3200 Series iDrive Belt Conveyors

Installation, Maintenance & Parts Manual

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851-702 Rev. A

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IMPORTANT

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

Upon receipt of shipment:

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

Dorner's Limited Warranty applies.

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

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.

Product Description

Refer to figures below for typical components.

Typical Conveyor Components Figure 1:

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

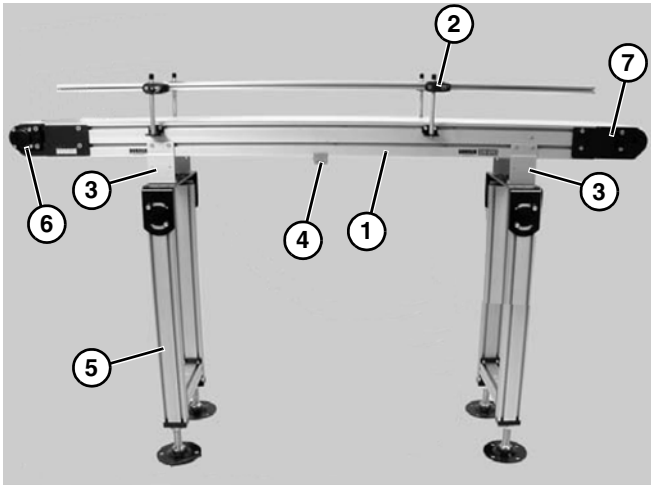


Figure 1

Typical Controller Components Figure 2:

1	Speed Control
2	On/Off Switch
3	Direction Switch
4	Power Input Jack

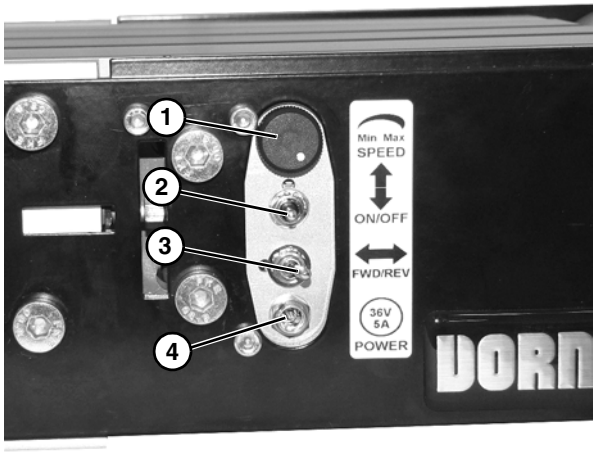


Figure 2

Specifications

Models:

Flat Belt 3200 Series Conveyor

Flat Belt 3200 Series Conveyor

3 1 0 M WW LLLL A PP BB - FD C P S

- **S** — iDrive Speed
- **P** — iDrive Power Supply
- **C** — iDrive Control Type
- **FD** — iDrive
- **BB** — Belt Type*
- **PP** — Conveyor Profile*
- **A** — Output Shaft Position*
- **LLLL** — Conveyor Length Reference
- **WW** — Conveyor Width Reference
- **M** — Document Language, M = English
- **0** = 3" tails, **1** = 1" tails
- **1** = Non-V-guided Belt, conveyor to include mounting brackets
  2 = V-guided Belt, conveyor to include mounting brackets
  3 = Non-V-guided Belt, conveyor not to include mounting brackets
  4 = V-guided Belt, conveyor not to include mounting brackets

Cleated Belt 3200 Series Conveyor

Cleated Belt 3200 Series Conveyor

3 1 C M WW LLLL A SSSS - FD C P S

- **S** — iDrive Speed
- **P** — iDrive Power Supply
- **C** — iDrive Control Type
- **FD** — iDrive
- **SSSS** — Cleat Spacing*
- **A** — Output Shaft Position*
- **LLLL** — Conveyor Length Reference
- **WW** — Conveyor Width Reference
- **M** — Document Language, M = English
- **C** — Cleat Type*
- **1** = Non-V-guided Belt, conveyor to include mounting brackets
  2 = V-guided Belt, conveyor to include mounting brackets
  3 = Non-V-guided Belt, conveyor not to include mounting brackets
  4 = V-guided Belt, conveyor not to include mounting brackets

* See Ordering and Specifications Catalog for details.

Conveyor Supports:

Maximum Distances:

1 = 24” (610 mm) (Drive End)

2 = 12 ft (3658 mm)

3 = 36” (914 mm) (Idler End)

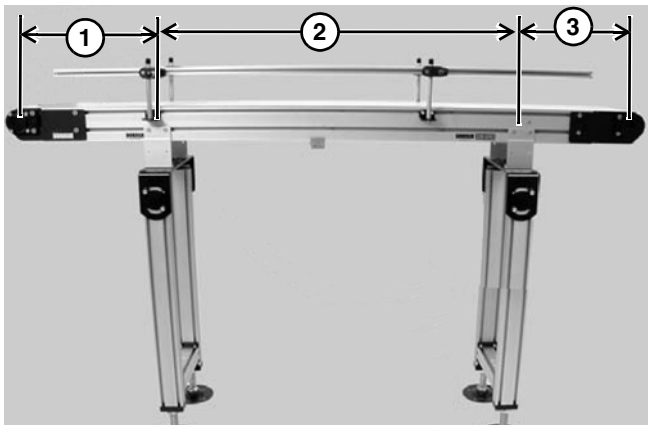


Figure 3

Specifications:

Conveyor Width Reference (WW)	06	08	10	12	14	16	18	20	22	24
Conveyor Belt Width	6” (152mm)	8” (203mm)	10” (254mm)	12” (305mm)	14” (356mm)	16” (406mm)	18” (457mm)	20” (508mm)	22” (559mm)	24” (609mm)
Maximum Conveyor Load	See iDrive Load Capacity Chart Below									
Conveyor Startup Torque*	13 in-lb (1.5 Nm)	17 in-lb (1.9 Nm)	22 in-lb (2.5 Nm)	25 in-lb (2.8 Nm)	29 in-lb (3.3 Nm)	33 in-lb (3.7 Nm)	41 in-lb (4.6 Nm)	43 in-lb (4.9 Nm)	48 in-lb (5.4 Nm)	50 in-lb (5.6 Nm)
Conveyor Length Reference (LLLL)	0300 to 1200 in 0001 increments									
Conveyor Length	3 ft (914mm) to 12 ft (3658mm) in 0.12” (0.31mm) increments									
Belt Travel	9.7” (246 mm) per revolution of pulley									
Maximum Belt Speed*	171 ft/minute (52 m/minute)									
Belt Takeup	1.62” (41 mm) of Belt Takeup on Conveyors Under 12’ Length									

* See Ordering and Specifications Catalog for details.

iDrive Load Capacity (lbs)

Conveyor Width	High Speed Motor	Medium Speed Motor	Low Speed Motor
6” (152mm)	46	63	115
8” (203mm)	43	60	111
10” (254mm)	37	54	106
12” (305mm)	34	51	103
14” (356mm)	30	47	98
16” (406mm)	25	42	94
18” (457mm)	16	34	85
20” (508mm)	14	31	83
22” (559mm)	10	27	78
24” (610mm)	8	25	76

NOTE

Maximum conveyor length based on:
- *Non-accumulating product*
- *Product moving towards gearmotor*
- *Conveyor being mounted horizontal*

Motor Specifications

	High Speed	Medium Speed	Low Speed
Output Power	150 watt	150 watt	150 watt
Motor Voltage	36 volt DC, 4 amp	36 volt DC, 4 amp	36 volt DC, 4 amp
Transformer Voltage	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz
Gearmotor Ratio	15:1	15:1	25:1
Motor Type	Brushless DC	Brushless DC	Brushless DC
Belt Speeds	27-171 Ft./Min., High Speed	21-133 Ft./Min., Medium Speed	15-80 Ft./Min., Low Speed
Duty Cycle	Continuous Rated	Continuous Rated	Continuous Rated
Index Capacity	30 times / Min.	30 times / Min.	30 times / Min.

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 26 through 40 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 7 and "Return Rollers" on page 8.

Conveyors Longer Than 13 ft (3962 mm)

Installation Component List:

1	Conveyor frame
2	Section Label

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

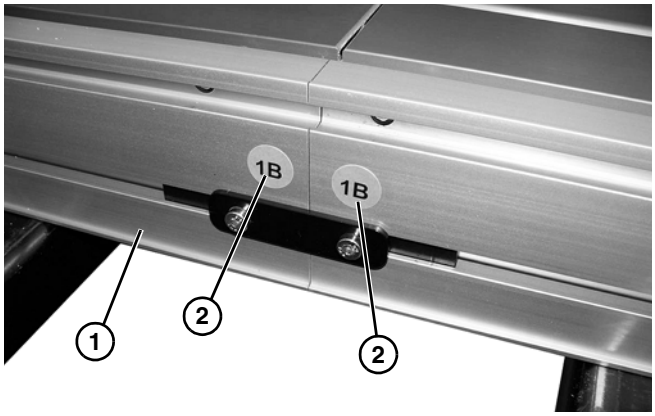


Figure 5

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 3)**, adjust the pinion torque screw **(Figure 7, item 1)**. On both sides of conveyor, loosen the two tail clamp bolts **(Figure 6, item 3)**, and push head plate assembly **(Figure 6, item 2)** inward.

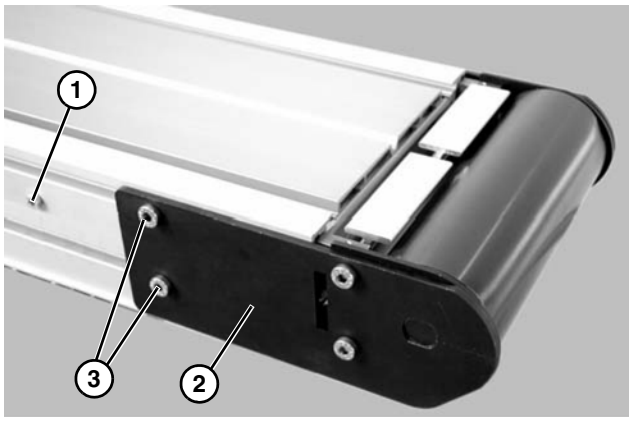


Figure 6

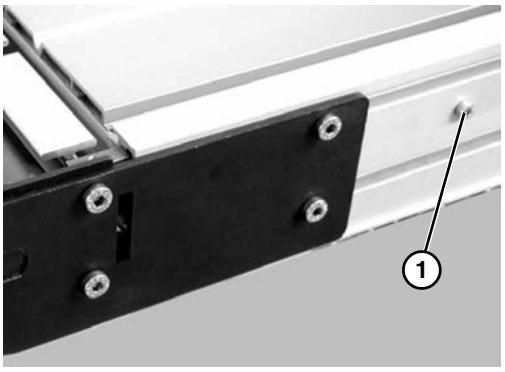


Figure 7

3. Roll out conveyor belt and place conveyor frame sections **(Figure 8, item 1)** into belt loop.

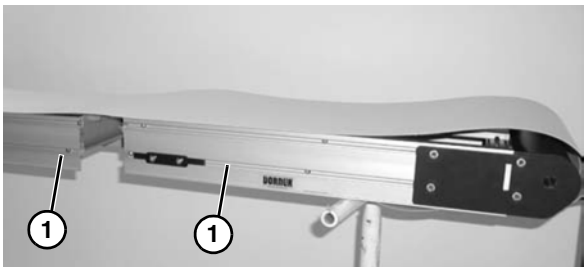


Figure 8

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

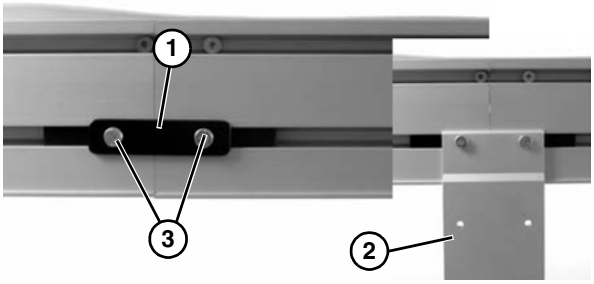


Figure 9

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 10, item 1)*** *before proceeding to step 5. The zero mark for the tension indicator is when the indicator begins to turn black.*

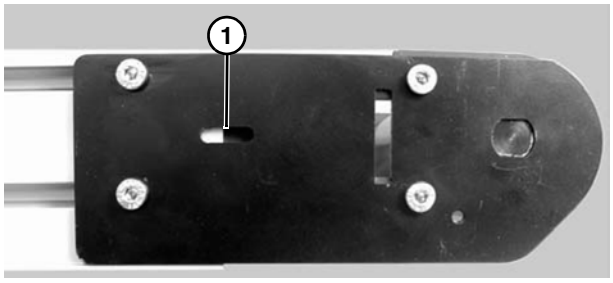
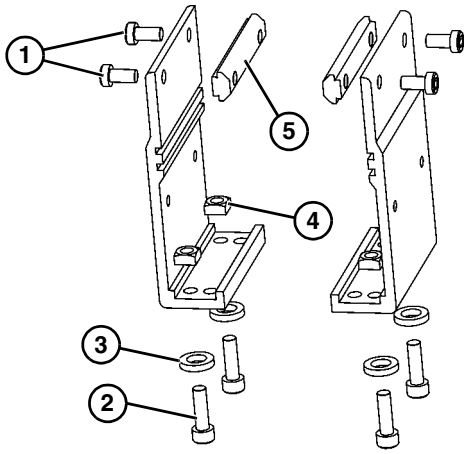


Figure 10

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 7 and "Return Roller" on page 8.

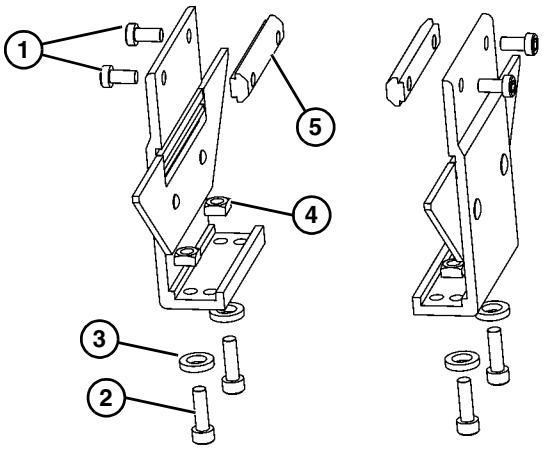
Mounting Brackets

1. Locate brackets. Exploded views shown in Figure 11 & Figure 12.



Mounting Brackets for Flat Belt Conveyor

Figure 11



Mounting Brackets for Cleated Belt Conveyor

Figure 12

2. Remove screws **(Figure 11, item 1 & 2)** or **(Figure 12, item 1 & 2)**, washers **(Item 3)**, nuts **(Item 4)** and T-bars **(Item 5)** from brackets.
3. Insert T-bars **(Figure 11, item 5)** or **(Figure 12, item 5)** into conveyor side slots **(Figure 13, item 1)**. Fasten brackets **(Figure 13, item 2)** to conveyor with mounting screws **(Figure 13, item 3)**.

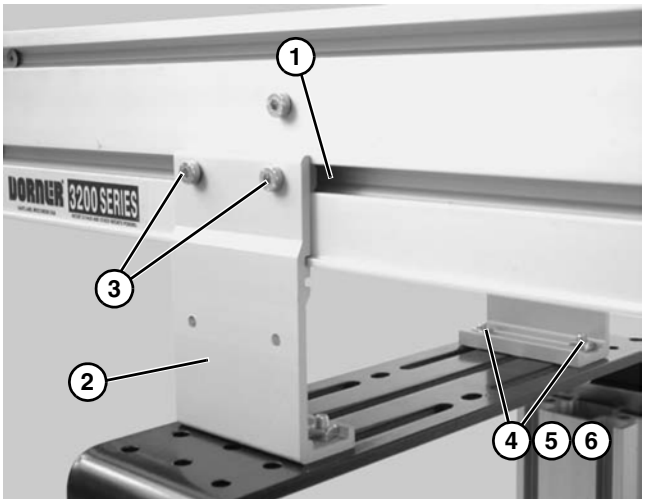


Figure 13

NOTE

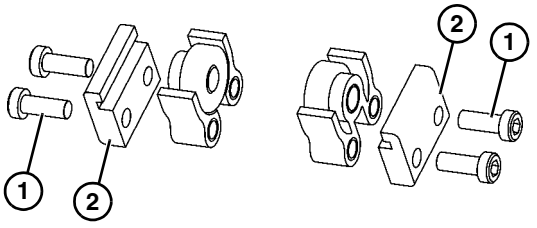
Mounting brackets for flat belt conveyors shown.

4. Fasten brackets to support stand with mounting screws **(Figure 13, item 4)**, washers **(Figure 13, item 5)** and nuts **(Figure 13, item 6)**.
5. Tighten screws **(Figure 13, item 3 & 4)** to 60 in-lb (7 Nm).

Return Rollers

Cleated Belt and 4–6" (51–152 mm) Wide Flat Belt Conveyors

1. Locate return rollers. Exploded views shown in Figure 14 & Figure 15.



Return Rollers for Flat Belt Conveyor

Figure 14

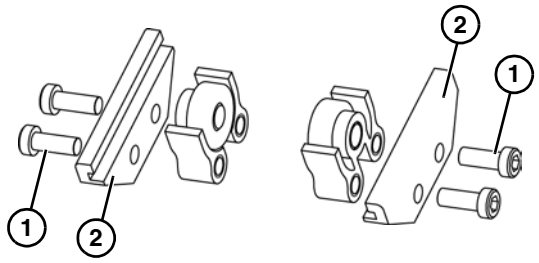


Figure 15

2. Remove screws **(Figure 14, item 1)** & **(Figure 15, item 1)** and clips **(Item 2)** from roller assembly.
3. Install roller assemblies **(Figure 16, item 1)** as shown. Tighten screws **(Figure 16, item 2)** to 60 in-lb (7 Nm).

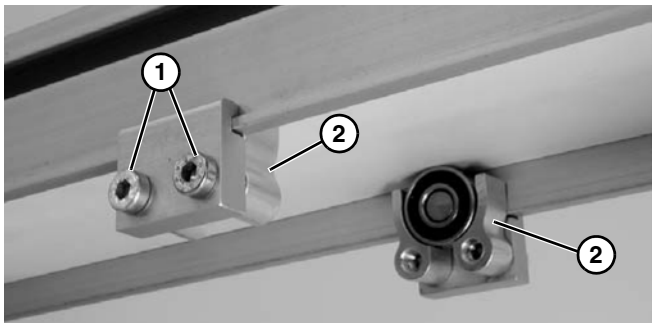


Figure 16

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

1. Locate return rollers. Exploded view shown in Figure 17.

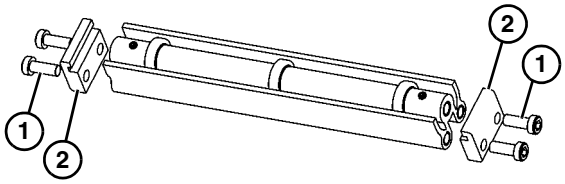


Figure 17

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

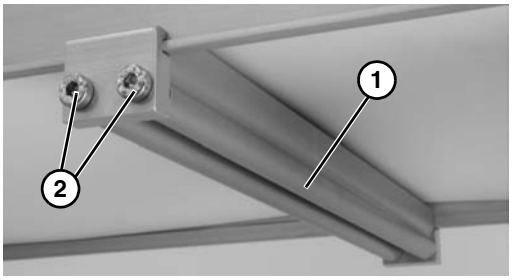


Figure 18

Wiring

⚠ WARNING

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

The 3200 series iDrive is available in 3 models:

- Cover Mounted Controls with 115 volt Power Supply
- Cover Mounted Controls with Customer Provided Power Supply
- Customer Wired with Flying Leads

Cover Mounted Controls with 115 volt Power Supply

⚠ WARNING

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

1. No wiring is required. Attach quick disconnect end of power supply to power jack **(Figure 19, item 1)**.

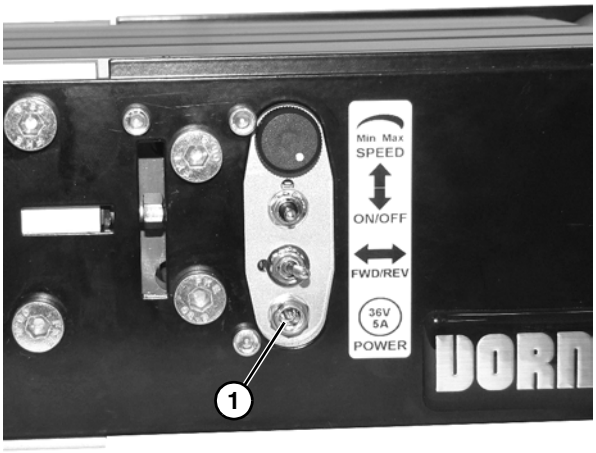


Figure 19

2. See “Change Acceleration / Deceleration Settings” on page 11 for changing factory control settings.

Cover Mounted Controls with Customer Provided Power Supply

⚠ WARNING

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

1. Locate the male disconnect plug provided.
2. Wire and solder DC power to the two terminals of the provided DC power plug. Wire +VDC to the short lug **(Figure 20, item 1)** and -VDC to the long lug **(Figure 20, item 2)**.

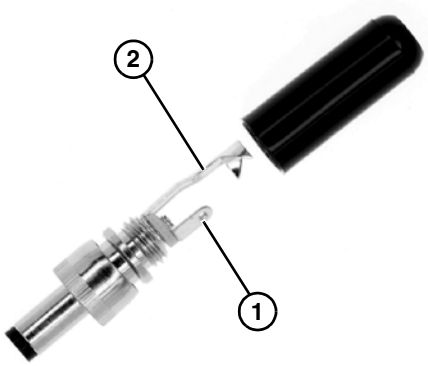


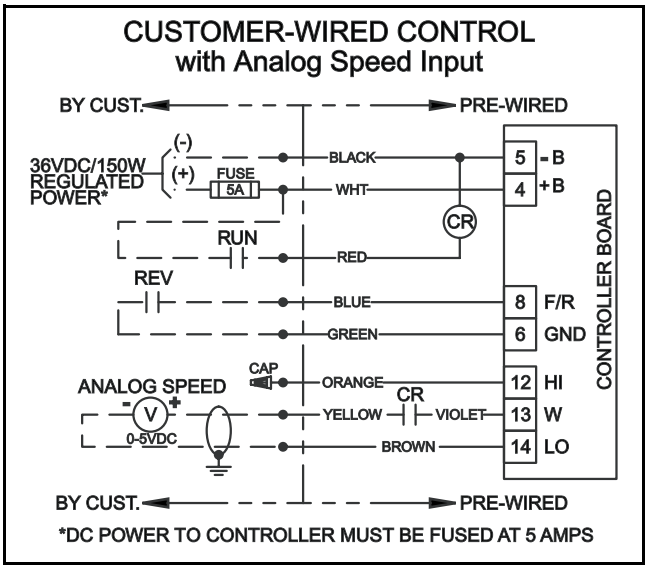
Figure 20

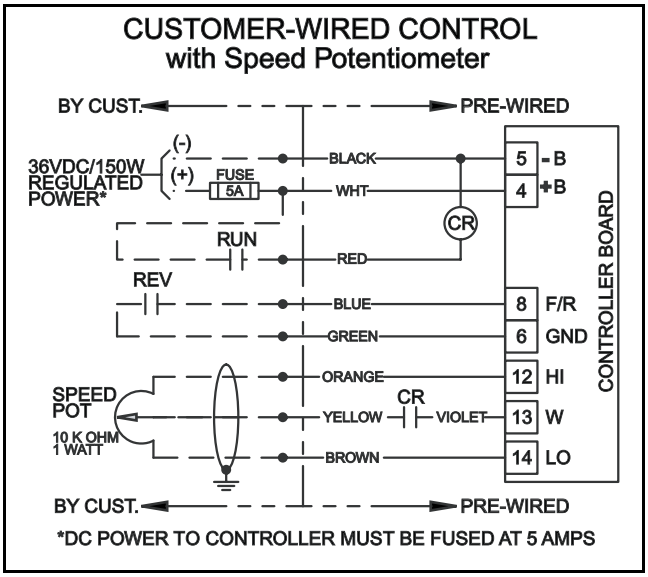
3. Required power is 36VDC, 4 amps minimum.
4. See “Change Acceleration / Deceleration Settings” on page 11 for changing factory control settings.

Customer Wired with Flying Leads

⚠ WARNING

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





NOTE

1. *Start Stop Application: Maximum start stop cycles are 20 per minute.*
2. *Reversing Applications: Do not reverse the motor direction when running. Make sure the motor is stopped before reversing signal is given.*

1. Locate lead wires **(Figure 21, item 1)** extending from conveyor side rail. Determine wiring diagrams based on diagrams above.

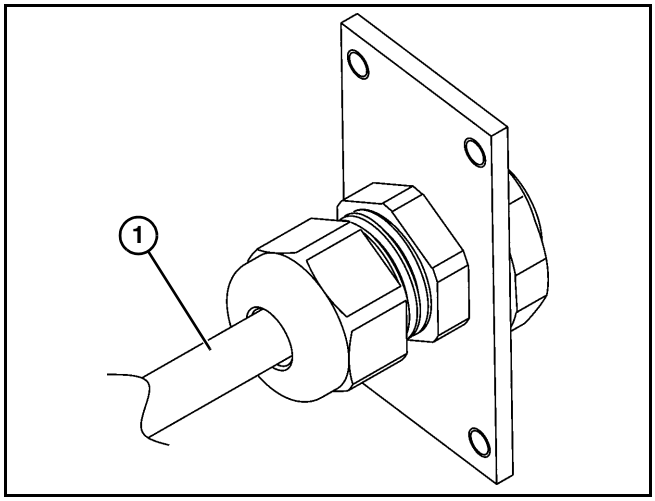
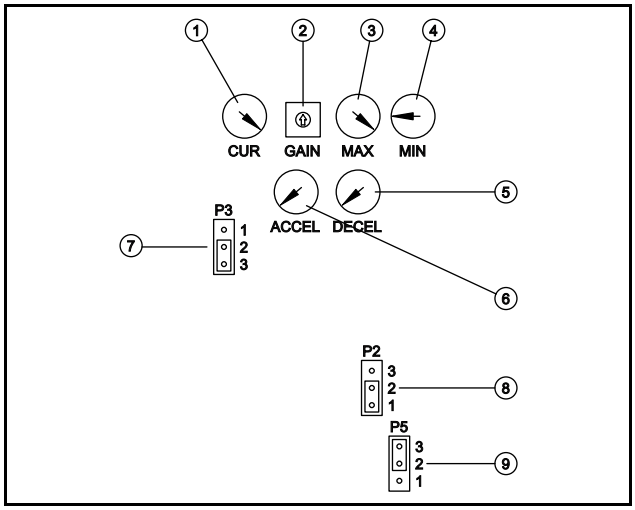


Figure 21

2. Shielding wiring is recommended.
3. See “Change Acceleration / Deceleration Settings” on page 11 for changing factory control settings.

Factory Settings

Controller Board:



Potentiometers

Item Number	Description	Setting
1	Current Limit %	100%
2	Gain %	N/A
3	Max. Speed %	100%
4	Min. Speed %	5%
5	Decel. (0-10 sec.)	0 sec.
6	Accel. (0-10 sec.)	0.5 sec.

Jumpers

Item Number	Description	Position	Setting
7	Input Voltage (P3)	P3-2 & 3 (36)	24/36 VDC
8	Sensor Spacing (P2)	P2-1 & 2 (120)	120 deg.
9	Potentiometer Function (P5)	P5-2 & 3 (U)	Unidirectional

NOTE: Refer to Dart Controls Instruction Manual for 700B Control Series for further details.

Change Acceleration / Deceleration Settings

⚠ WARNING

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

1. Remove belt. (See "Belt Removal for Conveyor Without Stands" on page 13 or "Belt Removal for Conveyor With Stands" on page 13.)
2. Remove control board mounting screws **(Figure 22, item 1)** from bottom of plate.

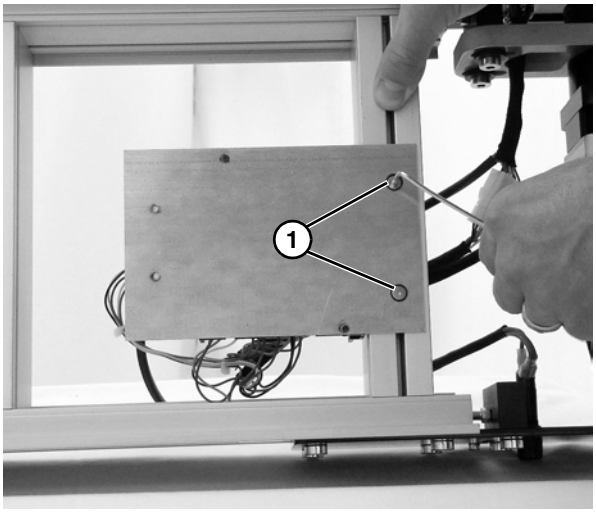


Figure 22

3. Locate potentiometers to change. See Controller Board layout on page 10.
4. Rotate potentiometers **(Figure 23, item 1)** to desired setting.

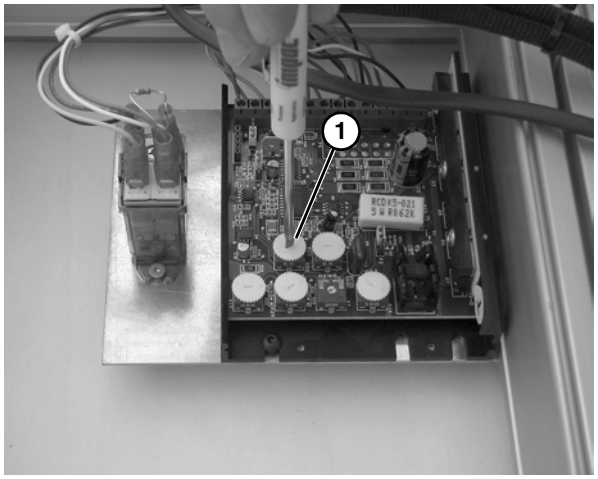


Figure 23

5. Reinstall by reversing steps.

Preventive Maintenance and Adjustment

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 (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

- Remove old conveyor belt:

-Conveyor without Stands

-Conveyor with Stands

- Install new conveyor belt
- Tension conveyor belt

Belt Removal for Conveyor Without Stands

1. If equipped, remove return rollers and guiding and accessories from one side of conveyor.
2. On tension end of the conveyor, identified by the pinion locking screw **(Figure 24, item 1)**, push in head plate assembly **(Figure 24, item 2)**: Loosen the pinion locking screw **(Figure 24, item 1)**, adjust the pinion torque screw **(Figure 25, item 1)**. On both sides of conveyor, loosen the two tail clamp bolts **(Figure 24, item 3)**, and push head plate assembly **(Figure 24, item 2)** inward.

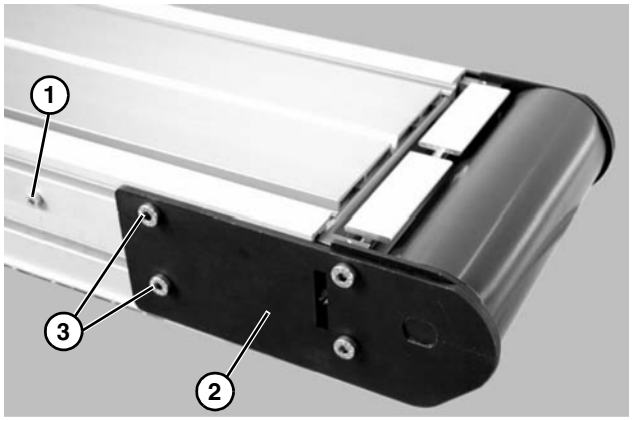


Figure 24

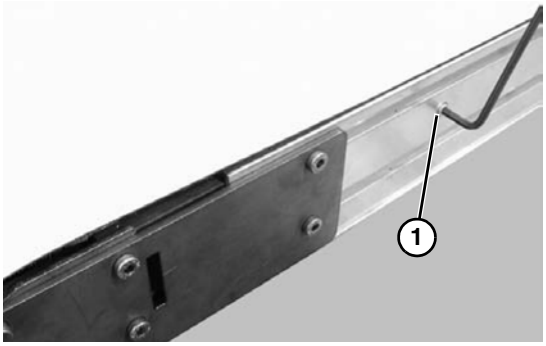


Figure 25

3. Remove conveyor belt.

Belt Removal for Conveyor With Stands

1. Place temporary support stands **(Figure 26, item 1)** at both ends of the conveyor.

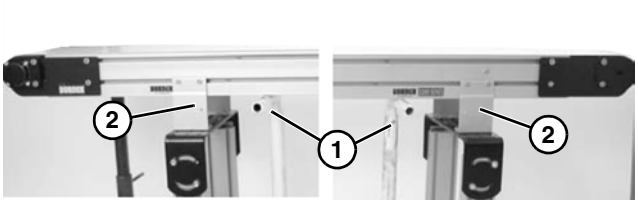


Figure 26

2. Remove mounting brackets **(Figure 26, item 2)** from one side of conveyor. (Reverse steps 3 & 4 of "Mounting Brackets" section on page 7).
3. If equipped, remove return rollers, guiding and accessories from the same side of conveyor.
4. On tension end of the conveyor, identified by the pinion locking screw **(Figure 27, item 1)**, push in head plate assembly **(Figure 27, item 2)**: Loosen the pinion locking screw **(Figure 27, item 1)**, adjust the pinion torque screw **(Figure 28, item 1)**. On both sides of conveyor, loosen the two tail clamp bolts **(Figure 27, item 3)**, and push head plate assembly **(Figure 27, item 1)** inward.

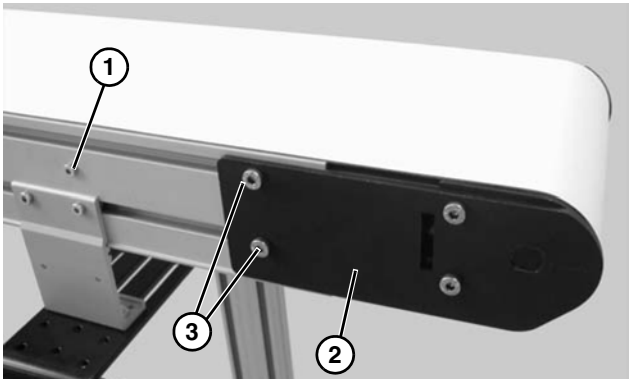


Figure 27

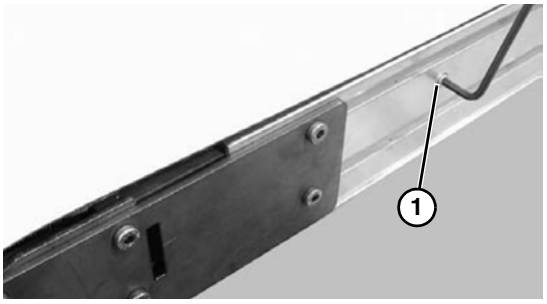


Figure 28

5. Remove belt **(Figure 29, item 1)** from conveyor.

Figure 29

Belt Installation for Conveyor without Stands

1. Orient belt so splice leading fingers **(Figure 30, item 1)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 30, item 2)**.

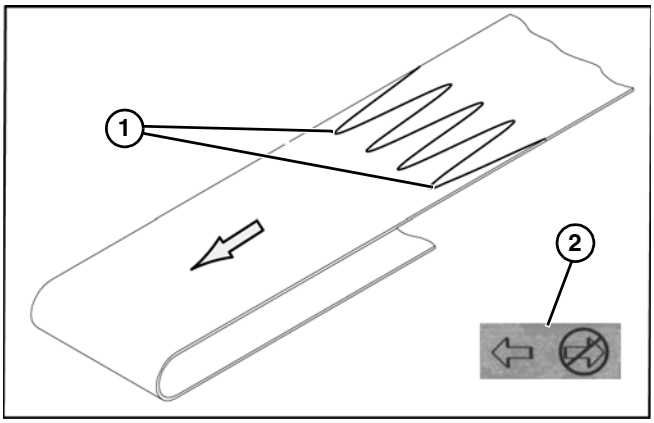


Figure 30

2. Slide belt onto the conveyor frame assembly.
3. Tension belt. Refer to "Conveyor Belt Tensioning" on page 14.
4. If equipped, install wipers, return rollers and guiding

Belt Installation for Conveyor with Stands

1. Ensure temporary support stands **(Figure 31, item 1)** are placed at both ends of the conveyor.
2. Orient belt so splice leading fingers **(Figure 30, item 1)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 30, item 2)**.
3. Install belt **(Figure 31, item 2)** on conveyor. Lift conveyor slightly to avoid pinching belt on temporary support stands.

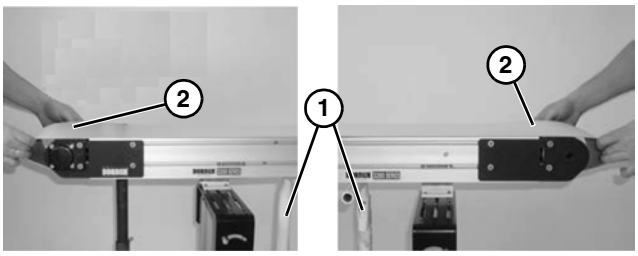


Figure 31

4. Re-install conveyor mounting brackets. Refer "Mounting Brackets" on page 7, 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.

NOTE

For conveyors longer than 20 ft (6096 mm) the belt tensioning procedure outlined below may be preformed on both the Drive and Idler Ends of the conveyor.

1. On tension end of the conveyor, identified by the pinion locking screw **(Figure 32, item 1)**, loosen the two tail clamp bolts **(Figure 32, item 2)**, on both sides of conveyor.

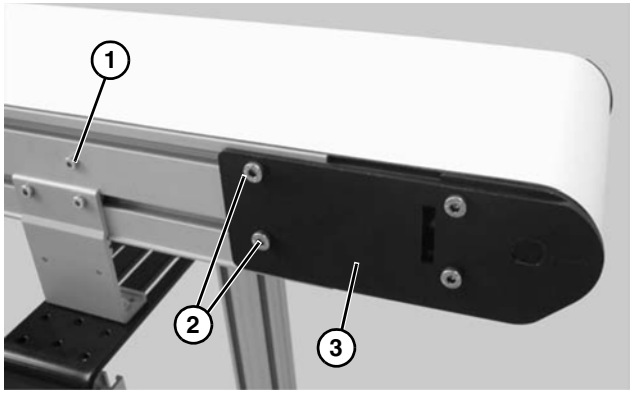


Figure 32

2. With 5mm hex wrench, hold pinion torque screw **(Figure 33, item 1)**. Loosen the pinion locking screw **(Figure 32, item 1)** and turn the pinion torque screw **(Figure 33, item 1)** to extend head plate assembly **(Figure 32, item 3)**.

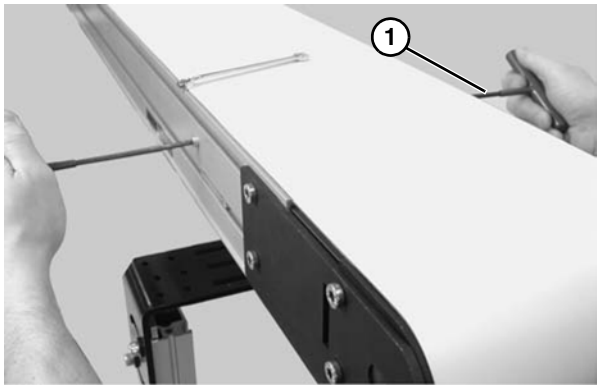


Figure 33

NOTE

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

3. Extend head plate assembly until proper tension in the belt is achieved. If proper tensioning can not be obtained before the belt life indicator is all black **(Figure 34, item 1)** the belt must be replaced.

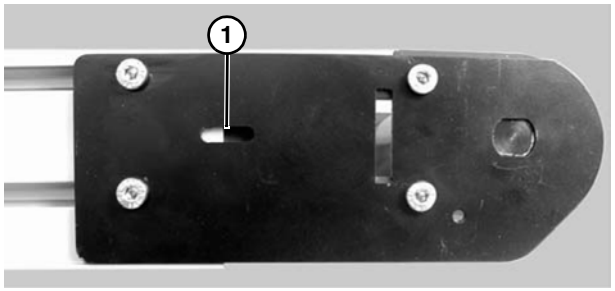


Figure 34

4. After adjusting proper tensioning, tighten the pinion locking screw **(Figure 32, item 1)** to 69 in–lbs (7.8 N–m), and tighten tail clamp bolts **(Figure 32, item 2)** on both sides of conveyor to 146 in-lb (16.5 N–m).
5. If belt tracking is necessary, refer to “Conveyor Belt Tracking” on page 15.

Conveyor Belt Tracking

V-Guided Belts

V-guides on belts help maintain proper belt tracking. Track as needed to reduce belt bulge from center of belt (Figure 35). See steps below in “Non V-guided Belts” procedure for adjusting for any belt bulging. Belt bulge will be minimal when belt is properly tracked.

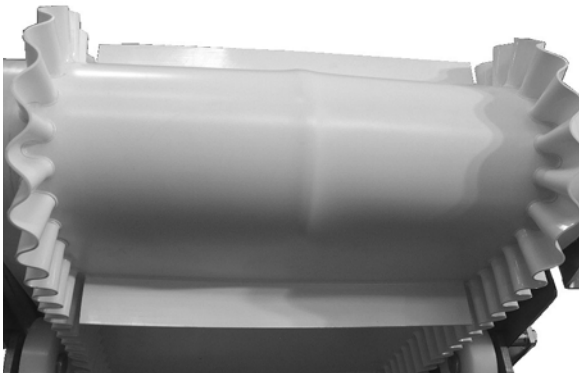


Figure 35

Non V-Guided Belts

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

1. When adjusting belt tracking, always adjust the discharge end of the conveyor first. To adjust belt tracking:
2. Ensure tensioning racks are extended and touching the idler pulley headplates: loosen the pinion locking screw **(Figure 36, item 1)** and rotate the pinion torque screw **(Figure 33, item 1)** clockwise until contact with the head plate is made, then tighten the pinion locking screw **(Figure 36, item 1)** to 69 in–lbs (7.8 N–m)
3. On the side of conveyor to be adjusted, loosen two (2) tail clamp screws **(Figure 36, item 2)**.

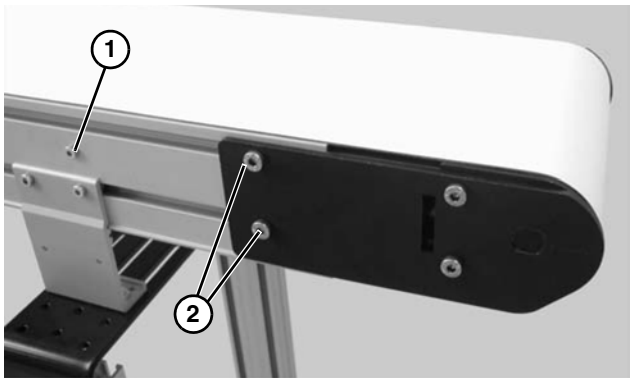


Figure 36

4. With the conveyor running, use wrench **(Figure 37, item 1)** to rotate the tracking screw **(Figure 38, item 1)** in small increments until the belt tracks in the center of the conveyor.

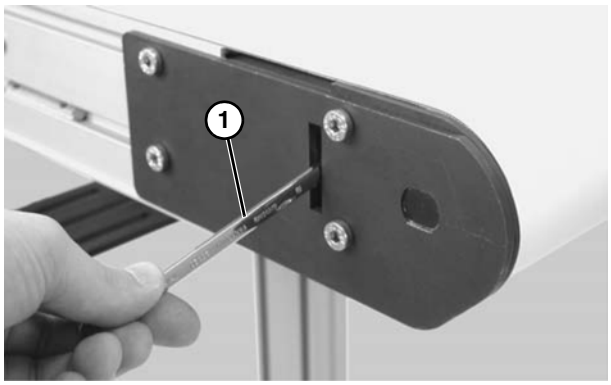


Figure 37

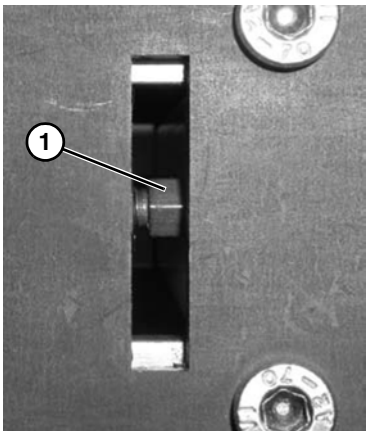


Figure 38

5. Re-tighten the head plate fastening screws **(Figure 39, item 1)** with a 5 mm hex-key wrench to 146 in-lb (16.5 Nm).

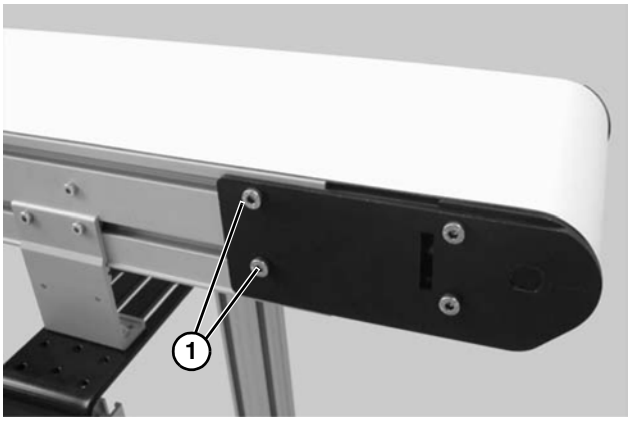


Figure 39

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 12. Remove the desired pulley following the corresponding instructions below:

- **A** – Idler Pulley Removal
- **B** – Transfer Tail Pulley Removal

A – Idler Pulley Removal

1. Temporarily support the idler pulley.

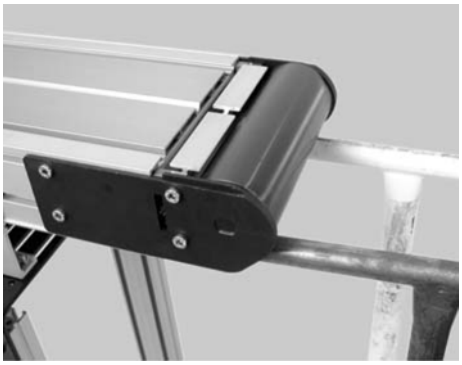


Figure 40

2. On one side of conveyor, loosen the two (2) back fastening screws **(Figure 41, item 1)** and remove two (2) front fastening screws **(Figure 41, item 2)**.

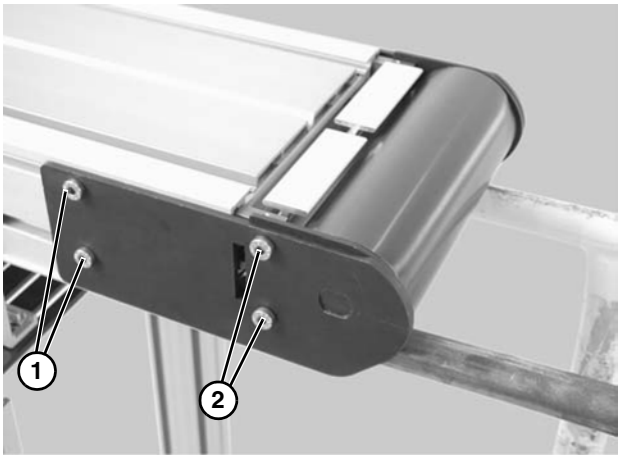


Figure 41

3. Pull back the outer headplate **(Figure 42, item 1)** and remove the inner spacer **(Figure 42, item 2)**.

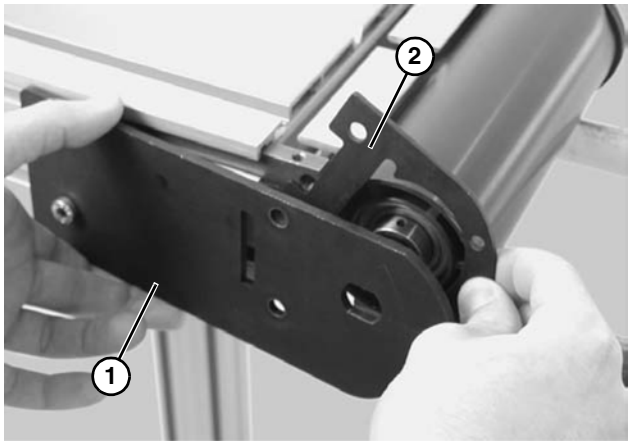


Figure 42

4. Slide the idler pulley assembly **(Figure 43, item 1)** out of the headplate on the opposite side.

Figure 43

5. Remove the pulley shaft assembly: remove the clip ring **(Figure 44, item 1)** and washer **(Figure 44, item 2)** from one side of the pulley assembly.

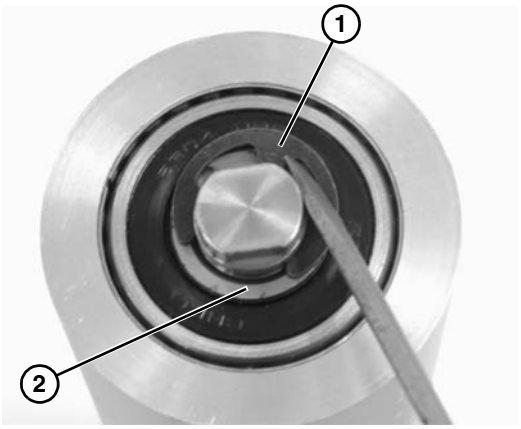


Figure 44

6. Slide the shaft assembly **(Figure 45, item 1)** out of the pulley **(Figure 45, item 2)**.

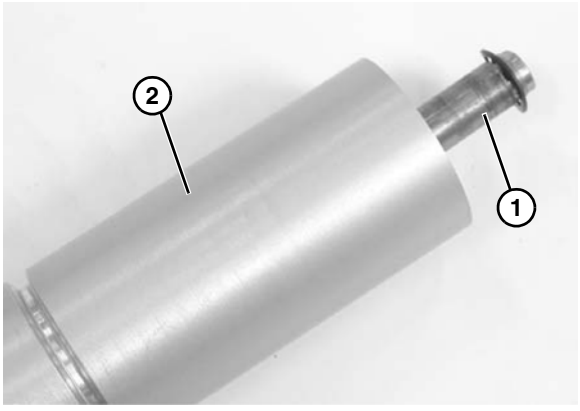


Figure 45

B – Transfer Tail Pulley Removal

1. Temporarily support the transfer tail assembly.

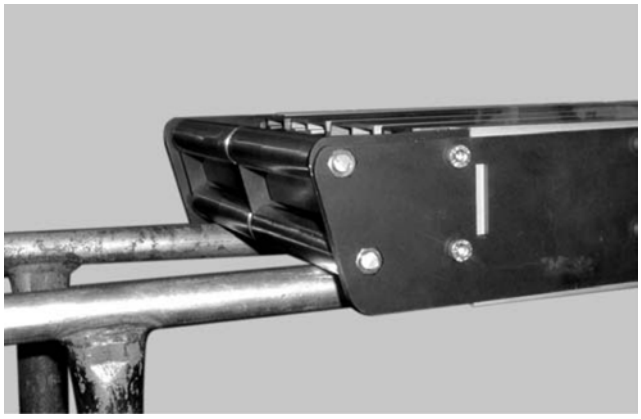


Figure 46

2. On one side of conveyor, remove the two (2) back fastening screws **(Figure 47, item 1)**, and the two (2) front fastening screws **(Figure 47, item 2)**.

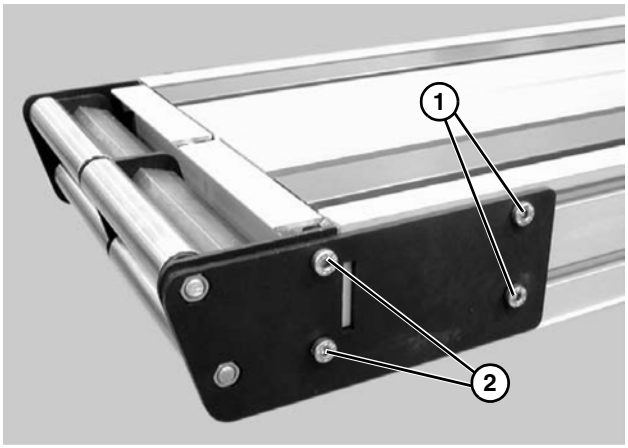


Figure 47

3. Remove the inner spacer **(Figure 48, item 1)**.

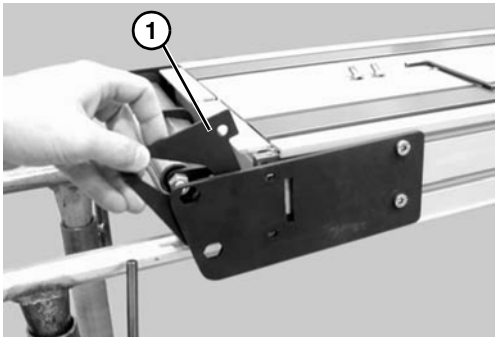


Figure 48

4. Slide the transfer tail pulley assembly **(Figure 49, item 1)** out of the headplate on the opposite side.

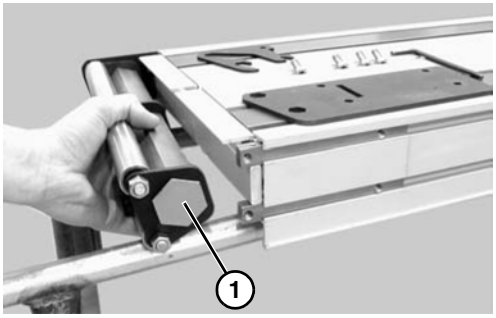


Figure 49

5. Remove hex nuts **(Figure 50, item 1)**.

Figure 50

6. Remove support plates **(Figure 51, item 1)** and washers **(Figure 51, item 2)**.

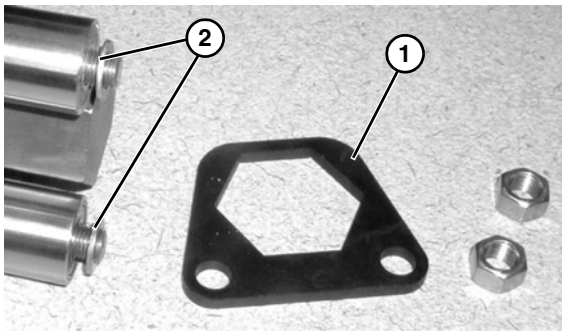


Figure 51

7. Remove pulleys **(Figure 52, item 1)** and additional washers **(Figure 52, item 2)**.

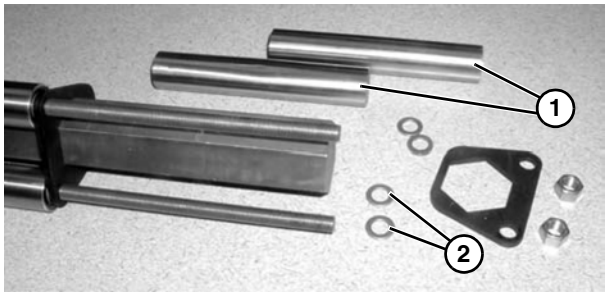


Figure 52

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

Pulley Replacement

Idler Pulley

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

Transfer Tail Pulley

To replace the transfer tail pulley, reverse the "Transfer Tail Pulley Removal" procedure on page 17.

Drive Spindle Removal and Replacement

⚠ WARNING

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

Removal

1. Remove belt. (See "Belt Removal for Conveyor Without Stands" on page 13 or "Belt Removal for Conveyor With Stands" on page 13.)
2. Remove wear plate **(Figure 53, item 1)** by removing plate fastening screws **(Figure 53, item 2)** on each side and end of conveyor

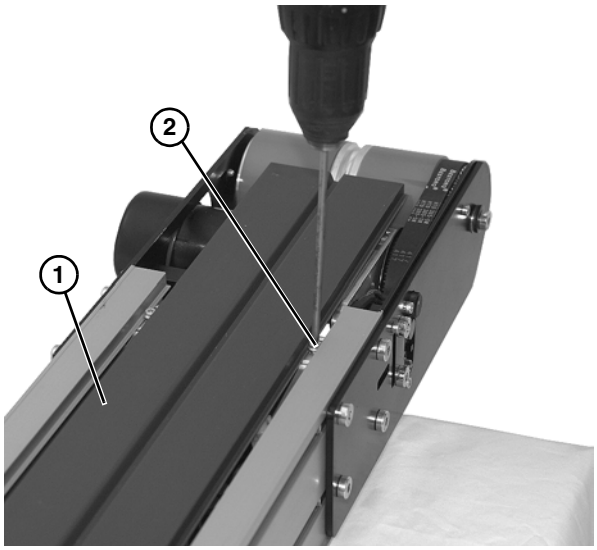


Figure 53

3. Disconnect two wiring harness connectors **(Figure 54, item 1)**.

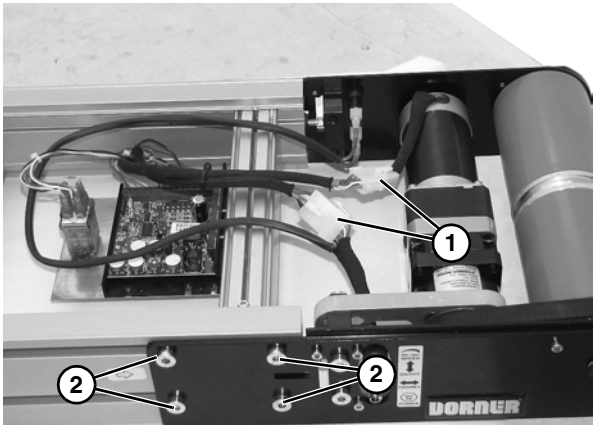


Figure 54

4. Loosen four hex head screws **(Figure 54, item 2)** on each side of conveyor.
5. Remove two hex head screws **(Figure 56, item 1)**.

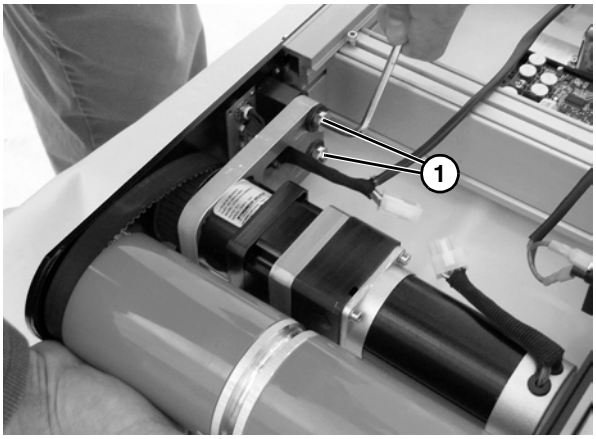


Figure 55

6. Slide drive motor and plate **(Figure 56, item 1)** to loosen tension on timing belt **(Figure 56, item 2)**.

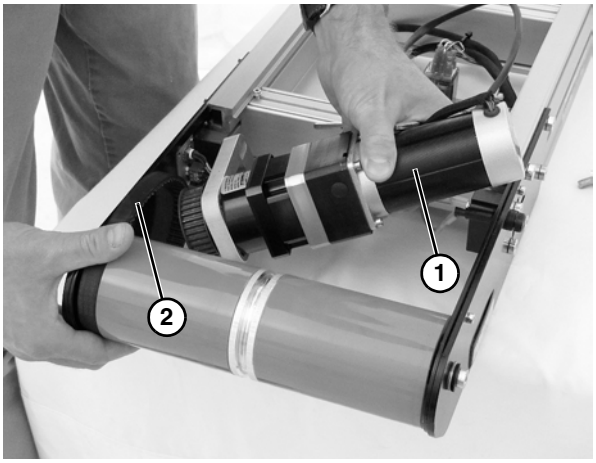


Figure 56

7. Remove hex head screw **(Figure 57, item 1)** and washer from both sides of the conveyor.

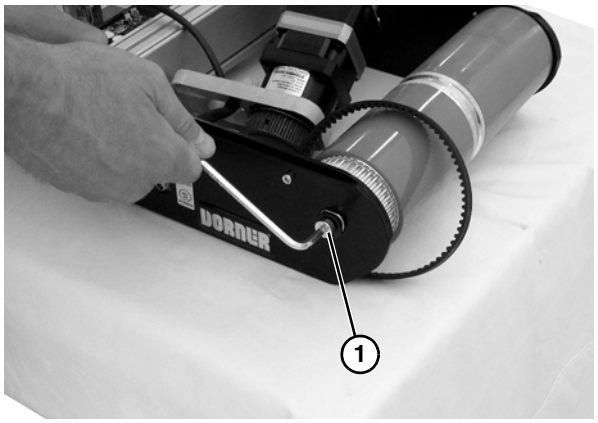


Figure 57

8. Remove drive spindle assembly **(Figure 58, item 1)** and replace.

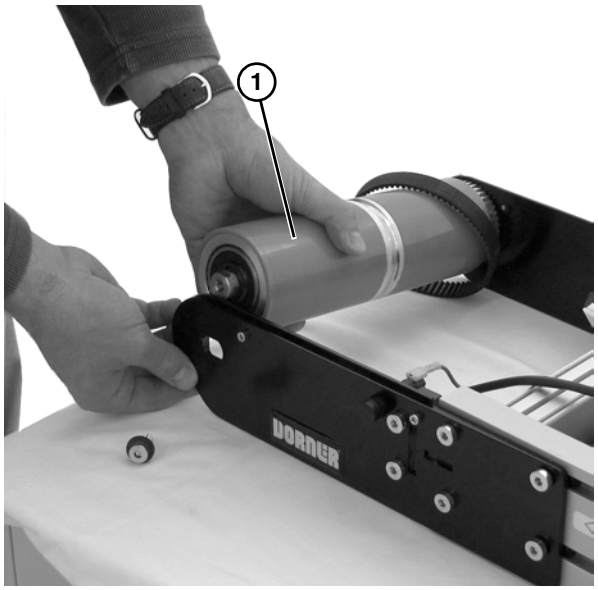


Figure 58

Replacement

Install in reverse order of removal.

NOTE

*Move drive motor plate **(Figure 59, item 1)** to obtain 1/8 - 1/4" belt deflection at center of belt **(Figure 59, item 2)** with approximately 3-5 in-lb of pressure. Tighten two hex head screws **(Figure 59, item 3)** to 15 in-lb (1.6 Nm) to secure position.*

⚠ CAUTION

Over tightening of timing belt will result in reduced gearmotor and timing belt life.

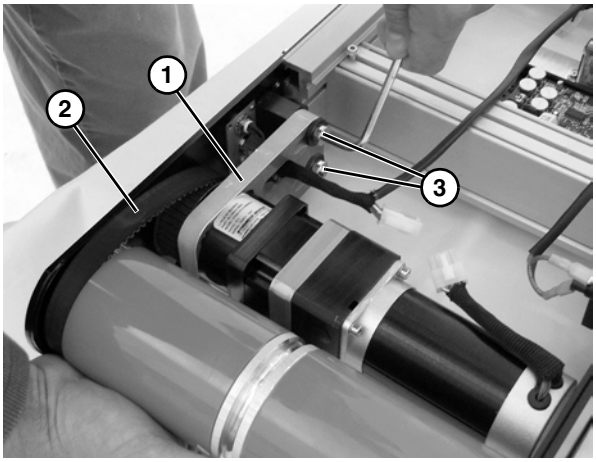


Figure 59

Motor Removal and Replacement

⚠ WARNING

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

1. Remove belt. (See "Belt Removal for Conveyor Without Stands" on page 13 or "Belt Removal for Conveyor With Stands" on page 13.)
2. Remove wear plate **(Figure 60, item 1)** by removing plate fastening screws **(Figure 60, item 2)** on each side and end of conveyor

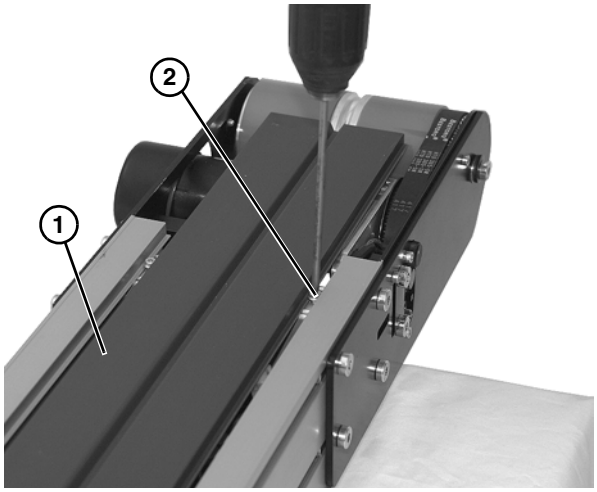


Figure 60

3. Disconnect two wiring harness connectors **(Figure 61, item 1)**.

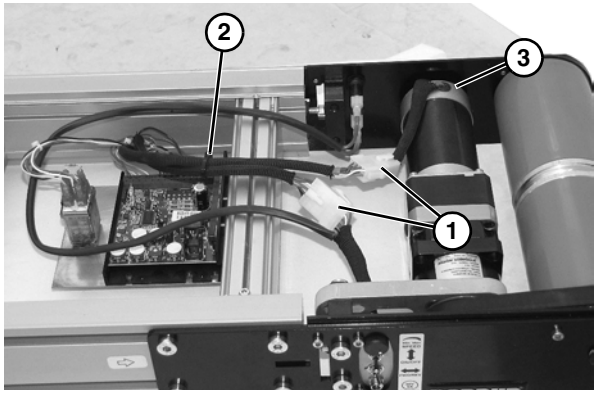


Figure 61

4. Remove tie strap **(Figure 61, item 2)** from drive motor harness.
5. If applicable, remove black cap from end **(Figure 61, item 3)** of drive motor.

6. Remove two hex head screws **(Figure 62, item 1)** and washers securing drive motor plate **(Figure 62, item 2)** to conveyor.

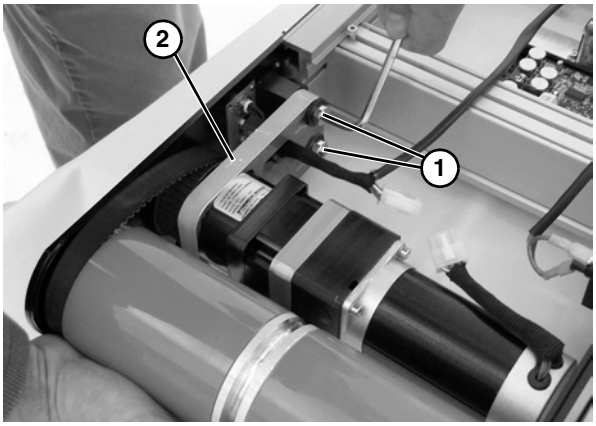


Figure 62

7. Slide drive motor **(Figure 63, item 1)** and remove timing belt **(Figure 63, item 2)** from drive motor gear **(Figure 63, item 3)**.

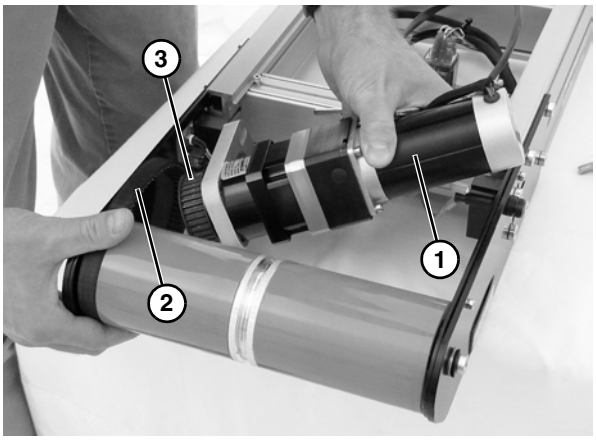


Figure 63

8. Loosen two set screws **(Figure 64, item 1)** holding drive motor gear **(Figure 64, item 2)** onto drive motor shaft.

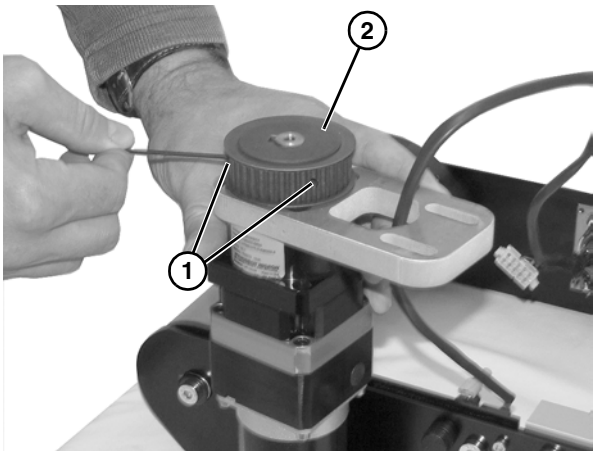


Figure 64

NOTE

*Take note of the drive motor gear **(Figure 65, item 1)** placement. When reassembling the drive motor gear, it should be reassembled to the exact same location on the shaft.*

9. Remove drive motor gear **(Figure 65, item 1)** from drive motor shaft **(Figure 65, item 2)**.

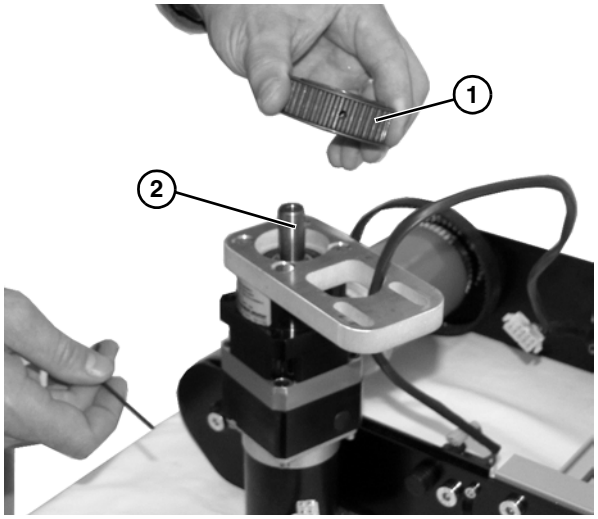


Figure 65

10. Remove drive motor from headplate assembly.
11. Replace motor.
12. Reinstall in reverse order of removal. (Refer to "Drive Spindle Removal and Replacement" on page 18 for timing belt tensioning.)

Circuit Board Removal and Replacement

⚠ WARNING

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

1. Remove belt. (See "Belt Removal for Conveyor Without Stands" on page 13 or "Belt Removal for Conveyor With Stands" on page 13.)
2. Remove wear plate **(Figure 66, item 1)** by removing plate fastening screws **(Figure 66, item 2)** on each side and end of conveyor

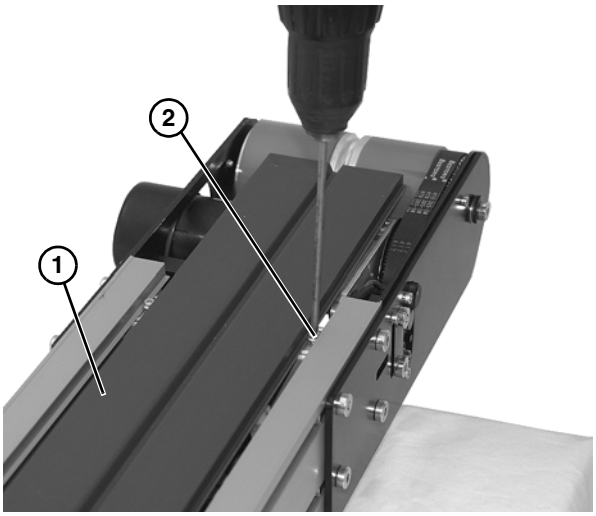


Figure 66

3. Disconnect two wiring harness connectors **(Figure 67, item 1)** from motor connector **(Figure 67, item 2)** and switch wiring connector **(Figure 67, item 3)**.

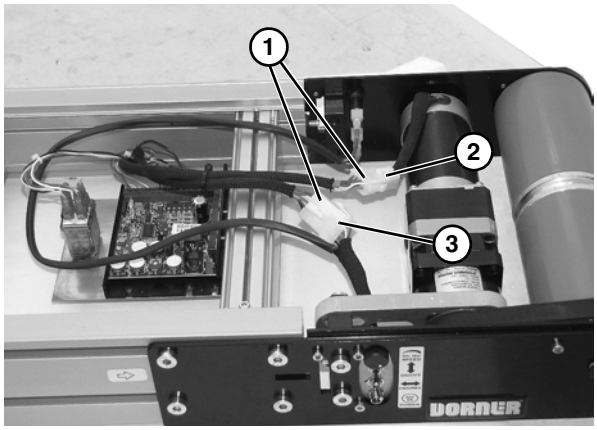


Figure 67

4. Remove hex head screw **(Figure 68, item 1)**, and loosen hex head screw **(Figure 68, item 2)**. Remove circuit board **(Figure 68, item 3)** from conveyor frame.

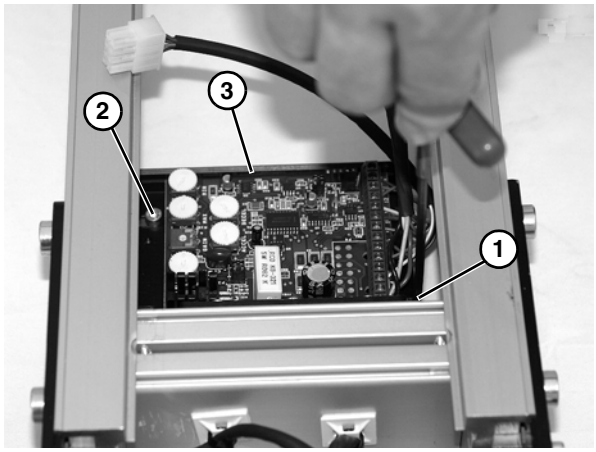


Figure 68

5. Replace circuit board.

NOTE

Make sure the cord or wires are not across the circuit board when reassembling. Tuck wires and cable into the frame extrusion.

6. Reinstall in reverse order of removal.

iDrive Motor Tuning

Before starting up the conveyor, set the following:

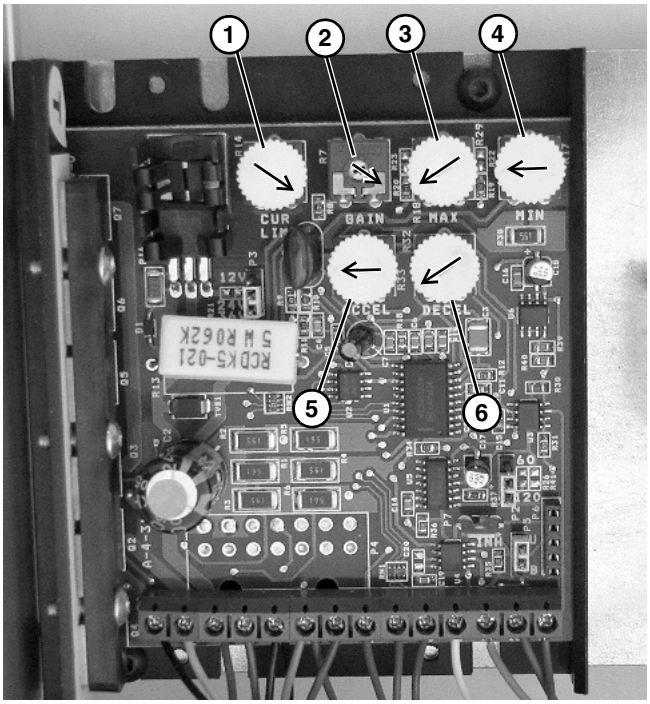


Figure 69

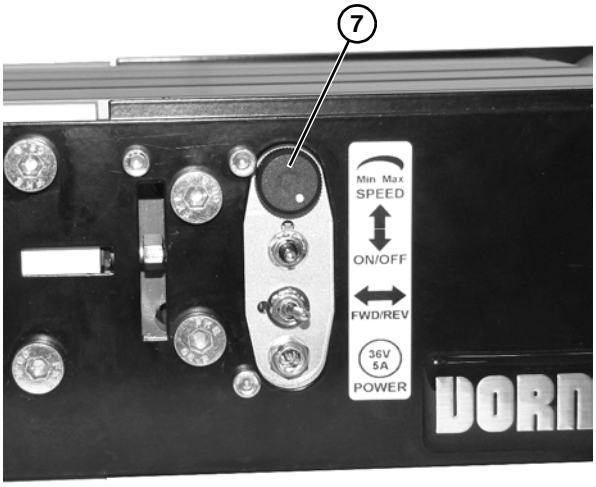


Figure 70

1	CUR LIM = 100% (4:00 position)
2	GAIN = 100% (4:00 position)
3	MAX = 0% (8:00 position)
4	MIN = 20% (9:00 position)
5	ACCEL = 20% (9:00 position)
6	DECEL = 0% (8:00 position)
7	Speed Pot = 100% (Fully CW)

Turn on the Conveyor and complete the following:

1. Place a tachometer **(Figure 71, item 1)** against the spindle **(Figure 71, item 2)** to register the speed (Ft./Min.).

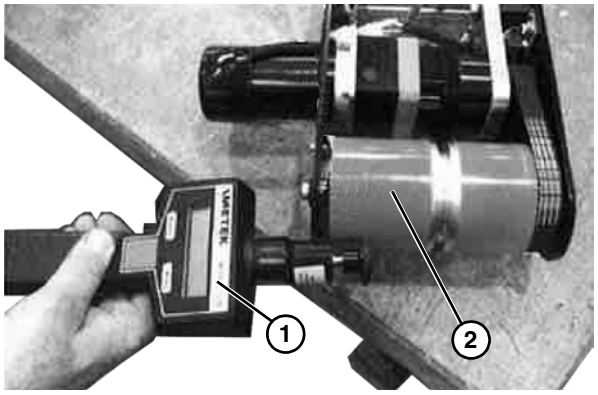


Figure 71

2. Using a small screwdriver, slowly turn down the GAIN (CCW) **(Figure 69, item 2)** to top speed within 3 Ft./Min. See Speed Chart below:

		Gearbox Ratio	
		15:1	**25:1**
Drive Pulley	**36**	27-171	19-103
	32	24-152	17-91
	28	21-133	15-80

3. Turn speed pot **(Figure 70, item 7)** all the way down (Fully CCW).
4. Adjust MIN **(Figure 69, item 4)** to low speed within 3 Ft./Min. (See Speed Chart above.)
5. Verify proper low and high speeds are achieved by turning speed pot **(Figure 70, item 7)** CCW to the lowest setting and the CW to the highest setting.

Switch Removal and Replacement

⚠ WARNING

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

1. Remove belt. (See "Belt Removal for Conveyor Without Stands" on page 13 or "Belt Removal for Conveyor With Stands" on page 13.)
2. Remove wear plate **(Figure 72, item 1)** by removing plate fastening screws **(Figure 72, item 2)** on each side and end of conveyor

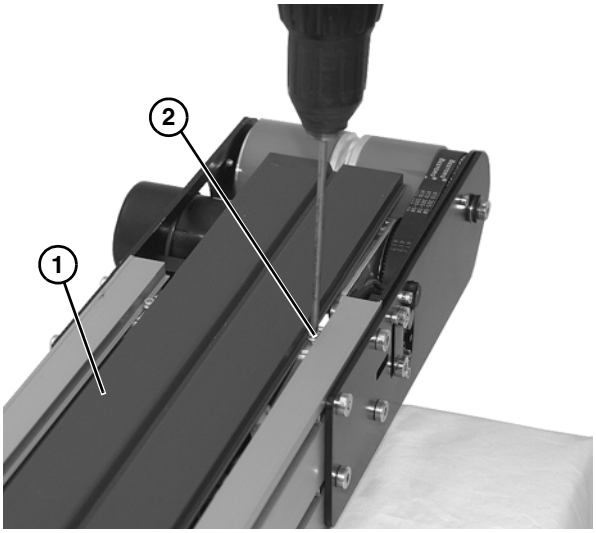


Figure 72

3. Disconnect wiring harness connector **(Figure 73, item 1)** from circuit board wiring connector **(Figure 73, item 2)**.

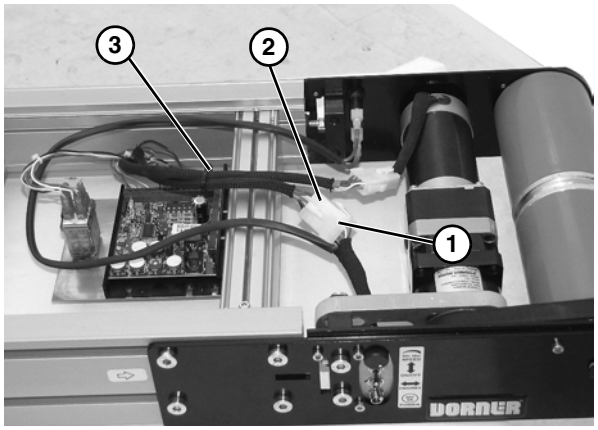


Figure 73

4. Remove tie strap **(Figure 73, item 3)** holding wiring harness to conveyor frame.
5. Remove two hex head screws **(Figure 74, item 1)** and switch assembly **(Figure 74, item 2)** from conveyor frame.

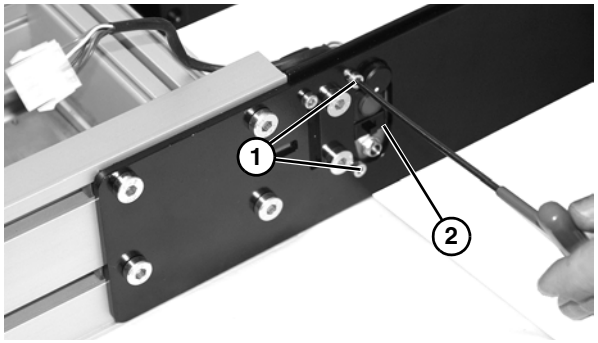


Figure 74

6. Replace switch assembly.

NOTE

Make sure the cord or wires are not kinked or under any conveyor parts when reassembling.

7. Reinstall in reverse order of removal.

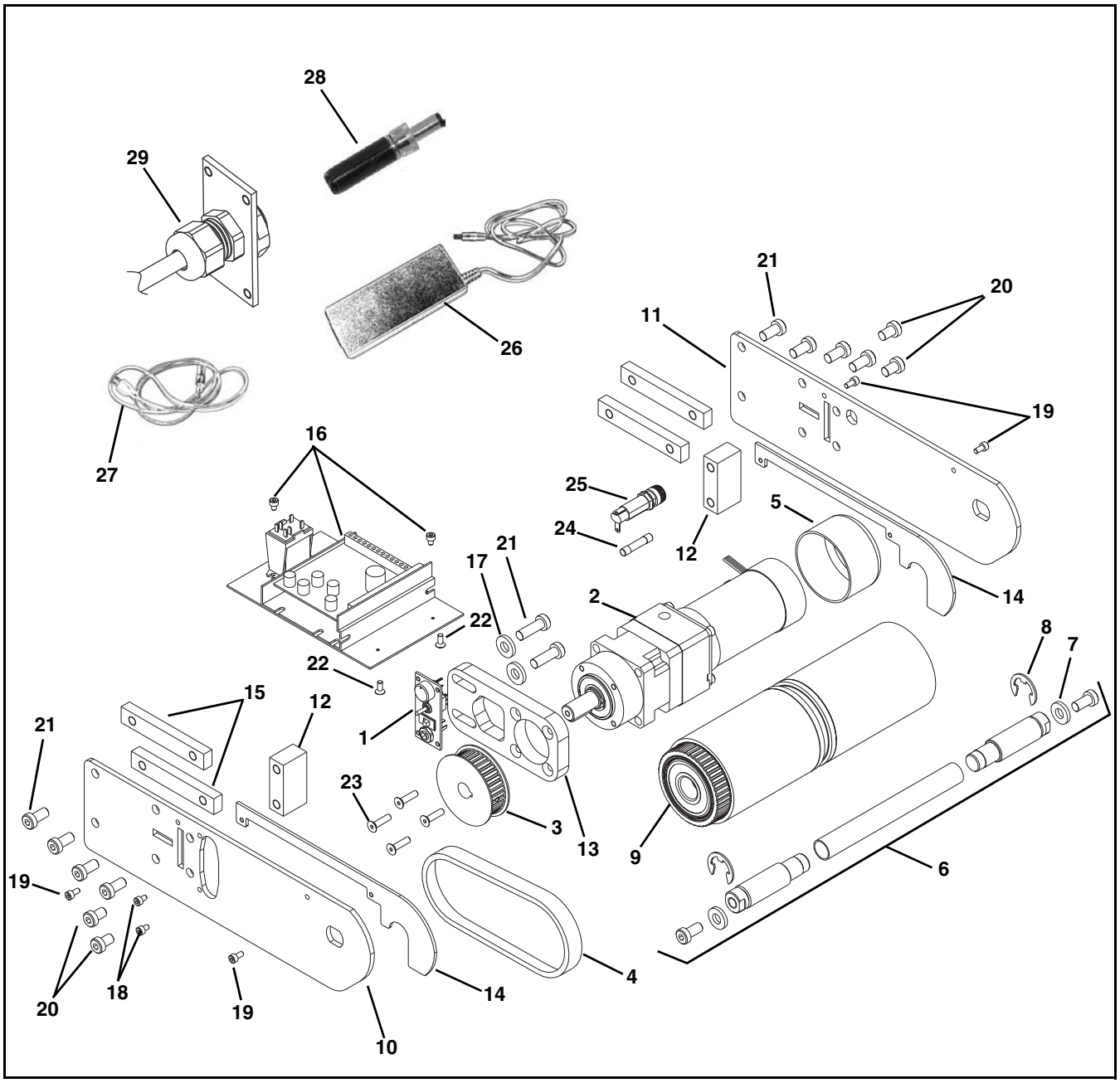
Notes

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.

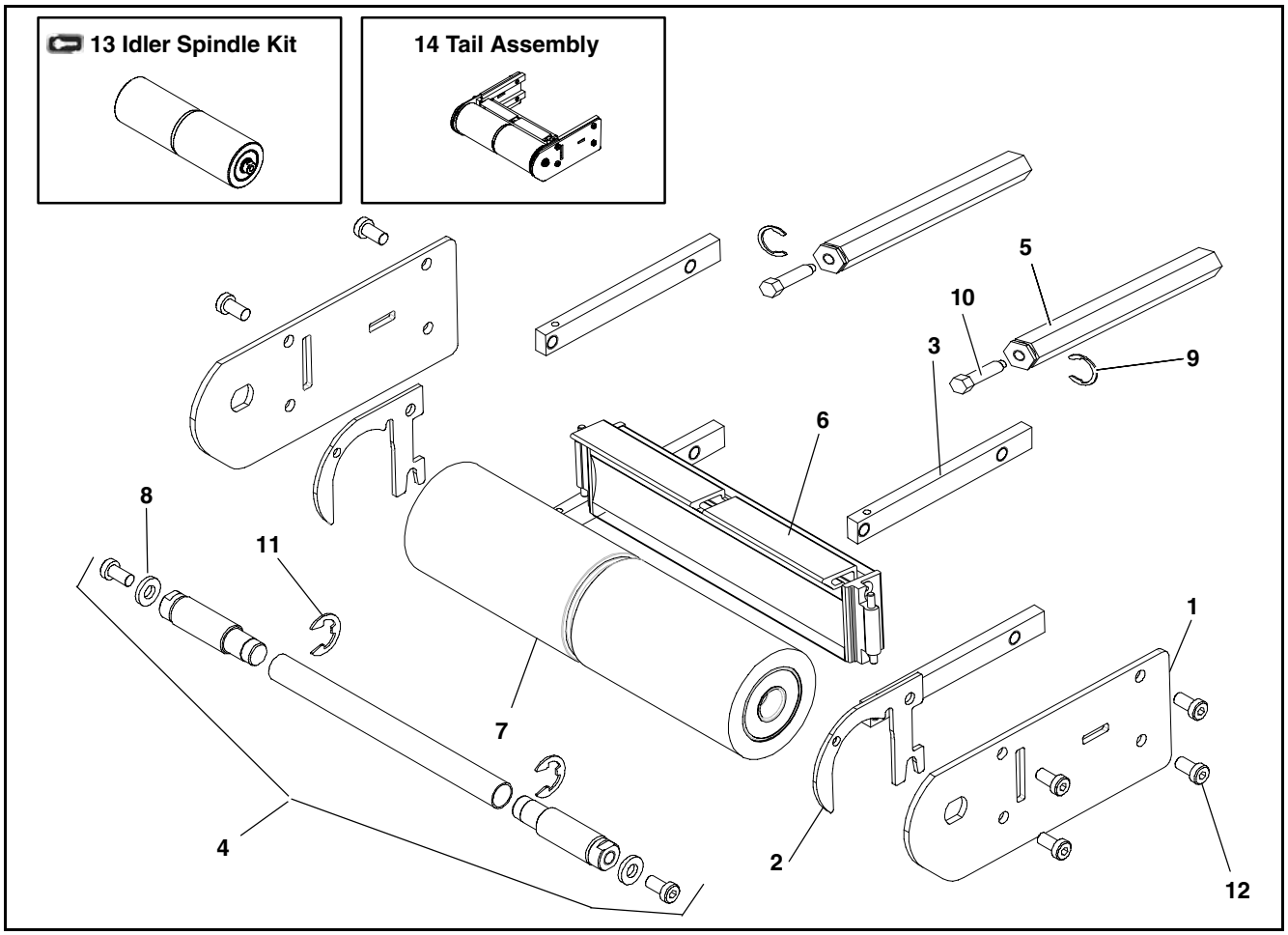
Drive End Tail Assembly



Item	Part Number	Description
1	350109	Switch Assembly
	350104	Cord Grip Assembly
2	826-579	High and Medium Speed Motor
	826-580	Low Speed Motor
3	811-361	High Speed Drive Pulley
	811-362	Medium and Low Speed Drive Pulley
4	814-119	Timing Belt
5	807-1941	Motor Cap for 6" and 8" wide Conveyors Only
6	3282WW	Spindle Wand Assembly (Includes Items 7 and 8)
7	605280P	Hard Washer
8	915-235	Stub Shaft Retaining Ring
9	350110-WW	Spindle Assembly
10	350091	Tail Plate, Drive Side
11	350092	Tail Plate, Non-Drive Side for 6" and 8" wide Conveyors
	350093	Tail Plate, Non-Drive Side for 8" and 10" wide and wider Conveyors
12	350095	Tracking Block
13	350096	Motor Mounting Plate
14	350097	Inner Tail Plate
15	350098	Slide Bar
16	350103	Control Assembly
17	605280P	Washer, 0.361 x 0.750 x 0.120
18	920406M	Socket Head Screw, M4-0.70 x 6mm
19	920408M	Socket Head Screw, M4-0.70 x 8mm
20	920892M	Low Head Cap Screw, M8-1.25 x 12mm
21	920893M	Low Head Cap Screw, M8-1.25 x 16mm
22	930410M	Flat Head Screw, M4-0.70 x 10mm
23	930512M	Flat Head Screw, M5-0.80 x 12mm
24	819-028	Fuse
25	819-150	Fuse Holder
26	831-140	Power Supply
27	818-164	Cord
28	805-1316	DC Power Plug
29	350104	Custom Wired Version
WW = Conveyor width reference: 06 to 24 in 02 increments		

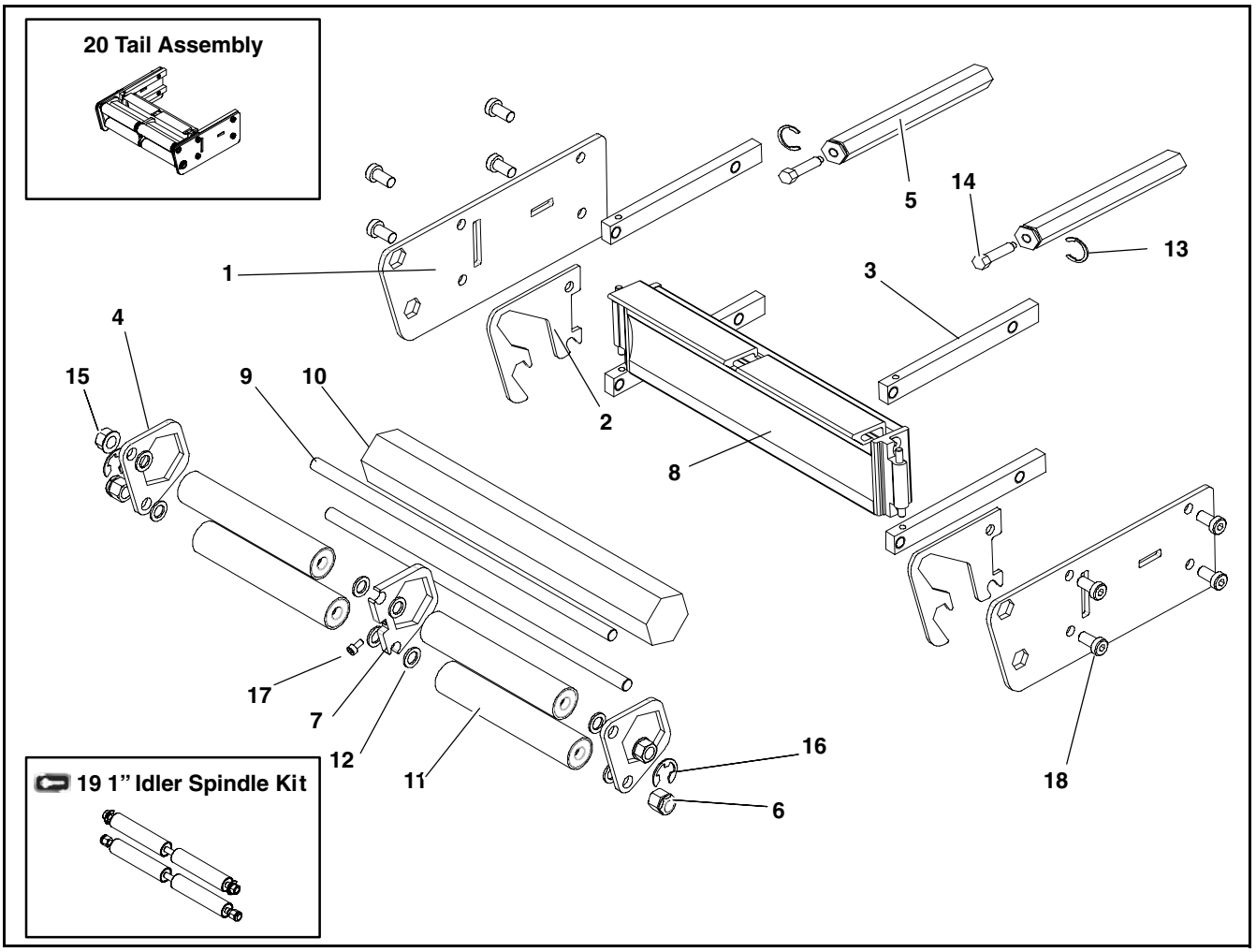
Service Parts

Idler End Assembly



Item	Part Number	Description
1	301049	Idler Cover Plate
2	301083	Inner 3” Tail Plate
3	301088	Tail Bar Clamp
4	3282WW	Idler Spindle Wand Assembly (includes items 8 and 11)
5	301196	Hex Tension Tracking Shaft
6	3202WW	Tail Articulation Bar
7	3289WW	3” Idler Pulley
8	605280P	Hard Washer
9	807–1151	Tracking Shaft Retaining Ring
10	807–1152	Hex Head Cap Screw M6 x 20mm
11	915–235	Stub Shaft Retaining Ring
12	920893M	Low Head Socket Screw M8 x 16mm
13	32T3–WW	Idler Spindle Kit (includes items 4 and 7)
14	32TT3–WW	Tail Assembly (including items 1 through 4, 6, 7 and 12)
WW = Conveyor width reference: 06 – 24 in 02 increments		

Transfer Tail Assembly

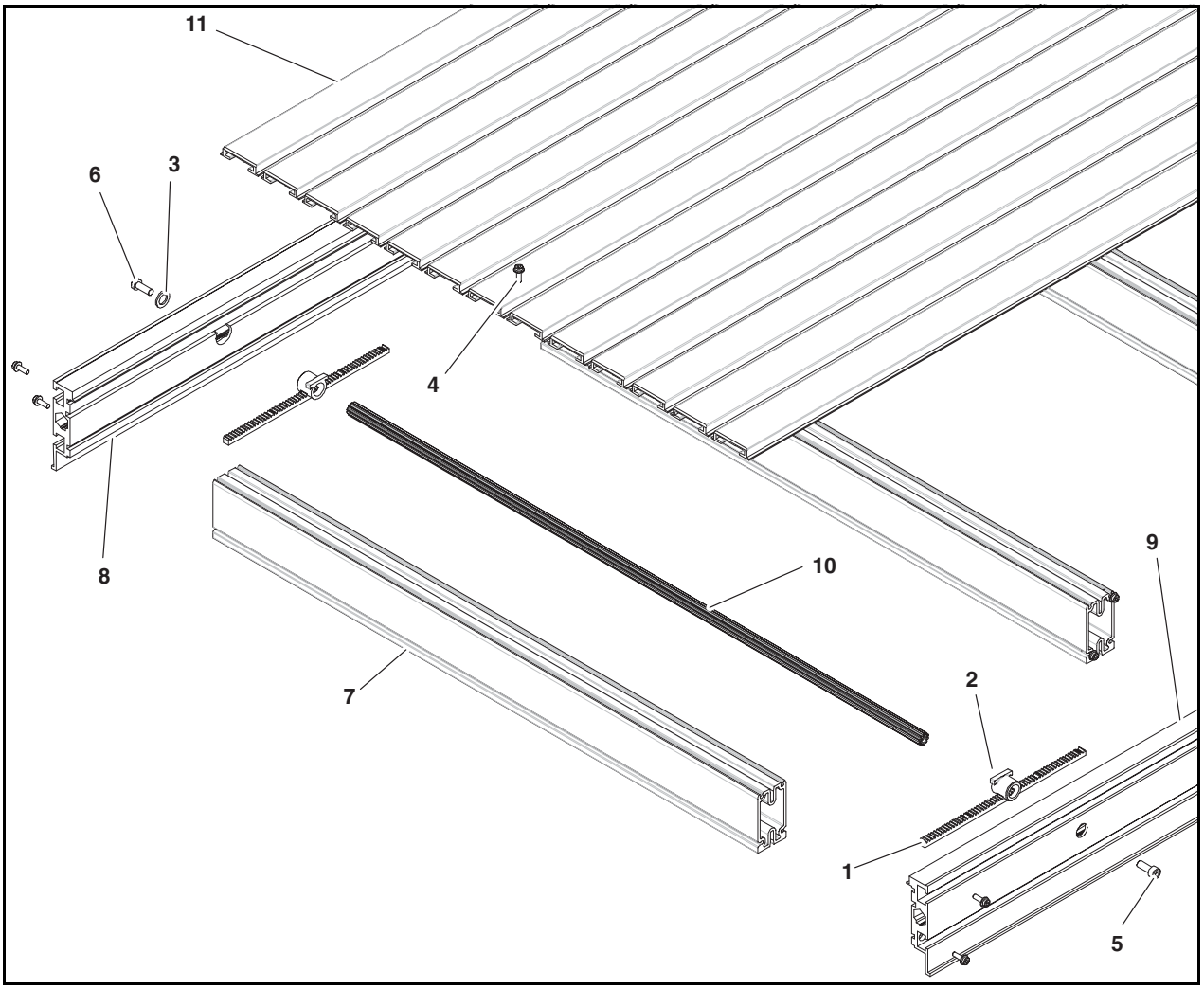


Item	Part Number	Description
1	301082	Nosebar Cover Plate
2	301084	1" Inner Tail Plate
3	301088	Tail Bar Clamp Transfer
4	301090	Tail Support Plate
5	301196	Hex Tension Tracking Shaft
6	301352	Nut, E−ring, Brace
7	301354	Inner Transfer Tail Support Plate
8	3202WW	Tail Articulation Bar
9	3217WW	1" Idler Tail Axle Shaft
10	3219WW	Support Bar
11	3237WW	Transfer Tail Roller
12	807−1136	Washer
13	807−1151	Retaining Ring

Item	Part Number	Description
14	807−1152	Hex Head Cap Screw M6 x 20mm
15	910−203	3/8" Hex Nut
16	915−319	Retaining Ring
17	920408M	Hex Head Cap Screw M4 x 8mm
18	920893M	Low Head Socket Screw M8 x 16mm
19	32T1−WW	1" Idler Spindle Kit (includes items 6, 9, 11, 12, 15 and 16)
20	32TT1−WW	Tail Assembly (includes items 1 through 4, 6 through 12, 15 through 18)
WW = Conveyor width reference: 06 − 24 in 02 increments		

Service Parts

Frame Assembly



Item	Part Number	Description
1	240420	Rack Gear
2	301091	Pinion Bearing
3	605279P	Washer
4	920484M	Flange Torx Screw, M4 x 16mm
5	920616M	Socket Head Socket Screw M6 x 16mm
6	920693M	Low Head Socket Screw M6 x 16mm
7	3245WW	Cross Support Rail
8	301041–LLLLL	RH Side Rail
9	301042–LLLLL	LH Side Rail
10	3229WW	Pinion
11	See Bed Plate Rail chart	Bed Plate Rail
WW = Conveyor width reference: 06 – 24 in 02 increments LLLLL = Frame Length (see Bed Plate & Frame Formulas)		

Item 11: Bed Plate Rail	
Width	**Part Number**
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

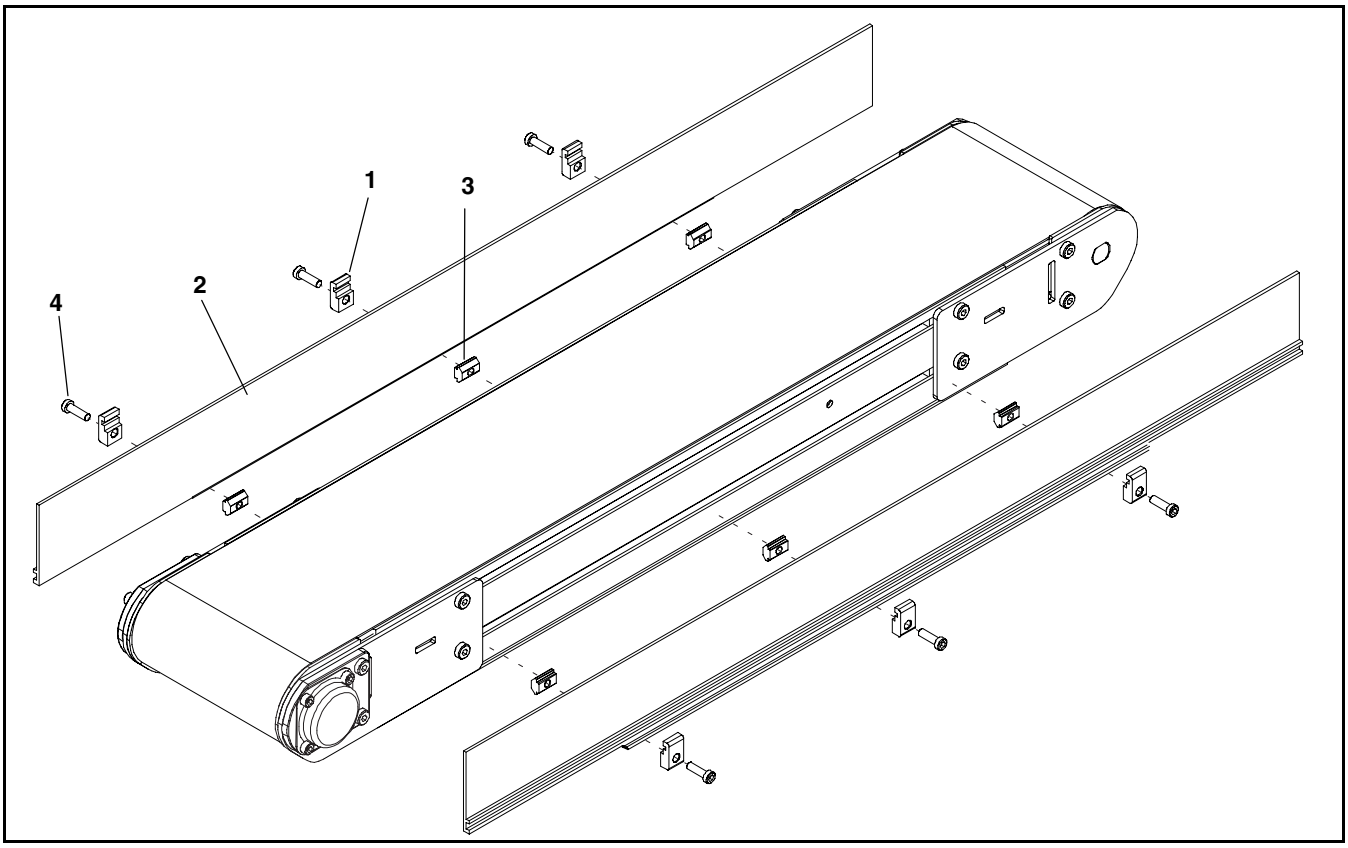
Bed Plate LLLLL = Frame LLLLL – 00013

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

Width	Bed Plate Configuration				
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”

–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	920694M	Socket Head 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

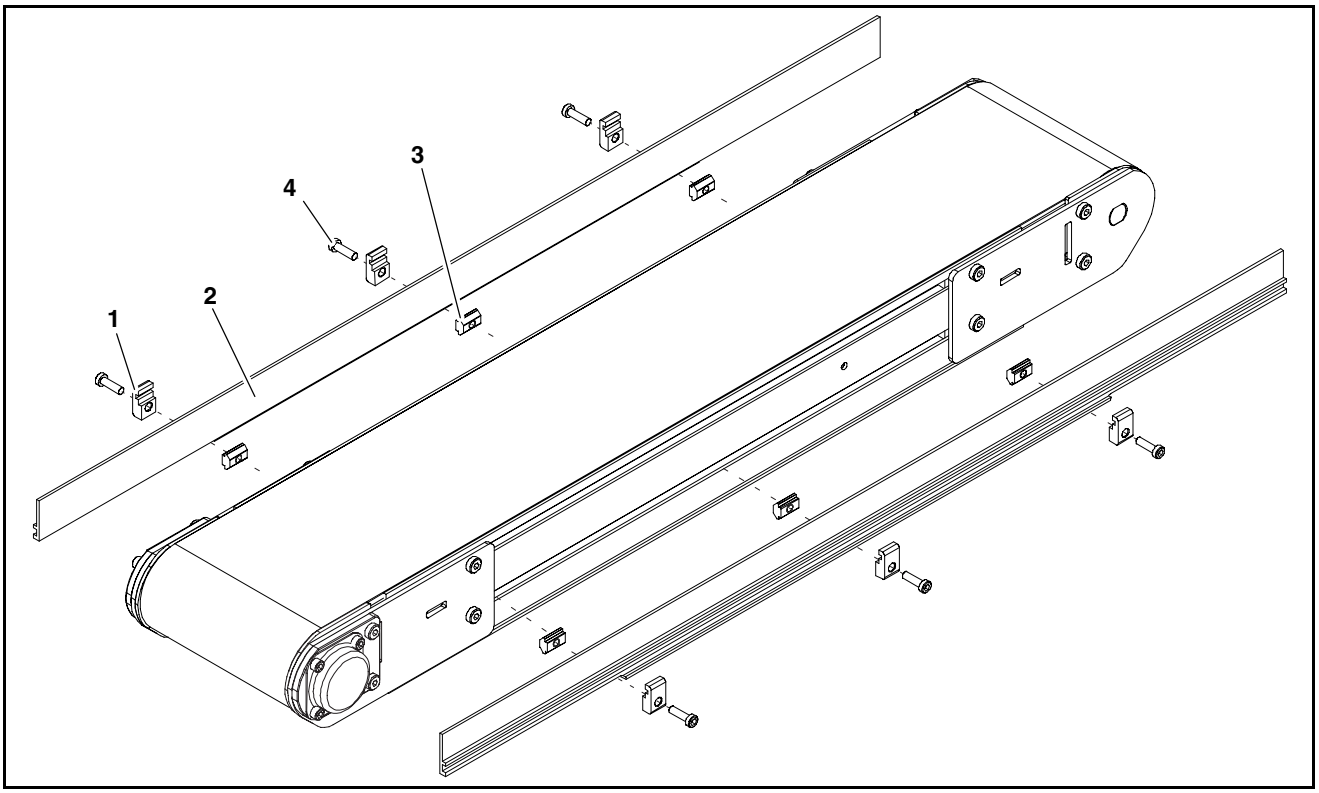
Conveyor Length = 1733
Tail Factor = 00200

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

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

Service Parts

–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	920694M	Socket Head Screw M6 x 20mm

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

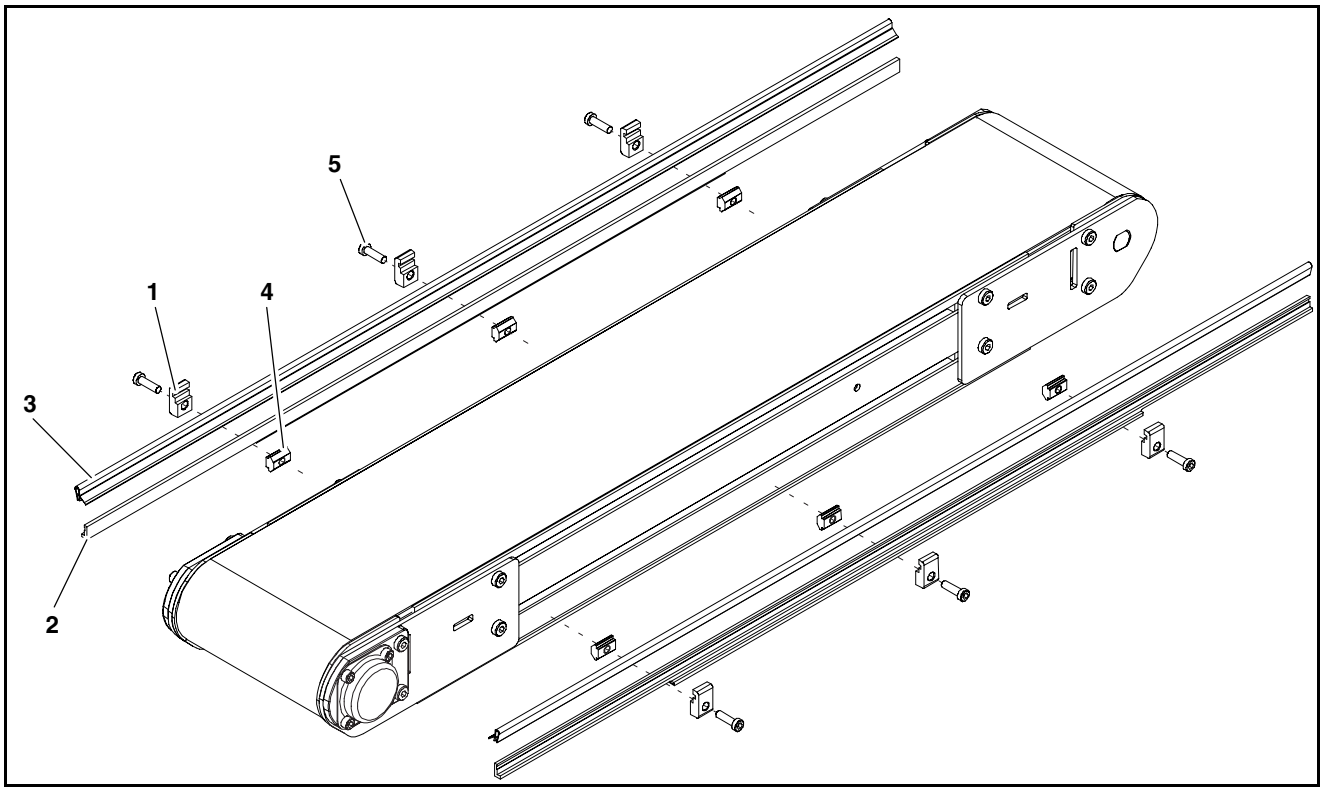
17’4” End Drive Conveyor with Standard Tails

Conveyor Length = 1733
Tail Factor = 00200

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

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

–07 Low to Side Wiper



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	380900–LLLLL (see Formulas)	3200 Guide, 0.5” (13mm) HS
3	41–00–24	Side Wiper Nylatron (per foot)
4	639971M	Single Drop–in Tee Bar
5	920694M	Socket Head Screw M6 x 20mm

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

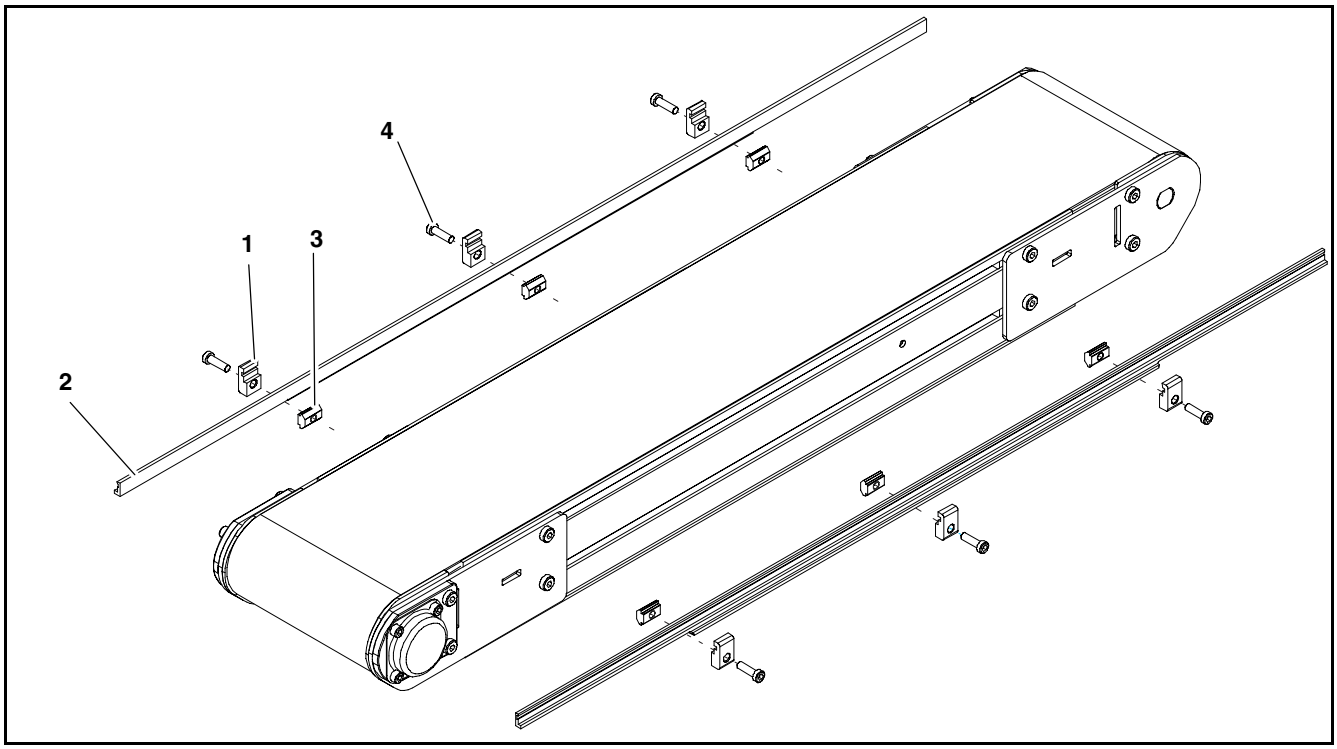
Conveyor Length = 1733
Tail Factor = 00200

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

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

Service Parts

–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	920694M	Socket Head 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

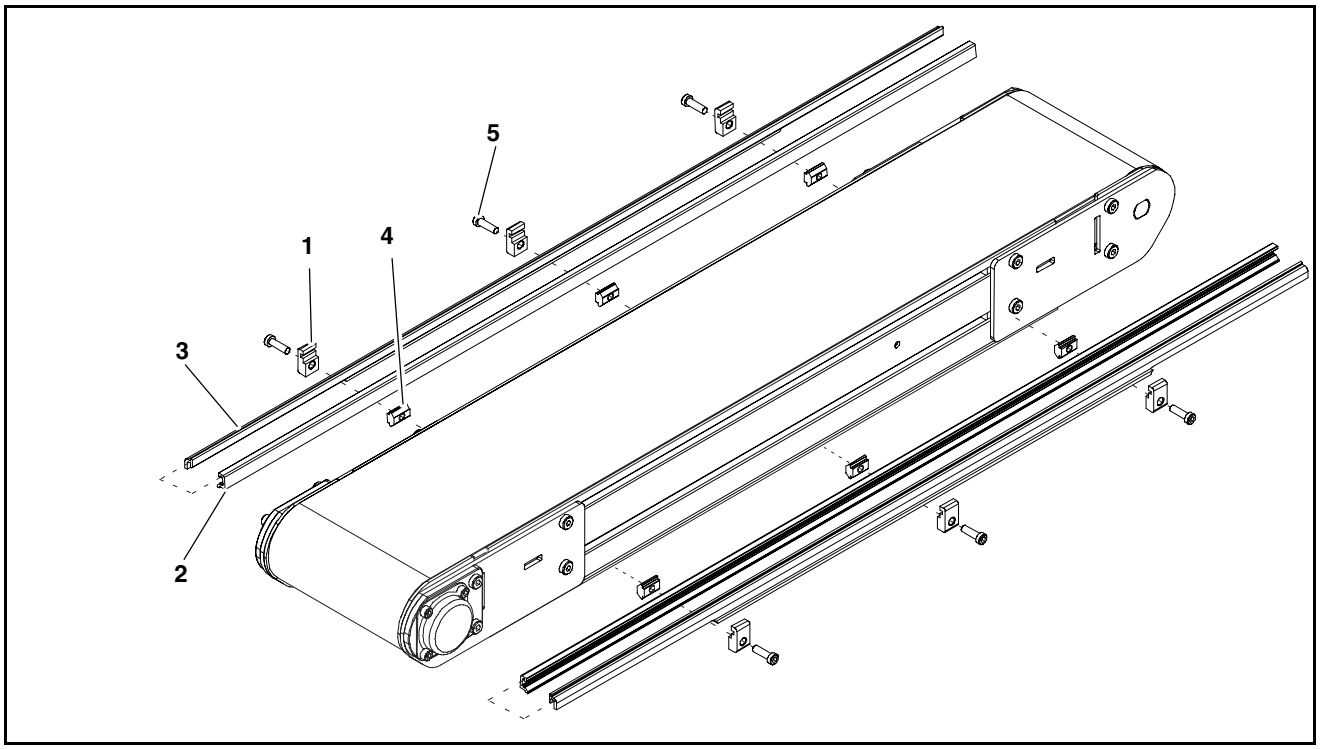
17'4" End Drive Conveyor with Standard Tails

Conveyor Length = 1733
Tail Factor = 00200

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

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

–10.5” (13mm) Extruded Plastic



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	200054P	Snap–On Guide (per foot)
3	3810000–LLLLL (see Formulas)	2200 Guide
4	639971M	Single Drop–in Tee Bar
5	920694M	Socket Head Screw M6 x 20mm

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

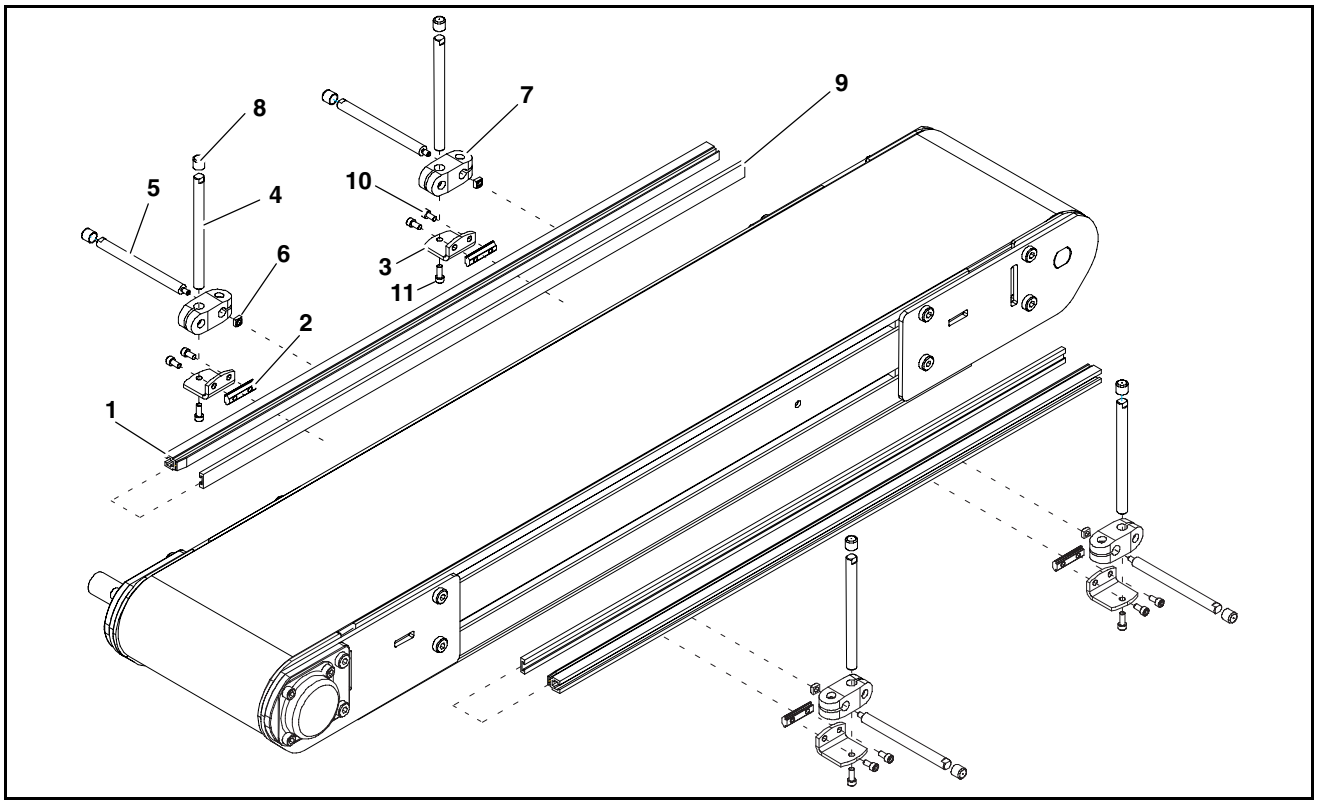
Conveyor Length = 1733
Tail Factor = 00200

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

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

Service Parts

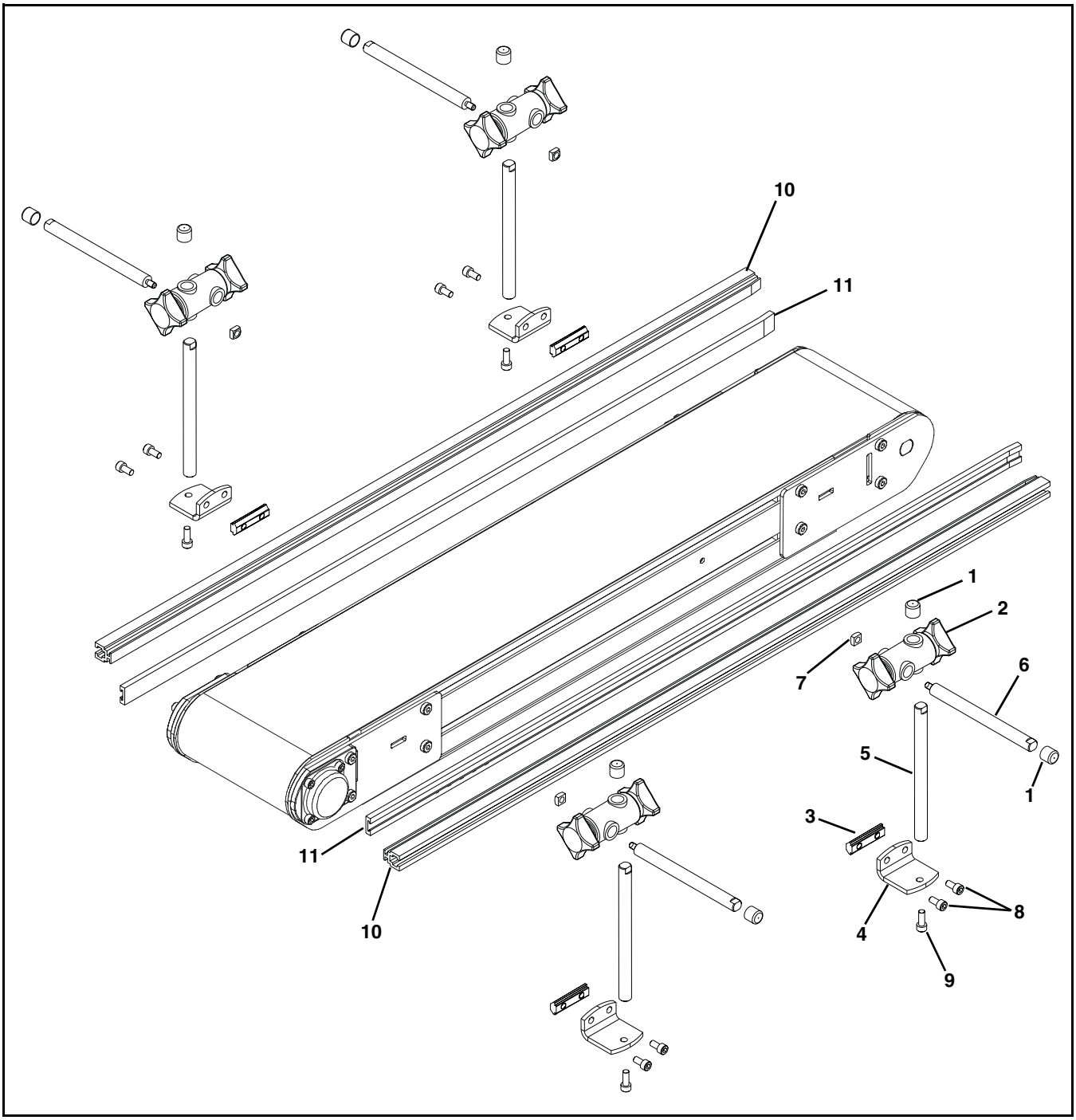
–13 Adjustable Guiding



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 12mm
11	920616M	Socket Head Screw M6 x 16mm

–14 Tool-Less Adjustable Guiding

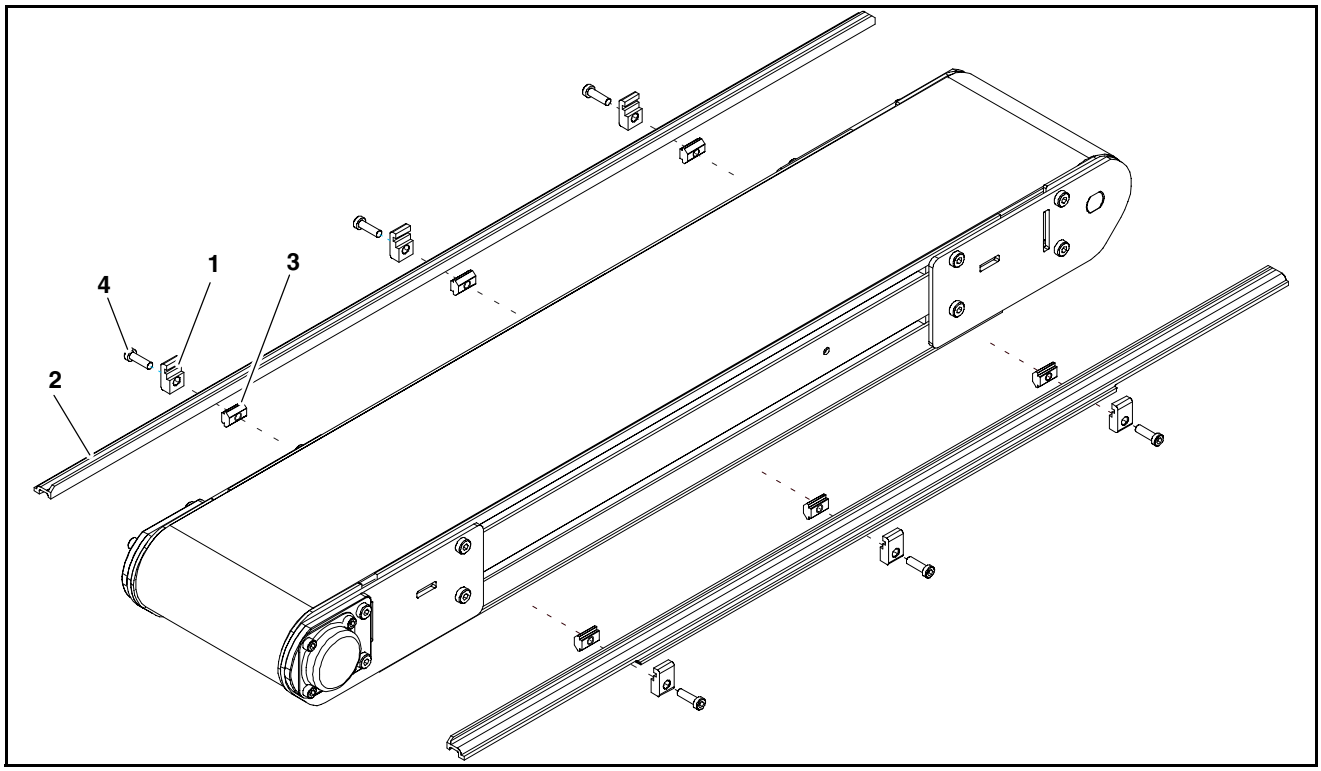


Item	Part Number	Description
1	807-948	Shaft Cap
2	807-1470	Cross Block
3	200830M	Drop-In Tee Bar
4	202004M	Mounting Bracket
5	202027M	Vertical Mounting Guide Shaft
6	202028M	Horizontal Mounting Guide Shaft

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

0.5” (13mm) Cleated Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	381600–LLLLL (see Formulas)	2200 Guide, 0.47” (13mm) Cleated
3	639971M	Drop–In Tee Bar
4	920694M	Socket Head 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

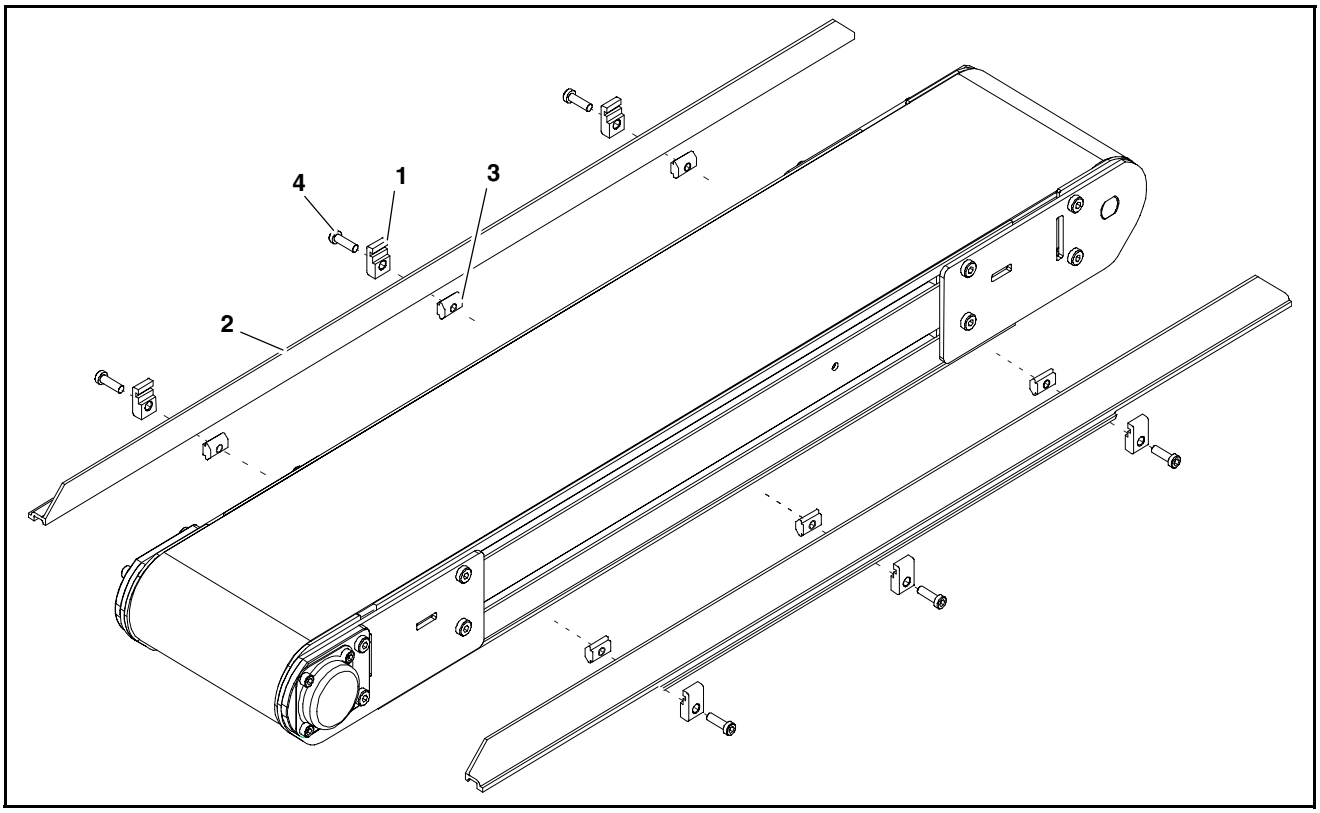
17’4” End Drive Conveyor with Standard Tails

Conveyor Length = 1733
Tail Factor = 00200

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

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

1” (25mm) Cleated Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	3200 Guide 1” (25mm) Cleated
3	639971M	Drop–In Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

Item 2: 3200 Guide		
# of Sections (see Formulas)		End Guide (for LLLLL See Formulas)
1	Each Side	381735–LLLLL
2	Left Hand	381736–LLLLL
	Right Hand	381737–LLLLL
3 or More	Left Hand	381736–LLLLL
	Middle Sections	381700–LLLLL
	Right Hand	381737–LLLLL

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

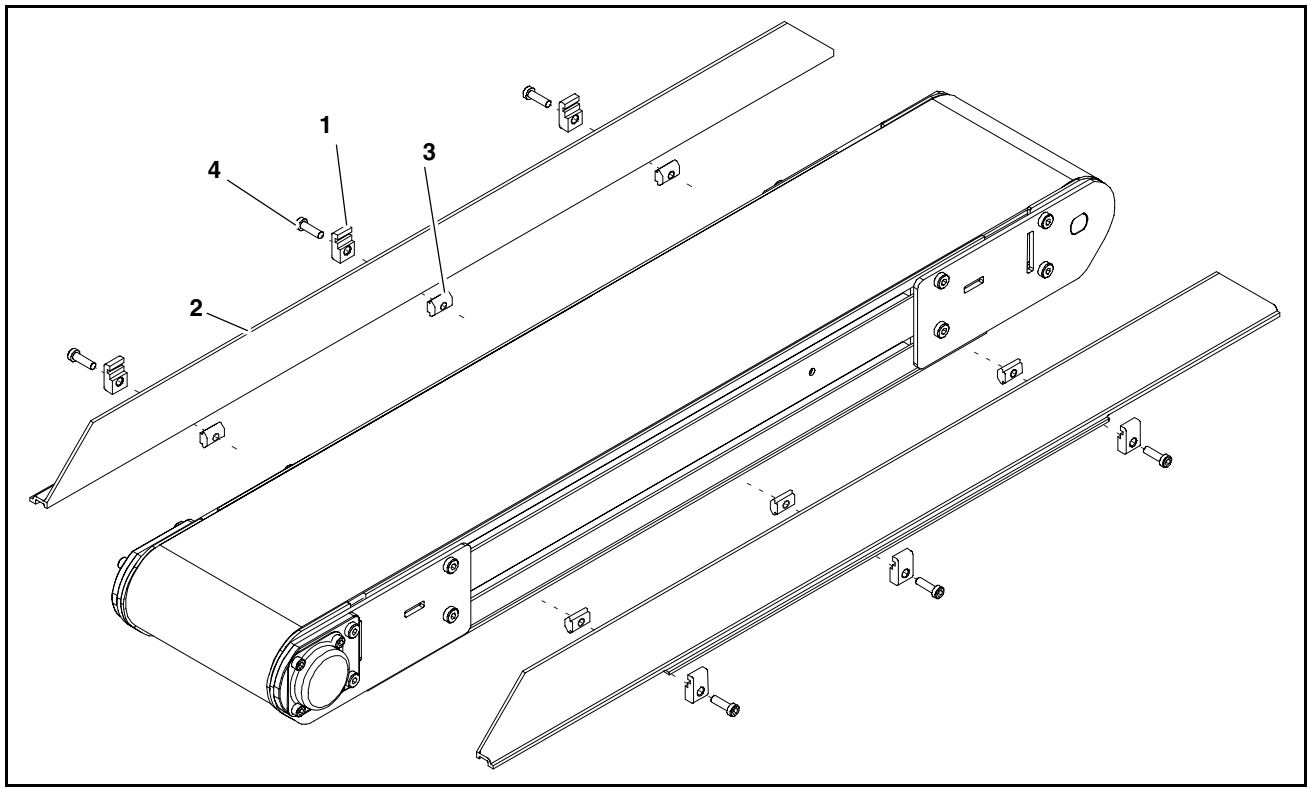
Conveyor Length = 1733
Tail Factor = 00200

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

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

Service Parts

2” (51mm) Cleated Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	3200 Guide 2.3” Cleated
3	639971M	Drop–In Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

Item 2: 3200 Guide		
# of Sections (see Formulas)		End Guide (for LLLLL See Formulas)
1	Each Side	381935–LLLLL
2	Left Hand	381936–LLLLL
	Right Hand	381937–LLLLL
3 or More	Left Hand	381936–LLLLL
	Middle Sections	381900–LLLLL
	Right Hand	381937–LLLLL

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

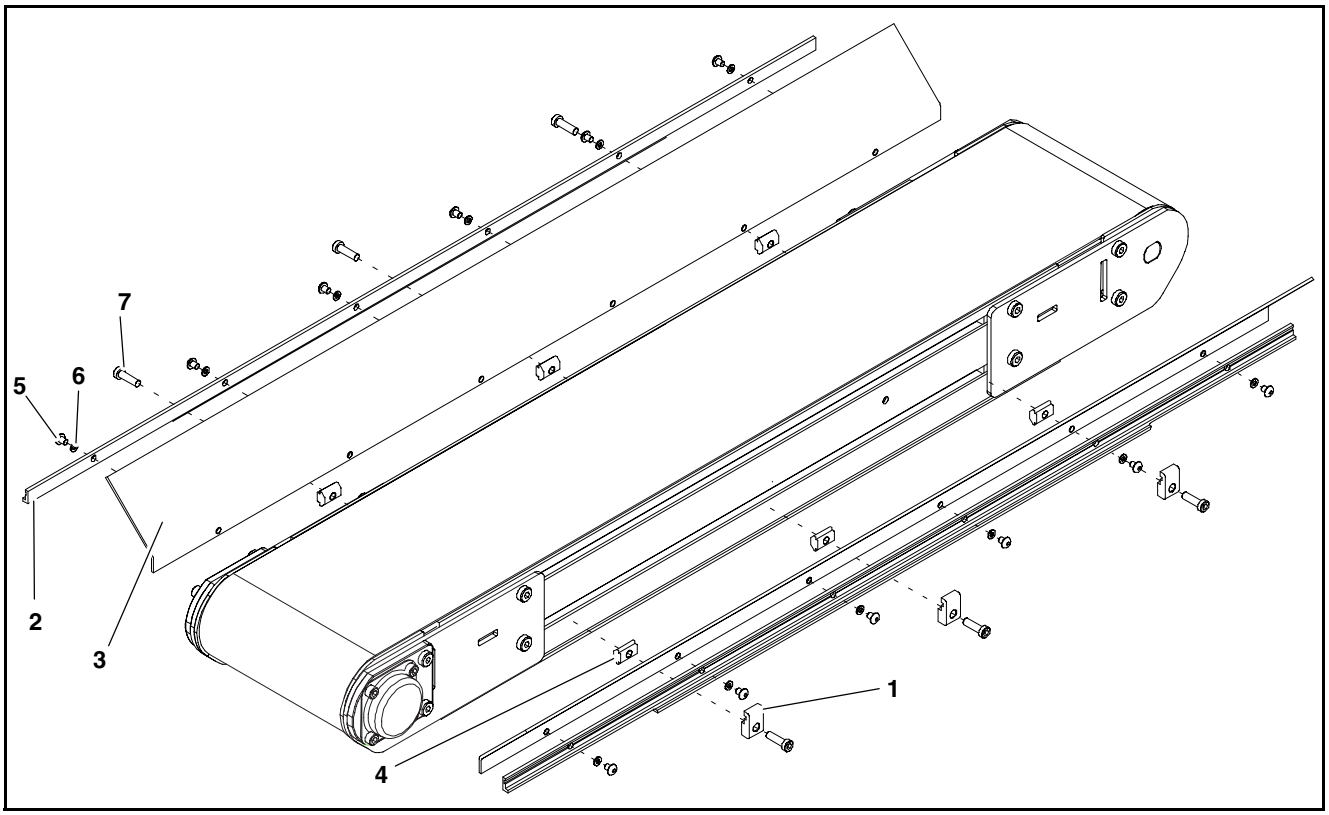
Conveyor Length = 1733
Tail Factor = 00200

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

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

Figure 75

Flared Side Guiding

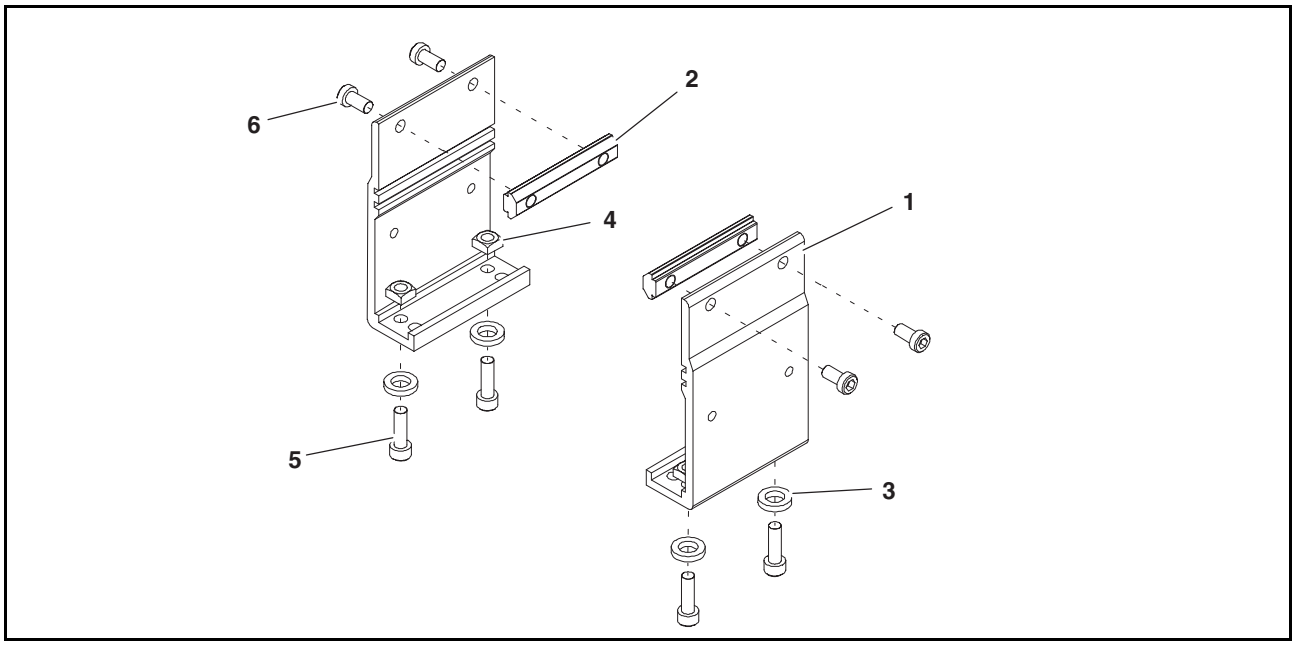


Item	Part Number	Description
1	200121	Guide Retaining Clip
2	202212	Side–Flare Mounting Guide 2’ (610mm)
	202213	Side–Flare Mounting Guide 3’ (914mm)
	202214	Side–Flare Mounting Guide 4’ (1219mm)
	202215	Side–Flare Mounting Guide 5’ (1524mm)
	202216	Side–Flare Mounting Guide 6’ (1829mm)

Item	Part Number	Description
3	202522M	Flared Guide 45° 2’ (610mm)
	202523M	Flared Guide 45° 3’ (914mm)
	202524M	Flared Guide 45° 4’ (1219mm)
	202525M	Flared Guide 45° 5’ (1524mm)
	202526M	Flared Guide 45° 6’ (1829mm)
4	639971	Drop–In Tee Bar
5	910506M	Button Head Screw M5 x 6mm
6	911–512	Washer
7	920694M	Cap Low–Head Screw M6 x 20mm

Service Parts

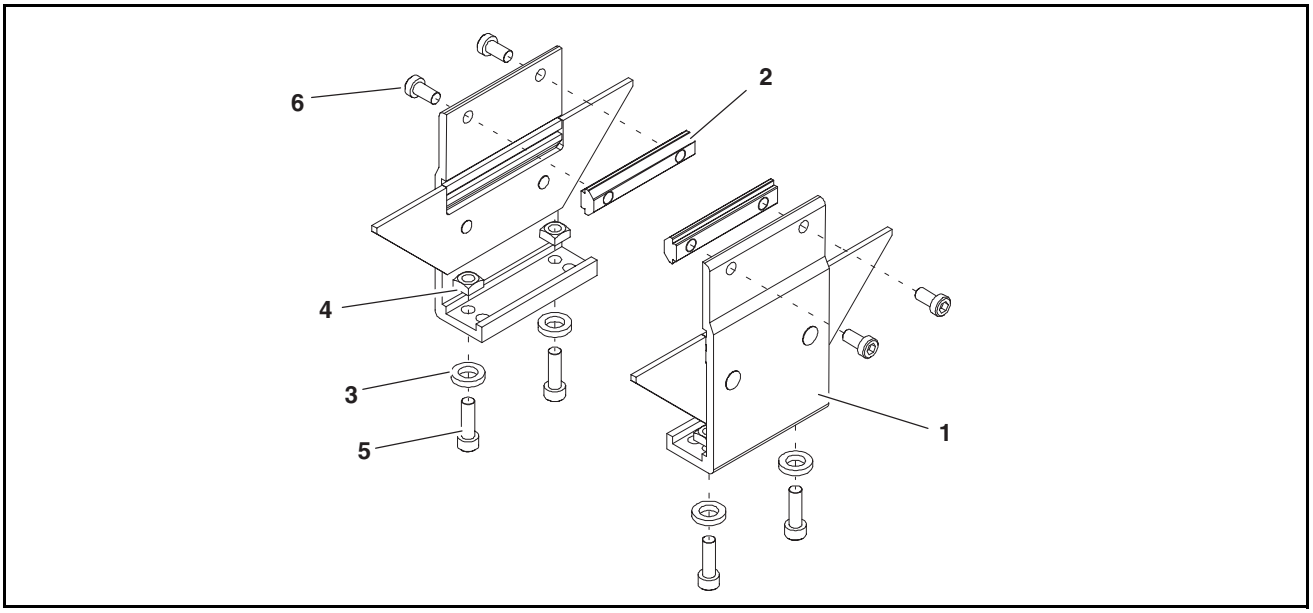
Flat Belt Mounting Brackets



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

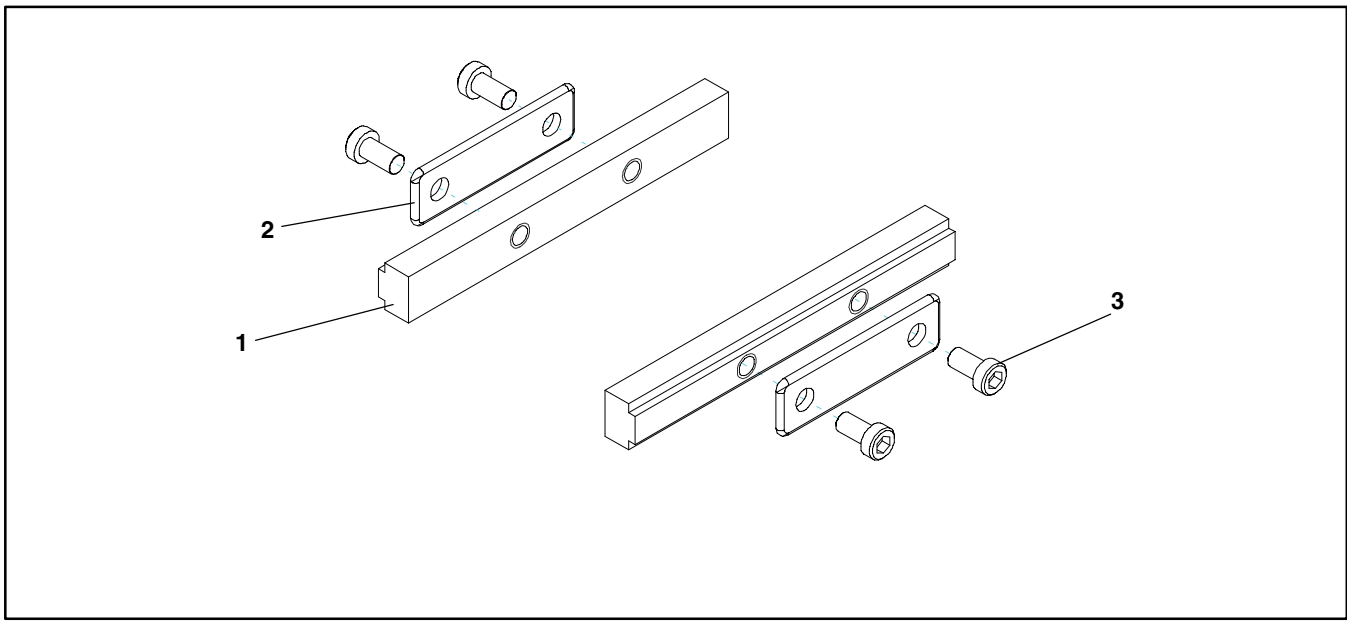
Cleated Belt Mounting Brackets



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

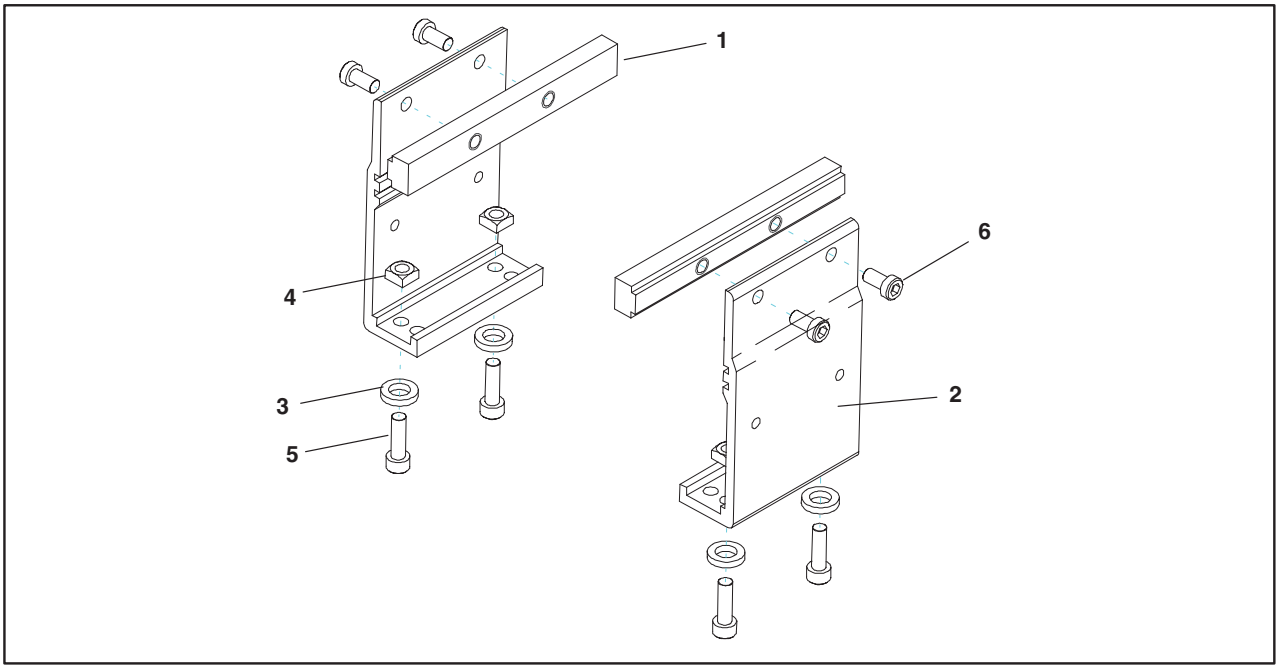
Connecting Assembly without Stand Mount



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

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

Flat Belt Connecting Assembly with Stand Mount

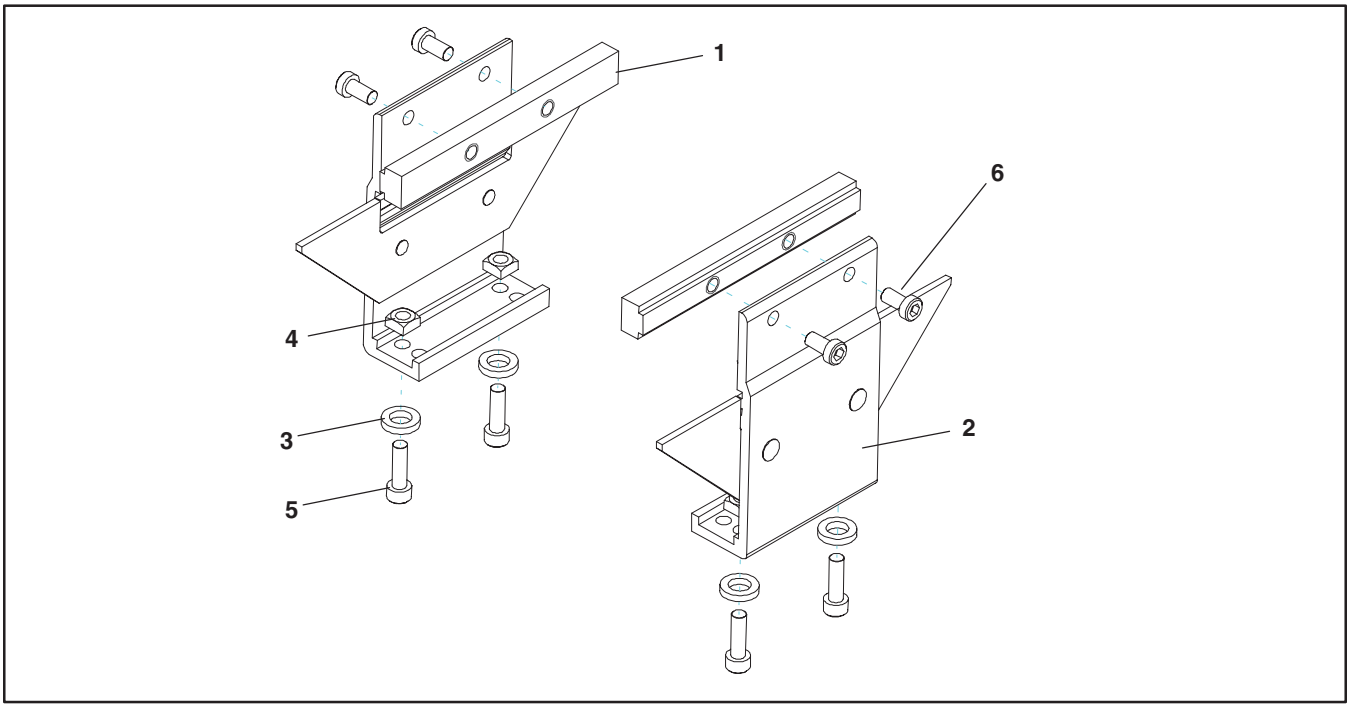


Item	Part Number	Description
1	240858	Frame Connector Bar
2	240837	Stand Mount Joint
3	605279P	Washer

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

Service Parts

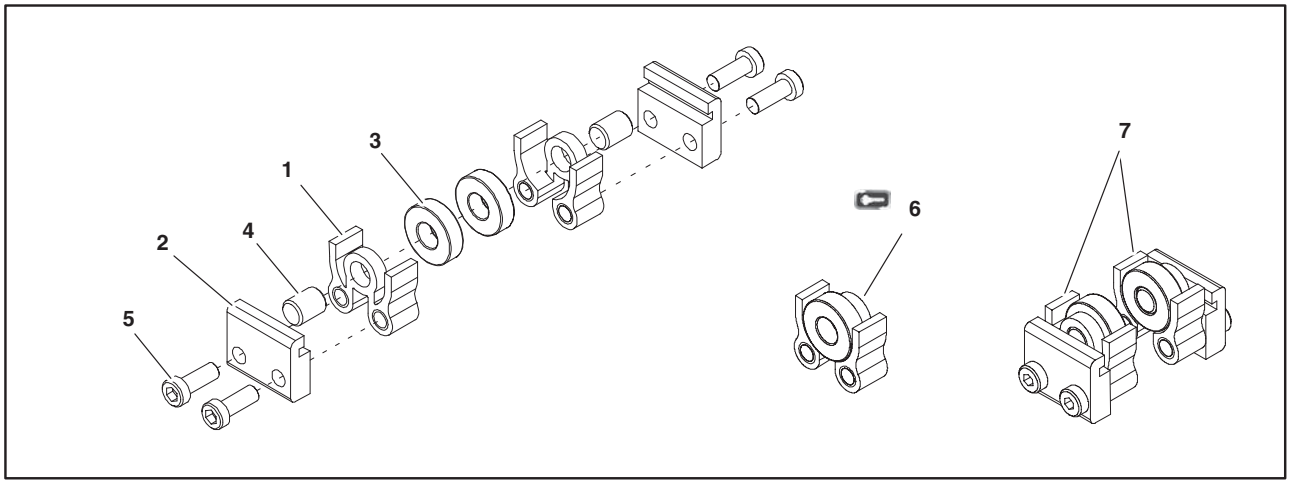
Cleated Belt Connecting Assembly with Stand Mount



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

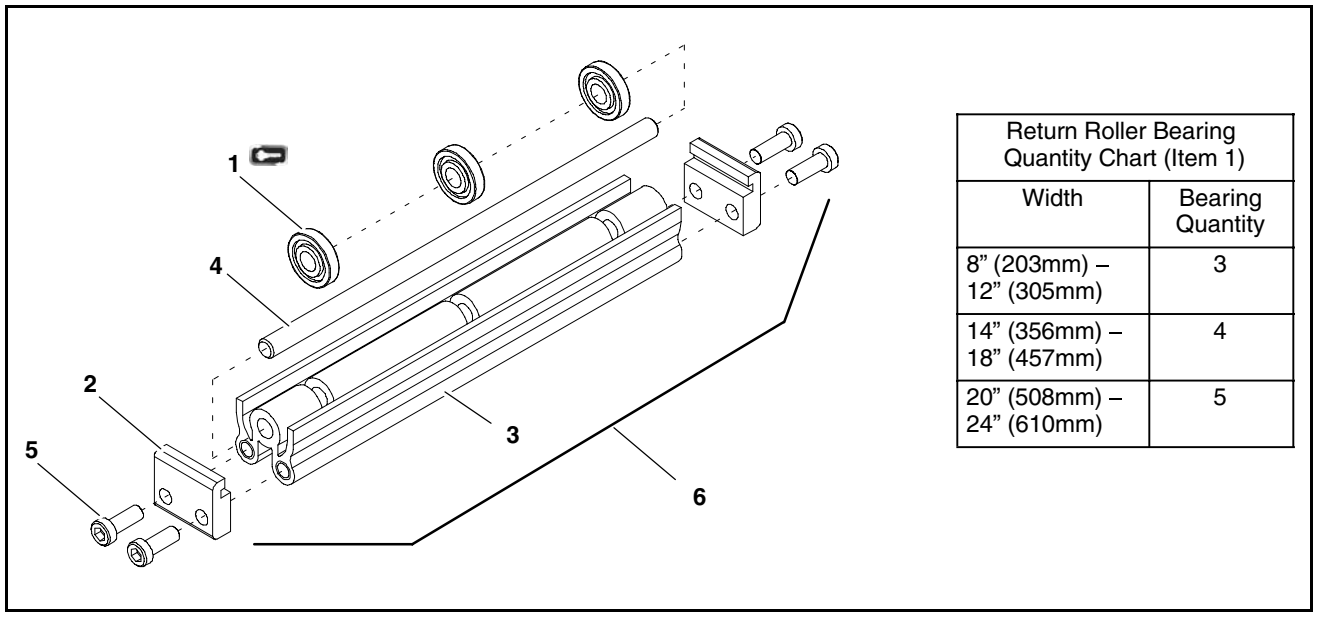
4” (102mm) to 6” (152mm) Flat Belt Return Roller



Item	Part Number	Description
1	240825	Return Roller Guard – Short
2	240827	Return Roller Clip
3	802–027	Bearing
4	913–100	Dowel Pin

Item	Part Number	Description
5	920693M	Socket Low Head Screw M6 x 16mm
6	240840	Roller Assembly (Includes Items 1, 3 and 4)
7	240830	Flat Belt Return Roller Assy

8” (203mm) to 24” (610mm) Flat Belt Return Roller

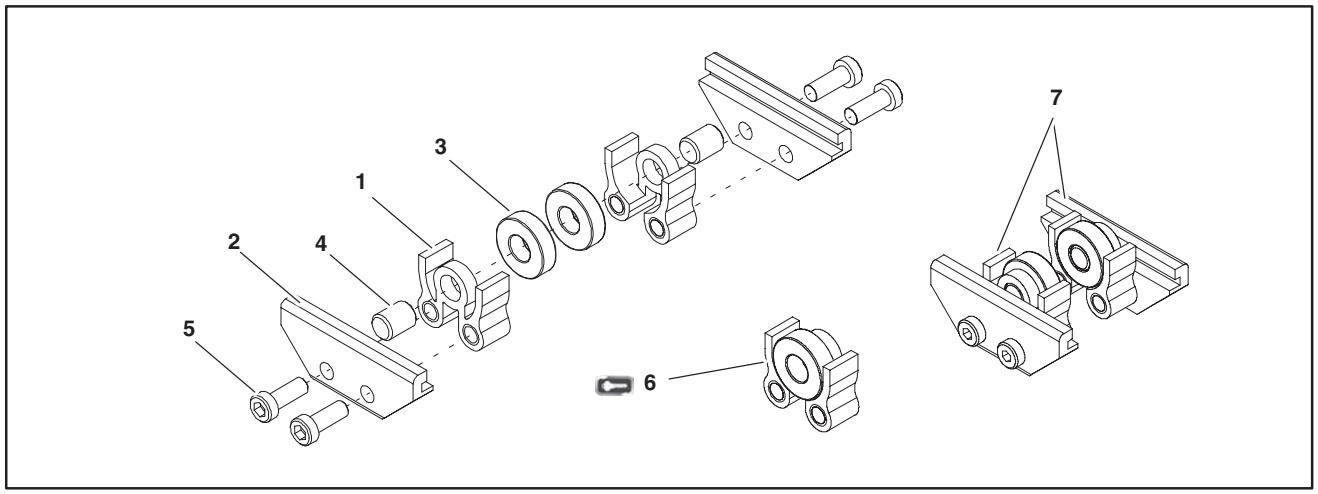


Return Roller Bearing Quantity Chart (Item 1)	
Width	Bearing Quantity
8” (203mm) – 12” (305mm)	3
14” (356mm) – 18” (457mm)	4
20” (508mm) – 24” (610mm)	5

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

Item	Part Number	Description
4	2410WW	Return Roller Rod
5	920693M	Socket Head Screw M6 x 16mm
6	3249WW	Flat Belt Return Roller Assembly
WW = Conveyor width reference: 08 – 24 in 02 increments		

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	920693M	Socket Low Head Screw M6 x 16mm
6	240840	Roller Assembly (Includes Items 1, 3 and 4)
7	240832	Cleated Belt Return Roller Assembly

Service Parts

Conveyor Belt Part Number Configuration

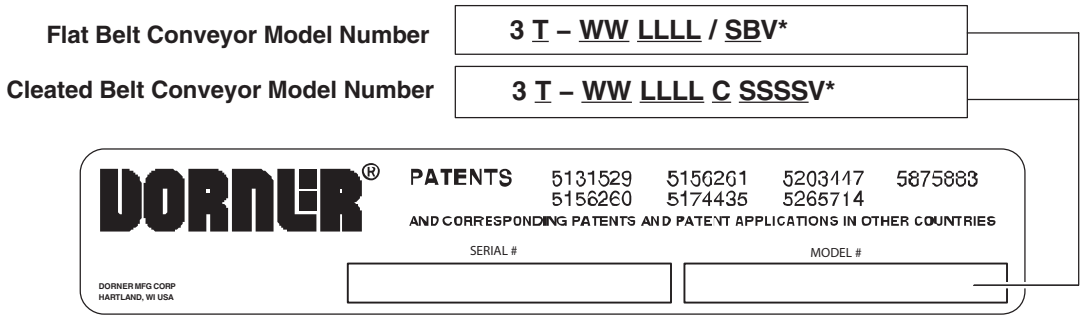


Figure 76

Flat Belt Part Number Configuration

Refer to Dorner patent plate (Figure 76). 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.

3T - WW LLLL / SBV *

(Fill In)
3 _ – __ ____ / __ V*

Cleated Belt Part Number Configuration

Refer to Dorner patent plate (Figure 76). From the model number determine, cleated belt ("T"), width ("WW"), length ("LLLL"), cleat type ("C"), and cleat spacing ("SSSS"). Use data to configure belt part number as indicated below. *Add "V" for V-guided belt.

3 T – WW LLLL C SSSS V*

(Fill In)
3 _ – __ ____ C ____ V*

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.

Conveyors and conveyor accessories

Standard catalog conveyors	30%
MPB, 7200, 7300 Series, cleated and specialty belt	50%
AquaGard & AquaPruf Series conveyors	non-returnable items
Engineered to order products	case by case
Drives and accessories	30%
Sanitary stand supports	non-returnable items

Parts

Standard stock parts	30%
Plastic chain, 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 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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