure 18.

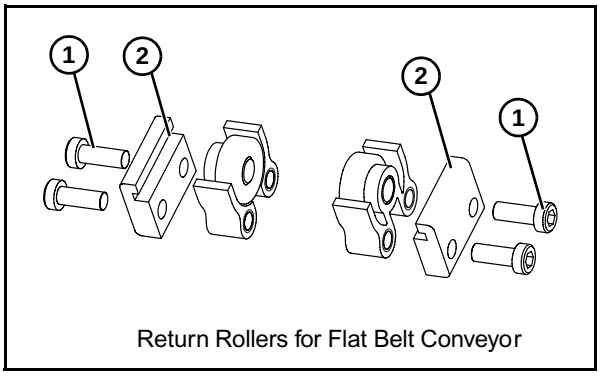


Figure 17

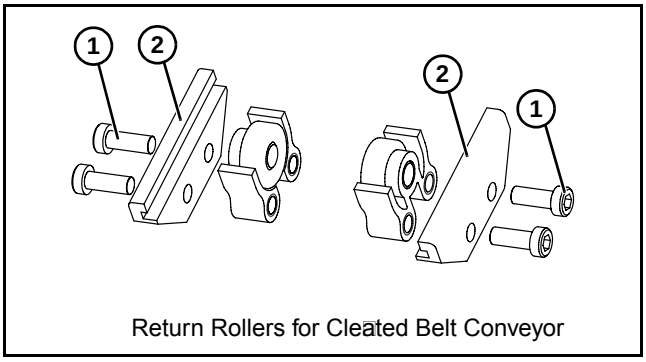


Figure 18

2. Remove screws **(Figure 17, item 1)** & **(Figure 18, item 1)** and clips **(Figure 17, item 2)** & **(Figure 18, item 2)** from roller assembly.
3. Install roller assemblies **(Figure 19, item 1)** as shown. Tighten screws **(Figure 19, item 2)** to 60 in-lb (7 Nm).

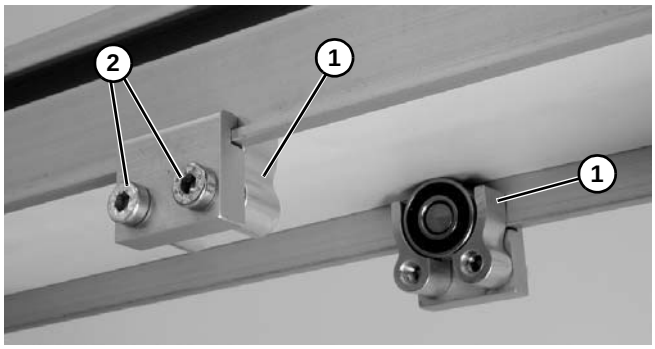


Figure 19

Required Tools

Standard Tools

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

Checklist

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

Lubrication

No lubrication is required. Replace bearings if worn.

Maintaining Conveyor Belt

Troubleshooting

Inspect conveyor belt for:

- Surface cuts or wear
- Stalling or slipping

Surface cuts and wear indicate:

- Sharp or heavy parts impacting belt
- Jammed parts
- 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
- Impacted dirt on drive pulley
- Intermittent jamming or drive train problems

Cleaning

IMPORTANT

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

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

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

Conveyor Belt Replacement

⚠ WARNING

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

Conveyor Belt Replacement Sequence

- 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

⚠ 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 at both ends **(Figure 20, item 1)** of the conveyor. Place an additional support stand under the drive motor **(Figure 20, item 2)**, if equipped. See WARNING.

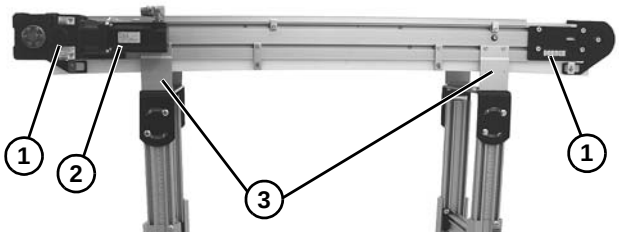


Figure 20

2. Remove mounting brackets **(Figure 20, item 3)** from one side of conveyor. (Reverse steps 3 & 4 of "Mounting Brackets" section on page 8).
3. For flat belt and cleated belt conveyors, remove return rollers and guiding on the opposite side of the gearmotor.
4. For fixture belt conveyors, on the opposite side of the gearmotor remove the UHMW return rail by removing support clip **(Figure 21, item 1)** and guiding **(Figure 21, item 2)** by removing clip **(Figure 21, item 3)** and return rail **(Figure 21, item 4)** on both ends of conveyor**)**.

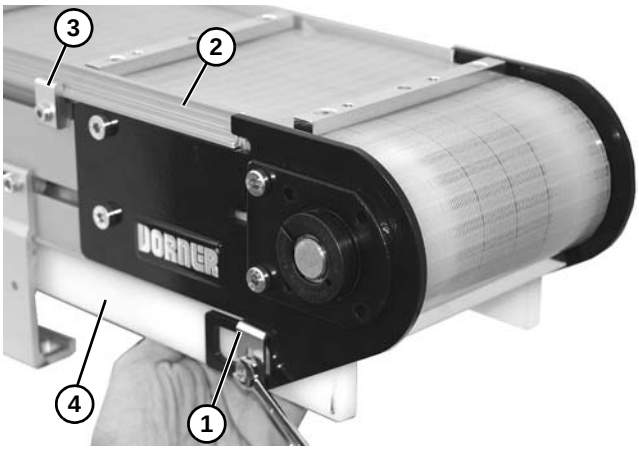


Figure 21

5. For fixture belt conveyor, loosen UHMW support screw of idler tails. Loosen screw **(Figure 22, item 1)** on both sides of tail with hex wrench **(Figure 22, item 2)**.

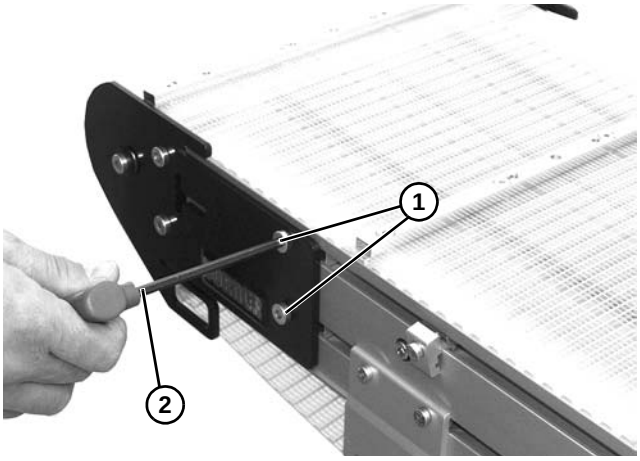


Figure 22

6. On tension end of the conveyor, identified by the pinion locking screw **(Figure 23, item 1)**, push in head plate assembly **(Figure 23, item 2)**: Loosen the pinion locking screw **(Figure 23, item 1)**, adjust the pinion torque screw **(Figure 23, item 3)**. On both sides of conveyor, loosen the two tail clamp bolts **(Figure 23, item 4)**, and push head plate assembly **(Figure 23, item 2)** inward.

NOTE

For some sizes of fixtured belt conveyors, the outer support plate of the idler tail needs to be removed to aid in belt removal.

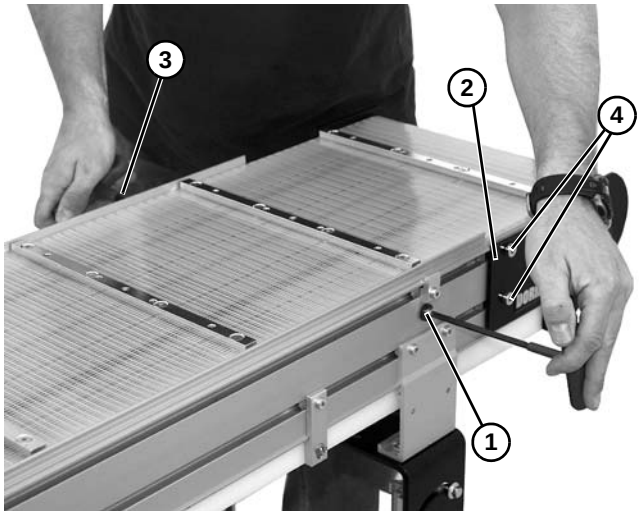


Figure 23

7. Slide belt **(Figure 24, item 1)** from conveyor from opposite side of gearmotor.

Figure 24

Belt Installation

⚠ 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

NOTE

For some sizes of fixtured belt conveyors, the outer support plate of the idler tail needs to be removed to aid in belt removal.

1. Ensure temporary support stands **(Figure 25, item 1)** are placed at both ends of the conveyor. Place an additional support stand under the drive motor, if equipped. See WARNING.
2. Orient belt **(Figure 25, item 2)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 25, item 3)**.
3. Install belt **(Figure 25, item 2)** on conveyor. Lift conveyor slightly to avoid pinching belt on temporary support stands.

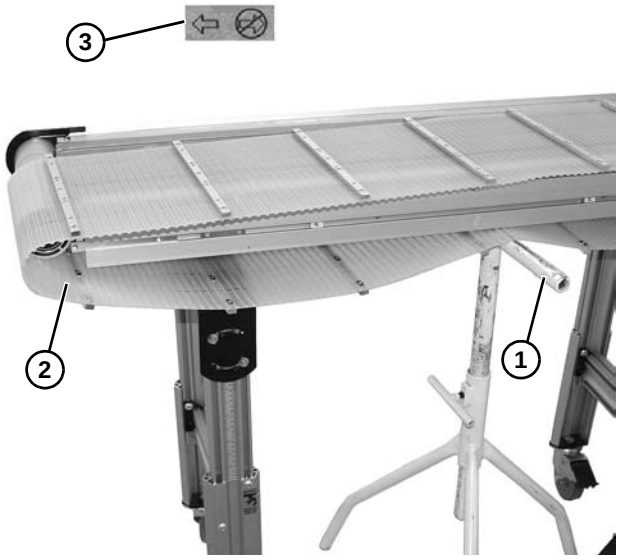


Figure 25

4. Re-install conveyor mounting brackets. Refer "Mounting Brackets" on page 8, steps 3 through 5.
5. Tension belt. Refer to "Conveyor Belt Tensioning" on page 14.
6. 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 26, item 1)**, loosen the two tail clamp bolts **(Figure 26, item 2)**, on both sides of conveyor.

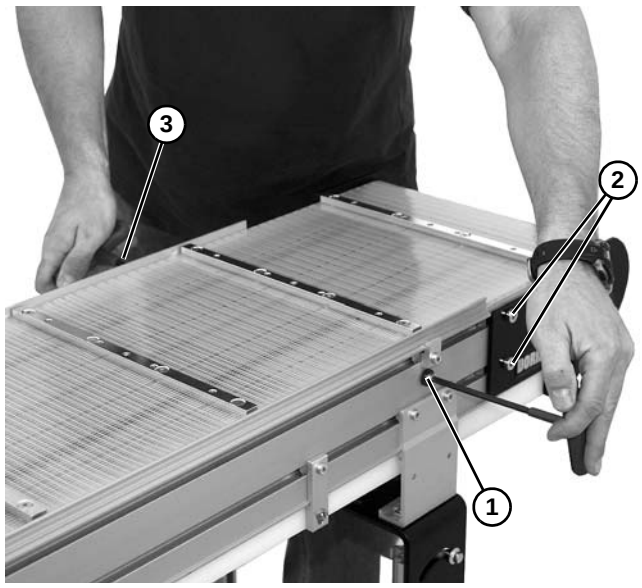


Figure 26

2. For fixture belt conveyor, loosen UHMW support screw of idler tails. Loosen screw **(Figure 27, item 1)** on both sides of tail with hex wrench **(Figure 27, item 2)**.

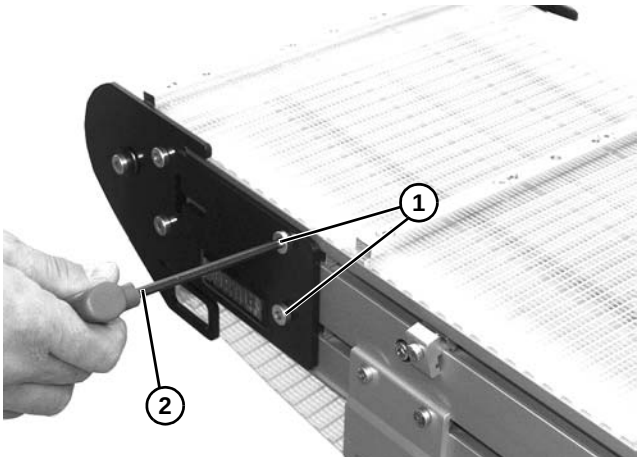


Figure 27

3. With 5mm hex wrench, hold pinion torque screw **(Figure 26, item 3)**. Loosen the pinion locking screw **(Figure 26, item 1)** and turn the pinion torque screw **(Figure 26, item 3)** to extend head plate assembly.

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.

4. 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 28, item 1)** the belt must be replaced.

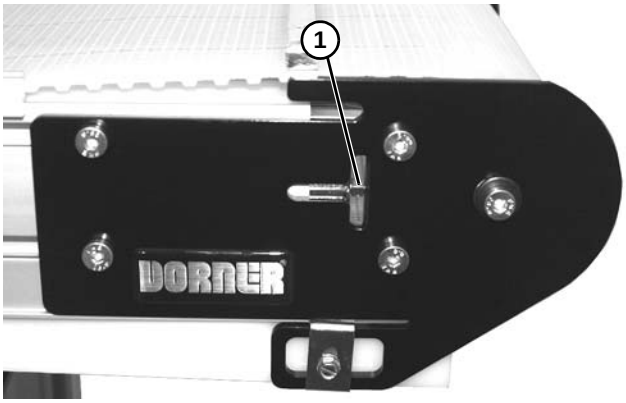


Figure 28

5. After adjusting proper tensioning, tighten the pinion locking screw **(Figure 26, item 1)** to 69 in-lbs (7.8 Nm), and tighten tail clamp bolts **(Figure 26, item 2)** on both sides of conveyor to 146 in-lb (16.5 Nm).
6. Tighten UHMW support screws **(Figure 27, item 1)** to 69 in-lbs (7.8 Nm).
7. If belt tracking is necessary, refer to “Conveyor Belt Tracking” on page 15.

Conveyor Belt Tracking

⚠ WARNING

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

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 29, item 1)** and rotate the pinion torque screw **(Figure 29, item 2)** clockwise until contact with the head plate is made, then tighten the pinion locking screw **(Figure 29, item 1)** to 69 in–lbs (7.8 N–m).
2. On the side of conveyor to be adjusted, loosen two (2) tail clamp screws **(Figure 29, item 3)**.

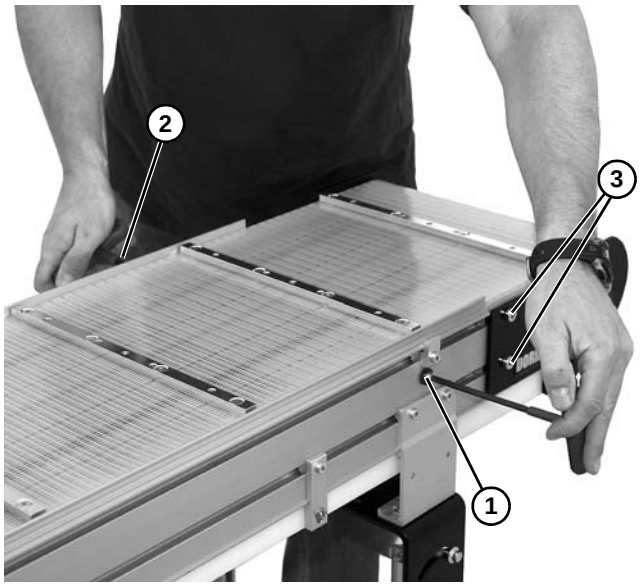


Figure 29

3. With the conveyor running, use wrench **(Figure 30, item 1)** to rotate the tracking screw **(Figure 31, item 2)** in small increments until the belt tracks in the center of the conveyor.

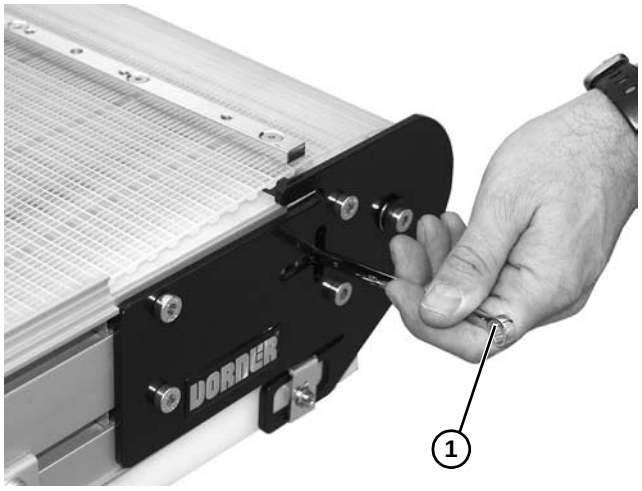


Figure 30

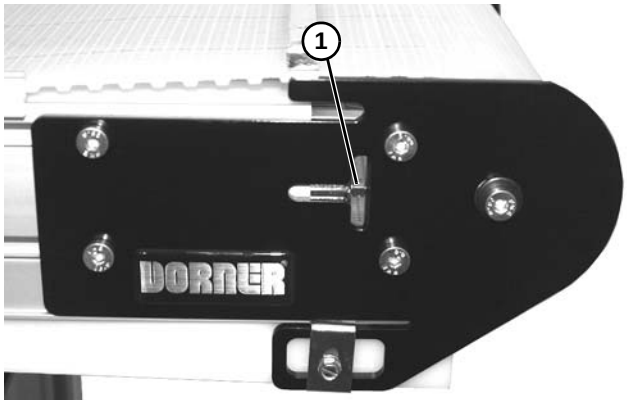


Figure 31

4. Re-tighten the head plate fastening screws **(Figure 29, item 3)** with a 8 mm hex-key wrench to 146 in-lb (16.5 Nm).

Pulley Removal

⚠ WARNING

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

Remove conveyor belt to access pulley(s). See "Conveyor Belt Replacement" on page 11. Remove the desired pulley following the corresponding instructions below:

- **A** – Idler Pulley Removal
- **B** – Drive Pulley Removal

A – Idler Pulley Removal

1. Temporarily support the idler pulley.
2. On one side of conveyor, loosen the four (4) fastening screws **(Figure 32, item 1)**.

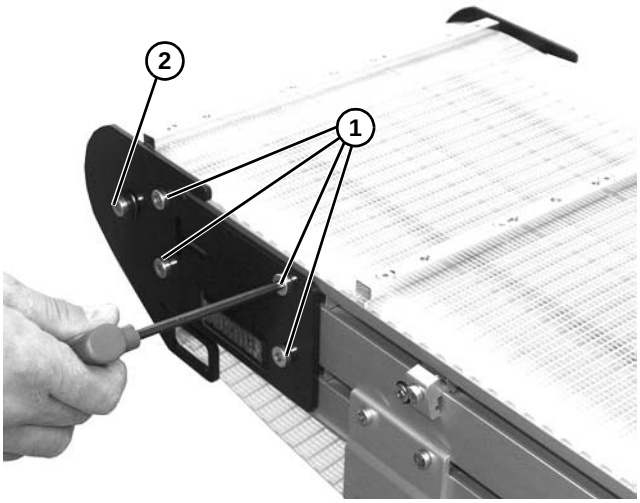


Figure 32

3. Remove screw **(Figure 32, item 2)**.
4. Pull back the outer headplate **(Figure 33, item 1)** and remove the inner spacer **(Figure 33, item 2)**.

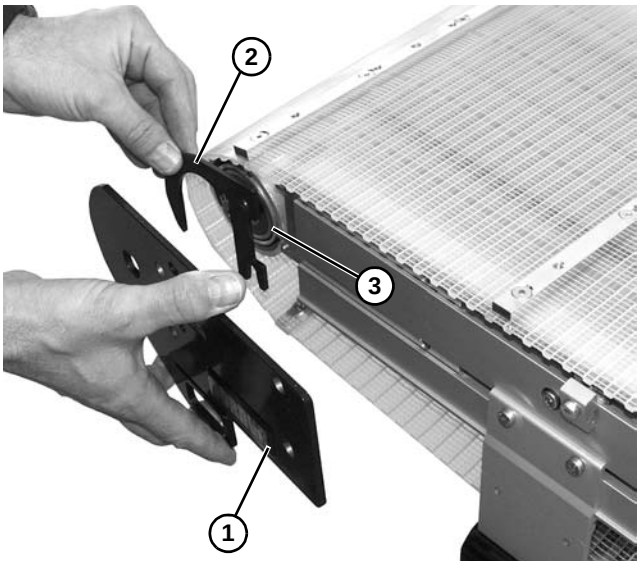


Figure 33

5. Slide the idler pulley assembly **(Figure 33, item 3)** out of the headplate on the opposite side.
6. Remove the pulley shaft assembly: remove the clip ring **(Figure 34, item 1)** and washer **(Figure 34, item 2)** from one side of the pulley assembly.

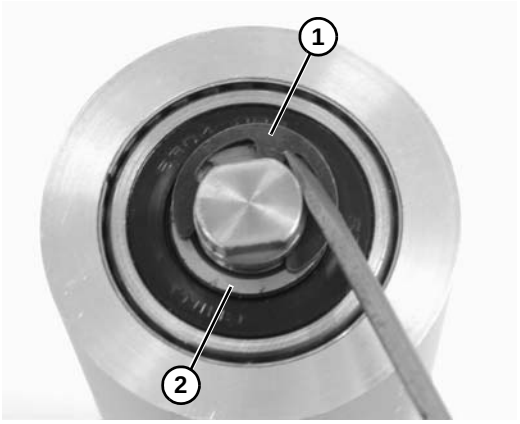


Figure 34

7. Slide the shaft assembly **(Figure 35, item 1)** out of the pulley **(Figure 35, item 2)**.

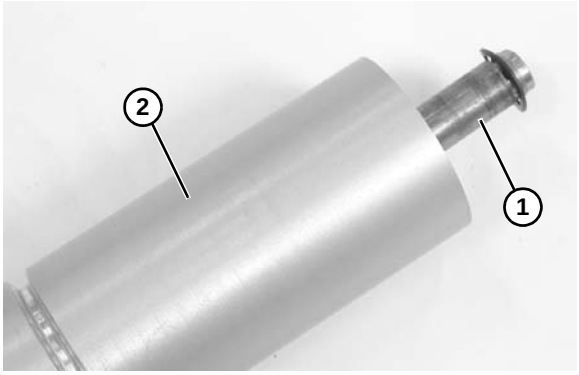


Figure 35

B – Drive Pulley Removal

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

1. Remove the gearmotor mounting package: Refer to your gearmotor mounting manual for removal procedure.
2. Remove four shaft cover screws **(Figure 36, item 1)**. Remove the shaft cover **(Figure 36, item 2)**.

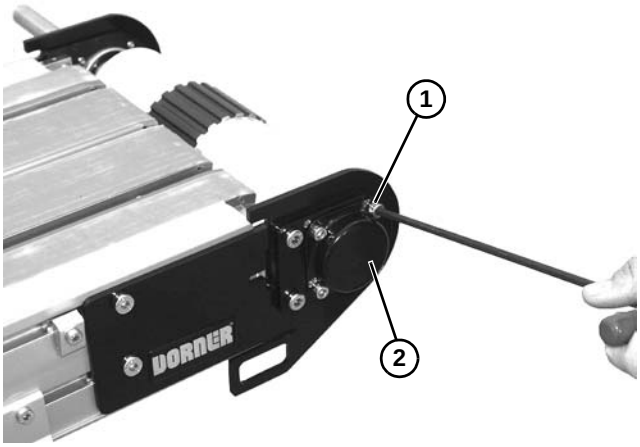


Figure 36

3. Loosen the bearing collar set screw **(Figure 37, item 1)** and remove bearing collar **(Figure 37, item 2)**. Repeat on drive shaft side of pulley **(Figure 38, item 1)** and **(Figure 37, item 2)**.

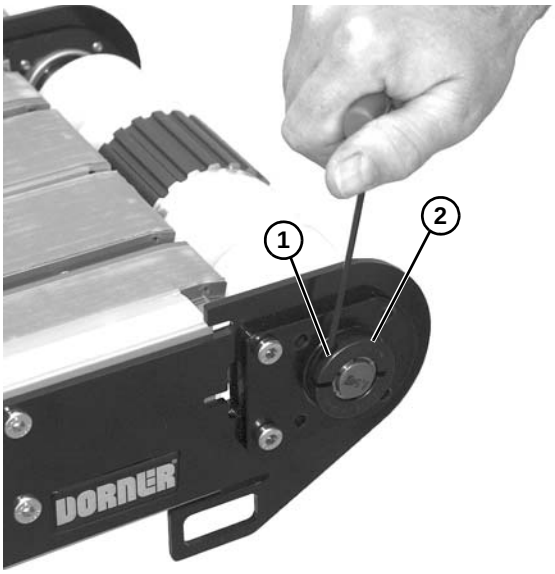


Figure 37

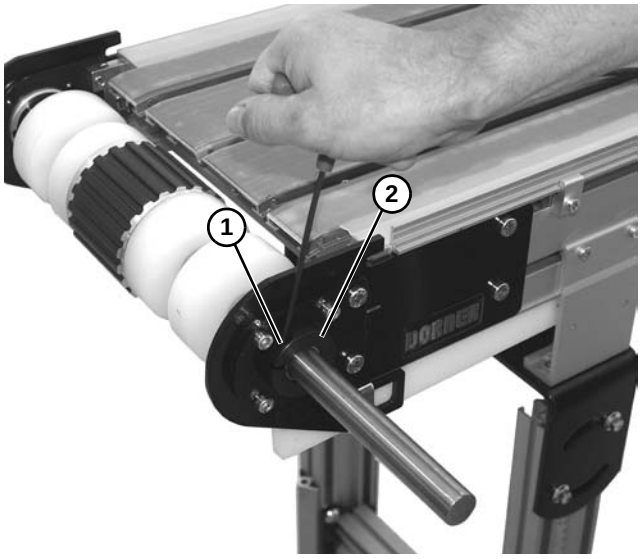


Figure 38

NOTE

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

4. On the outer headplate assembly, remove two (2) screws **(Figure 39, item 1)**.

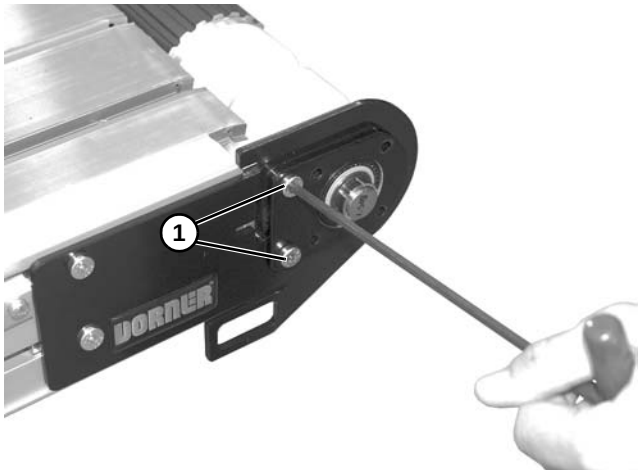


Figure 39

5. Remove the outer headplate assembly **(Figure 40, item 1)**.

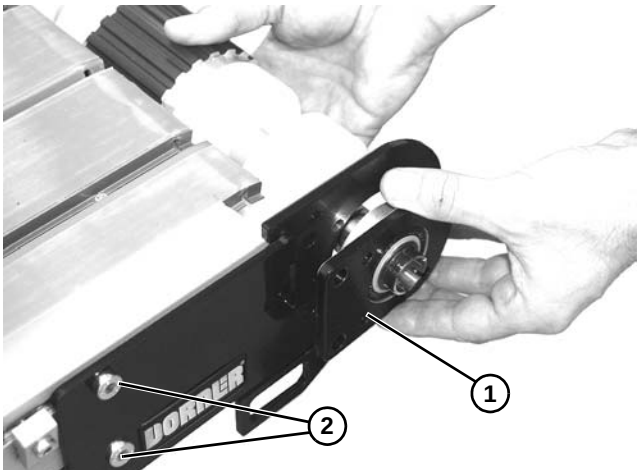


Figure 40

6. On the drive headplate, remove two (2) screws **(Figure 39, item 2)**.
7. Remove the outer headplate assembly **(Figure 40, item 1)**, and inner spacer **(Figure 40, item 2)**.

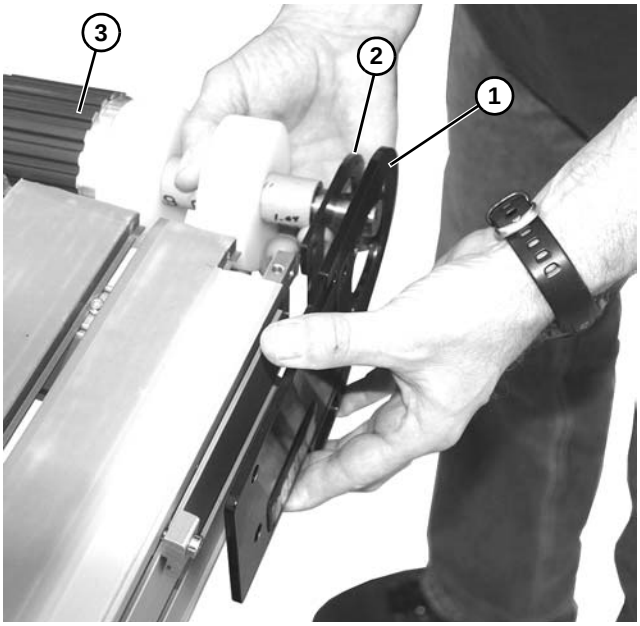


Figure 41

8. Slide the drive pulley **(Figure 41, item 3)** out of the headplate on the opposite side.
9. Remove spacers **(Figure 42, item 1)** and rollers **(Figure 42, item 2)** from both sides of the drive pulley shaft.

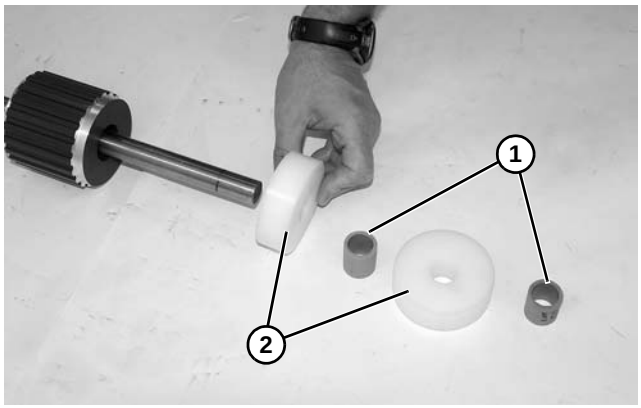


Figure 42

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

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.

Removal

1. Turn bearing **(Figure 43, item 1)** to align with slots **(Figure 43, item 2)** in bearing housing. Then remove bearing.

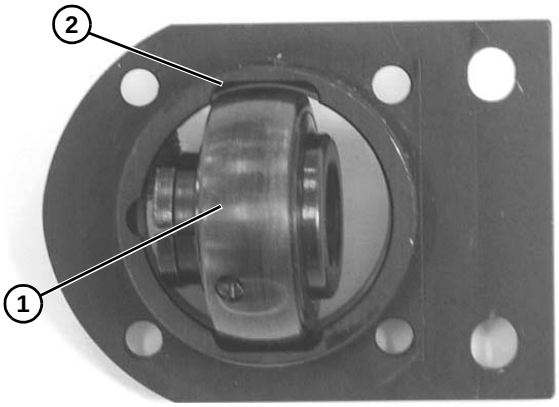


Figure 43

Replacement

1. Inspect bearing housing bearing surface. If worn or damaged, replace. See "Service Parts" on page 22.
2. Insert bearing **(Figure 44, item 1)** into housing slot **(Figure 44, item 2)**. Locate anti–rotation nub **(Figure 44, item 3)** to align with slot **(Figure 44, item 4)**, and twist bearing into housing.

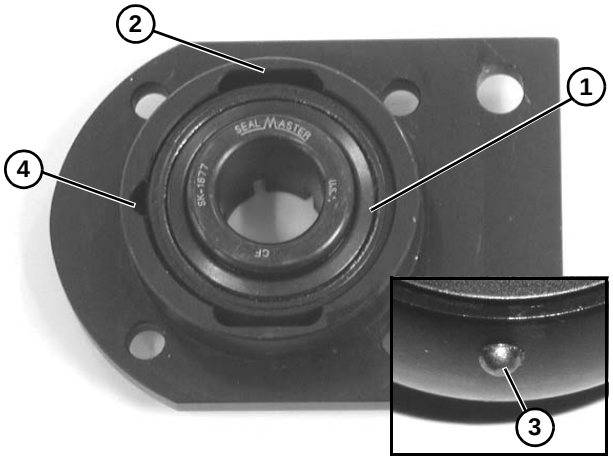


Figure 44

Pulley Replacement

Idler Pulley

To replace the idler pulley, reverse the "Idler Pulley Removal" procedure on page 16.

Drive Pulley

To replace the drive pulley, reverse the "Drive Pulley Removal" procedure on page 17.

Upper Wear Strip Replacement

⚠ WARNING

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

1. Remove conveyor belt. See "Belt Removal" section on page 18.
2. With a putty knife **(Figure 45, item 1)**, start by raising edge of wear strip **(Figure 45, item 2)**.

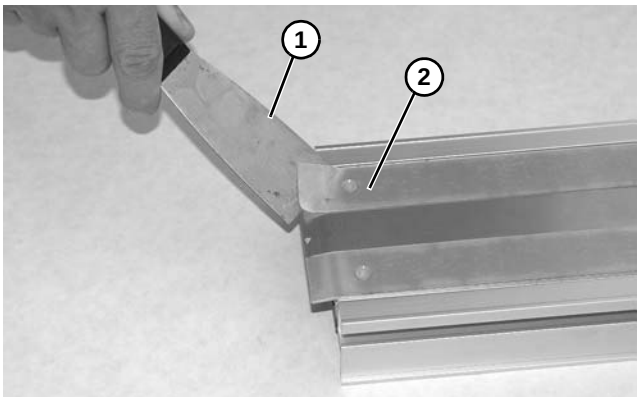


Figure 45

3. Remove old wear strip with a pliers **(Figure 46, item 1)**.

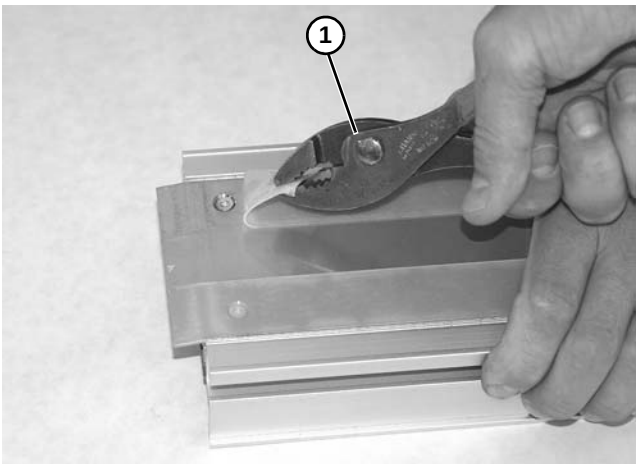


Figure 46

4. Clean conveyor surface with isopropyl alcohol and allow to fully dry.

5. Install new wear strip **(Figure 47, item 1)**.

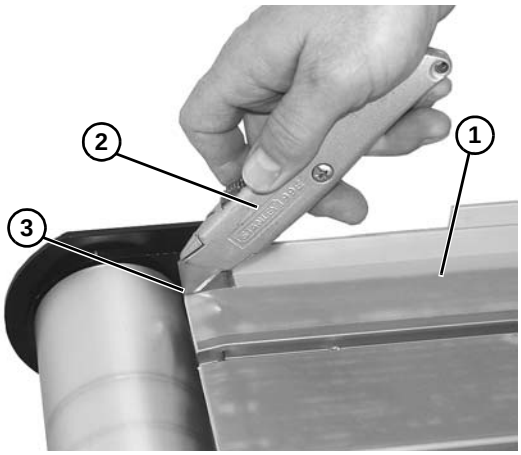


Figure 47

⚠ WARNING

Utility knife will be sharp. HANDLE WITH CARE.

6. Using a utility knife **(Figure 47, item 2)**, cut out notch in each corner **(Figure 47, item 3)**.

Lower Wear Strip Replacement

⚠ WARNING

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

1. Remove conveyor belt. See "Belt Removal" section on page 18.
2. Remove screw **(Figure 48, item 1)**, clip **(Figure 48, item 2)**, and spacer.

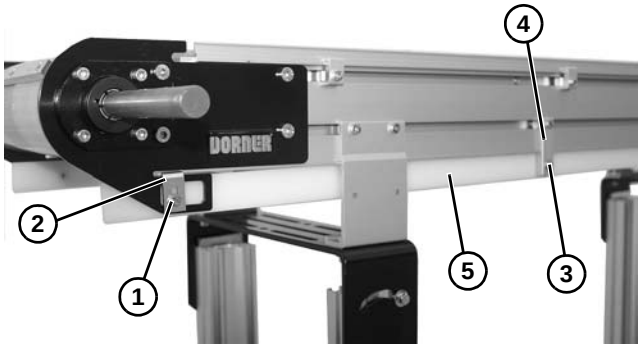


Figure 48

3. Remove screw(s) **(Figure 48, item 3)** from each retaining clip **(Figure 48, item 4)**, and remove lower wear strip **(Figure 48, item 5)**.
4. Clean conveyor surface with isopropyl alcohol and allow to fully dry.
5. Install new wear strip **(Figure 48, item 5)** and secure with retaining clips **(Figure 48, item 4)**.
6. Install sag guard plate **(Figure 49, item 1)** with spacer **(Figure 49, item 2)** and screw **(Figure 49, item 3)**.

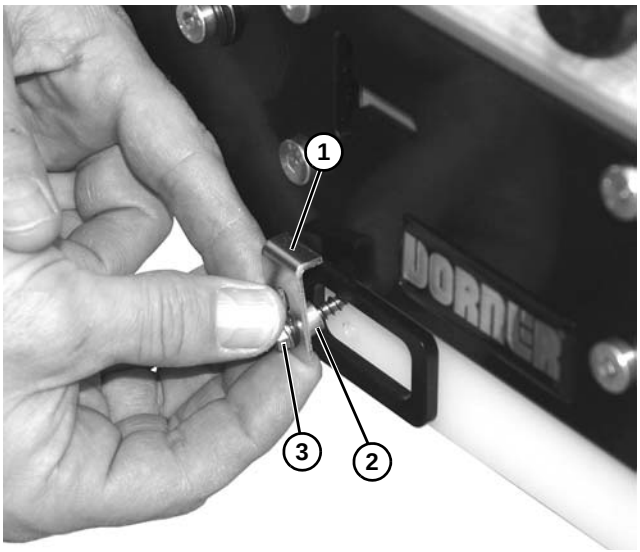


Figure 49

7. Adjust wear strip up or down as needed on slotted holes in sag guard plate **(Figure 49, item 1)** and retaining clip **(Figure 48, item 4)**, and secure with screws **(Figure 49, item 3)**.

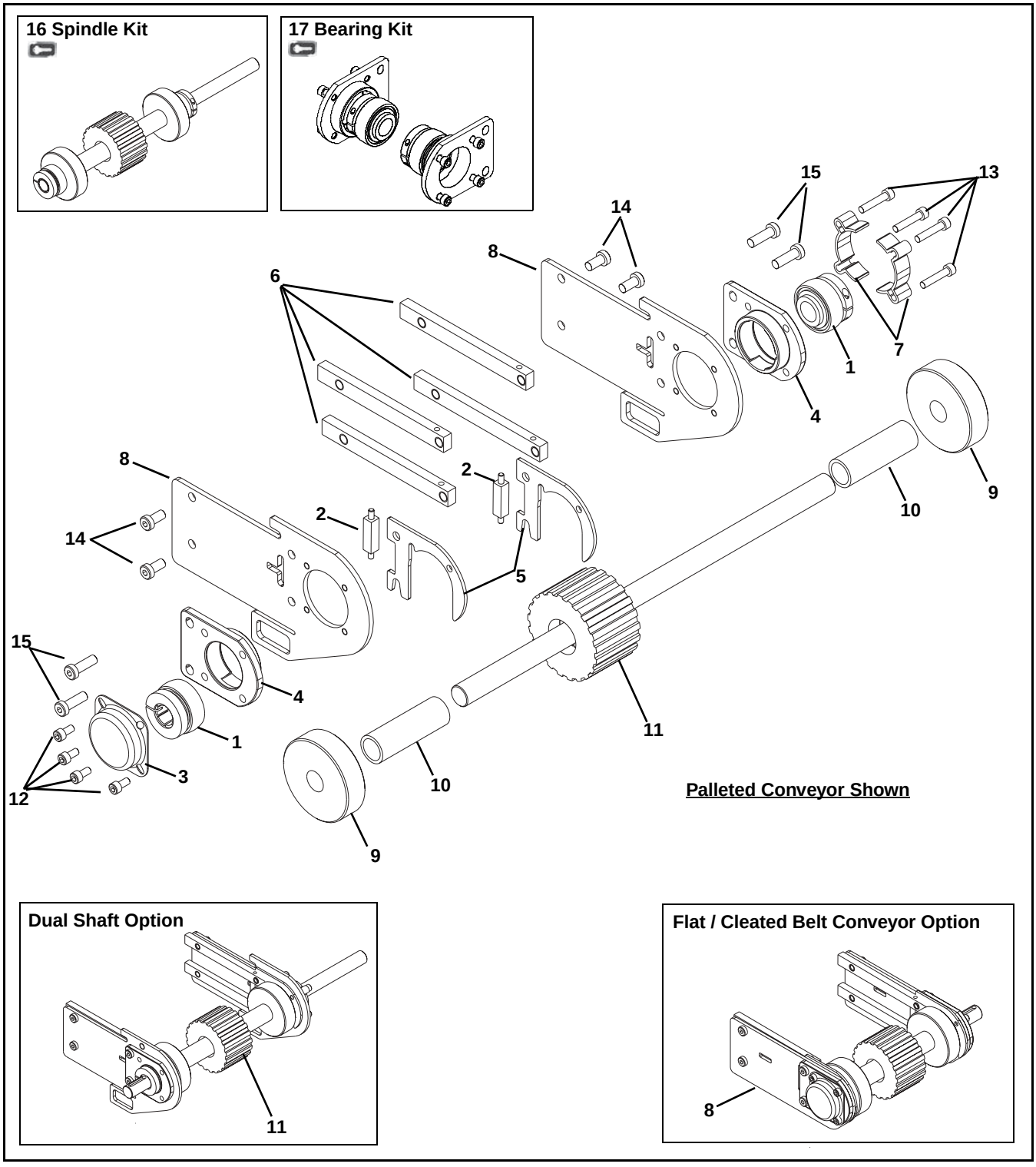
Notes

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.

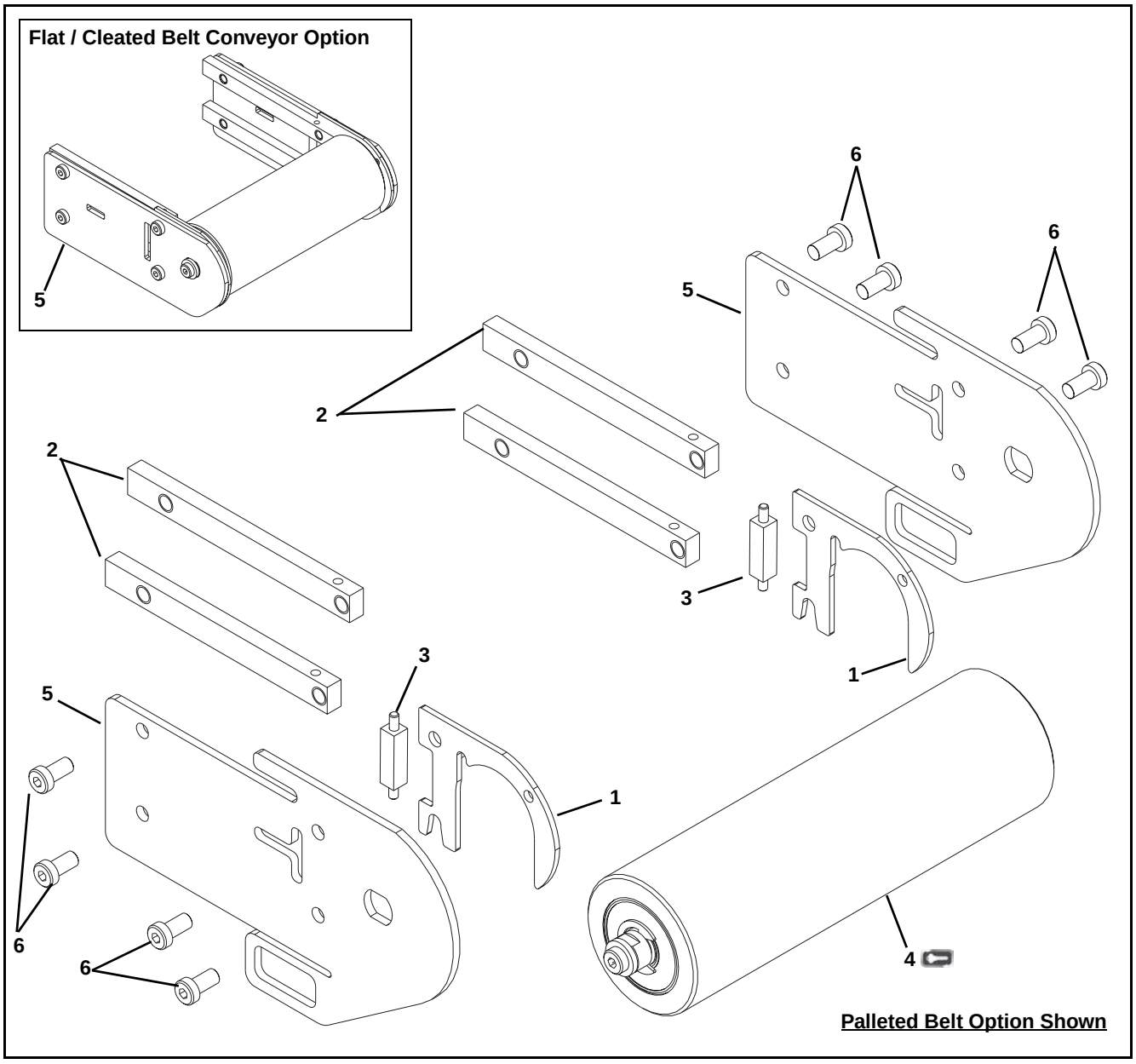
Drive End & Auxiliary Output Idler End



Item	Part Number	Description
1	802-135	D-Lok Bearing
2	350229	Tracking Block Assembly
3	300139	Shaft Cover
4	300885	Bearing Retainer
5	350131	Inner Tail Plate
6	301088	Tail Bar Clamp
7	301092	Side Drive Guard (Servo Drives Only)
8	301048	Drive Tail Plate
	350153	Drive Tail Plate (Palleted Conveyor Only)
9	350156	Puck
10	350157-LLLLL	Puck Spacer
11	350206-WW	Spindle Assembly
	350208-WW	Spindle Assembly (Servo Drive Only)
	350207-WW	Dual Shaft Spindle Assembly
	350209-WW	Dual Shaft Spindle Assembly (Servo Drive Only)
12	920612M	Socket Head Screw, M6 - 1.00 x 12 mm
13	920630M	Socket Head Screw, M6 - 1.00 x 30 mm (Servo Drive Only)
14	950816M	Low Head Cap Screw, M8 - 1.25 x 16 mm
15	950825M	Low Head Cap Screw, M8 - 1.25 x 25 mm
16	32PMDS-WW	Drive Spindle Kit (Includes items 1, 9, 10 & 11)
	32PMDSS-WW	Servo Drive Spindle Kit (Includes items 1, 9, 10 & 11)
	32PMDDS-WW	Duel Shaft Drive Spindle Kit (Includes items 1, 9, 10 & 11)
	32PMDDSS-WW	Duel Shaft Servo Drive Spindle Kit (Includes items 1, 9, 10 & 11)
17	32D	Bearing Kit, (Includes items 1, 4, & 13)
WW = Conveyor Width Reference: 04, 06, 08, 10, 12, 14, 16 & 18		
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 35.25" LLLLL = 03525		

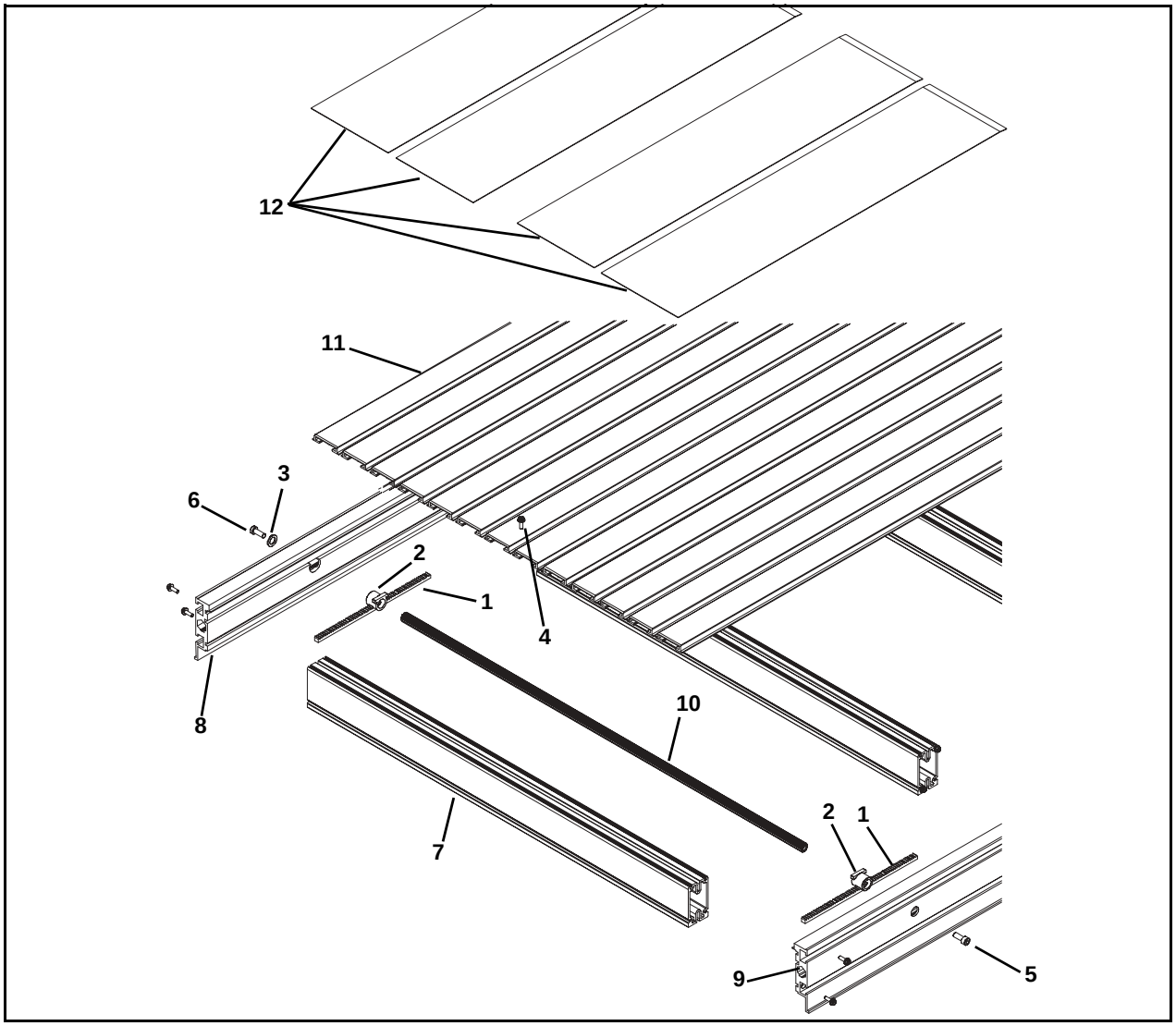
Service Parts

Idler End Assembly



Item	Part Number	Description
1	350131	Inner Tail Plate
2	301088	Tail Bar Clamp
3	350229	Tracking Block Assembly
4	350165-WW	Spindle Assembly
5	301049	Idler Tail Plate
	350167	Idler Tail Plate (Palleted Conveyor Only)
6	950816M	Low Head Cap Screw, M8 - 1.25 x 16 mm
WW = Conveyor Width Reference: 04, 06, 08, 10, 12, 14, 16 & 18		

Frame Assembly



Item	Part Number	Description
1	240420	Rack Gear
2	301091	Pinion Bearing
3	605279P	Washer
4	920484M	Flange Torx Screw, M4 x 16 mm
5	920616M	Socket Head Screw M6 x 16 mm
6	950616M	Low Head Cap Screw M6 x 16 mm
7	3245WW	Cross Support Rail
8	301041–LLLLL	RH Side Rail
9	301042–LLLLL	LH Side Rail
10	3229WW	Pinion
11	See Bed Plate Rail charts	Bed Plate Rail
12	807-2052	UHWM Tape, 1.625” Wide
	807-2053	UHWM Tape, 2.50” Wide
	807-2057	UHWM Tape, 5.75” Wide
WW = Conveyor Width Reference: 04, 06, 08, 10, 12, 14, 16, & 18		
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 35.25" LLLLL = 03525		

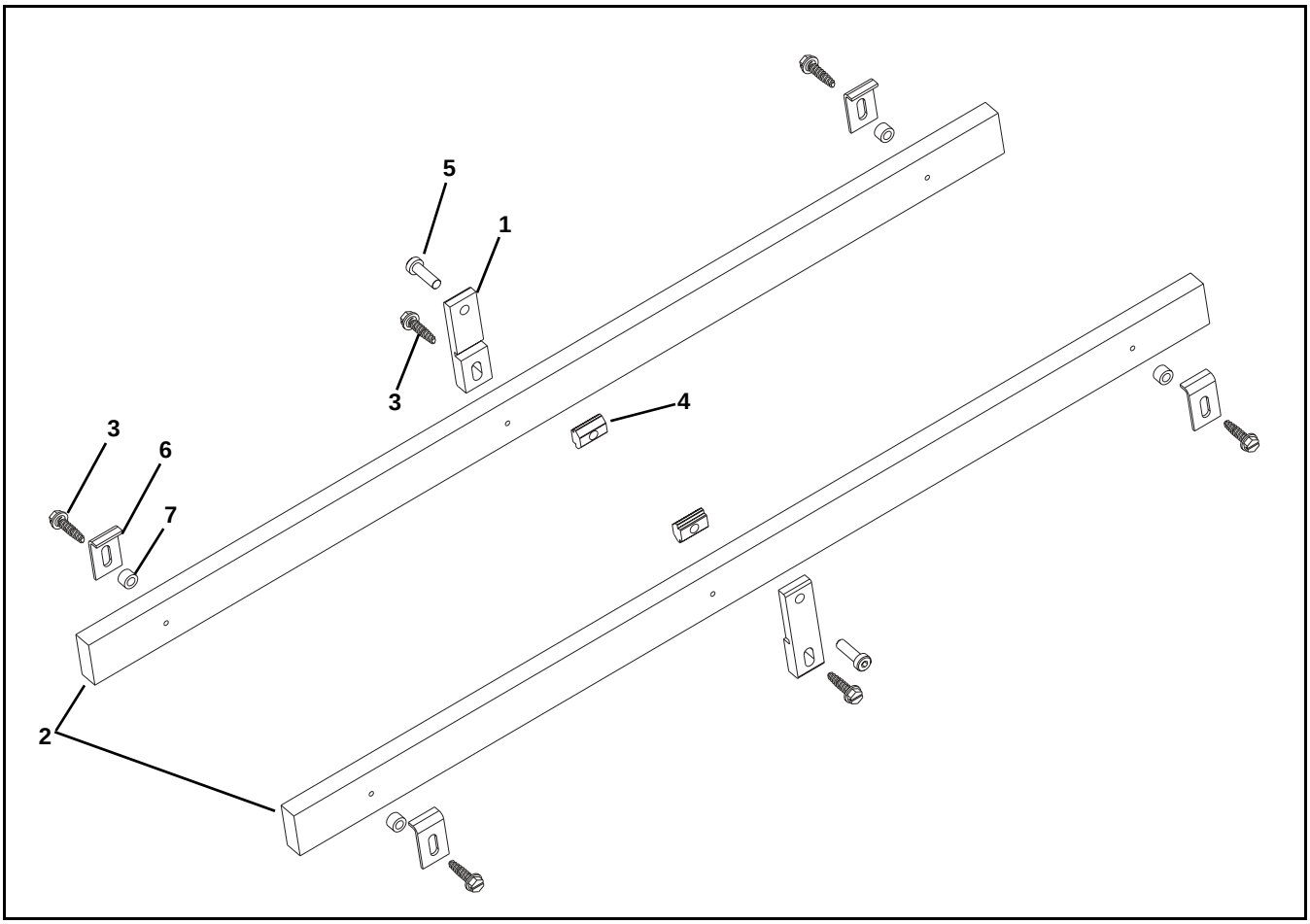
Item 11: Bed Plate Rail for Single Piece Frames	
Bed Plate Width	**Part Number**
1.75” (44 mm)	350215-LLLLL
2” (51 mm)	350216-LLLLL
4” (102 mm)	350217-LLLLL
6” (152 mm)	350218-LLLLL

Item 11: End Bed Plate Rail for Multiple Piece Frames	
Bed Plate Width	**Part Number**
1.75” (44 mm)	350211-LLLLL
2” (51 mm)	350212-LLLLL
4” (102 mm)	350213-LLLLL
6” (152 mm)	350214-LLLLL

Item 11: Mid Bed Plate Rail for Multiple Piece Frames	
Bed Plate Width	**Part Number**
1.75” (44 mm)	300887-LLLLL
2” (51 mm)	300888-LLLLL
4” (102 mm)	300889-LLLLL
6” (152 mm)	300890-LLLLL

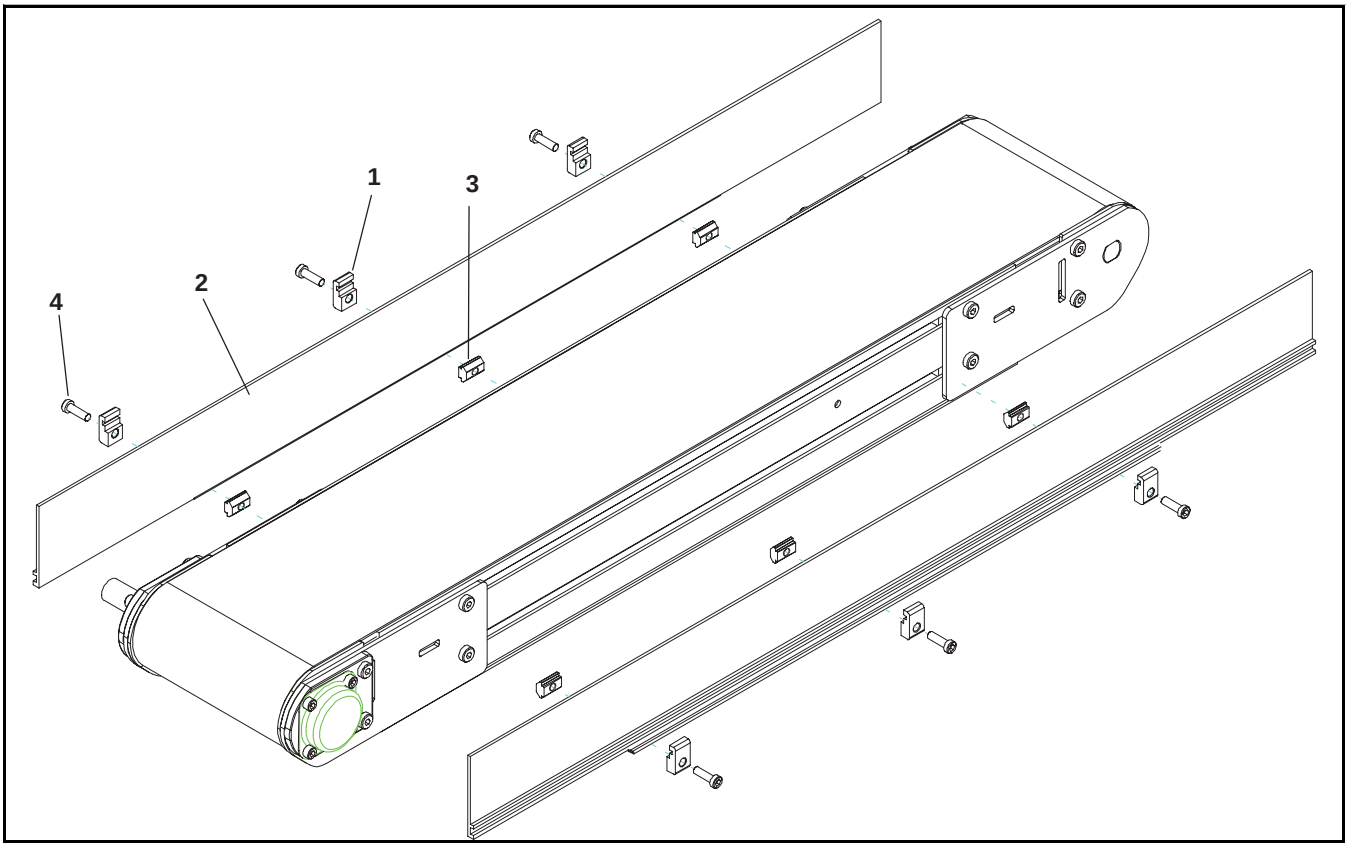
Service Parts

Lower Wear Strip



Item	Part Number	Description
1	350163	Return Clip
2	350162-LLLLL	Return Wear Strip
3	807-1840	Hex Washer Head Sheet Metal Screw
4	639971M	Single Drop-In Tee Bar
5	950620M	Low Head Cap Screw, M6-1.00 x 20 mm
6	350187	Return L Bracket
7	350186	Spacer
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 35.25" LLLLL = 03525		

–04 3” (76mm) Aluminum Side



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	380400–LLLLL (see Formulas)	3200 Guide 3” (76mm) HS
3	639971M	Single Drop–in Tee Bar
4	950620M	Low Head Cap Screw M6 x 20 mm

Length Formulas

$$\underline{LLLLL} = \frac{(\text{Conveyor Length } \underline{XXXX}) \times 12 - \text{Tail Factor}}{\#\text{ of Sections of Conveyor}}$$

Tail Factor =

00000	for center drive with transfer tail both ends
00100	for end drive with one transfer tail
00200	for end drive and center drives with standard tails
00325	for All Cleated Conveyors

$$\#\text{ of Conveyor Sections} = \frac{(\text{Conveyor Length } \underline{XXXX} - 0100)}{1200}$$

XXXX = Conveyor Length (XX.XX ft)

Example

17’4” End Drive Conveyor with Standard Tails

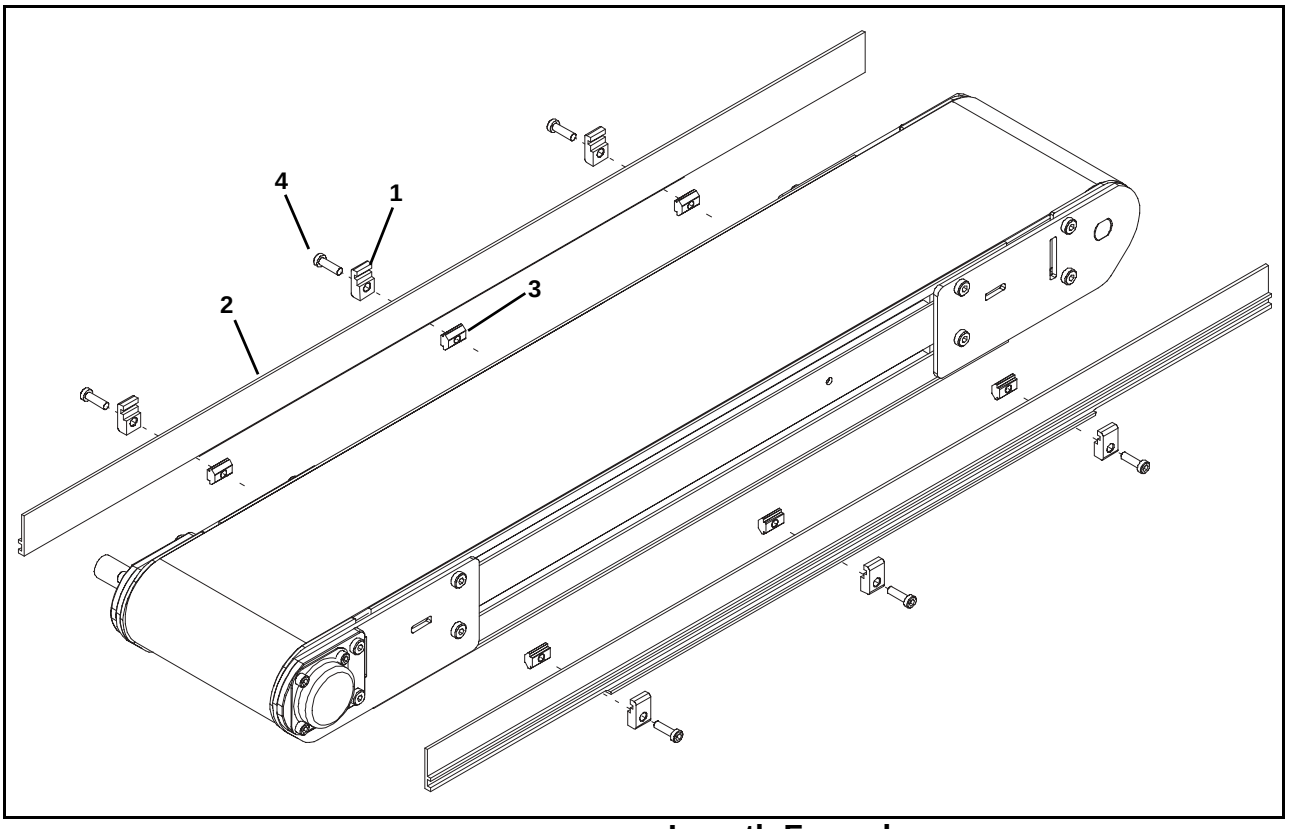
Conveyor Length = 1733
Tail Factor = 00200

$$\#\text{ of Sections (round up)} = \frac{(1733 - 0100)}{1200} = 1.36 = 2 \text{ Sections}$$

$$\underline{LLLLL} = \frac{(1733 \times 12) - 00200}{2} = 10298$$

Service Parts

–05 1.5” (38mm) Aluminum Side



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	380500–LLLLL (see Formulas)	3200 Guide, 0.5” (13mm) HS
3	639971M	Single Drop–in Tee Bar
4	950620M	Low Head Cap Screw M6 x 20 mm

Length Formulas

Length Formulas

$$\underline{LLLLL} = \frac{(\text{Conveyor Length } \underline{XXXX}) \text{ X } 12 - \text{Tail Factor}}{\text{\# of Sections of Conveyor}}$$

Tail Factor =

00000	for center drive with transfer tail both ends
00100	for end drive with one transfer tail
00200	for end drive and center drives with standard tails
00325	for All Cleated Conveyors

$$\text{\# of Conveyor Sections} = \frac{(\text{Conveyor Length } \underline{XXXX} - 0100)}{1200}$$

XXXX = Conveyor Length (XX.XX ft)

Example

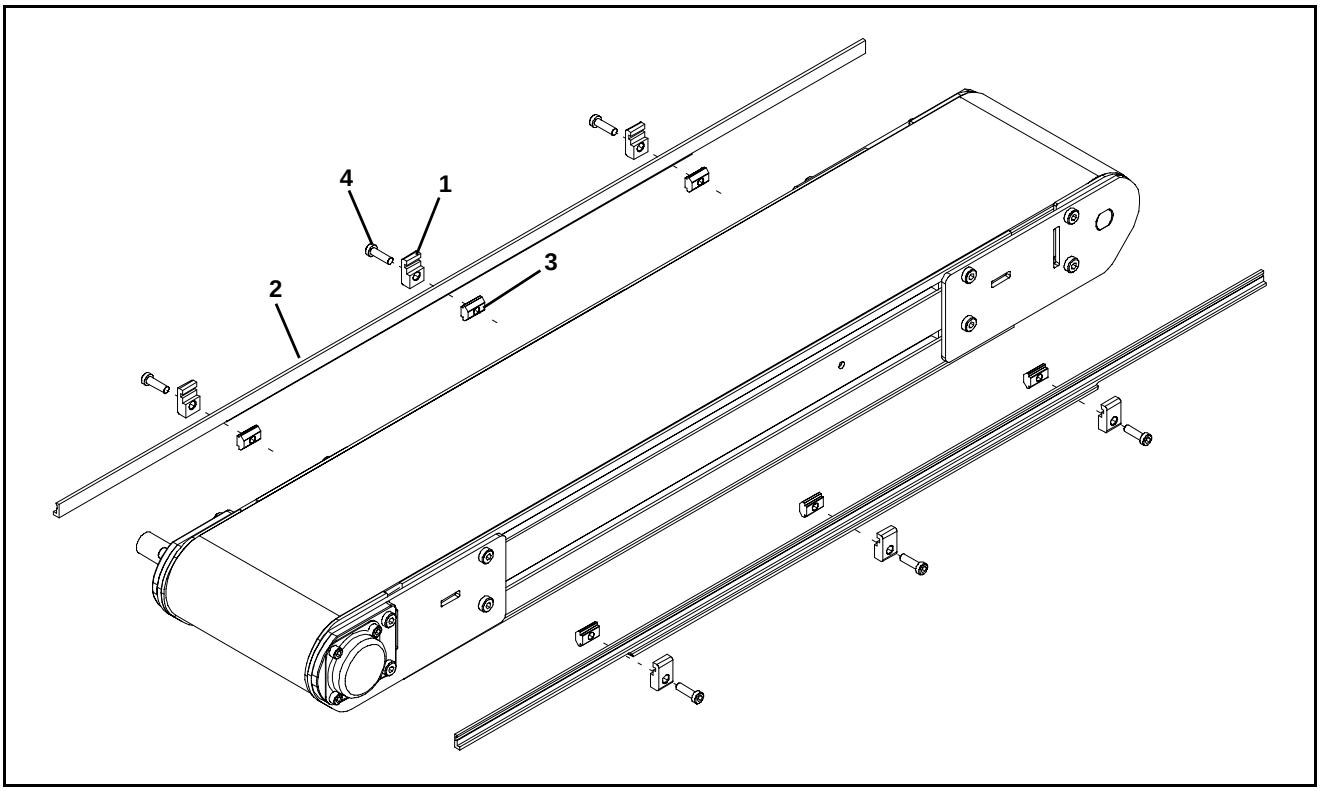
17’4” End Drive Conveyor with Standard Tails

Conveyor Length = 1733
Tail Factor = 00200

$$\text{\# of Sections (round up)} = \frac{(1733 - 0100)}{1200} = 1.36 = 2 \text{ Sections}$$

$$\underline{LLLLL} = \frac{(1733 \times 12) - 00200}{2} = 10298$$

–09 Low to High Side



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	380900–LLLLL (see Formulas)	2200 Guide, 0.5" (13mm) HS
3	639971M	Single Drop–in Tee Bar
4	950620M	Low Head Cap Screw M6 x 20mm

Length Formulas

$$\underline{LLLLL} = \frac{(\text{Conveyor Length } \underline{XXXX}) \text{ X } 12 - \text{Tail Factor}}{\text{\# of Sections of Conveyor}}$$

Tail Factor =

00000	**for center drive with transfer tail both ends**
00100	**for end drive with one transfer tail**
00200	**for end drive and center drives with standard tails**
00325	**for All Cleated Conveyors**

$$\text{\# of Conveyor Sections} = \frac{(\text{Conveyor Length } \underline{XXXX} - 0100)}{1200}$$

XXXX = Conveyor Length (XX.XX ft)

Example

17'4" End Drive Conveyor with Standard Tails

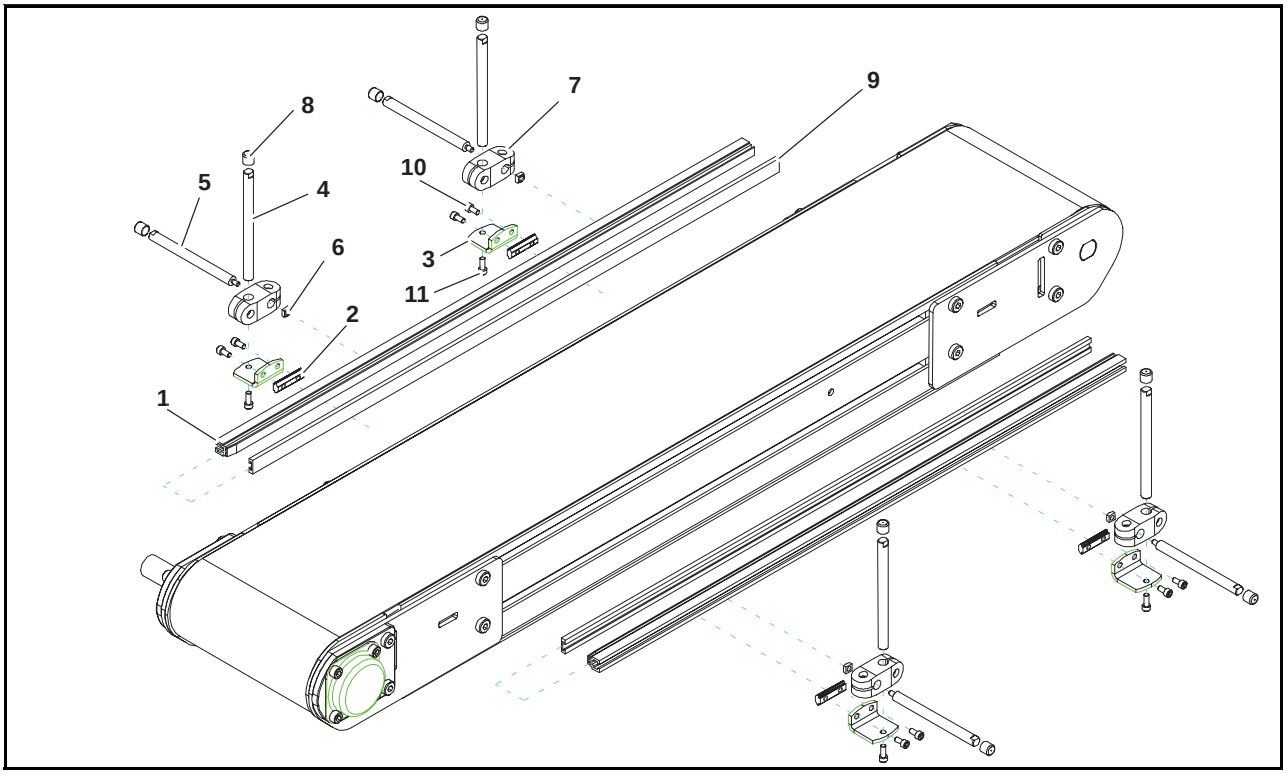
Conveyor Length = 1733
Tail Factor = 00200

$$\text{\# of Sections (round up)} = \frac{(1733 - 0100)}{1200} = 1.36 = 2 \text{ Sections}$$

$$\underline{LLLLL} = \frac{(1733 \times 12) - 00200}{2} = 10298$$

Service Parts

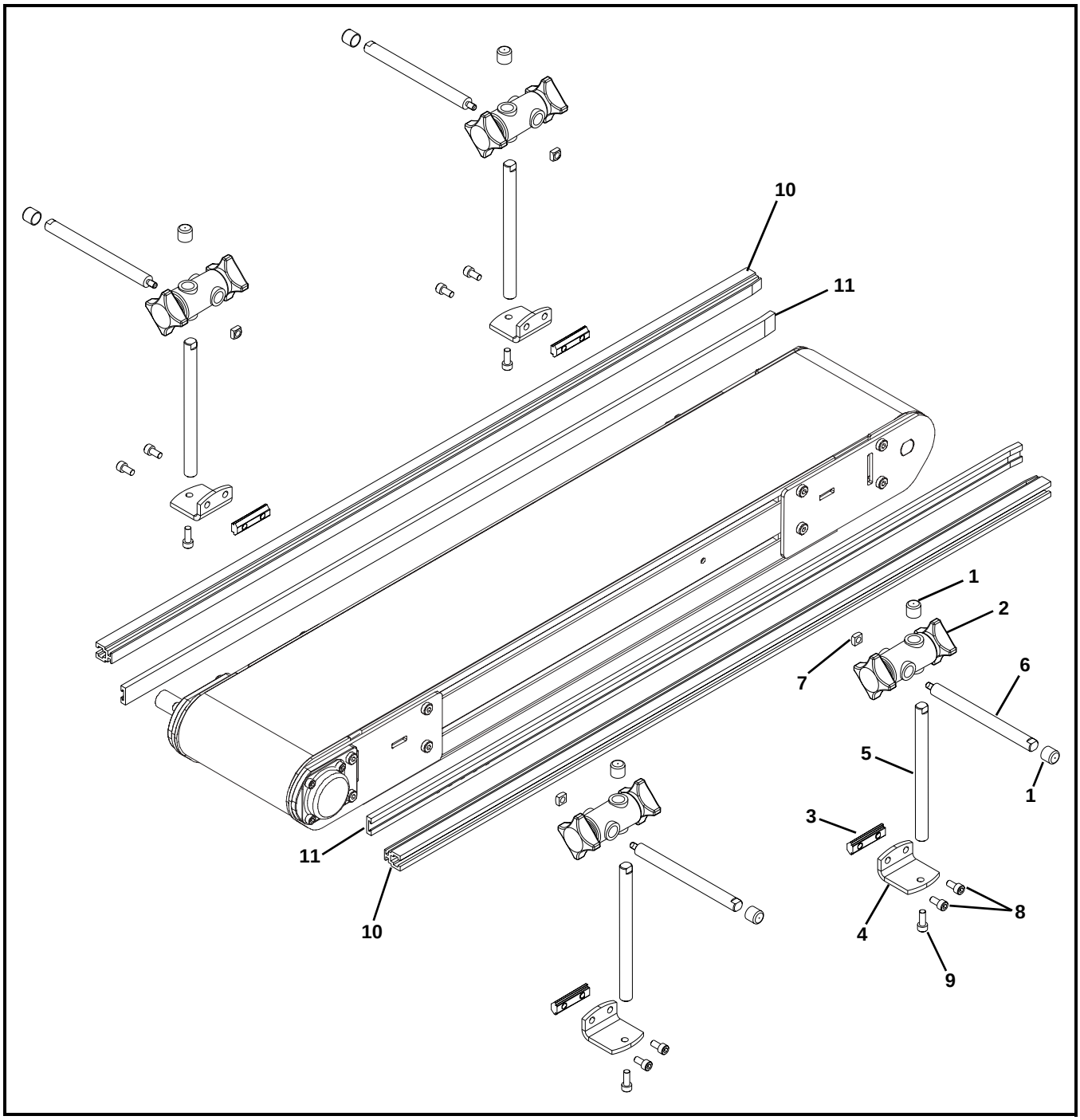
–13 Adjustable Guiding



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)

Item	Part Number	Description
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 12 mm
11	920616M	Socket Head Screw M6 x 16 mm

–14 Tool-Less Adjustable Guiding

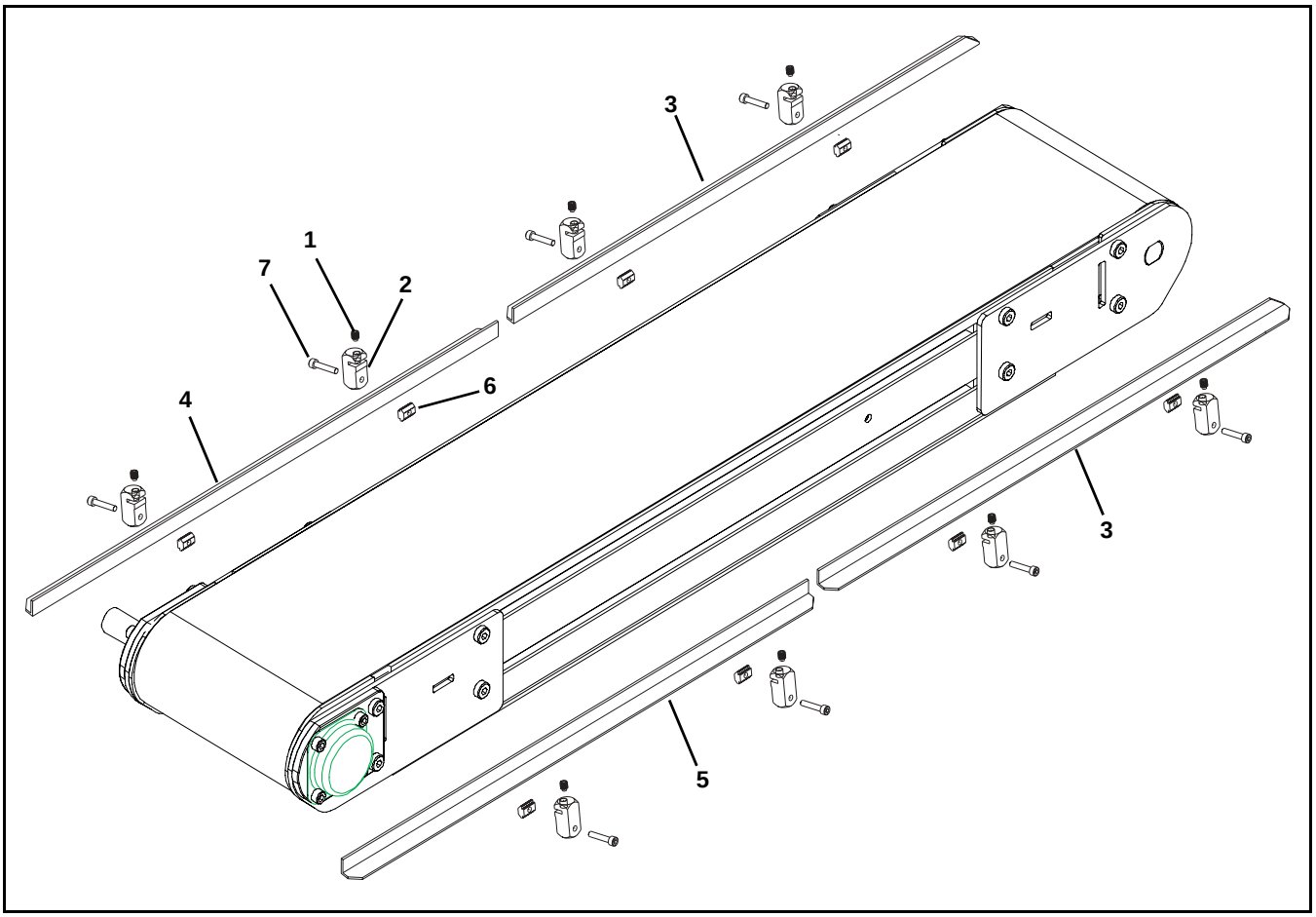


Item	Part Number	Description
1	807-948	Shaft Cap
2	807-1470	Cross Block
3	200830M	Drop-In Tee Bar
4	202004M	Mounting Bracket
5	202027M	Vertical Mounting Guide Shaft
6	202028M	Horizontal Mounting Guide Shaft

Item	Part Number	Description
7	674175MP	Square Nut, M6-1.00
8	920612M	Socket Head Screw, M6-1.00 x 12 mm
9	920616M	Socket Head Screw, M6-1.00 x 16 mm
10	460063-LLLLL	Aluminum Profile Guide
11	614068P-LLLLL	Extruded Guide
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

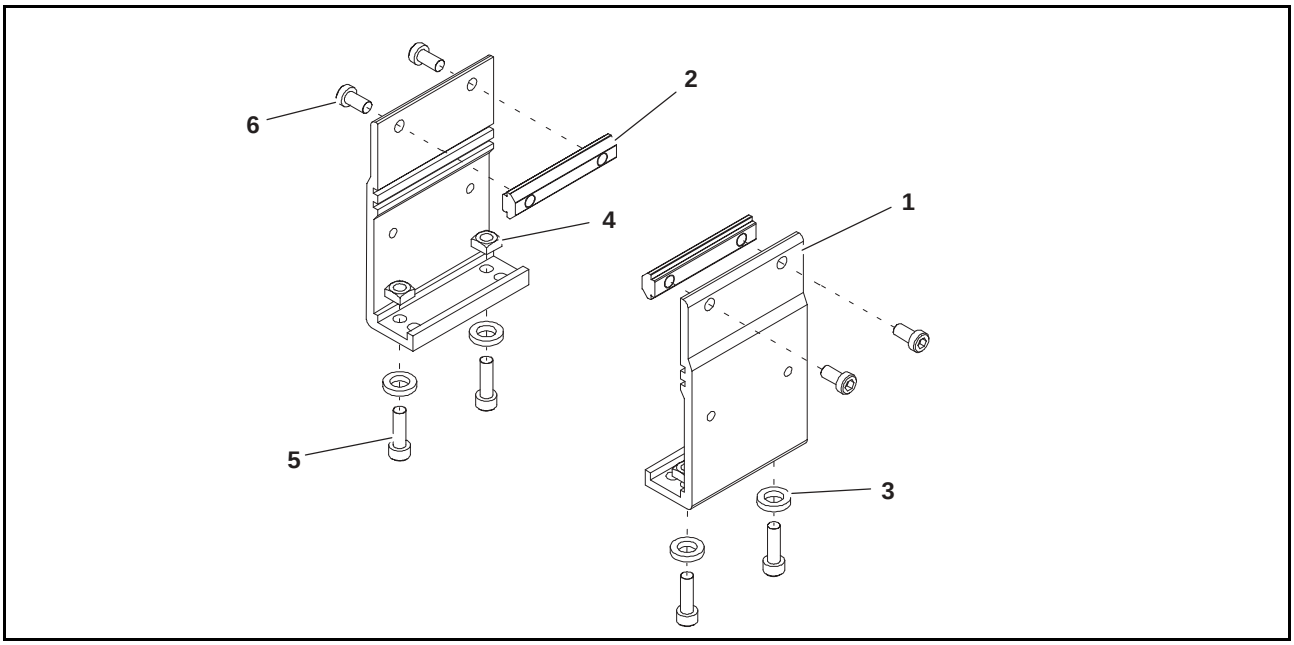
Service Parts

1” (25 mm) Cleated Guiding



Item	Part Number	Description
1	807-2121	Set Screw
2	350177	Guide Clamping Block
3	350181-LLLLL	Cleated Guide for Multi Piece Guiding
4	350182-LLLLL	Cleated Guide for A Side
5	350183-LLLLL	Cleated Guide for D Side
6	639971MK10	Single Drop-in Tee Bar (x10)
7	950630M	Low Head Cap Screw, M6 - 1.00 x 30 mm
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 35.25" LLLLL = 03525		

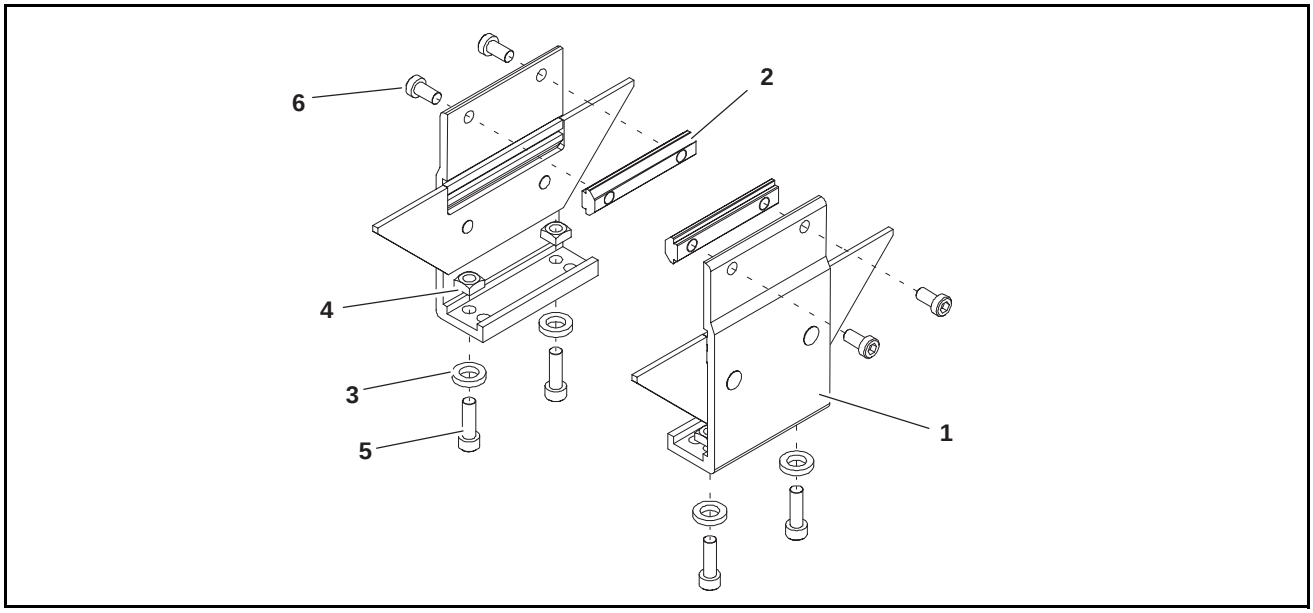
Flat Belt Mounting Brackets



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 5 mm x 10 mm
5	920620M	Socket Head Screw M6 x 20 mm
6	950612M	Low Head Cap Screw M6 x 12 mm

Cleated Belt Mounting Brackets

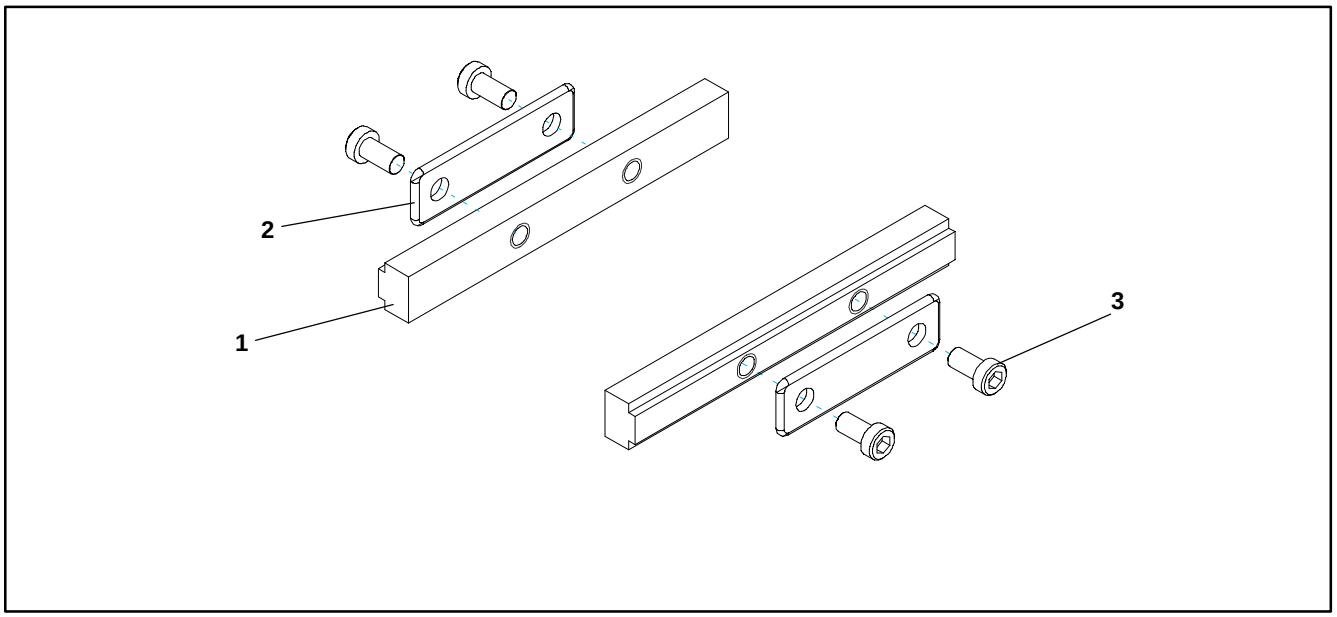


Item	Part Number	Description
1	240836	Cleated Mounting Assembly
2	300150M	Drop–In Tee Bar
3	605279P	Washer

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

Service Parts

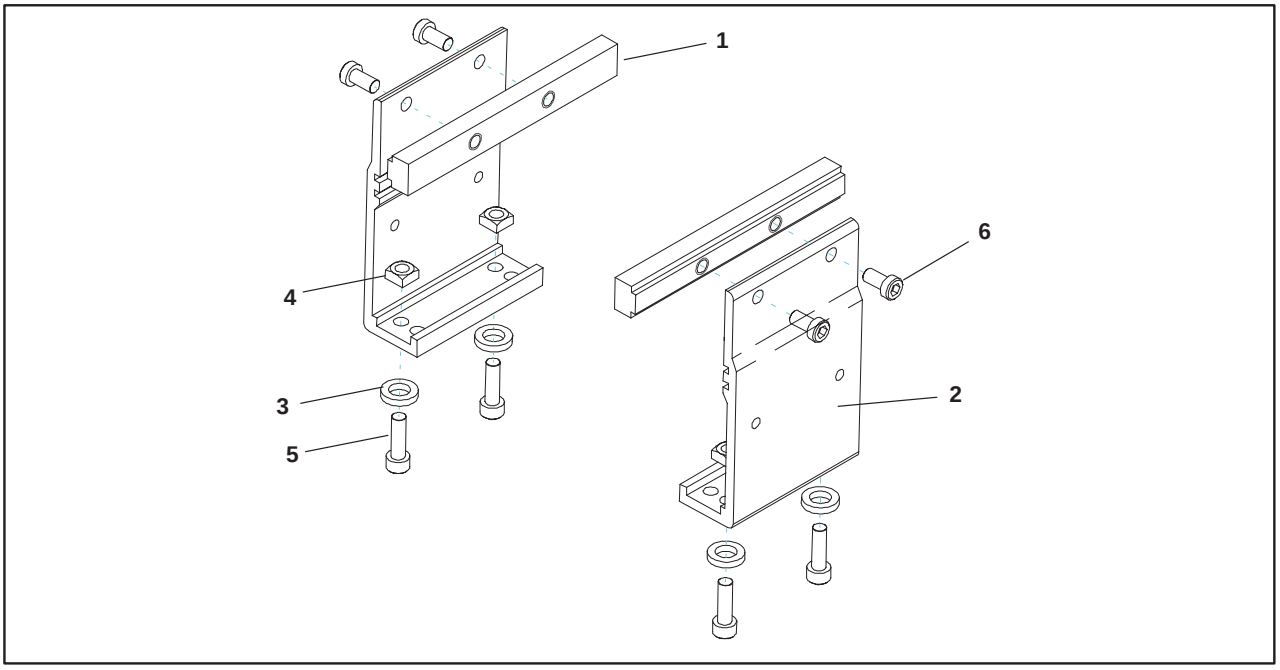
Connecting Assembly without Stand Mount



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

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

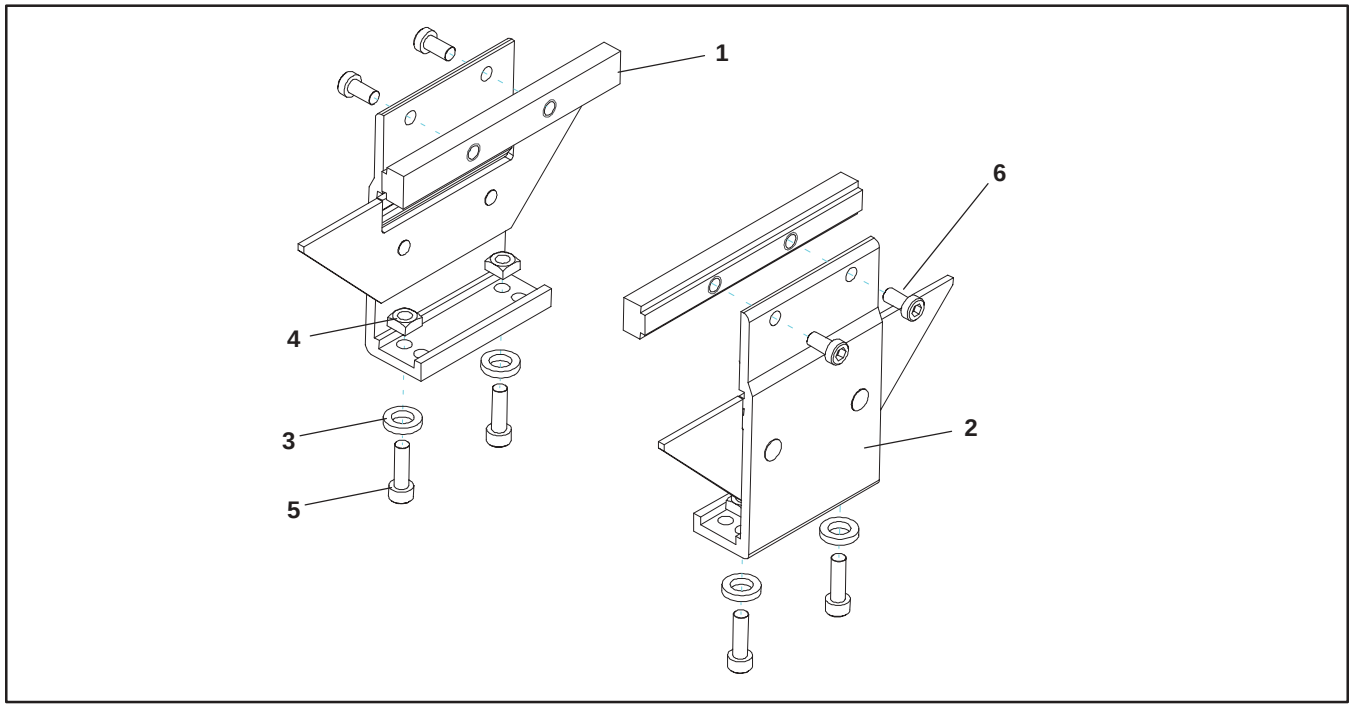
Flat Belt Connecting Assembly with Stand Mount



Item	Part Number	Description
1	240858	Frame Connector Bar
2	240831	Stand Mount Joint
3	605279P	Washer

Item	Part Number	Description
4	807–920	Square Nut M6 5 mm x 10 mm
5	920620M	Socket Head Screw M6 x 20 mm
6	950616M	Low Head Cap Screw M6 x 16 mm

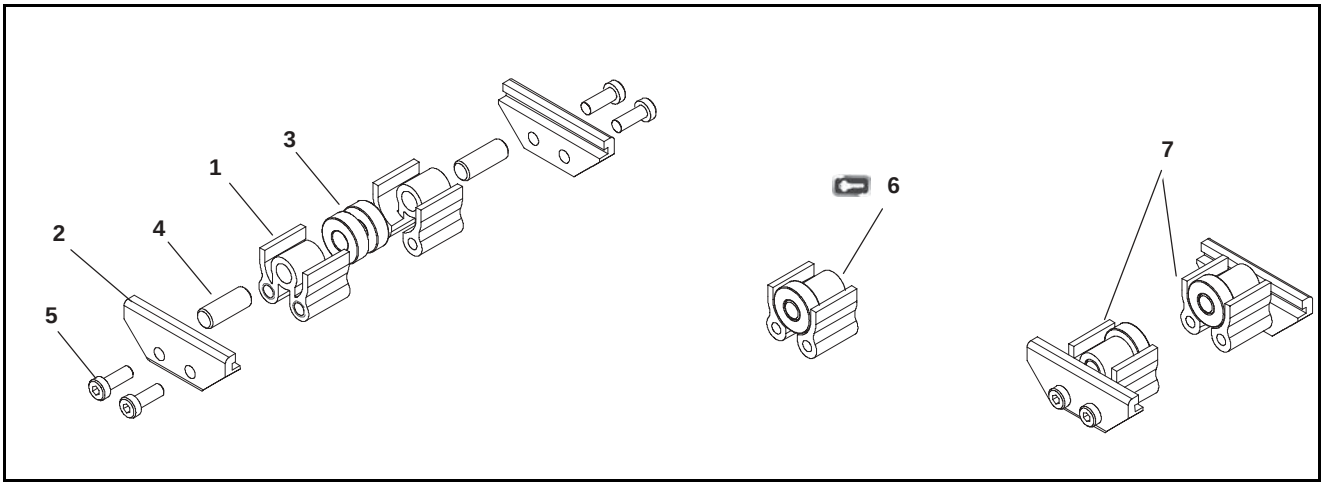
Cleated Belt Connecting Assembly with Stand Mount



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

Item	Part Number	Description
4	807–920	Square Nut M6 5 mm x 10 mm
5	920620M	Socket Head Screw M6 x 20 mm
6	950616M	Socket Head Screw M6 x 16 mm

Flat Belt Return Roller

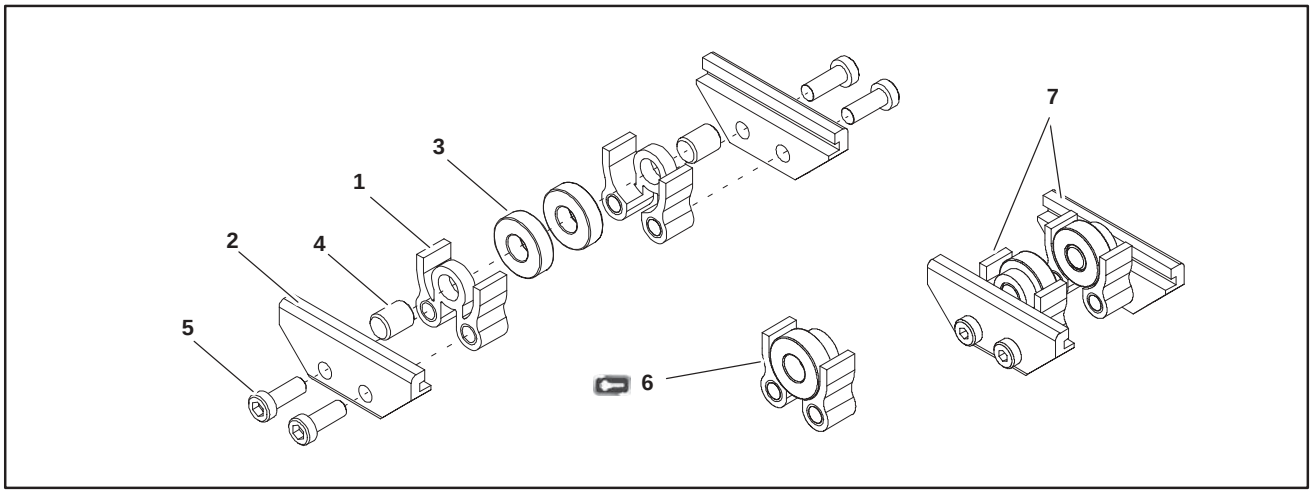


Item	Part Number	Description
1	240855	Return Roller Guard – Short
2	240828	Return Roller Clip
3	802–027	Bearing
4	913–108	Dowel Pin

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

Service Parts

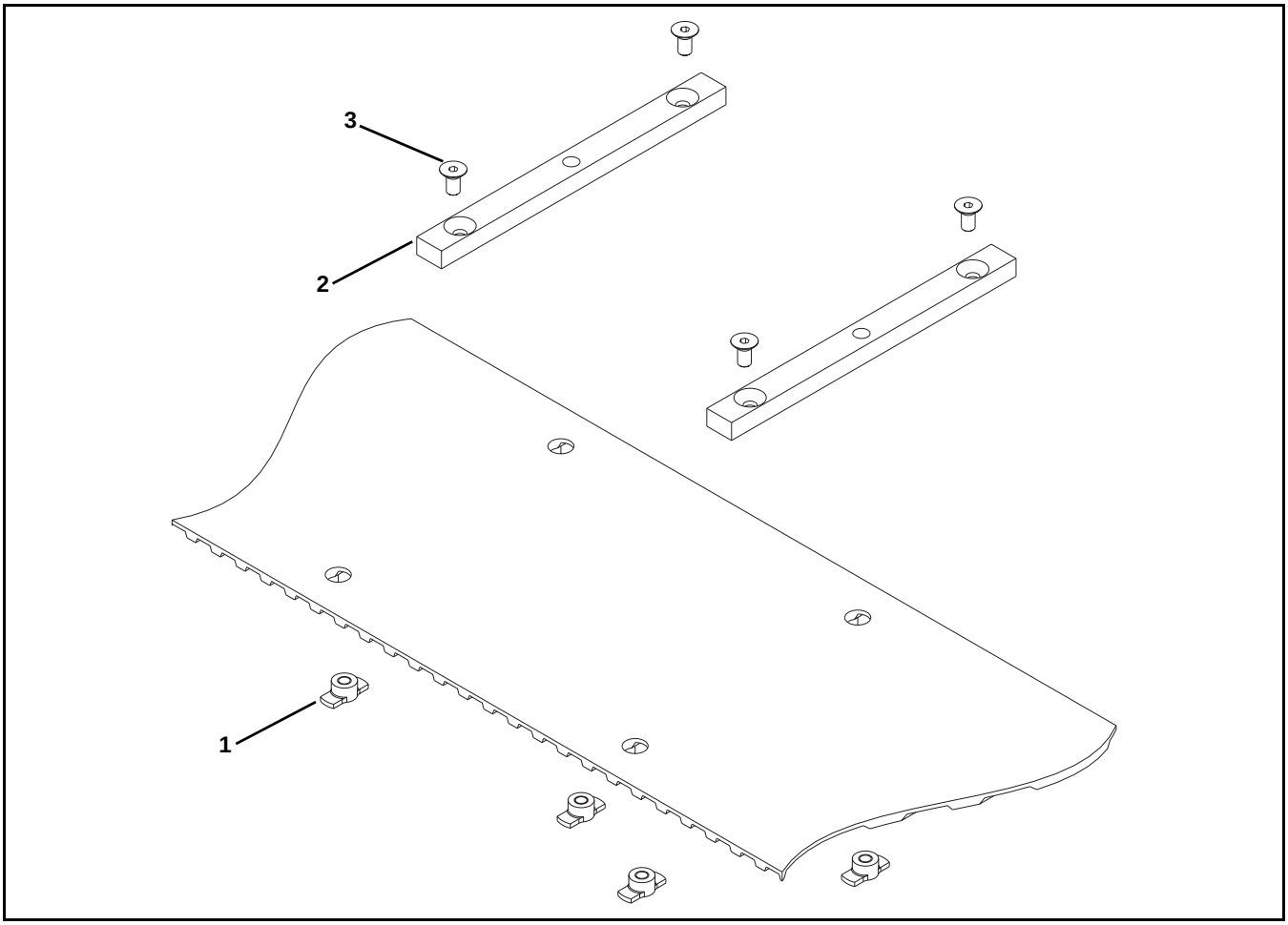
Cleated Belt Return Roller



Item	Part Number	Description
1	240825	Return Roller Guard – Short
2	240828	Cleated Return Roller Clip
3	802–027	Bearing
4	913–100	Dowel Pin

Item	Part Number	Description
5	950616M	Low Head Cap Screw M6 x 16mm
6	240840	Roller Assembly (Includes Items 1, 3 and 4)
7	240832	Cleated Belt Return Roller Assembly

Belt Inserts & Fixtures



Item	Part Number	Description
1	350152	T-Nut 5 mm
2	350164-WW	Belt Fixture
3	930510M	Flat Head Screw, M5-.80 x 10 mm
WW = Conveyor Width Reference: 04, 06, 08, 10, 12, 14, 16 & 18		

Service Parts

Conveyor Belt Part Number Configuration

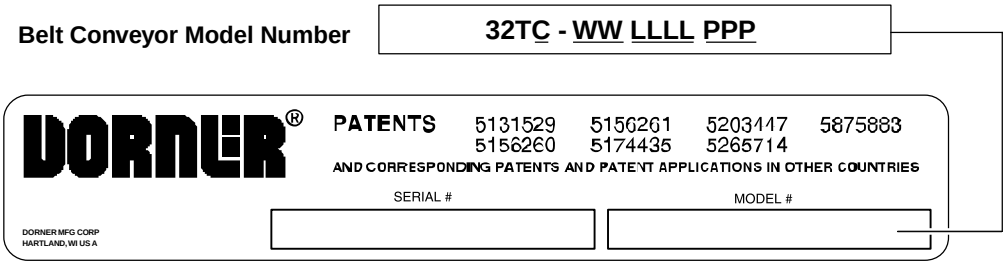
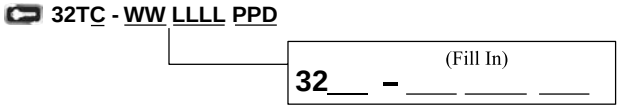


Figure 50

Belt Part Number Configuration

Refer to Dorner patent plate (Figure 50). From the model number, determine configuration type ("C"), width (“WW”), length (“LLLL”), pocket spacing ("PPP"). Use data to configure belt part number as indicated below.



Notes

Return Policy

Returns must have prior written factory authorization or they will not be accepted. Items that are returned to Dorner without authorization will not be credited nor returned to the original sender. When calling for authorization, please have the following information ready for the Dorner factory representative or your local distributor:

1. Name and address of customer.
2. Dorner part number(s) of item(s) being returned.
3. Reason for return.
4. Customer's original order number used when ordering the item(s).
5. Dorner or distributor invoice number (if available, part serial number).

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

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

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

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

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

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

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