2200 Series Version 2 Modular Belt Conveyors

Installation, Maintenance & Parts Manual

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851-818 Rev. A

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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 2200 series conveyors are covered by Patent Numbers 5,174,435, 6,298,981, 6,422,382 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

Gearmotors may be HOT.

DO NOT TOUCH Gearmotors.

⚠ WARNING

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

⚠ WARNING

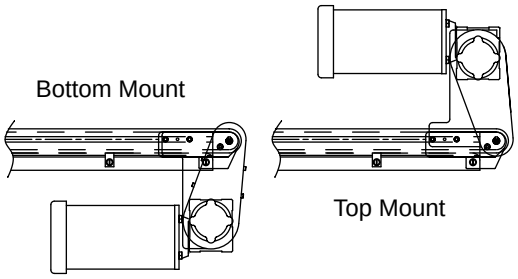
Conveyors are not reversible. Reversing creates pinch points which can cause severe injury.

DO NOT REVERSE CONVEYORS.

⚠ WARNING

Top and Bottom Mount Gearmotors must be mounted as shown below.

Failure to do so creates pinch points which can cause severe injury.



⚠ 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

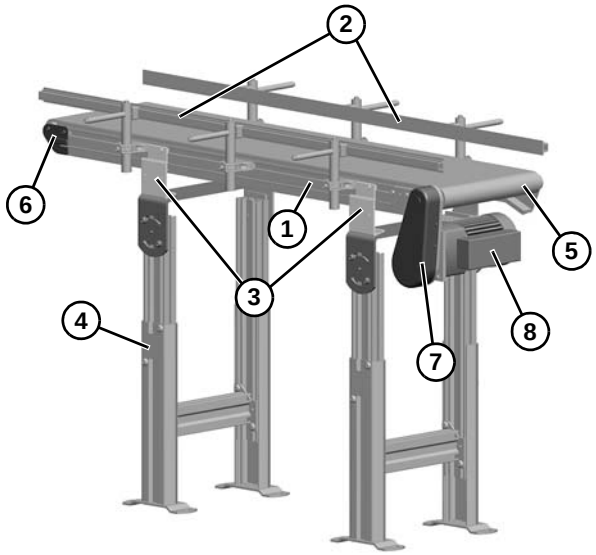
Loosening stand height or angle adjustment screws may cause conveyor sections to drop down, causing severe injury.

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

Product Description

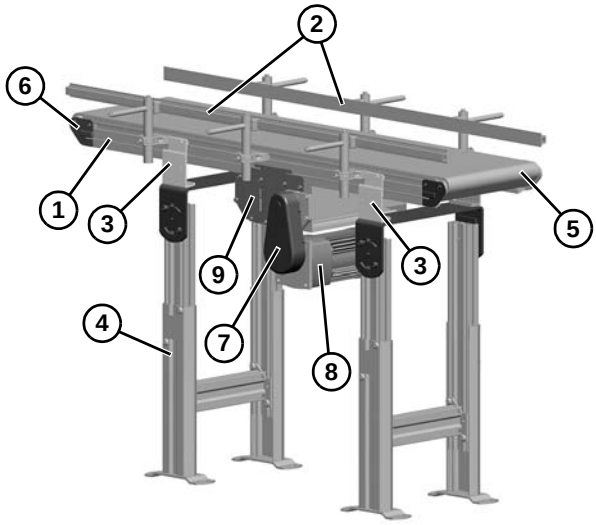
Refer to Figure 1 for typical conveyor components.

1	Conveyor
2	Guiding
3	Mounting Brackets
4	Support Stand
5	Drive End
6	Idler/Tension End
7	Gearmotor Mounting Package
8	Gearmotor
9	Center Drive Box (Center Drive Units)



End Drive Conveyor

Figure 1

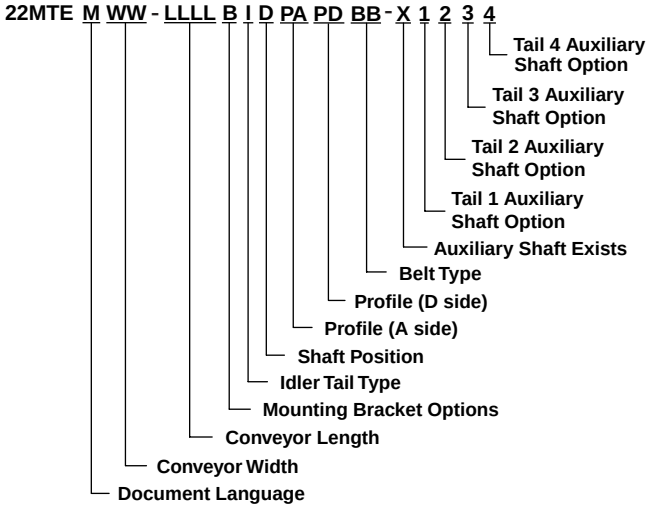


Center Drive Conveyor

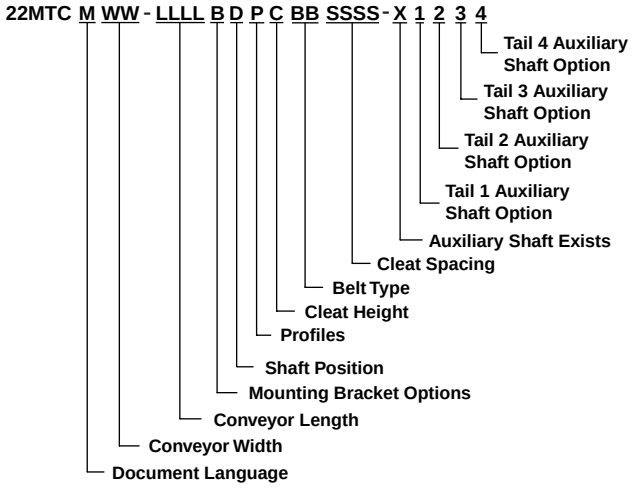
Figure 2

Models:

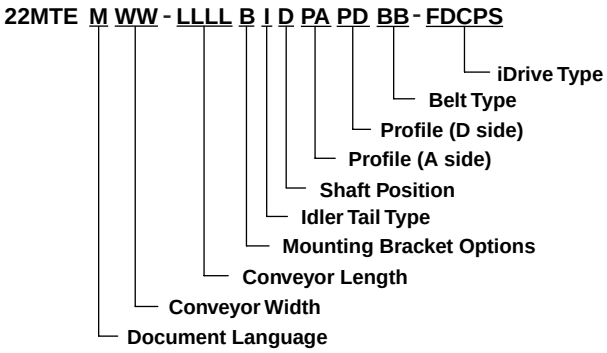
Flat Belt End Drive Conveyor



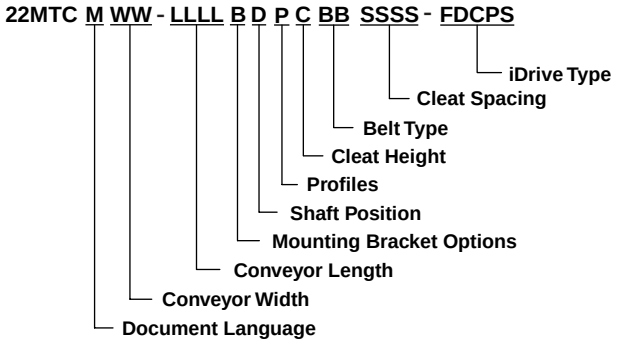
Cleated Belt End Drive Conveyor



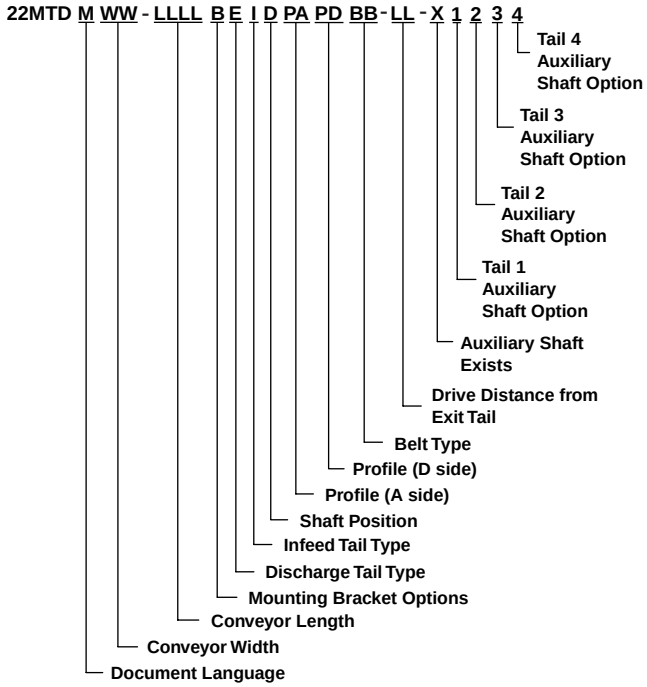
Flat Belt iDrive Conveyor



Cleated Belt iDrive Conveyor



Flat Belt Center Drive Conveyor



* See Engineering Manual for details.

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

Specifications

Conveyor Supports:

Maximum Distances:

1 = 18" (457 mm)**

2 = 6 ft (1829 mm)***

3 = 18" (457 mm)

** For Heavy Load Bottom Mount Package, mount support under gear head.

*** For conveyors longer than 10 ft (3048 mm), install support at joint.

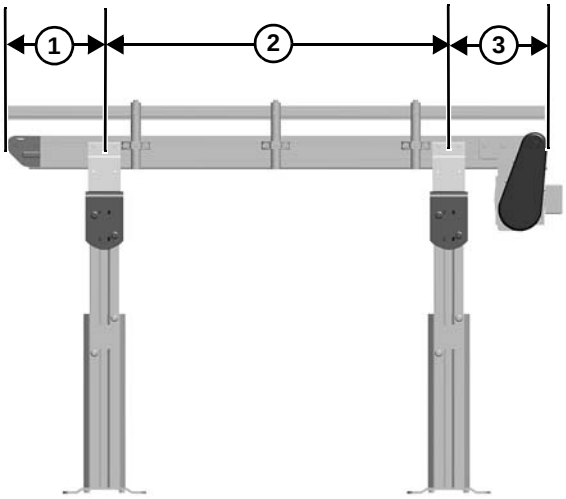


Figure 3

Conveyor Specifications:

Standard Micropitch Belts						
Conveyor Width Reference (WW)	04	06	08	12	18	24
Conveyor Belt Width	4" (102 mm)	6" (152 mm)	8" (203 mm)	12" (305 mm)	18" (457 mm)	24" (610 mm)
Conveyor Length Reference (LLLL)	01500 to 3000 in 001 increments					
Conveyor Length	1.50 ft (457 mm) to 30 ft (9144 mm) in 0.12" (3 mm) increments					
Belt Travel	5.35" (136 mm) per revolution of pulley					
End / Center Drive Maximum Belt Speed*	250 ft/minute (76.2 m/minute)					
iDrive Maximum Belt Speed*	90 ft/minute (27.4 m/minute)					

Standard Metalworking Belts						
Conveyor Width Reference (WW)	03	06	09	12	18	24
Conveyor Belt Width	3" (76 mm)	6" (152 mm)	9" (229 mm)	12" (305 mm)	18" (457 mm)	24" (610 mm)
Conveyor Length Reference (LLLL)	01500 to 3000 in 001 increments					
Conveyor Length	1.50 ft (457 mm) to 30 ft (9144 mm) in 0.12" (3 mm) increments					
Belt Travel	5.91" (150 mm) per revolution of pulley					
End / Center Drive Maximum Belt Speed*	250 ft/minute (76.2 m/minute)					
iDrive Maximum Belt Speed*	90 ft/minute (27.4 m/minute)					

* See Engineering Manual for details.

Table 1: 60 Hz Center Drive Standard Load 90° Gearmotor Specifications

	Single Phase Fixed Speed	Compact Three Phase, 4-Pole, Fixed/Variable Speed	Three Phase, 4-Pole, Variable Speed	Three Phase, SEW, Fixed/Variable Speed		
Output Power	0.25 Hp (0.19 kw)		0.5 Hp (0.37 kw)	0.25 Hp (0.19 kw)	0.33 Hp (0.25 kw)	0.5 Hp (0.37 kw)
Input Voltage (VAC)	115	208–230/460		230/460		
Input Frequency (Hz)	60					
Input Current (Amperes)	3.1	1.9/0.95	1.76-1.71/1.14	0.89/0.44	1.24/0.62	1.84/0.92
Gearmotor Ratios	5:1, 10:1, 20:1, 40:1, 60:1			39:1	17:1	8:1
Frame Size	NEMA 42CZ		NEMA 56C	N/A		
Motor Type	Totally enclosed, Fan cooled					

Table 2: 60 Hz Center Drive Heavy Load 90° Gearmotor Specifications

	Single Phase Fixed Speed	Three Phase, 4-Pole, Fixed Speed	Three Phase, 4-Pole, Variable Speed	Three Phase, 4-Pole, 575 VAC	Three Phase, 2-Pole, Variable Speed
Output Power	0.5 Hp (0.37 kw)		0.75 Hp (0.55 kw)	0.5 Hp (0.37 kw)	0.75 Hp (0.55 kw)
Input Voltage (VAC)	115	208–230/460	230/460	575	230/460
Input Frequency (Hz)	60				
Input Current (Amperes)	5.7	1.76-1.71/1.14	2.6/1.3	0.8	2.15/1.37
Gearmotor Ratios	5:1, 10:1, 20:1, 40:1, 60:1				5:1
Frame Size	NEMA 56C				
Motor Type	Totally enclosed, Fan cooled				

Table 3: 60 Hz Center Drive Parallel Shaft Gearmotor Specifications

	Standard Load			
	Single Phase Fixed Speed	Three Phase, 4-Pole, Fixed/Variable Speed	Three Phase, 4-Pole, Fixed/Variable Speed	BLDC
Output Power	0.17 Hp (0.13 kw)		0.38 Hp (0.28 kw)	0.25 Hp (0.19 kw)
Input Voltage (VAC)	115	230/460		See BLDC Manual
Input Frequency (Hz)	60			See BLDC Manual
Input Current (Amperes)	1.9	1.0/0.5	1.9/0.95	See BLDC Manual
Gearmotor Ratios	5:1, 10:1, 20:1, 30:1, 60:1, 180:1	60:1, 180:1	5:1, 10:1, 20:1, 30:1	10:1, 20:1, 50:1
Frame Size	N/A			N/A
Motor Type	Totally enclosed, Fan cooled			N/A

Specifications

Table 4: 50 Hz Center Drive 90° Gearmotor Specifications

	Standard Load	
	Single Phase Fixed Speed	**Three Phase Variable Speed**
Output Power	0.18 kw	0.25 kw
Input Voltage (VAC)	230	230/400
Input Frequency (Hz)	50	50
Input Current (Amperes)	1.6	1.56/0.9
Gearmotor Ratios	5:1, 10:1, 20:1, 40:1, 60:1	
Frame Size	IEC 63 B5 C Face	
Motor Type	Totally enclosed, Fan cooled	

Table 5: Belt Speeds for 60 Hz Standard Load Fixed Speed 90° E Drive Gearmotors

Part Number	RPM	In-lbs	N-m
62M060ES4(vp)FN	10	226	25.5
62M040ES4(vp)FN	43	237	26.8
62M020ES4(vp)FN	86	142	16
62M010ES4(vp)FN	173	78	8.8
62M005ES4(vp)FN	345	41	4.6

(vp) = voltage and phase

11 = 115 V, 1-phase

23 = 230V, 3-phase

Table 6: Belt Speeds for 60 Hz Standard Load Fixed Speed Parallel Shaft Gearmotors

Part Number	RPM	In-lbs	N-m
62M0180PS4(vp)FN	10	341	38.5
62M0060PS4(vp)FN	29	270	30.5
62M030PS4(vp)FN	58	250	15.3
62M0020PS4(vp)FN	86	167	10.2
62M0010PS4(vp)FN	173	115	5.1
62M0005PS4(vp)FN	345	58	2.8

(vp) = voltage and phase

11 = 115 V, 1-phase

23 = 230V, 3-phase

Table 7: Belt Speeds for 60 Hz Standard Load Fixed Speed SEW Gearmotors

Part Number	RPM	In-lbs	N-m
22M039WS423EN	46	203	22.9
22M017WS423EN	109	159	18
22M008WS423EN	219	132	14.9

Table 8: Belt Speeds for 60 Hz Compact Standard Load Variable Speed 90° E Drive Gearmotors

Part Number	RPM	In-lbs	N-m
62M060ES4(23)EN	5 - 29	226	25.5
62M040ES4(23)EN	7 - 43	237	26.8
62M020ES4(23)EN	14 - 86	142	16
62M010ES4(23)EN	29 - 174	78	8.8
62M005ES4(23)EN	58 - 345	41	4.6

Table 9: Belt Speeds for 60 Hz Standard Load Variable Speed 90° E Drive Gearmotors

Part Number	RPM	In-lbs	N-m
32M060EL4(23)EN	3 - 29	226	25.5
32M040EL4(23)EN	4 - 43	237	26.8
32M020EL4(23)EN	9 - 86	142	16
32M010EL4(23)EN	17 - 173	78	8.8
32M005EL4(23)EN	35 - 345	41	4.6

Table 10: Belt Speeds for 60 Hz Standard Load Variable Speed Parallel Shaft Gearmotors

Part Number	RPM	In-lbs	N-m
62M0180PS4(vp)FN	2 - 10	341	38.5
62M0060PS4(vp)FN	5 - 29	270	30.5
62M030PS4(vp)FN	10 - 58	250	15.3
62M0020PS4(vp)FN	14 - 86	167	10.2
62M0010PS4(vp)FN	29 - 173	115	5.1
62M0005PS4(vp)FN	58 - 345	58	2.8

(vp) = voltage and phase

11 = 115 V, 1-phase

23 = 230V, 3-phase

Table 11: Belt Speeds for Parallel Shaft Variable Speed Brushless DC Gearmotors

Part Number	RPM	In-lbs	N-m
62M050PSBDDENB	2 - 60	230	25.7
62M020PSBDDENB	5 - 150	88	9.7
62M010PSBDDENB	10 - 200	38	4.2

Table 12: Belt Speeds for 60 Hz Standard Load Variable Speed SEW Gearmotors

Part Number	RPM	In-lbs	N-m
22M039WS423EN	8 - 46	203	22.9
22M017WS423EN	18 - 109	159	18
22M008WS423EN	37 - 219	132	14.9

Specifications

Table 13: Belt Speeds for 60 Hz Heavy Load Fixed Speed 90° E Drive Gearmotors

Part Number	RPM	In-lbs	N-m
32M060ES4(vp)FN	29	226	25.5
32M040ES4(vp)FN	43	247	27.9
32M020ES4(vp)FN	86	248	27.9
32M010ES4(vp)FN	173	156	17.6
32M005ES4(vp)FN	345	81	9.1
32M005ES2(vp)FN	672	33	3.2

(vp) = voltage and phase

11 = 115 V, 1-phase

23 = 230V, 3-phase

Table 14: Belt Speeds for 60 Hz Heavy Load Variable Speed 90° E Drive Gearmotors

Part Number	RPM	In-lbs	N-m
32M060ES4(vp)EN	3 - 29	226	25.5
32M040ES4(vp)EN	4 - 43	247	27.9
32M020ES4(vp)EN	9 - 86	248	27.9
32M010ES4(vp)EN	17 - 173	156	17.6
32M005ES4(vp)EN	35 - 345	81	9.1
32M005ES2(vp)EN	67 - 672	33	3.2

(vp) = voltage and phase

11 = 115 V, 1-phase

23 = 230V, 3-phase

Table 15: Belt Speeds for 60 Hz Heavy Load Variable Speed 90° E Drive Gearmotors

Part Number	RPM	In-lbs	N-m
32M060ES453EN	3 - 29	256	28.9
32M040ES453EN	4 - 43	247	27.9
32M020ES453EN	9 - 86	248	28
32M010ES453EN	17 - 173	156	17.6
32M005ES453EN	35 - 345	81	9.1

Table 16: Belt Speeds for 50 Hz Standard Load Fixed Speed 90° E Drive Gearmotors

Part Number	RPM	N-m
62Z060ES4(vp)FN	23	26.4
62Z040ES4(vp)FN	35	28.9
62Z020ES4(vp)FN	70	19.4
62Z010ES4(vp)FN	140	10.7
62Z005ES4(vp)FN	280	5.6

(vp) = voltage and phase

21 = 230 V, 1-phase

23 = 230V, 3-phase

43 = 400V, 3-phase

Table 17: Belt Speeds for 50 Hz Standard Load Variable Speed 90° E Drive Gearmotors

Part Number	RPM	N-m
62Z060ES4(23)EN	12 - 29	26.4
62Z040ES4(23)EN	18 - 44	28.9
62Z020ES4(23)EN	35 - 88	19.4
62Z010ES4(23)EN	70 - 176	10.7
62Z005ES4(23)EN	140 - 353	5.6

NOTE

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

Specifications

Table 18: Pulley Ratio

Motor (Drive) Pulley Teeth	Conveyor (Driven) Pulley Teeth	Pulley Ratio
19	32	0.59
22	32	0.69
28	22	1.27
28	32	0.88
32	22	1.45
32	28	1.14
32	32	1.00
44	19	2.32
44	22	2.00
44	28	1.57
44	32	1.38
48	19	2.53
48	22	2.18
48	28	1.71
48	32	1.50

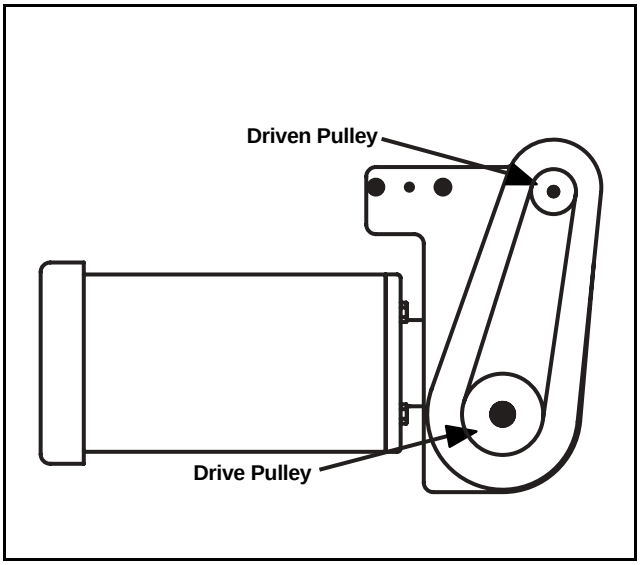


Figure 4

Table 19: Conveyor Belt Speed Factor

Conveyor Type	ft/min	m/min
2200 MB Micropitch	0.455	0.139
2200 MB Metalworking	0.501	0.153

Belt Speed Calculation:

How to Calculate Belt Speed

1. Determine gearmotor RPM from tables 5-17.
2. Determine the pulley kit ratio. Count the number of teeth on the drive and driven pulleys following figure 4. Using table 18, look up pulley ratio based on pulley combinations.
3. Determine conveyor speed factor using table 19. Based on your conveyor type, select the appropriate factor.
4. Calculate belt speed:

Example: Belt Speed = Gearmotor RPM (tables 5-17) x Pulley Kit Ratio (table 18) x Conveyor Speed Factor (table 19)

2200 Series Heavy Load Variable Speed 90° E Drive Gearmotors with 32 tooth sprocket on gearmotor (Drive) and 28 tooth sprocket on the conveyor output shaft (Driven).

Gearmotor =	32M010ES453EN	= 17 - 173 RPM
Pulley Kit =	32 t mtr. - 28 t conv.	= 1.14
Speed Factor =	Micropitch 0.455	= 0.139 ft/min per RPM
Minimum Belt Speed =	17 x 1.14 x 0.139	= 2.69382 Ft/min
Maximum Belt Speed =	173 x 1.14 x 0.139	= 27.41358 Ft/min

iDrive Motor Specifications

Output Power	25 watt	25 watt
Motor Voltage	24 volt DC, 0.8 amp	24 volt DC, 0.8 amp
Transformer Voltage	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz
Gearmotor Ratio	23:1	66:1
Motor Type	Brushless DC	Brushless DC
Belt Speeds	9-90 Ft./Min., 6-60 Ft./Min.	3-30 Ft./Min., 2-20 Ft./Min.
Duty Cycle	Non-Continuous Duty	Non-Continuous Duty
Index Capability	Up to 30 per Minute	Up to 30 per Minute

iDrive Load Capacity (lbs)

		HIGH SPEED (A) OPTION 9-90 Ft./Min								
		LENGTH								
		2	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
WIDTH	**3**	2	3	4	5	6	7	8	9	10
	4	10	15	19	19	19	18	18	18	17
	6	13	20	20	20	20	19	19	18	18
	8	18	18	17	17	16	15	15	14	13
	9	17	17	16	15	14	13	13	12	11
	12	16	15	14	13	12	11	10	9	9
	18	14	12	11	10	9	8	6	5	0
	24	12	10	9	7	5	0	0	0	0

		MEDIUM HI (B) SPEED OPTION 6-60 Ft./Min								
		LENGTH								
		2	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
WIDTH	**3**	10	15	20	25	30	32	31	31	30
	4	13	20	27	28	27	27	26	25	25
	6	20	28	27	26	25	25	24	23	22
	8	27	27	26	25	24	23	22	21	20
	9	27	24	22	21	20	19	18	16	15
	12	25	21	20	18	16	15	13	12	10
	18	23	19	17	15	13	11	9	7	5
	24	21	0	0	0	0	0	0	0	0

Specifications

		MEDIUM LO (C) SPEED OPTION 3-30 Ft./Min								
		LENGTH								
		2	3	4	5	6	7	8	9	10
WIDTH	3	10	15	20	25	30	35	40	45	50
	4	13	20	27	33	40	47	53	58	57
	6	20	30	40	50	52	51	51	50	49
	8	27	40	52	51	50	49	49	48	47
	9	30	45	50	49	48	47	46	45	44
	12	40	48	47	46	45	43	42	41	40
	18	48	46	45	43	41	40	38	36	35
	24	46	44	42	40	38	36	34	32	29

		LOW (D) SPEED OPTION 2-20 Ft./Min								
		LENGTH								
		2	3	4	5	6	7	8	9	10
WIDTH	3	10	15	20	25	30	35	40	45	50
	4	13	20	27	33	40	47	53	55	55
	6	20	30	40	50	60	70	75	75	75
	8	27	40	53	67	75	75	75	75	74
	9	30	45	60	75	75	75	74	73	72
	12	40	60	74	73	72	71	69	68	67
	18	60	73	72	70	68	67	65	63	62
	24	73	71	69	67	65	63	61	59	57

NOTE

Maximum conveyor loads based on:

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

⚠ WARNING

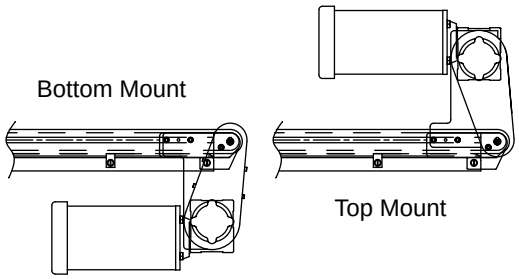
Conveyors are not reversible. Reversing creates pinch points which can cause severe injury.

DO NOT REVERSE CONVEYORS.

⚠ WARNING

Top and Bottom Mount Gearmotors must be mounted as shown below.

Failure to do so creates pinch points which can cause severe injury.



NOTE

Conveyor MUST be mounted straight, flat and level within confines of conveyor. Use a level ***(Figure 5, item 1)*** *for setup.*

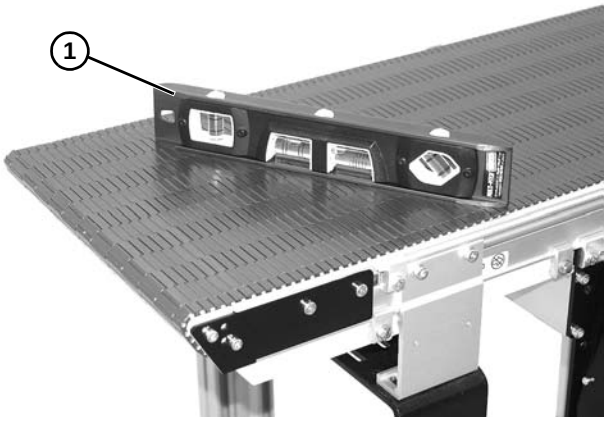


Figure 5

Required Tools

- Hex-key wrenches: 4 mm, 5 mm
- Level
- Torque wrench
- 3/32” (2.4 mm) wide Flat Blade screwdriver

Recommended Installation Sequence

- Install support stands (see accessory instructions)
- Assemble conveyor frame (if required) (page 17)
- Attach mounting brackets to conveyor frame and stands (page 18)
- Install Belt (page 19)
- Mount gearmotor mounting package (see accessory instructions)
- Attach guides/accessories (Refer to “Service Parts” on page 42 for details)

Conveyors Up to 10 ft (3048 mm)

No assembly is required. Install mounting brackets. Refer to “Mounting Brackets” on page 18.

Installation

Conveyors Longer Than 12 ft (3658 mm)

1. Locate and arrange conveyor sections by section labels **(Figure 6, item 1)**.

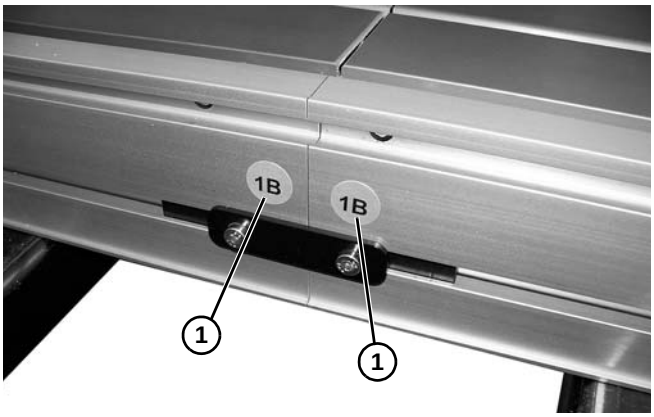


Figure 6

2. Join conveyor sections and install connector brackets **(Figure 7, item 1)** or connector/mount brackets **(Figure 7, item 2)** and screws **(Figure 7, item 3)** on both sides as indicated.

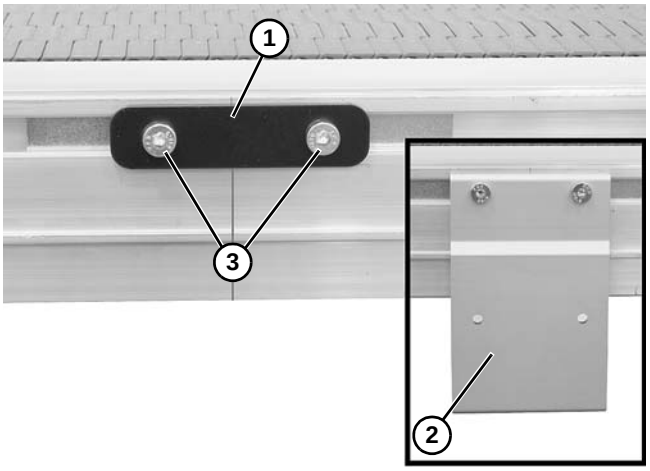


Figure 7

3. Tighten screw **(Figure 7, item 3)** to 60 in-lb (7 Nm) on both sides of conveyor.

Mounting Brackets

1. Locate brackets. Exploded view shown in Figure 8.

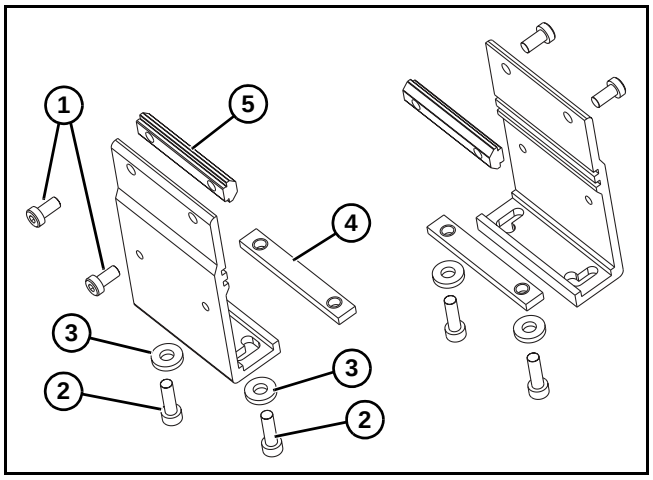


Figure 8

2. Remove screws **(Figure 8, item 1 & 2)**, washers **(Figure 8, item 3)**, nutbars **(Figure 8, item 4)** and T-bars **(Figure 8, item 5)** from brackets.
3. Insert T-bars **(Figure 8, item 5)** into conveyor side slots **(Figure 9, item 1)**. Fasten brackets **(Figure 9, item 2)** to conveyor with mounting screws **(Figure 9, item 3)**.

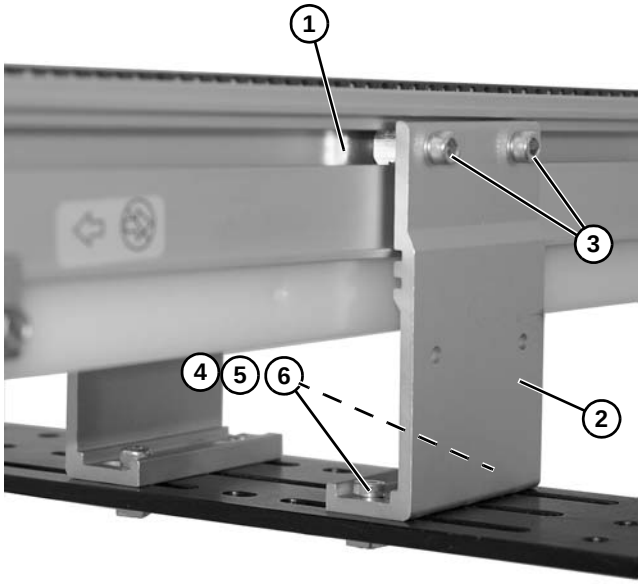


Figure 9

4. Fasten brackets to support stand with mounting screws **(Figure 9, item 4)**, washers **(Figure 9, item 5)** and nuts **(Figure 9, item 6)**.
5. Tighten screws **(Figure 9, item 3 & 4)** to 60 in-lb (7 Nm).

Installing Plastic Belt

1. Locate the conveyor belt retaining rod **(Figure 10, item 1)**.

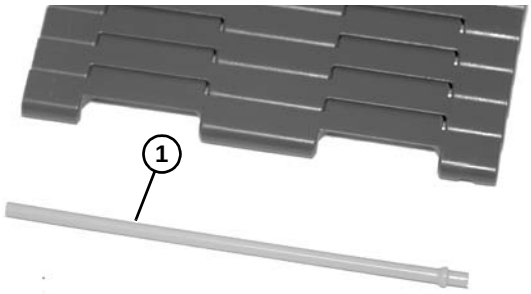
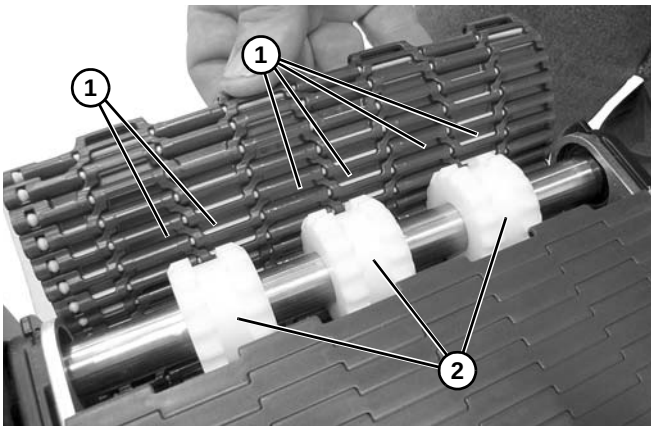


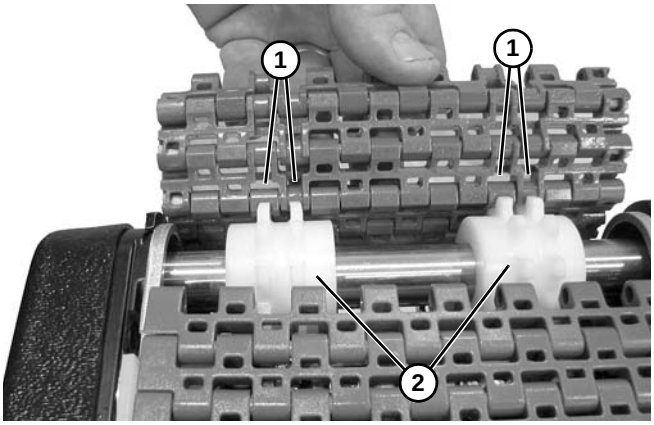
Figure 10

2. Align the belt grooves **(Figure 11, item 1)** or **(Figure 12, item 1)** to the evenly spaced sprockets **(Figure 11, item 2)** or **(Figure 12, item 2)** on the drive end of the conveyor.



Micropitch Belt

Figure 11



Metalworking Belt

Figure 12

3. Feed belt into bottom wear strips **(Figure 13, item 1)** and pull through to the far end.

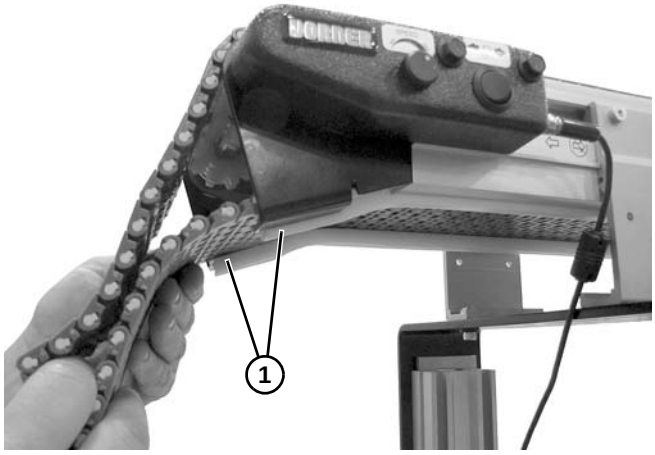


Figure 13

4. Splice the belt together by pushing the plastic rod **(Figure 14, item 1)** through the side hole on the rod retaining side of belt.

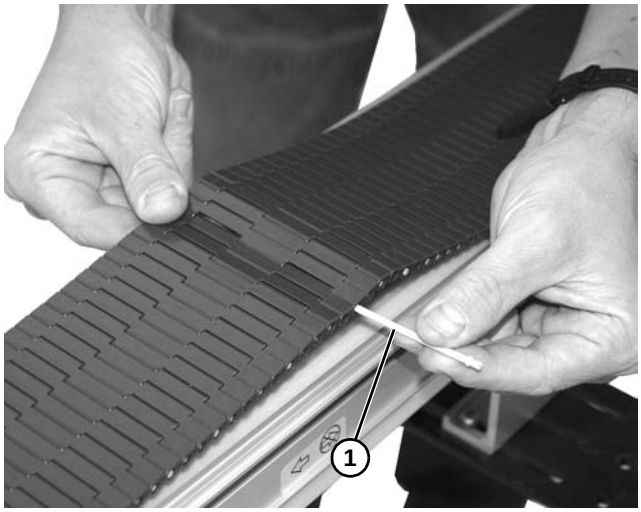


Figure 14

iDrive Wiring

⚠ WARNING

Motor will start immediately once power is supplied. Exposed moving parts can cause severe injury. LOCK OUT POWER before wiring to avoid accidental startup.

The 2200 series iDrive is available in 2 models:

A. Cover Mounted Controls

B. Cover Mounted Controls with Remote Start/Stop Cable

Cover Mounted Controls with 115 volt Power Supply

1. No wiring is required. Attach quick disconnect end **(Figure 15, item 1)** of power supply **(Figure 15, item 2)** to power jack **(Figure 15, item 3)**.

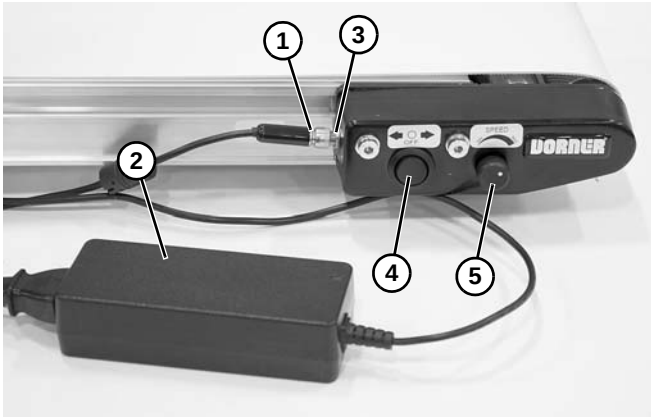


Figure 15

2. Select conveyor running direction with directional switch **(Figure 15, item 4)**.
3. Select conveyor speed with speed control knob **(Figure 15, item 5)**.

NOTE

1. *Start Stop Application: Maximum start stop cycles are 30 per minute.*
2. *Reversing Applications: Do not reverse the motor direction when running. Make sure the motor is stopped before reversing signal is given.*

Cover Mounted Controls with Remote Start/Stop Cable

1. Connect power supply to cover. See previous section.
2. Select conveyor running direction with directional switch **(Figure 16, item 1)**.

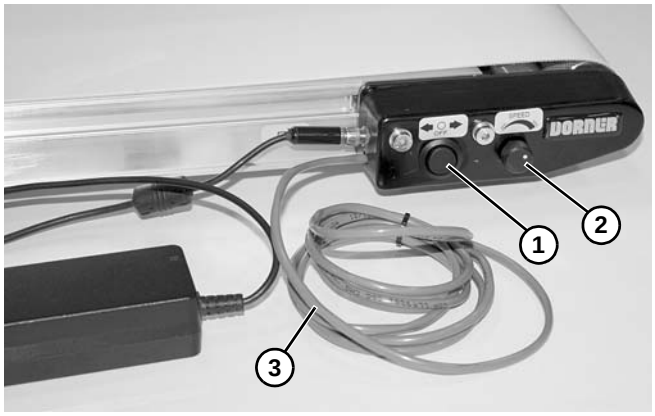


Figure 16

3. Select conveyor speed with speed control knob **(Figure 16, item 2)**.
4. Remote start/stop cable **(Figure 16, item 3)** comes with wire nut over remote leads to allow test running conveyor.
5. Remove wire nut and connect red and black wires to switching device. Switching device minimum rating 1 amp @ 24 VDC.

NOTE

1. *Start Stop Application: Maximum start stop cycles are 30 per minute.*
2. *Reversing Applications: Do not reverse the motor direction when running. Make sure the motor is stopped before reversing signal is given.*

Customer Provided Power

1. Locate the male disconnect plug **(Figure 17, item 1)** provided.

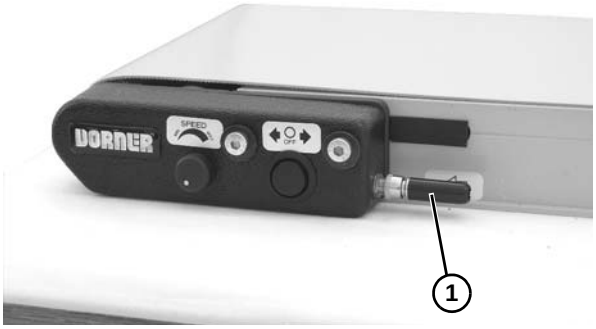


Figure 17

2. Wire and solder DC power to the two terminals of the provided DC power plug. Wire +VDC to the short lug **(Figure 18, item 1)** and -VDC to the long lug **(Figure 18, item 2)**.

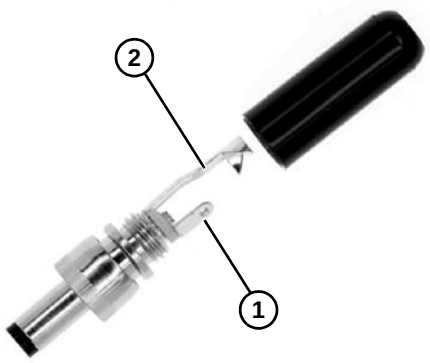


Figure 18

3. Required power is 24VDC, 2 amps minimum.

Cover Mounted Controls with Photo Eye Option

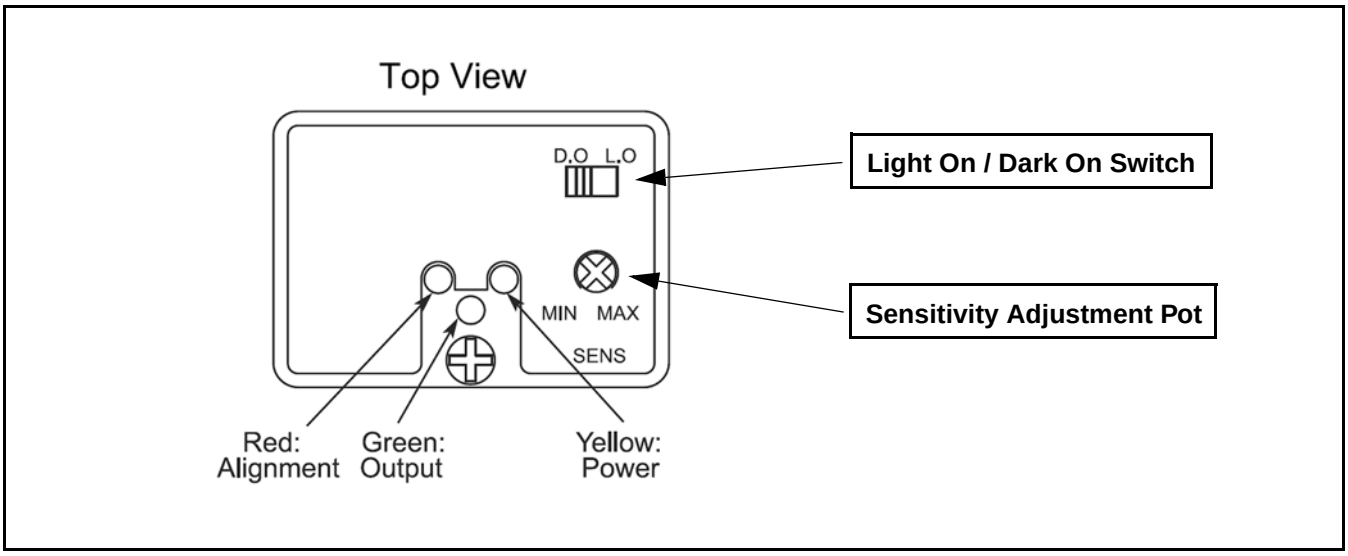


Figure 19

1. Mount photo eye and reflector bracket to side of conveyor close to zone to be sensed.
2. Connect power supply to AC input power, photo eye plug, and to conveyor drive cover. Adjust conveyor running direction switch to off (center) position. Photo eye should have yellow LED lit.
3. Adjust reflector to align with red beam emitted from photo eye and be at a 90 degree +/- 15 degree angle to photo eye face. When reflector is properly aligned, photo eye will have yellow and red LED lit. Green LED indicates output relay is energized.
4. Adjust photo eye sensitivity by placing a sample object in the beam. Unscrew clear cover on photo eye top and slowly turn the gain adjustment clockwise (see caution below concerning pot adjustment) until the green (output) LED activates (assuming the sensor is in the light operate mode). Note the position and remove the sample object. Now continue turning the sensitivity setting clockwise to find the position where the green LED activates from the background reflection. Reset the sensitivity midway between the two positions.

⚠ CAUTION

Adjustment pots are 3/4 turn devices. Any resistance encountered while adjusting these pots indicates you have reached the adjustment limit stop. Turning past stop will damage the sensor.

5. Photo eye comes preset to Light-On operation which causes the conveyor to run when the sensed zone is clear and stop when the sensed zone is blocked. For Dark-On operation move selector to D.O. position (Figure 19).
6. Select conveyor running direction with directional switch **(Figure 16, item 1)**. If Dark-On operation is selected, temporarily block photo eye to energize conveyor.
7. Select conveyor speed with speed control knob **(Figure 16, item 2)**.

Guide Clips

1. Install guide clip assembly **(Figure 20, item 1)** into conveyor t-slot **(Figure 20, item 2)** as shown.

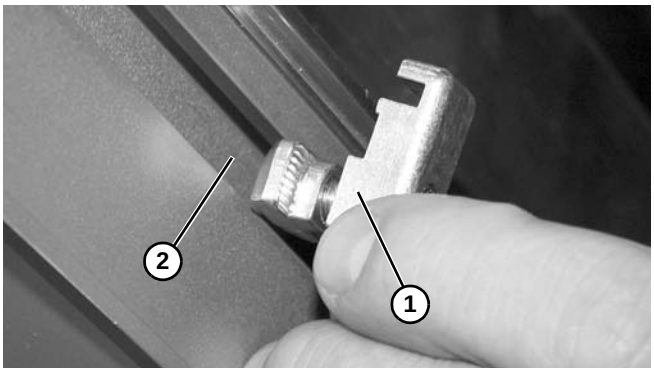


Figure 20

2. Tighten screw **(Figure 21, item 1)** making sure t-bar **(Figure 21, item 2)** rotates and engages inside of t-slot.

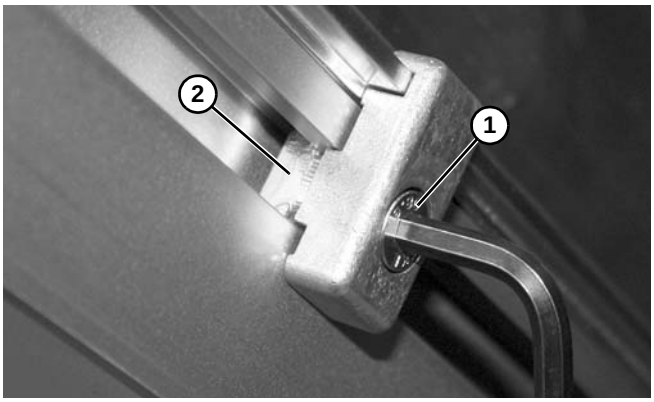


Figure 21

Adjustable Guides

1. Install guide bracket assembly **(Figure 22, item 1)** into the conveyor t-slot **(Figure 22, item 2)**.

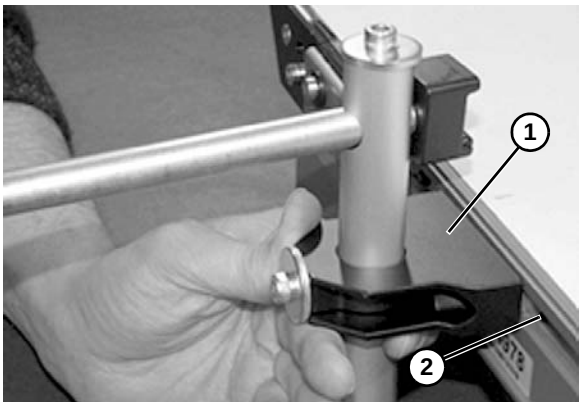


Figure 22

2. Tighten screws **(Figure 23, item 1)** making sure t-nut **(Figure 23, item 2)** rotates and engages inside of the t-slot.

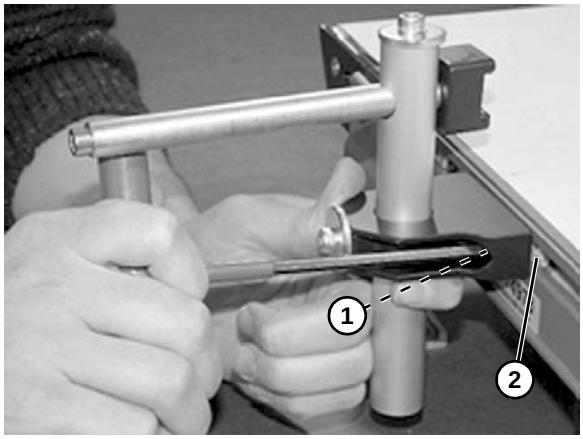


Figure 23

3. Loosen screw **(Figure 24, item 1)** on end of shaft **(Figure 24, item 2)** to remove clip **(Figure 25, item 1)**.

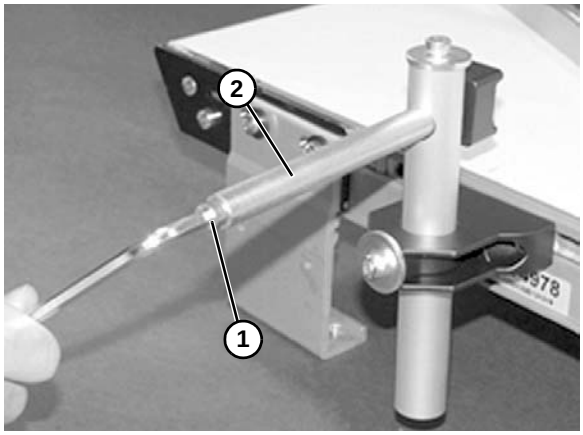


Figure 24

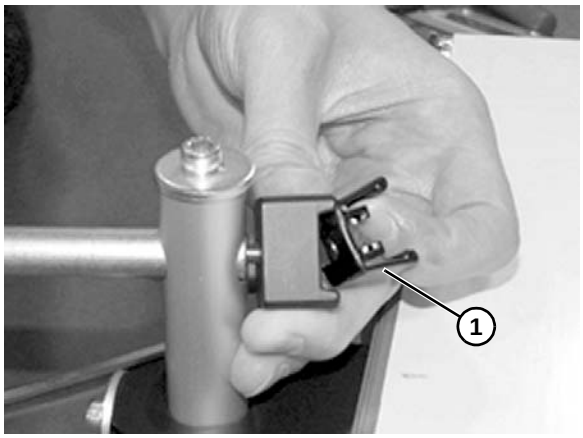


Figure 25

4. Snap clip **(Figure 26, item 1)** onto guide rail **(Figure 26, item 2)**.

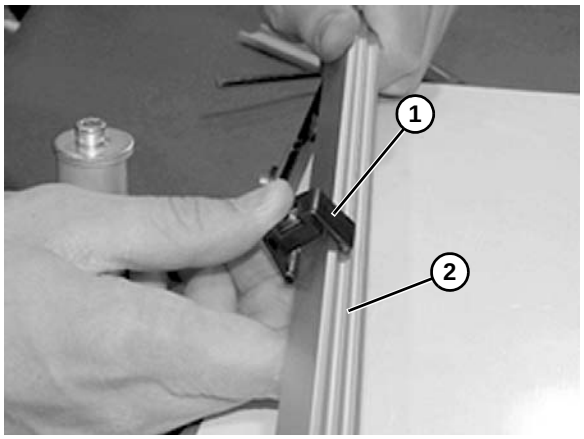


Figure 26

5. Reassemble clip **(Figure 27, item 1)** and attach to shaft **(Figure 27, item 2)**. Tighten screw **(Figure 24, item 1)** on end of shaft.

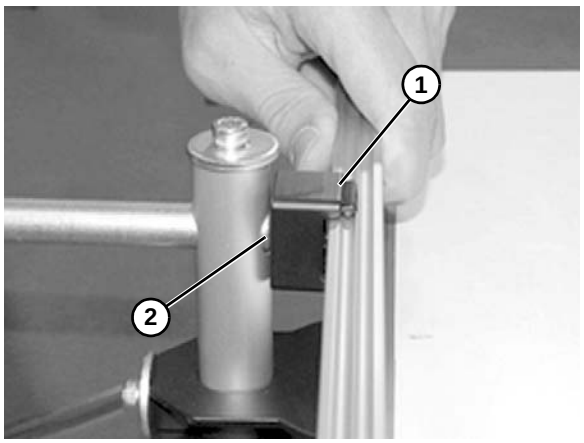


Figure 27

6. Adjust rail width with top screw **(Figure 28, item 1)**.

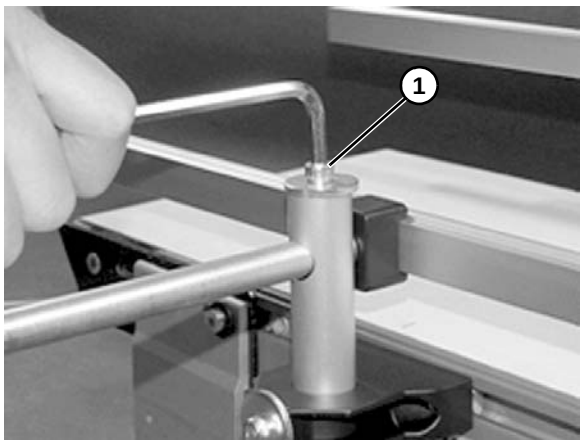


Figure 28

7. Adjust rail height with lower screw **(Figure 29, item 1)**.

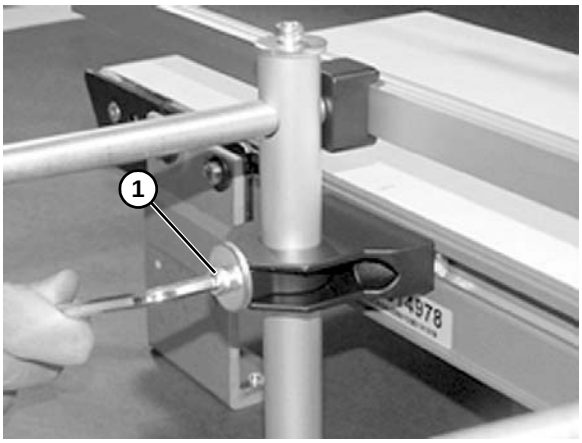


Figure 29

Required Tools

Standard Tools

- Hex-key wrenches:
  2.5 mm, 4 mm, 5 mm
- 3/32” (2.4 mm) wide Flat Blade screw driver
- Arbor press
- Adjustable wrench to 1” (25 mm) wide

Special Tools

- 807–1078 Sealed Bearing Removal Tool
- 450293 Sealed Bearing Installation Tool

Checklist

- Keep service parts on hand (see “Service Parts” section for recommendations)
- Keep supply of belt cleaner
- Clean entire conveyor 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
- Tooth skipping
- Loose links

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 skipping belt indicates:

- Belt stretching
- Conveyor belt or drive timing belt are not properly tensioned
- Worn sprocket or 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.

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
- Install new conveyor belt

Belt Removal

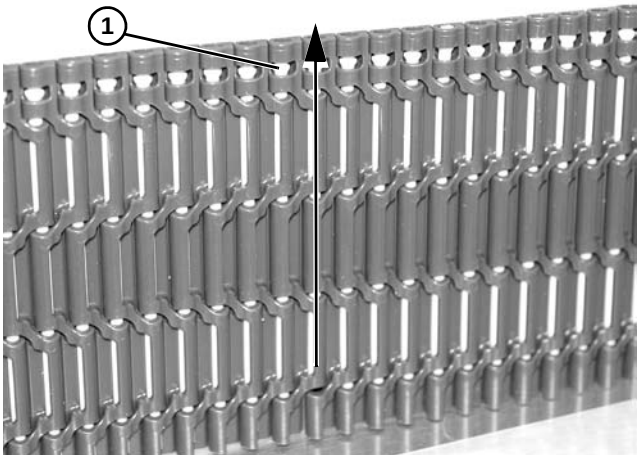
IMPORTANT

You may need to slightly raise the underside of the conveyor belt to properly drive pin out of slots.

NOTE

For Micropitch Belts follow steps 1, 2, 3, 6 and 7. For Metalworking Belts follow steps 4, 5, 6 and 7.

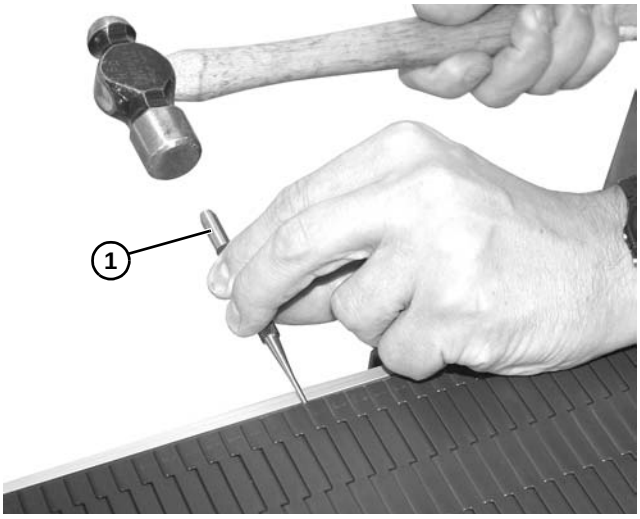
1. Choose one link on either end of the conveyor to remove belt pin. Locate end of rod without retaining feature **(Figure 30, item 1)**.



Micropitch Belt

Figure 30

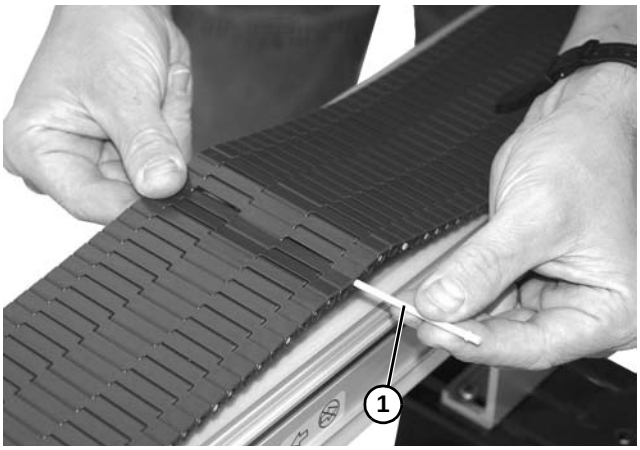
2. Insert punch **(Figure 31, item 1)** into non-retaining side of belt, pushing rod out.



Micropitch Belt

Figure 31

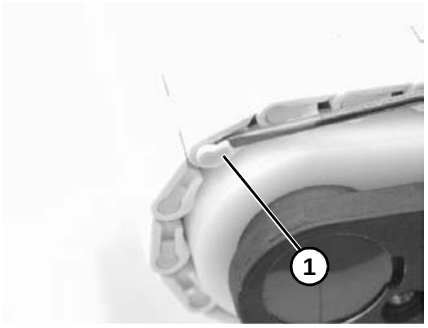
3. Remove rod **(Figure 32, item 1)** and separate belt.



Micropitch Belt

Figure 32

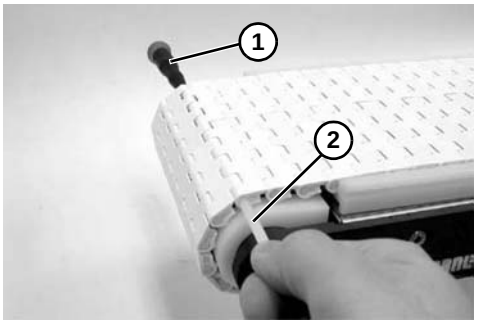
4. Choose one link on the idler end of chain to remove endcaps. With a 3/32" (2.4 mm) flat blade screwdriver, pry under tab of end caps **(Figure 33, item 1)** and remove end cap. Repeat for opposite side of conveyor.



Metalworking Belt

Figure 33

5. Insert screwdriver **(Figure 34, item 1)** into one side of belt, pushing rod **(Figure 34, item 2)** out. Remove rod and separate belt.



Metalworking Belt

Figure 34

6. Pull back topside of belt to the drive end of the conveyor. See Figure 35.

Figure 35

7. Remove belt by pulling belt out of bottom wear strips **(Figure 36, item 1)**.

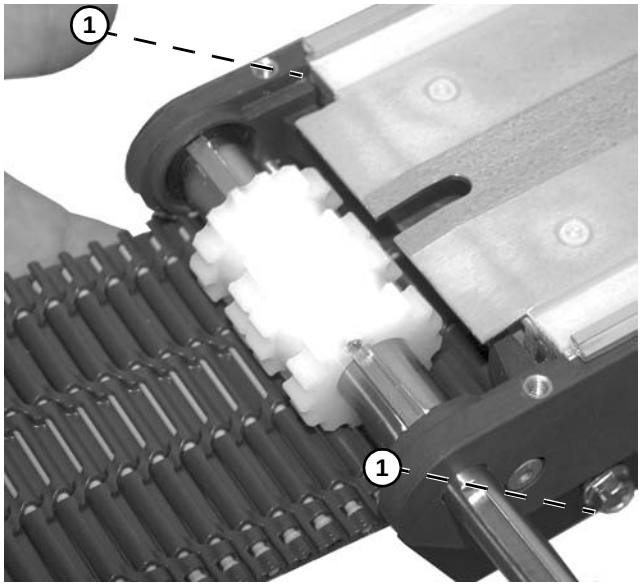


Figure 36

Belt Installation

1. See “Installing Plastic Belt” page 19.

Conveyor Belt Tension

⚠ WARNING

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

NOTE

The Modular Belt Conveyor is designed to operate with minimal belt tension. Conveyor will come with proper amount of belt sag at drive end of conveyor belt. See Figure 37. As belt stretches, it may be necessary to remove links to avoid too much belt sag. See Figure 38.

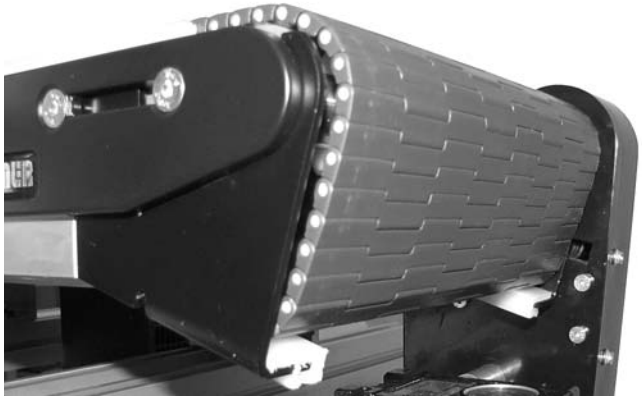


Figure 37

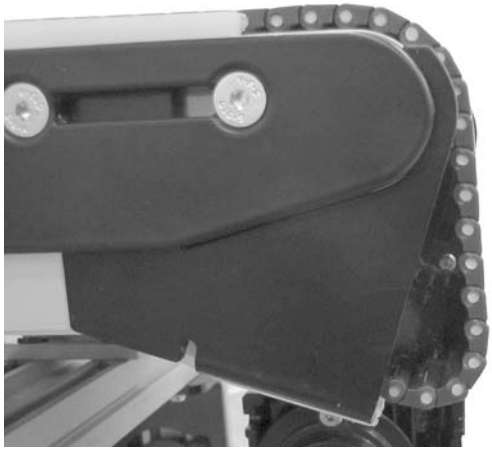


Figure 38

⚠ WARNING

Operating conveyor with belt sag beyond maximum shown in Figure 38 will create belt pinch points which can cause injury.

REMOVE BELT LINKS IF MAXIMUM SAG IS REACHED

Removal of Belt Links

IMPORTANT

You may need to slightly raise the underside of the conveyor belt to properly drive pin out of slots.

Micropitch Belts

1. Choose one link on either end of the conveyor to remove belt pin. Locate end of rod without retaining feature **(Figure 39, item** 1).

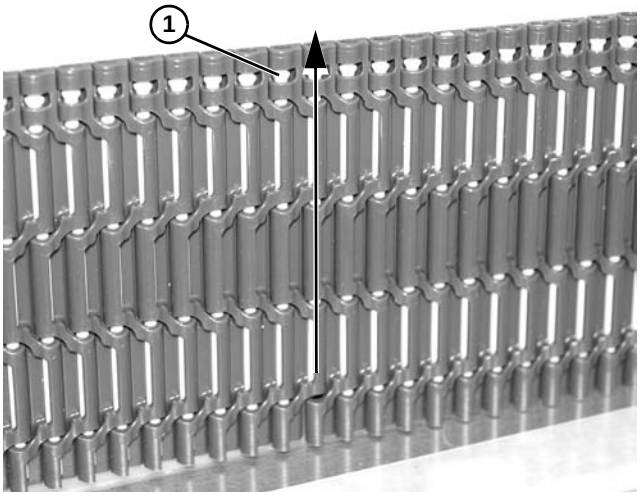


Figure 39

2. Insert punch **(Figure 40, item 1)** into non-retaining side of belt, pushing rod out.

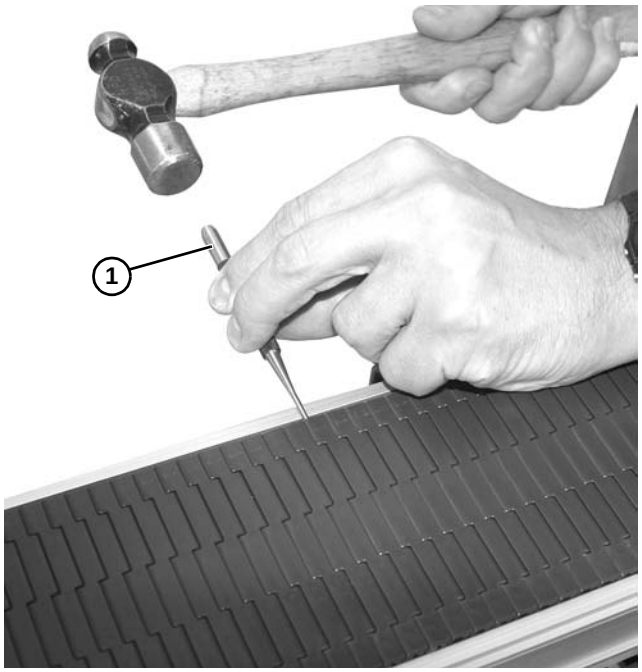


Figure 40

3. Remove rod **(Figure 41, item 1)** and separate belt.

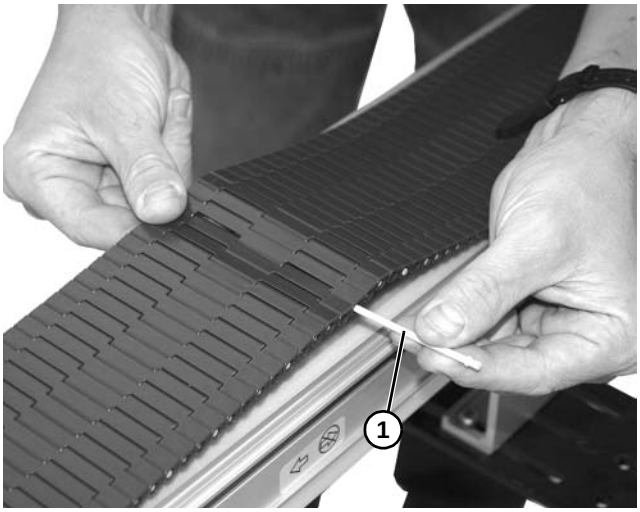


Figure 41

4. Determine the number of links to be removed. Start with 1 link and progress if additional tensioning is required repeat steps 1 - 3.

5. Splice the belt together by pushing the plastic rod **(Figure 42, item 1)** through the side hole on the rod retaining side of belt.

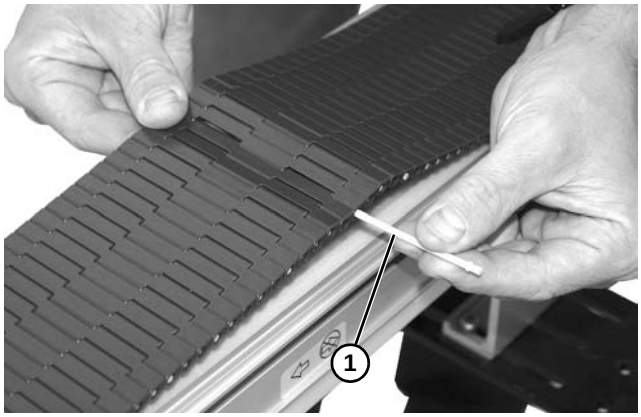


Figure 42

6. Review belt sag at drive end to ensure it stays within the sag area of the tail. If additional tensioning is required repeat steps 1 - 5.

Metalworking Belts

1. Choose one link on the idler end of chain to remove endcaps. With a 3/32" (2.4 mm) flat blade screwdriver, pry under tab of end caps **(Figure 43, item 1)** and remove end cap. Repeat for opposite side of conveyor.

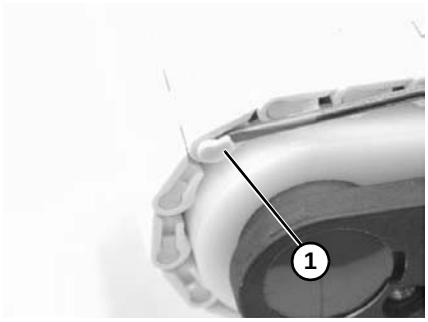


Figure 43

2. Insert screwdriver **(Figure 44, item 1)** into one side of belt, pushing rod **(Figure 44, item 2)** out. Remove rod and separate belt.

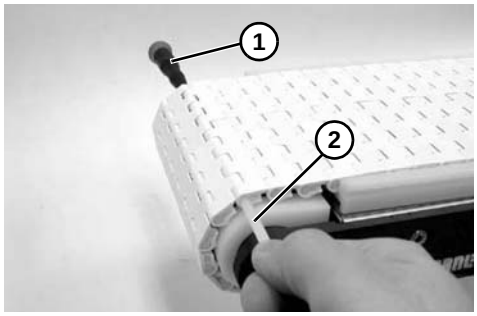


Figure 44

3. Determine the number of links to be removed. Start with 1 link and progress if additional tensioning is required repeat steps 1 and 2.
4. Splice the belt together by pushing the plastic rod **(Figure 45, item 1)** through the side hole.

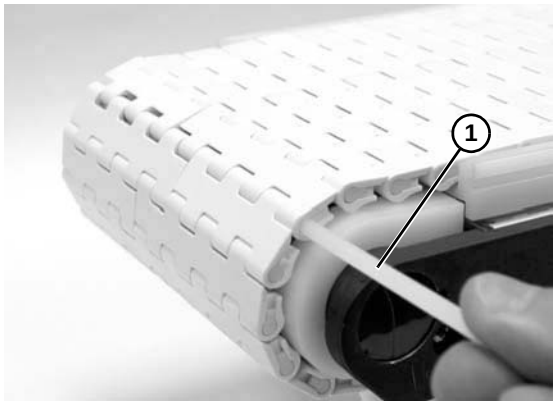


Figure 45

5. Insert rod retaining end caps **(Figure 46, item 1)** on both sides of belt.

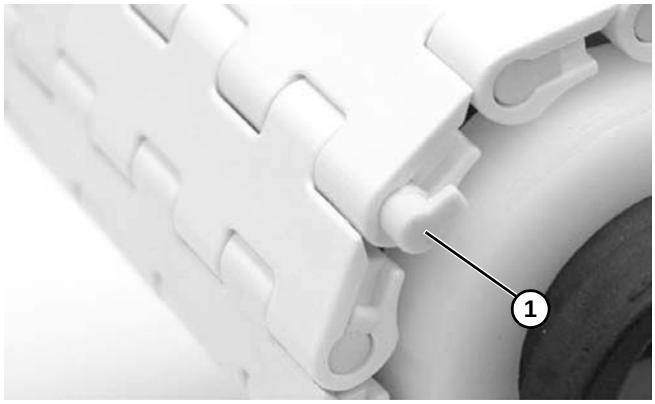


Figure 46

6. Review belt sag at drive end to ensure it stays within the sag area of the tail. If additional tensioning is required repeat steps 1 - 5.

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

- A – End Drive Conveyor
- B – Center Drive Conveyor
- C – iDrive Conveyor

A – End Drive Conveyor

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

1. Remove belt from drive tail. See “Belt Removal” on page 26.
2. Remove upper wear strips **(Figure 47, item 1)** from end drive.

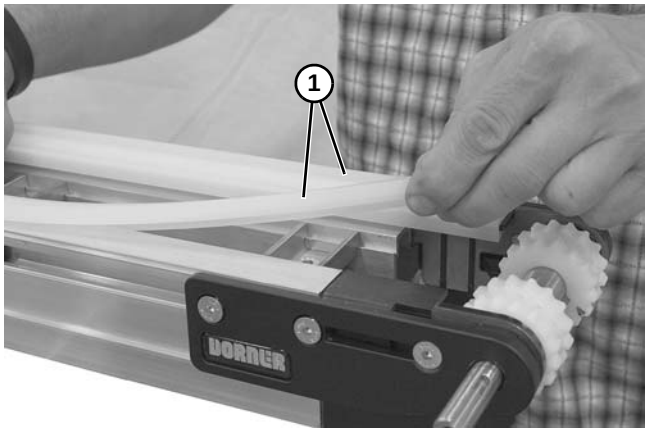


Figure 47

3. Remove lower wear strips **(Figure 48, item 1)** from end drive.

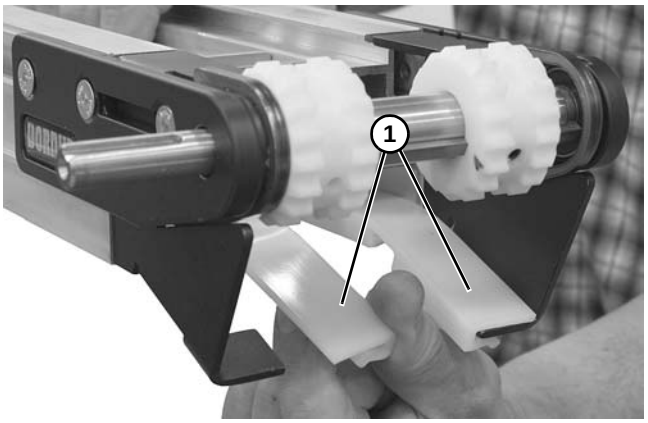


Figure 48

4. Loosen two fastening screws **(Figure 49, item 1)** on both sides of conveyor.

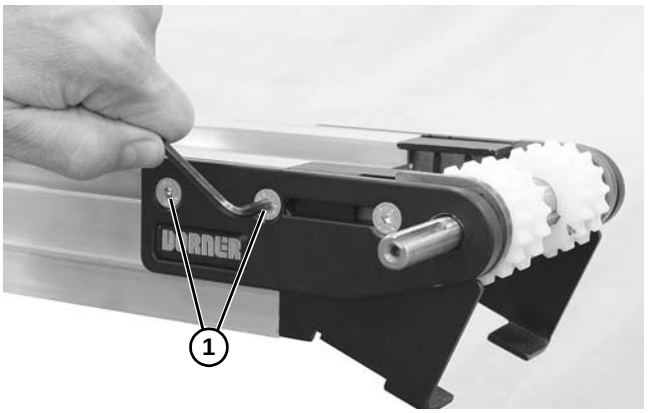


Figure 49

5. Remove end drive **(Figure 50, item 1)** from conveyor.

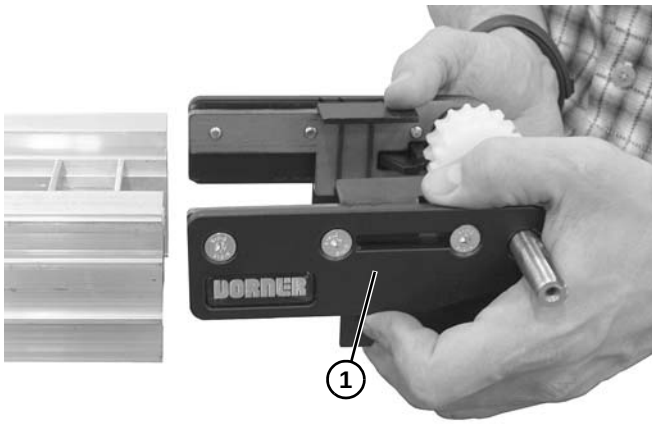


Figure 50

6. Remove head plate **(Figure 51, item 1)** and spindle **(Figure 51, item 2)**.

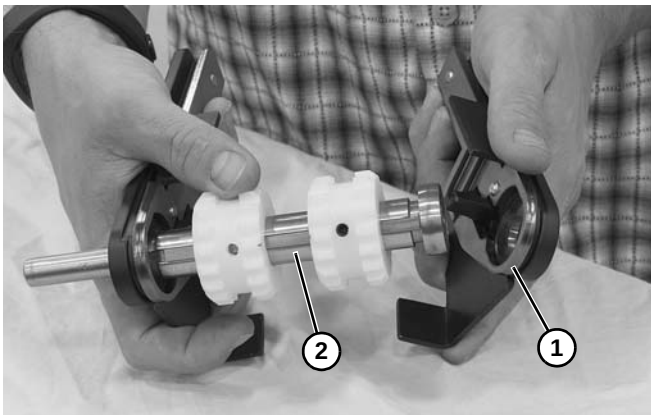


Figure 51

7. Remove and replace worn bearings and sprockets. See "Bearing and Sprocket Removal and Replacement" on page 35.
8. Reassemble in reverse order.

B – Center Drive Conveyor

1. Loosen screw **(Figure 52, item 1)** on each side of conveyor.

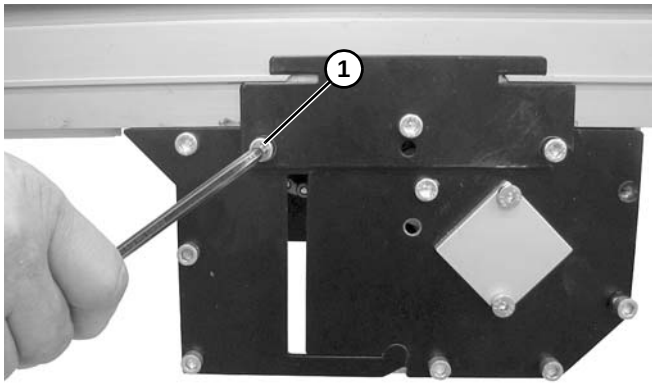


Figure 52

2. Lower bracket **(Figure 53, item 1)**.

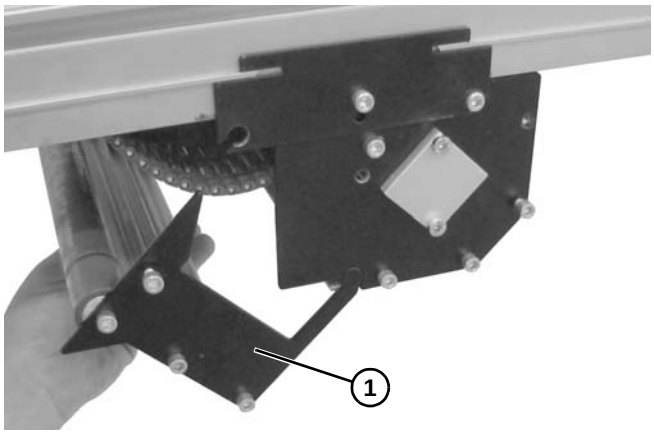


Figure 53

3. Remove screw **(Figure 54, item 1)** on both sides of bracket and remove takeup roller **(Figure 54, item 2)**.

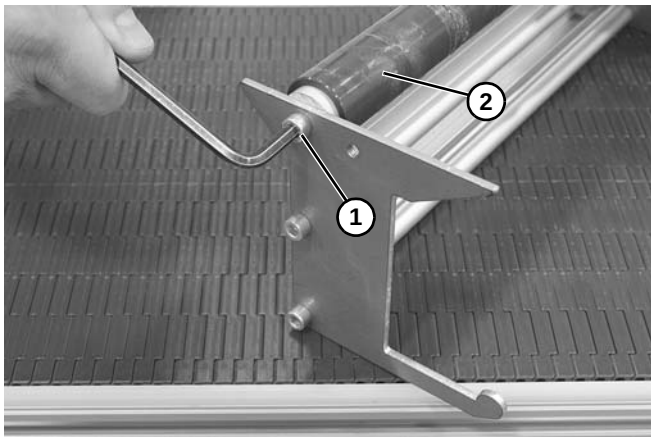


Figure 54

4. Remove belt from drive tail. See "Belt Removal" on page 26.

5. Loosen screw **(Figure 55, item 1)** on both sides of the conveyor to remove center drive module **(Figure 55, item 2)**.

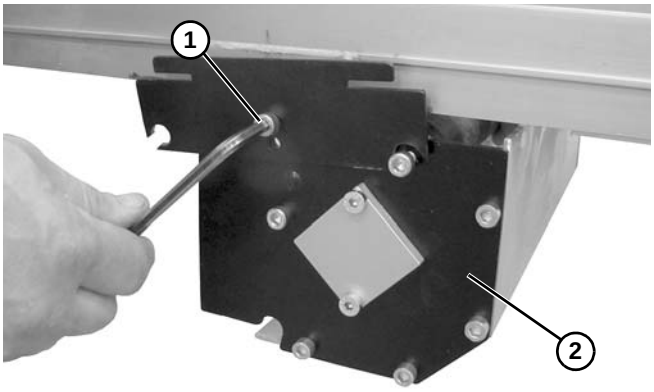


Figure 55

6. Remove two screws **(Figure 56, item 1)** on both sides of the center drive module.

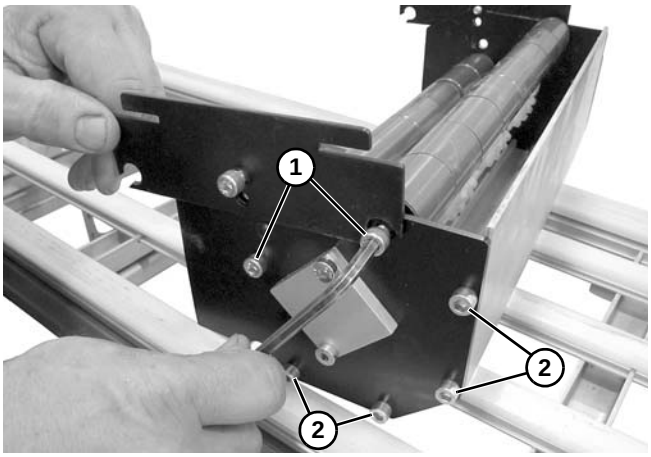


Figure 56

7. Remove four screws **(Figure 56, item 2)** from the non-motor side of the center drive module.
8. Remove side plate **(Figure 57, item 1)**.

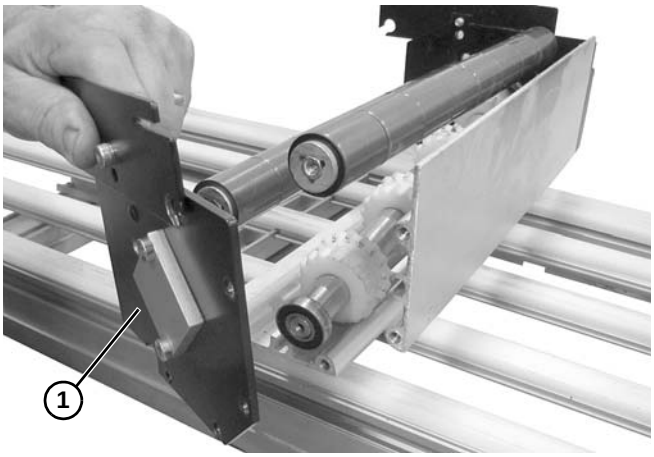


Figure 57

9. Remove drive shaft **(Figure 58, item 1)**.

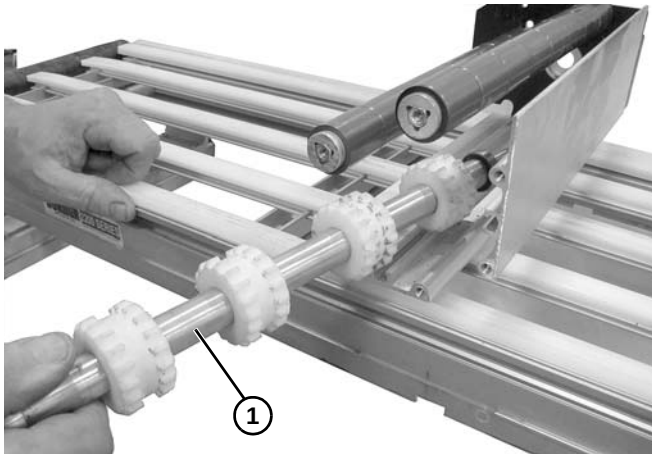


Figure 58

10. Remove and replace worn bearings and sprockets. See "Bearing and Sprocket Removal and Replacement" on page 35.
11. Remove shafts **(Figure 59, item 1)**, replace if worn.

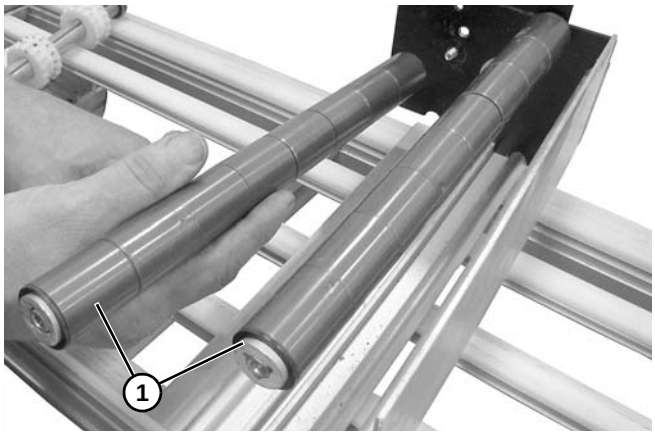


Figure 59

12. Reassemble in reverse order.

C – iDrive Conveyor

NOTE

To prevent damage to the head plates and spindle, be sure to remove them slowly because they are not attached to spindle.

1. Remove belt. (Refer to "Belt Removal" on page 26)
2. Remove inframe drive side cover **(Figure 60, item 1)** by removing two iDrive cover screws **(Figure 60, item 2)**.

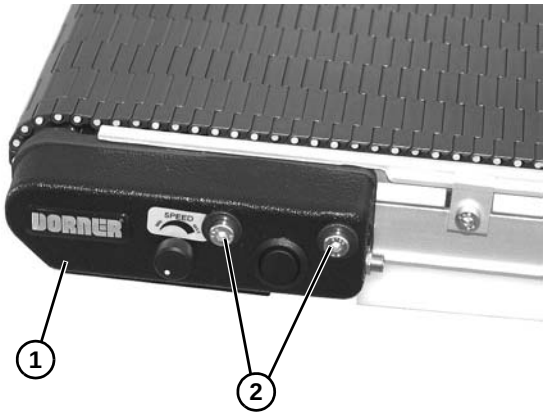


Figure 60

3. Unplug motor connector **(Figure 61, item 1)** from cover wiring connector **(Figure 61, item 2)**.

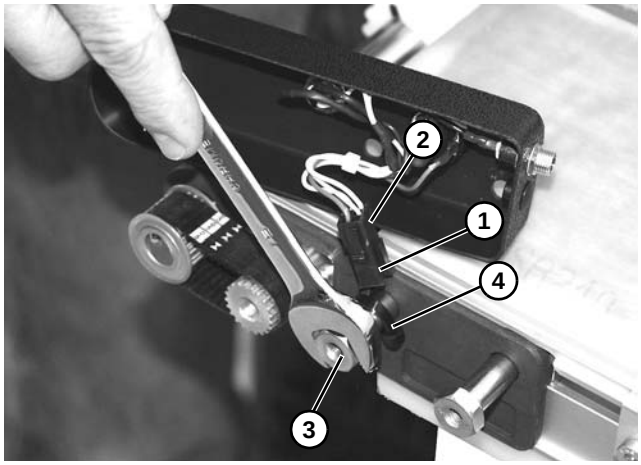


Figure 61

4. Remove hex standoff **(Figure 61, item 3)** and remove tie strap **(Figure 61, item 4)** and wiring harness from hex standoff.
5. Loosen four clamp plate screws **(Figure 62, item 1)**.

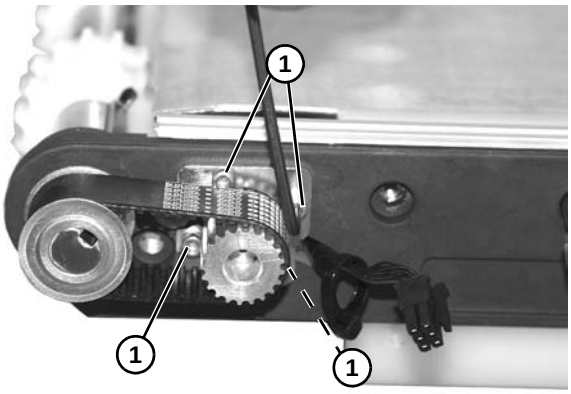


Figure 62

6. Loosen timing belt tension cam **(Figure 63, item 1)**.

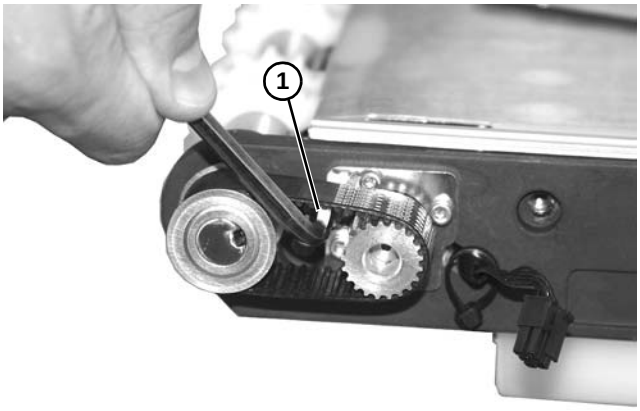


Figure 63

7. Loosen two set screws **(Figure 64, item 1)** on drive pulley **(Figure 64, item 2)**. Slide drive pulley outward off of the gearmotor shaft, and remove timing belt **(Figure 64, item 3)**.

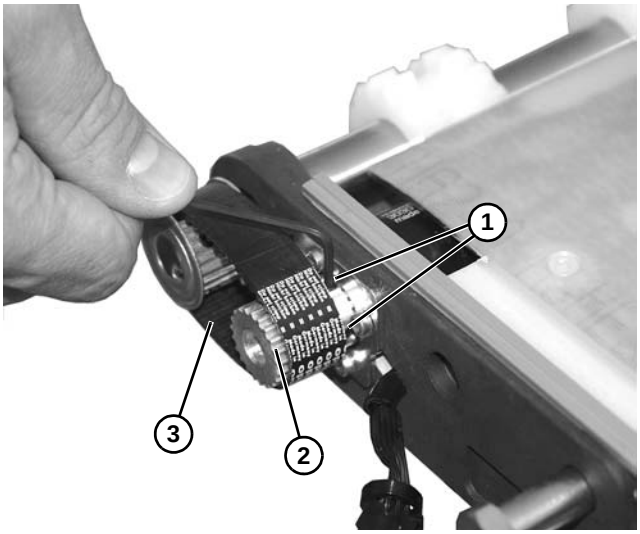


Figure 64

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

8. Loosen two set screws **(Figure 65, item 1)** on driven pulley **(Figure 65, item 2)**, and slide off of shaft to remove.

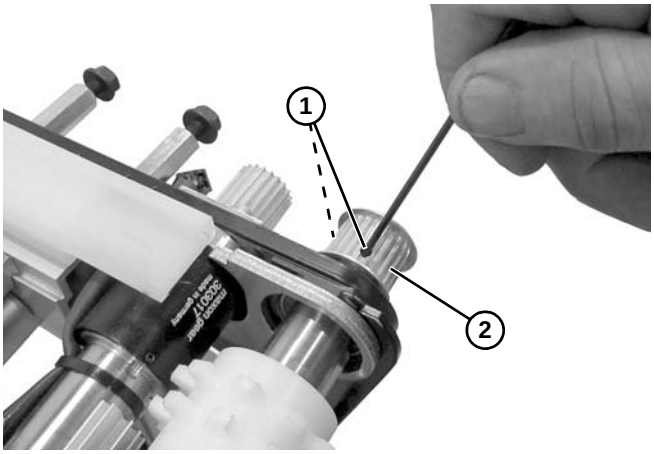


Figure 65

9. Remove three head plate fastening screws **(Figure 66, item 1)** from opposite side of conveyor.

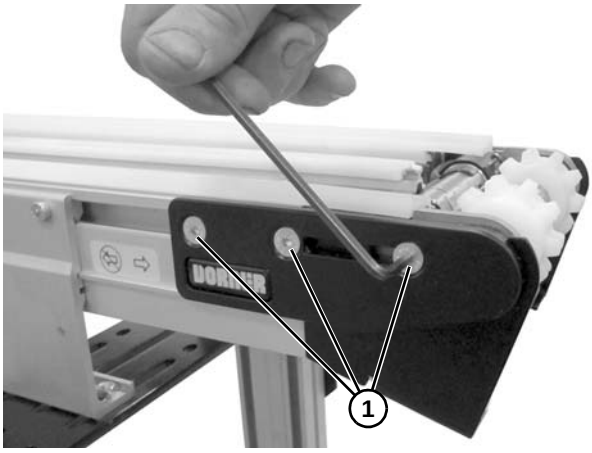


Figure 66

⚠ CAUTION

Spindle can slide out.

10. Remove tail plate **(Figure 67, item 1)** from frame.

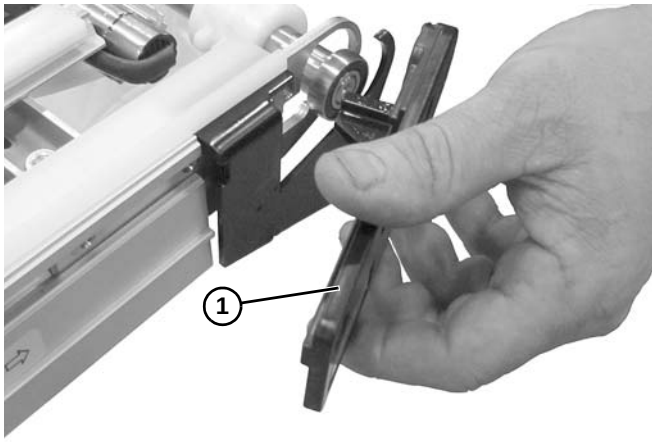


Figure 67

11. Remove spindle **(Figure 68, item 1)**.

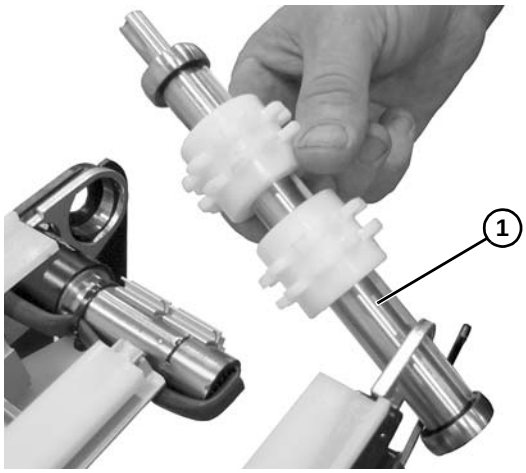


Figure 68

12. Remove and replace worn bearings and sprockets. See “Bearing and Sprocket Removal and Replacement” on page 35.

Bearing and Sprocket Removal and Replacement

Removal

1. Remove drive pulley. For end drive pulley see section "A – End Drive Conveyor." For center drive pulley see section "B – Center Drive Conveyor." For iDrive pulley see section "C - iDrive Conveyor."
2. Use bearing removal tool (807-1078) **(Figure 69, item 1)** to remove bearings from drive pulley.

IMPORTANT

You must replace with a new bearing after it is removed from the shaft.

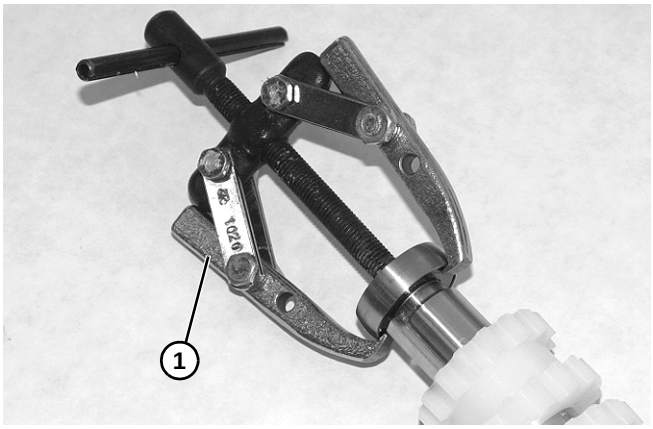


Figure 69

3. Slide free moving sprocket(s) **(Figure 70, item 1)** off the end of pulley **(Figure 70, item 2)**.

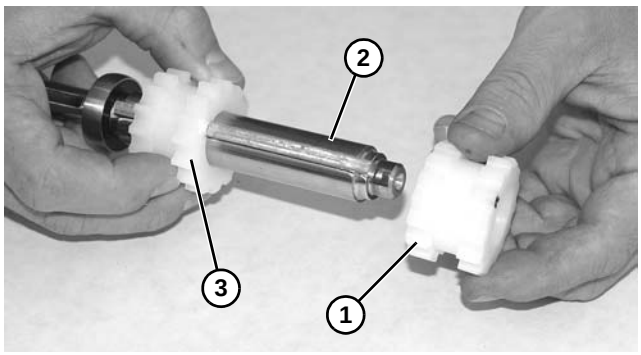


Figure 70

4. Measure location of fixed sprocket **(Figure 70, item 3)**, loosen set screw, and remove fixed sprocket.

Replacement

1. Inspect head plate bearing surface. If worn or damaged, replace head plate. See "Service Parts" on page 42.
2. Install required quantity of free moving sprockets **(Figure 71, item 1)** onto drive pulley **(Figure 71, item 2)**.

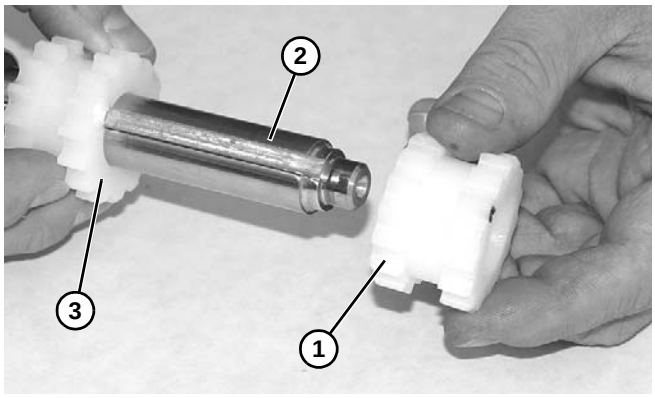


Figure 71

3. Install fixed sprocket **(Figure 71, item 3)** at the same location it was removed, making sure it engages the belt. Tighten set screw.
4. Press new bearing onto drive pulley using installation tool 450293 **(Figure 72, item 1)**.

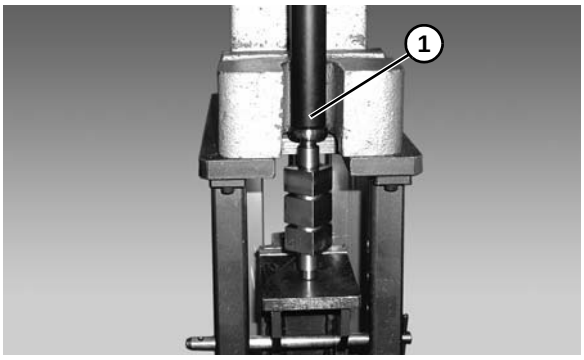


Figure 72

iDrive Tail Installation

1. Install drive spindle **(Figure 73, item 1)** into head plate **(Figure 73, item 2)**. Install head plate **(Figure 73, item 3)** and install screws **(Figure 73, item 4)**.

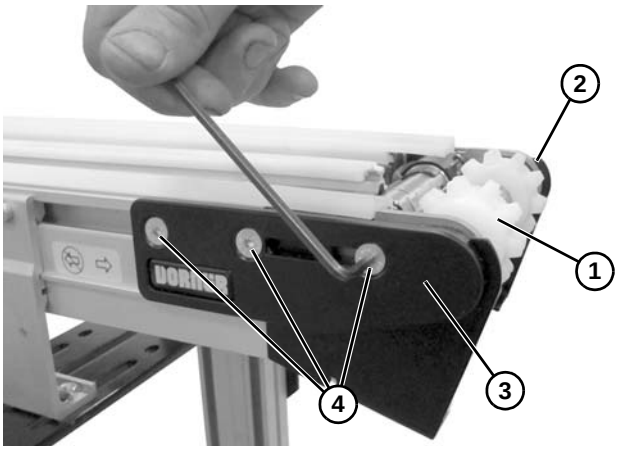


Figure 73

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

2. Install driven pulley **(Figure 74, item 1)** onto conveyor shaft until flush with spindle end. Line up longer set screw **(Figure 74, item 2)** on pulley over keyway **(Figure 74, item 3)** of shaft. Tighten set screw **(Figure 74, item 2)** and set screw **(Figure 74, item 4)** to 18 in-lb (2 Nm).

⚠ CAUTION

Failure to install the longer set screw into the keyway will cause the setscrew to protrude into the timing belt, which will cause the conveyor to run erratically and may cause damage to the timing belt and the gearmotor shaft.

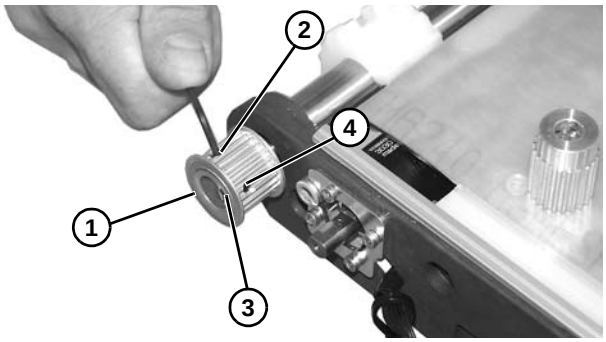


Figure 74

3. Slip timing belt **(Figure 75, item 1)** over driven pulley **(Figure 75, item 2)** and slide drive pulley **(Figure 75, item 3)** through timing belt onto gearmotor shaft.

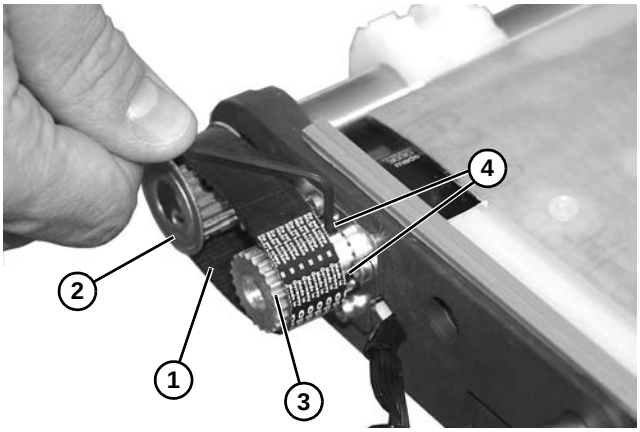


Figure 75

4. Tighten drive pulley set screws **(Figure 75, item 4)** on gearhead shaft, making sure one set screw is over flat on shaft, and drive pulley is aligned with driven pulley.
5. Tighten timing belt tension cam **(Figure 76, item 1)**, making certain that pointer **(Figure 76, item 2)** on cam is pointing towards the motor drive spindle **(Figure 76, item 2)**.

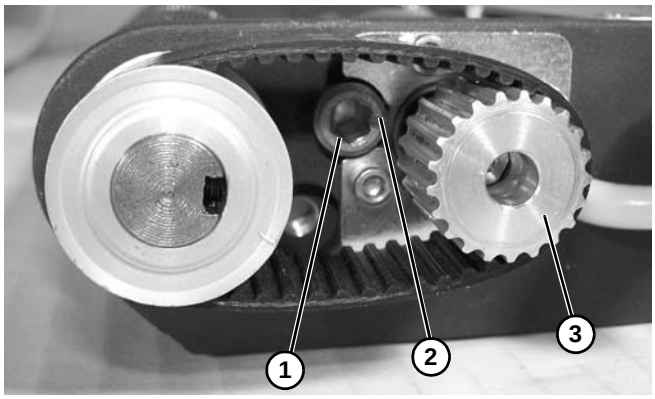


Figure 76

6. Rotate tension cam **(Figure 76, item 1)** to obtain 1/8 - 1/4" belt deflection at center of belt **(Figure 77, item 1)** with approximately 3-5 in-lb of pressure. Tighten four clamp plate screws **(Figure 77, item 2)** 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.

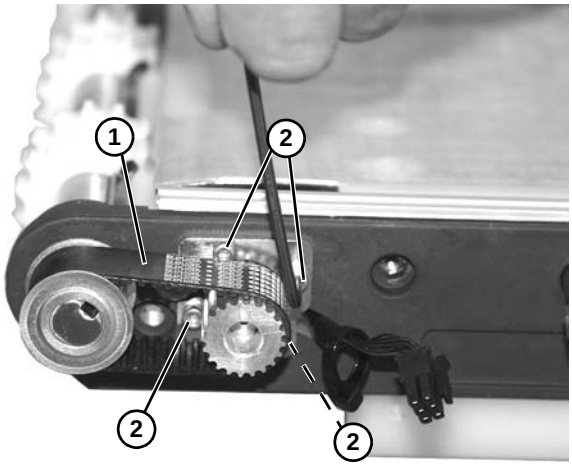


Figure 77

7. Install inframe drive side cover **(Figure 78, item 1)** with two head plate fastening screws **(Figure 78, item 2)**.

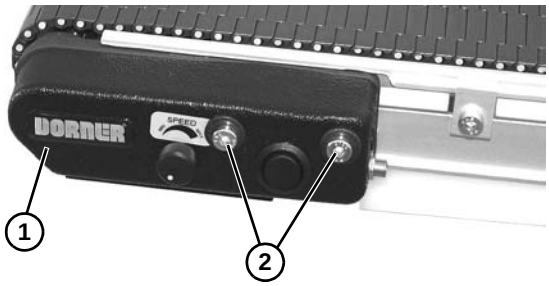


Figure 78

Idler End Wear Items

⚠ 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 25. Remove the desired pulley following the corresponding instructions below:

- A – Standard Idler Tail
- B – Nose Bar Idler Tail

A - Standard Idler Tail

1. On both sides of conveyor, remove fastening screw **(Figure 79, item 1)**.

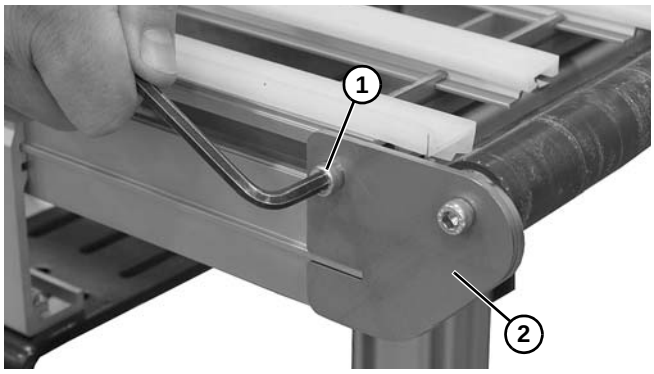


Figure 79

2. Remove idler tail **(Figure 79, item 2)** from conveyor.
3. Remove screw **(Figure 80, item 1)** and head plate **(Figure 80, item 2)**.

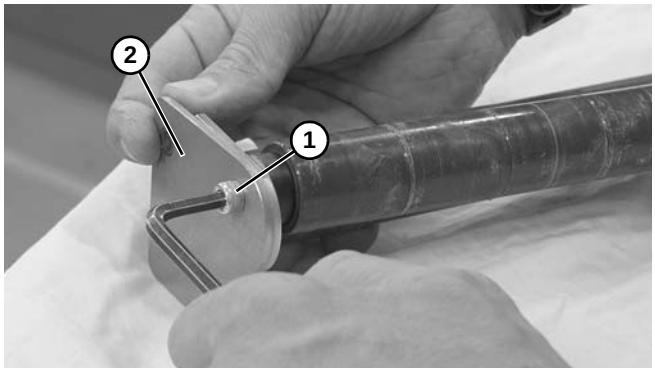


Figure 80

4. Slide idler sleeves **(Figure 81, item 1)** off the end of the idler shaft **(Figure 81, item 2)**. If equipped, remove second idler shaft and remove idler sleeves.

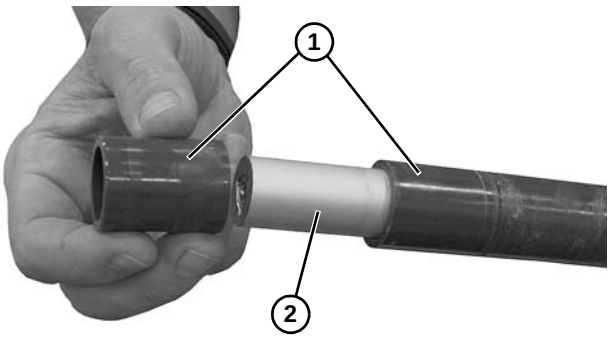


Figure 81

5. If equipped, remove retaining plates **(Figure 82, item 1)** off the ends of the wear bar **(Figure 82, item 2)**. Inspect bar surface. If worn or damaged, replace bar. See "Service Parts" on page 42.

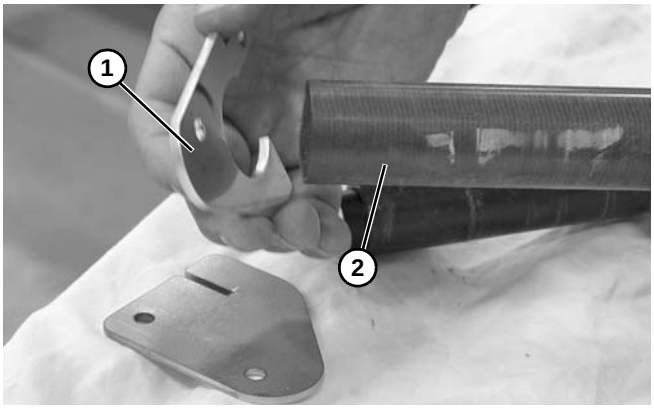


Figure 82

6. When re-installing idler tail **(Figure 83, item 1)** with wear bar, make sure that the flat end **(Figure 83, item 2)** of the wear bar is flush against the conveyor **(Figure 83, item 3)**.

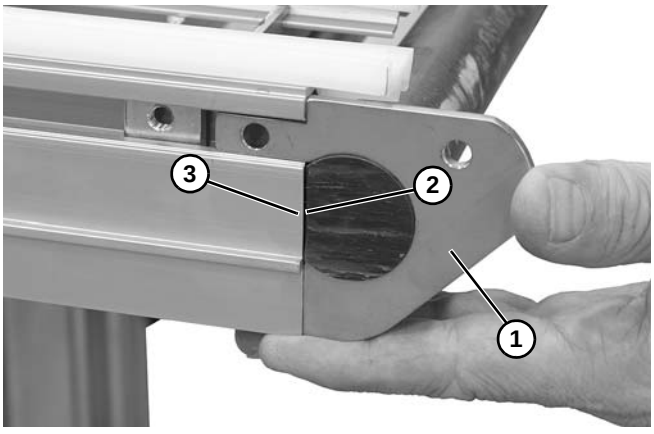


Figure 83

B - Nose Bar Idler Tail

1. On both sides of conveyor, remove two fastening screws **(Figure 84, item 1)**.

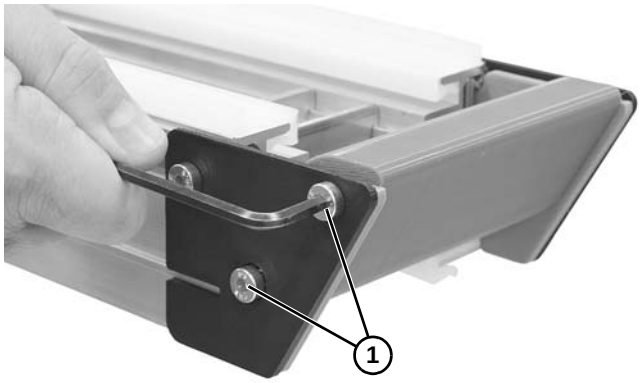


Figure 84

2. Remove bar **(Figure 85, item 1)**, flip 180°, and re-install bar.

NOTE
*Bar may be flipped 180° to use second wear surface **(Figure 85, item 2)**.*

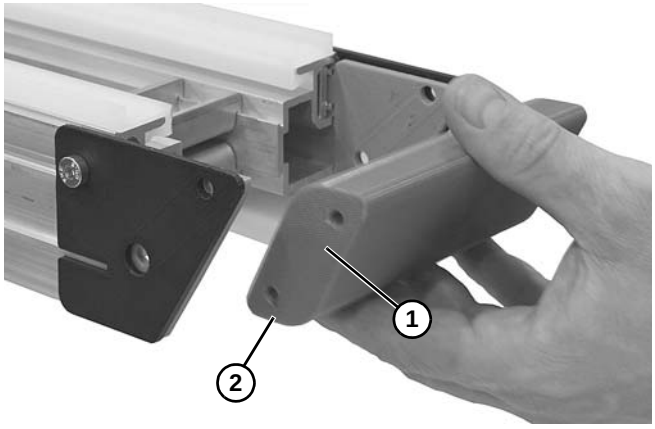


Figure 85

Frame 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 26.
2. Remove upper wear strips **(Figure 86, item 1)**.

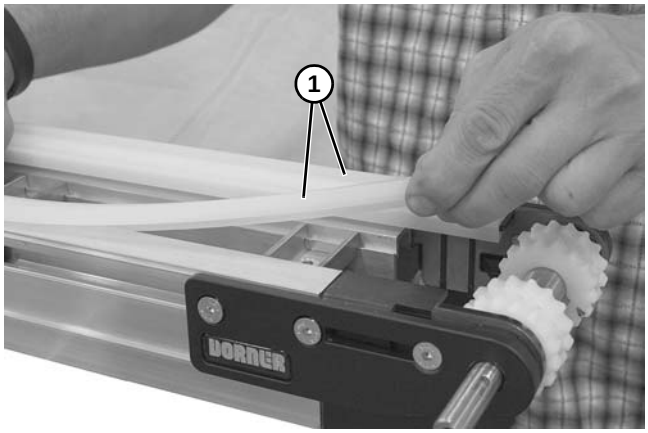


Figure 86

3. Remove lower wear strips **(Figure 87, item 1)**.

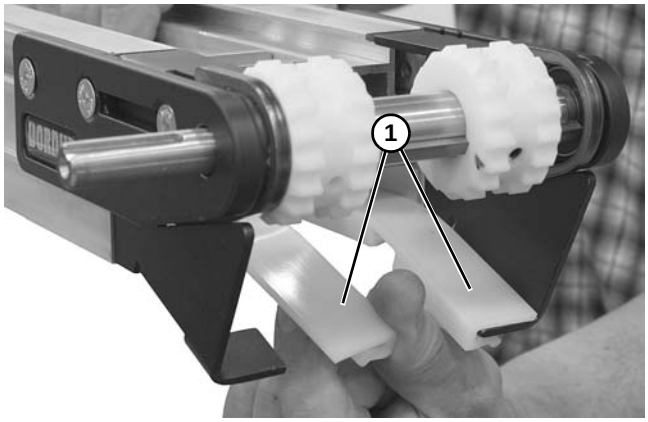


Figure 87

Center Rail 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 26.
2. Slide center rail **(Figure 88, item 1)** from frame assembly **(Figure 88, item 2)**.

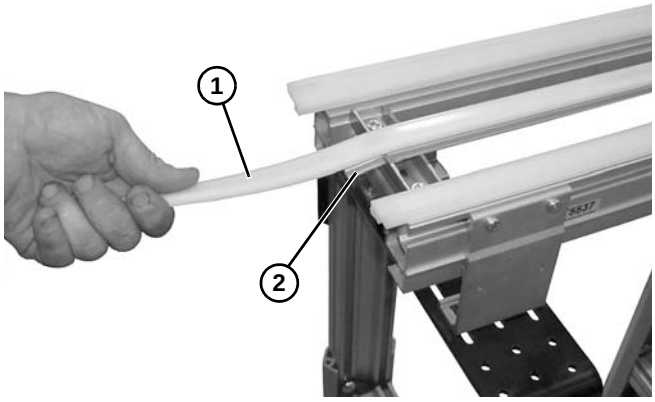


Figure 88

3. Install new center rail.

Tail Plate Shaft Knockout Removal

1. Determine which tail plate(s) require the hole knockout slug to be removed for the drive shaft.
   - Position A or B = 205370-LH
   - Position C or D = 205370-RH
2. Set tail plate **(Figure 89, item 1)** flat side down over washer **(Figure 89, item 2)** or hole in workbench that has a minimum diameter or 5/8".

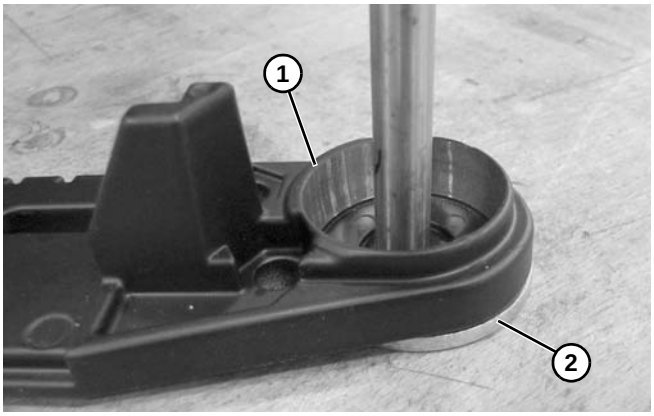


Figure 89

3. Use a hammer and punch (1/4" - 1/2" dia) **(Figure 90, item 1)** or long bolt to knock out slug **(Figure 94, item 1)** for shaft backing up tail plate with washer.

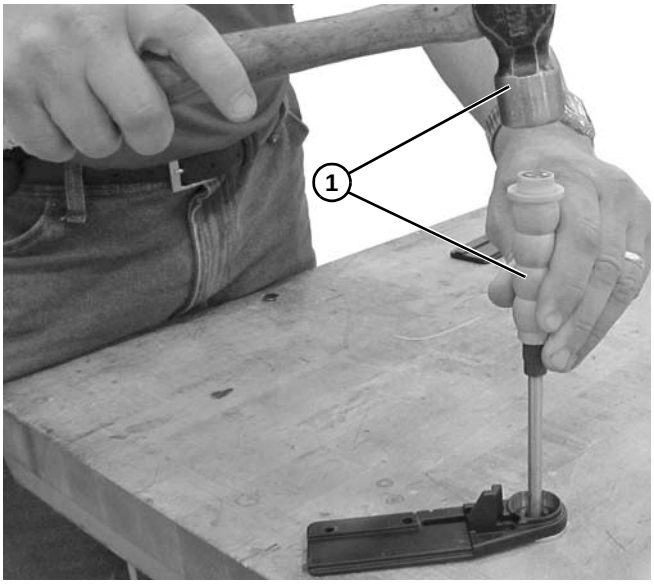


Figure 90

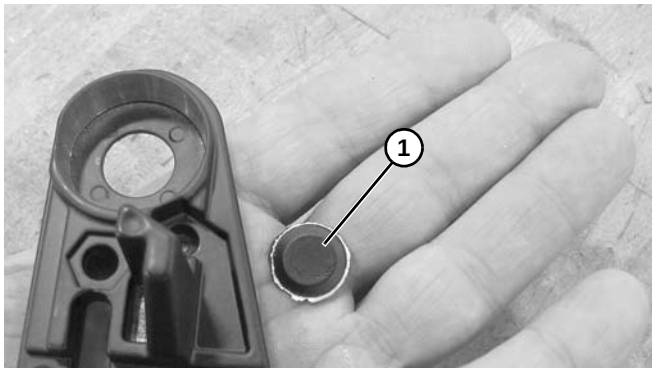


Figure 91

4. Repeat the same operation to knockout **(Figure 93, item 1)** for alignment screw hole using 1/8" - 3/16" punch **(Figure 92, item 1)** or M5 - M6 bolt.

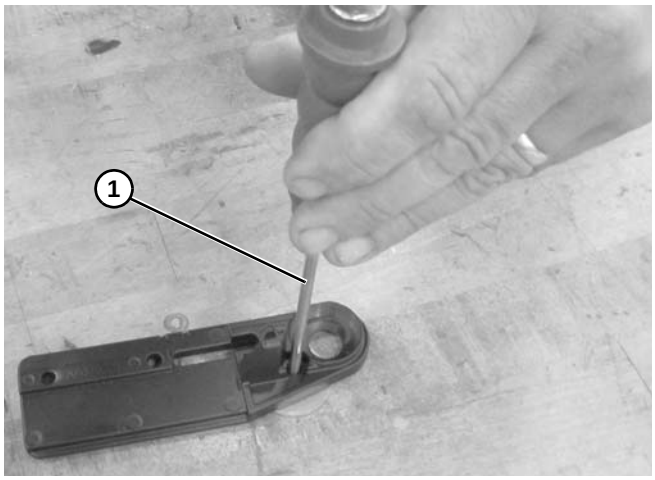


Figure 92

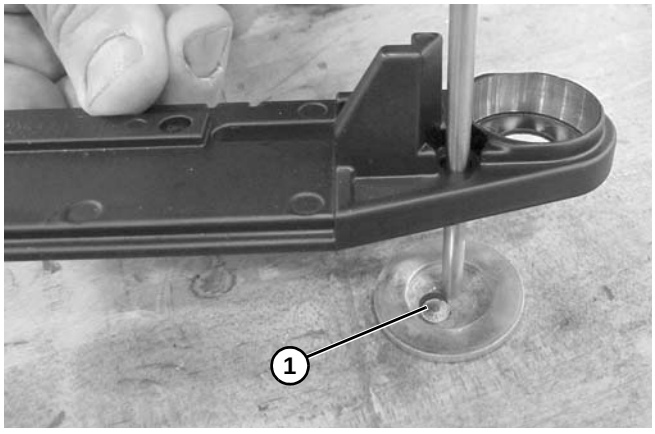


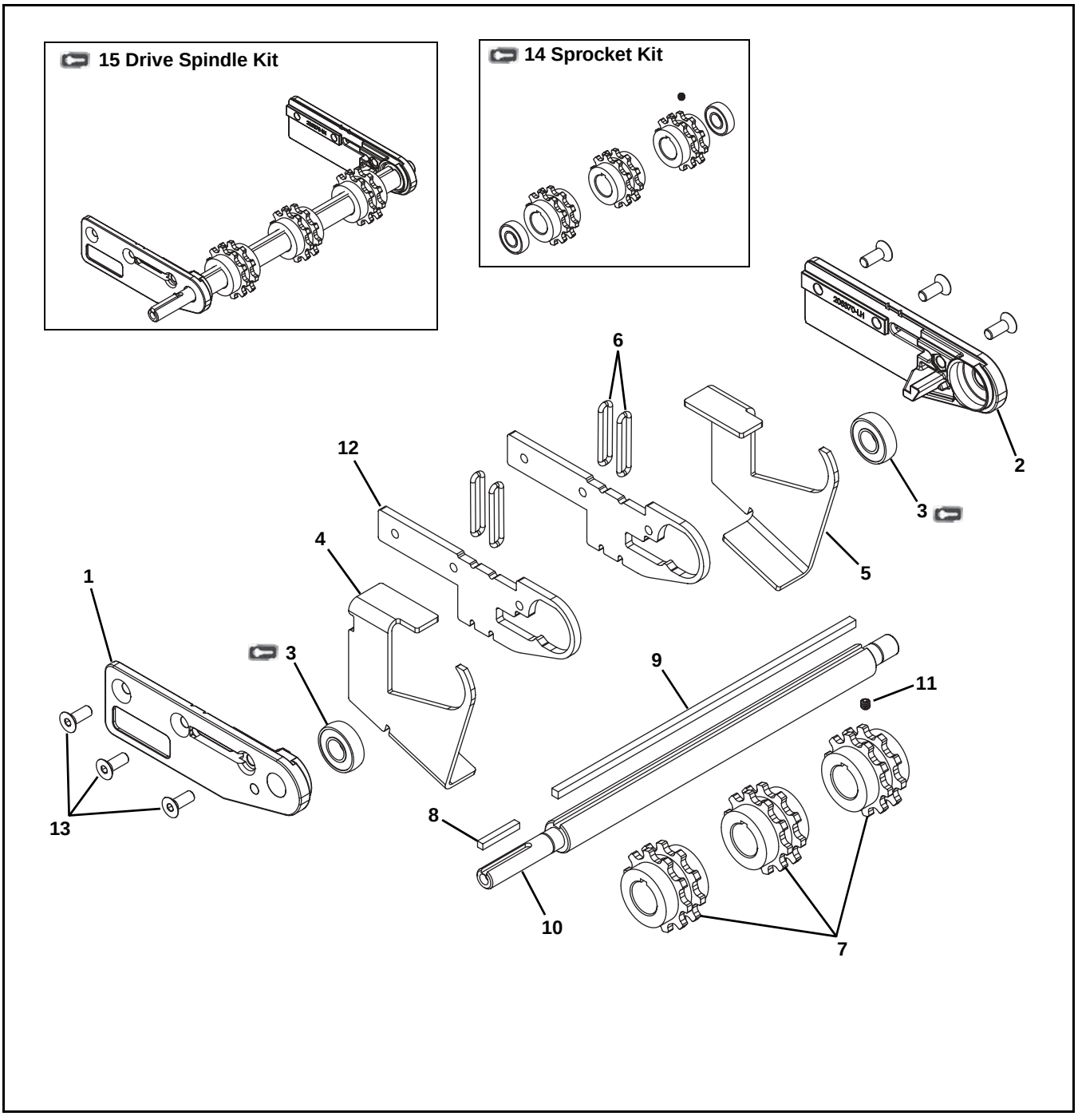
Figure 93

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.

End Drive Tail

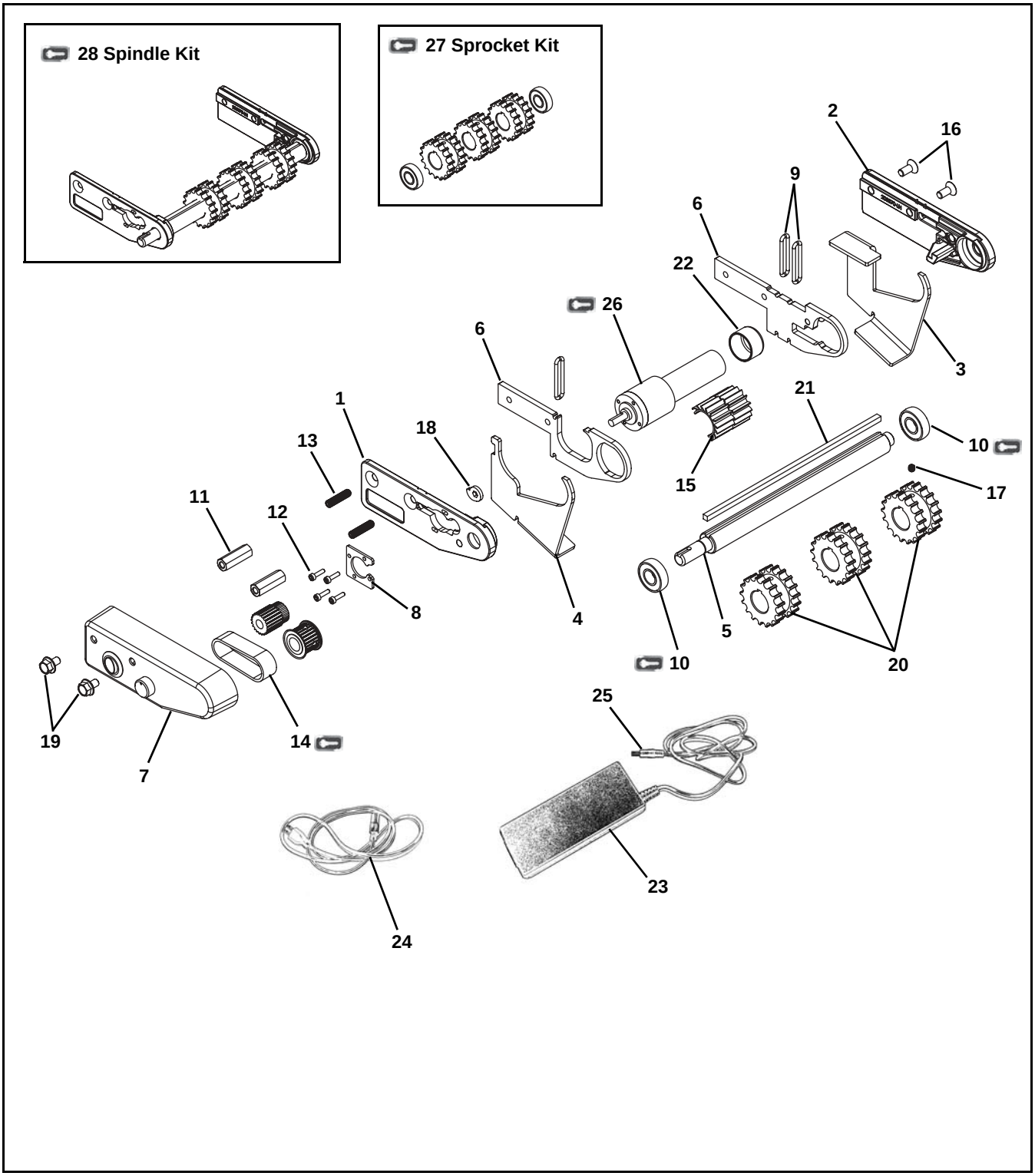


Item	Part Number	Description
1	205370-RH	Head Plate, Right Hand for Metal Working Conveyors and 4" wide Micropitch Conveyors
	207140-RH	Head Plate, Right Hand for 8" - 24" wide Micropitch Conveyors
2	205370-LH	Head Plate, Left Hand for Metal Working Conveyors and 4" wide Micropitch Conveyors
	207140-LH	Head Plate, Left Hand for 8" - 24" wide Micropitch Conveyors
3	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)
4	206792	Pinch Tail, Right Hand
5	206791	Pinch Tail, Left Hand
6	915-346	O-Ring
7	203765	Sprocket for Micropitch Conveyors
	203766	Sprocket for Metal Working Conveyors
8	980428M	Square Key, 4 mm x 28 mm
9	201433-WW	Sprocket Key
10	206023K-WW	Spindle (One Keyed Shaft)
	206194KK-WW	Dual Shaft Spindle (Two Keyed Shafts)
	206194KS-WW	Common Drive Spindle (Keyed Shaft & Stub Shaft)
	206194SS-WW	Common Drive Spindle - Mid Conveyor (Two Stub Shafts)
	206023S-WW	Common Drive Spindle - End Conveyor (One Stub Shaft)
11	970505M	Cup Set Screw, M5-0.80 x 5 mm
12	206790	Nutbar Tail
13	930616M	Flat Head Screw, M6-1.00 x 16 mm
14	22V2MB1S-WW	Sprocket Kit for Micropitch Conveyors (Includes Items 3, 7, & 11)
	22V2MB2S-WW	Sprocket Kit for Metal Working Conveyors (Includes Items 3, 7, & 11)

Item	Part Number	Description
15	22V2MB1FO-WW	Spindle Kit for Micropitch Conveyors (One Keyed Shaft) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
	22V2MB1FK-WW	Dual Shaft Spindle Kit for Micropitch Conveyors (Two Keyed Shafts) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
	22V2MB1FS-WW	Common Drive Spindle Kit for Micropitch Conveyors (Keyed Shaft & Stub Shaft) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
	22V2MB1FE-WW	Common Drive Spindle Kit for Micropitch Conveyors - Mid Conveyor (2 Stub Shafts) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
	22V2MB1FC-WW	Common Drive Spindle Kit for Micropitch Conveyors - End Conveyor (One Stub Shaft) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
	22V2MB2FO-WW	Spindle Kit for Metal Working Conveyors (One Keyed Shaft) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
	22V2MB2FK-WW	Dual Shaft Spindle Kit for Metal Working Conveyors (Two Keyed Shafts) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
	22V2MB2FS-WW	Common Drive Spindle Kit for Metal Working Conveyors (Keyed Shaft & Stub Shaft) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
	22V2MB2FE-WW	Common Drive Spindle Kit for Metal Working Conveyors - Mid Conveyor (2 Stub Shafts) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
	22V2MB2FC-WW	Common Drive Spindle Kit for Metal Working Conveyors - End Conveyor (One Stub Shaft) (Includes Items 1, 2, 3, 7, 8, 9, 10 & 11)
WW = Conveyor width reference: 03, 04, 06, 08, 09, 12, 18, 24		

Service Parts

iDrive Tail

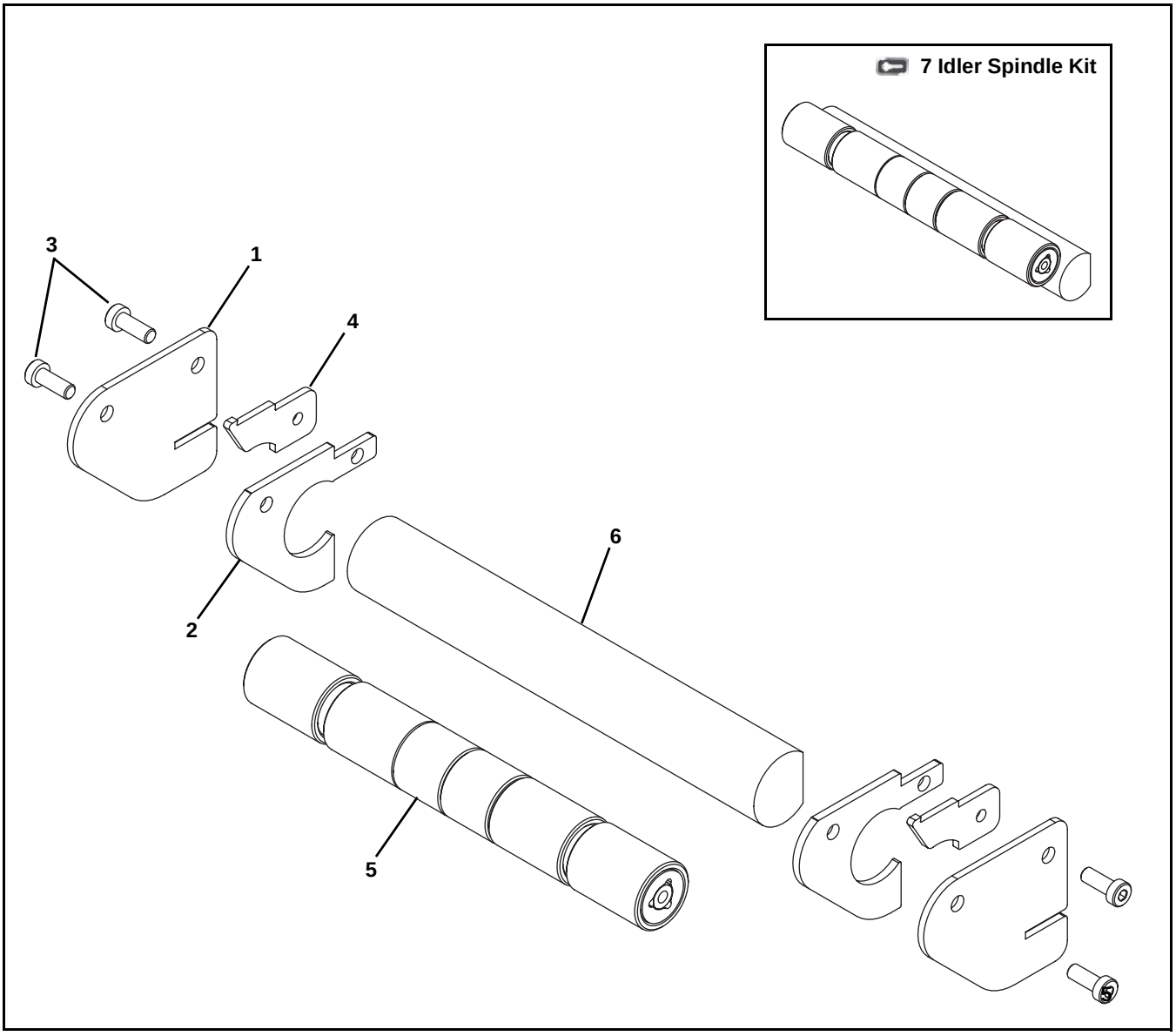


Item	Part Number	Description
1	206795-RH	iDrive Tail Plate, Right Hand iDrive Side
	206799-RH	Tail Plate, Right Hand for 3"-4" wide Conveyors
	205370-RH	Tail Plate, Right Hand for 6" and wider Conveyors
2	206799-LH	Tail Plate, Left Hand for 3"-4" wide Conveyors
	205370-LH	Tail Plate, Left Hand for 6" and wider Conveyors
	206795-LH	iDrive Tail Plate, Left Hand iDrive Side
3	206781	Pinch Plate, Left Hand for 3"-4" wide Conveyors
	206791	Pinch Plate, Left hand for 6" and wider Conveyors
	206781	iDrive Pinch Plate, Left hand iDrive Side
4	206782	iDrive Pinch Plate, Right hand iDrive Side
	206782	Pinch Plate, Right Hand for 3"-4" wide Conveyors
	206792	Pinch Plate, Right hand for 6" and wider Conveyors
5	206044-WW	Spindle
6	206780	iDrive Nutbar Tail, iDrive Side
	206780	Nutbar Tail for 3"-4" wide Conveyors
	206790	Nutbar Tail for 6" and wider Conveyors
7	22FDEAA	Electrical Assembly, with speed direction control for A position
	22FDEAD	Electrical Assembly, with speed direction control for D position
	22FDC6A	Electrical Assembly, with customer wired control for A position, 6’ cable
	22FDC6D	Electrical Assembly, with customer wired control for D position, 6’ cable
	22FDC30A	Electrical Assembly, with customer wired control for A position, 30’ cable
	22FDC30D	Electrical Assembly, with customer wired control for D position, 30’ cable
	22FDR6A	Electrical Assembly, with speed, direction, and 6’ remote start/stop cable for A position
	22FDR6D	Electrical Assembly, with speed, direction, and 6’ remote start/stop cable for D position
	22FDR30A	Electrical Assembly, with speed, direction, and 30’ remote start/stop cable for A position
	22FDR30D	Electrical Assembly, with speed, direction, and 30’ remote start/stop cable for D position
8	206045	Clamp Plate
9	915-346	O-Ring
10	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)

Item	Part Number	Description
11	807-983	Hex Standoff
12	920312M	Socket Head Screw, M3-0.50 x 12 mm
13	970625MSS	Cup Set Screw, M6-1.00 x 25 mm
14	814-145	Timing Belt
15	807-1982	Heat Sink
16	930614M	Flat Head Screw, M6-1.00 x 14 mm
17	970505M	Cup Set Screw, M5-0.80 x 5 mm
18	203729	Cam
19	960681M	Flange Head Screw, M6 x 10 mm
20	203765	Sprocket for Micropitch Conveyors
	203766	Sprocket for Metal Working Conveyors
21	201433-WW	Sprocket Key
22	807-2006	Motor Cap
23	831-139	Power Supply
24	818-164	Cord, 115 V
25	805-1316	Plug
26	22FDGM023	Gearmotor, 23:1
	22FDGM066	Gearmotor, 66:1
27	22V2MB1S-WW	Sprocket Kit for Micropitch Conveyors (Includes Items 9, 16 & 19)
	22V2MB2S-WW	Sprocket Kit for Metal Working Conveyors (Includes Items 9, 16 & 19)
28	22V2MB1ID-WW	Spindle Kit for Micropitch Conveyors (Includes Items 1, 2, 5, 9, 16, 19 & 20)
	22V2MB2ID-WW	Spindle Kit for Metal Working Conveyors (Includes Items 1, 2, 5, 9, 16, 19 & 20)
WW = Conveyor width reference: 03, 04, 06, 08, 09, 12, 18, 24		

Service Parts

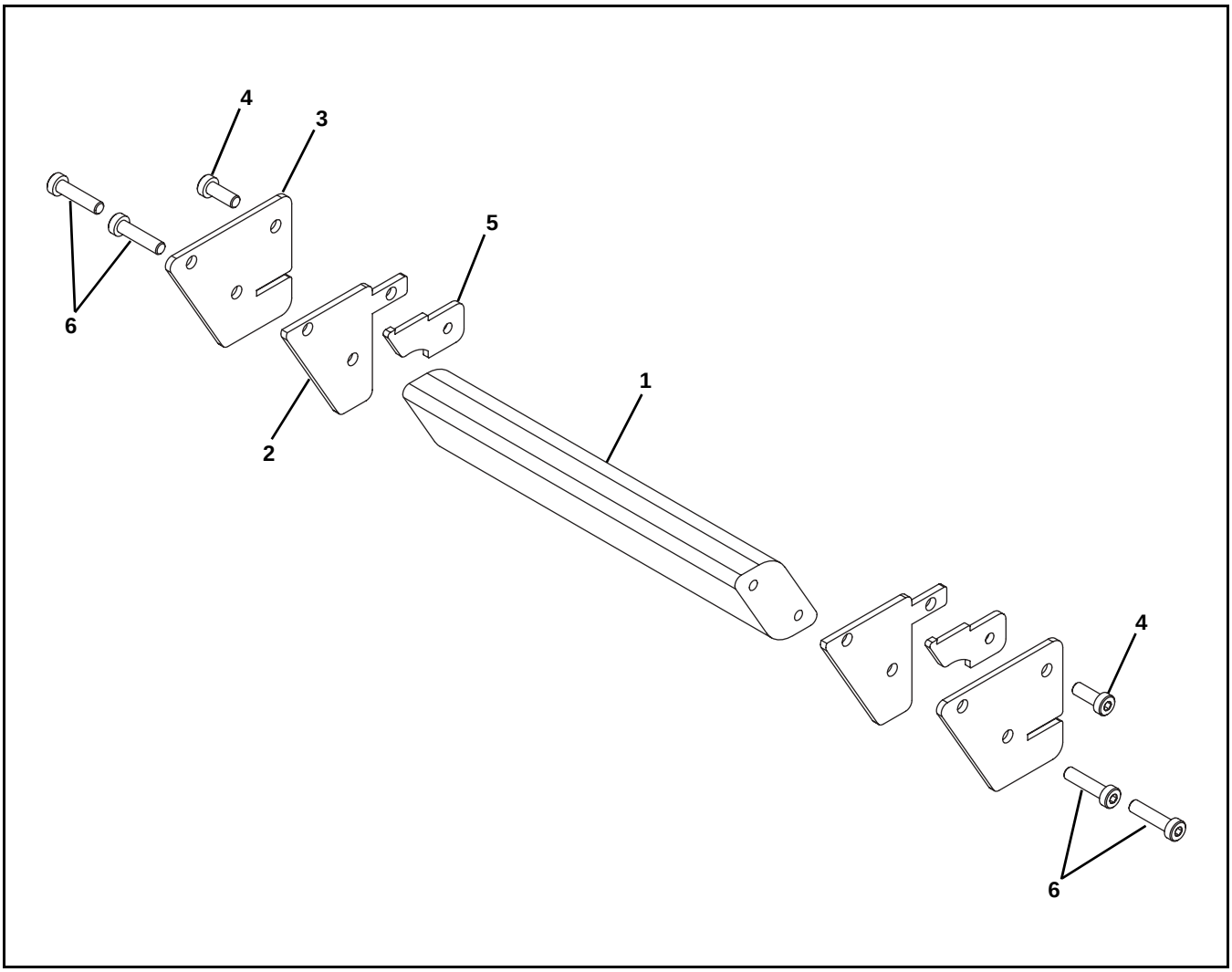
Idler Tail



Item	Part Number	Description
1	206794	Tail Plate
2	206793	Pinch Plate
3	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
4	203796	Slide-In Nut
5	205428-WW	Idler Assembly
6	203698-WW	Wear Bar
7	22V2MBT-WW	Idler Spindle Kit (Includes Items 5 & 6)

WW = Conveyor width reference: 03, 04, 06, 08, 09, 12, 18, 24

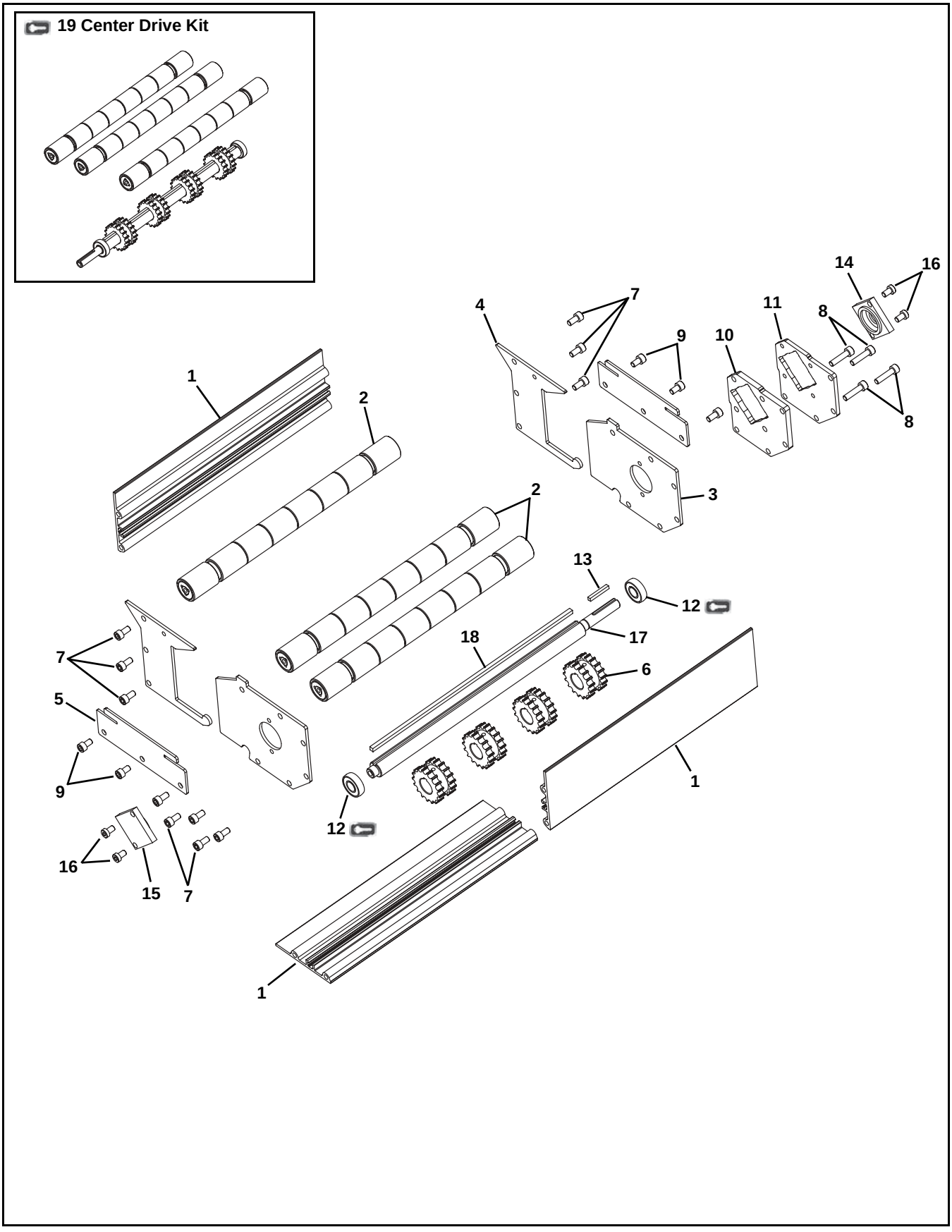
Nose Bar Idler Tail



Item	Part Number	Description
1	206027-WW	Static Bar
2	206796	Pinch Plate
3	206797	Tail Plate
4	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
5	203796	Slide-In Nut
6	950625M	Low Head Cap Screw, M6-1.00 x 25mm
WW = Conveyor width reference: 04, 06, 08, 12, 18, 24		

Service Parts

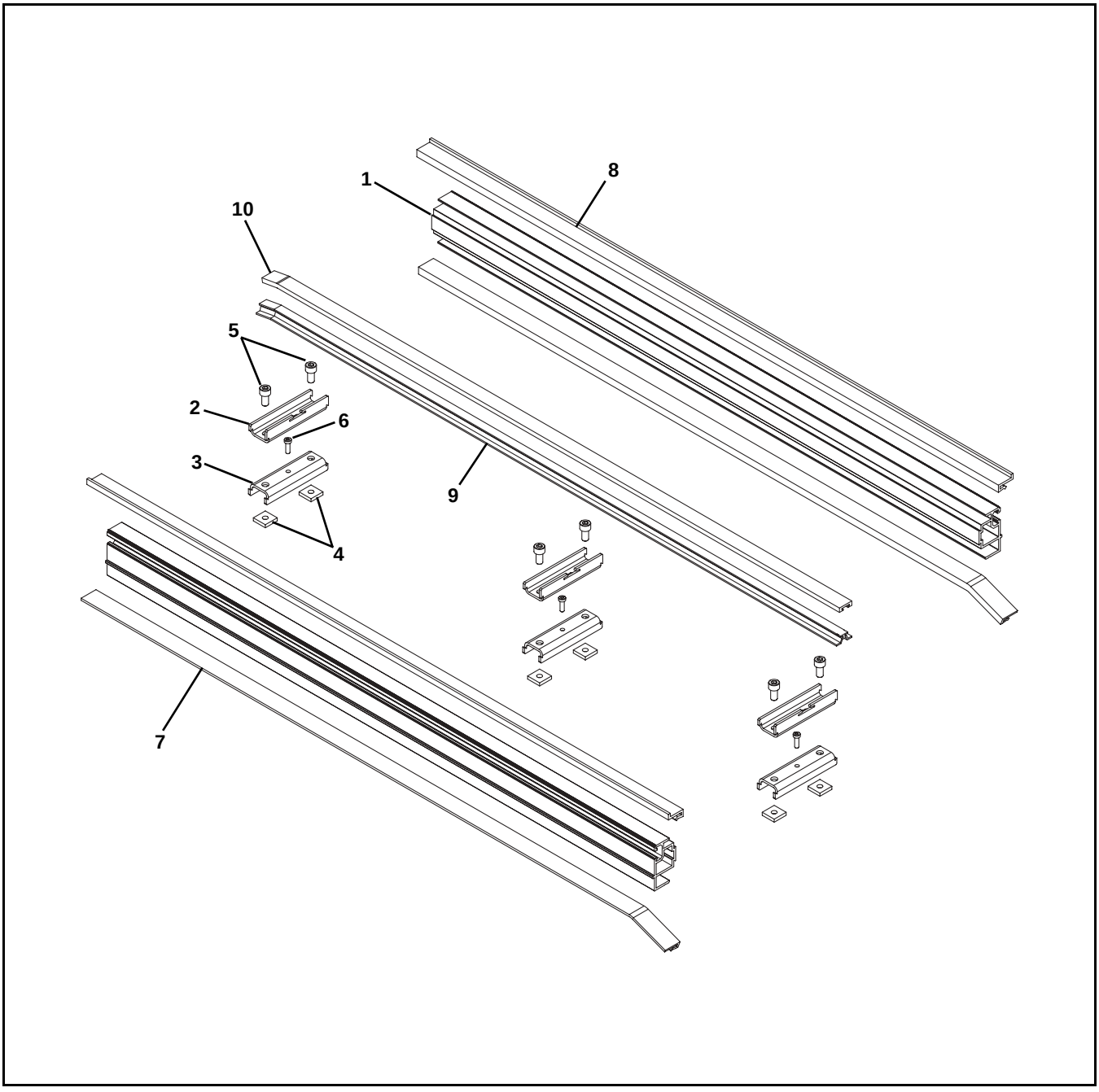
Center Drive Module



Item	Part Number	Description
1	205425-WW	Support Rail
2	205428-WW	Idler Assembly
3	205444	Motor Side Plate
4	205445	Tension Side Plate
5	203598	Clamp Plate
6	203765	Sprocket for Micropitch Conveyors
	203766	Sprocket for Metal Working Conveyors
7	920614M	Socket Head Screw, M6-1.00 x 14 mm
8	920625M	Socket Head Screw, M6-1.00 x 25 mm
9	920608M	Socket Head Screw, M6-1.00 x 8 mm
10	205446	Inside Mounting Plate
11	205447	Outside Mounting Plate
12	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)
13	980428M	Square Key, 4 mm x 28 mm
14	203628	Mounting Block with Hole
15	203728	Mounting Block
16	950610M	Low Head Cap Screw, M6-1.00 x 10 mm
17	206023K-WW	Spindle (One Keyed Shaft)
	206194KK-WW	Dual Shaft Spindle (Two Keyed Shafts)
18	201433-WW	Sprocket Key
19	22V2MB1CD-WW	Center Drive Kit for Micropitch Conveyors (Includes Items 2, 6, 9, 12, 17 & 18)
	22V2MB2CD-WW	Center Drive Kit for Metal Working Conveyors (Includes Items 2, 6, 9, 12, 17 & 18)
WW = Conveyor width reference: 03, 04, 06, 08, 09, 12, 18, 24		

Service Parts

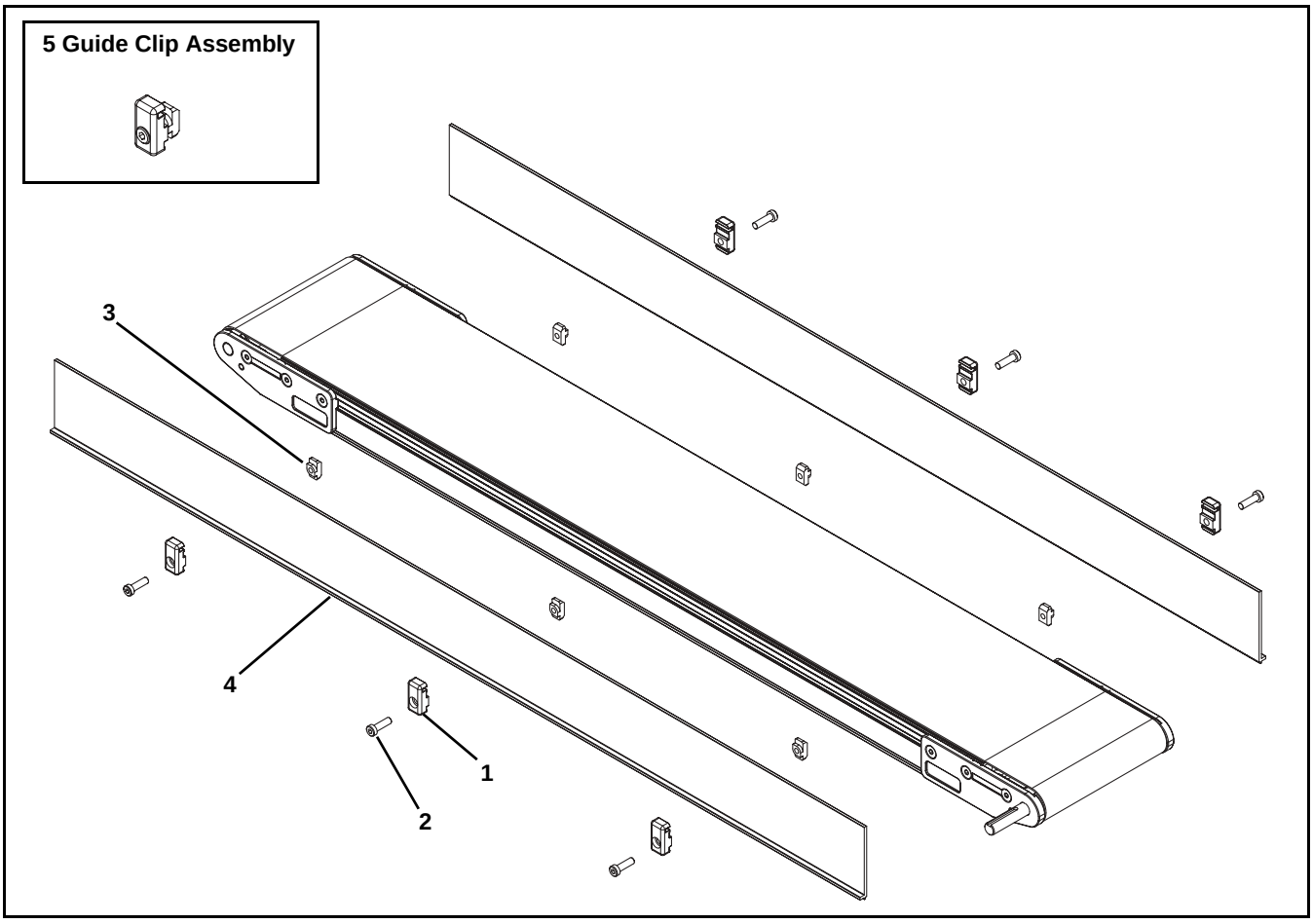
Frame Assembly



Item	Part Number	Description
1	206507-LLLLL	Side Rail, End Drive Conveyors
	205401RH-LLLLL-YYYYY	Side Rail, Center Drive Conveyors, Right Hand
	205401RH-LLLLL-YYYYY	Side Rail, Center Drive Conveyors, Left Hand
2	203642-WW	Top Connecting Clip
3	203641-WW	Bottom Connecting Clip
4	834-014	Slide-In Nut
5	950816M	Low Head Screw, M8-1.25 x 16 mm

Item	Part Number	Description
6	950516M	Low Head Cap Screw, M5-0.80 x 16 mm
7	807-1102-LLLLL	Wear Strip
8	807-2845-LLLLL	J-Leg
9	203638-LLLLL	Mid Support
10	614068P-LLLLL	Guide
WW = Conveyor width reference: 03, 04, 06, 08, 09, 12, 18, 24		
LLLLL = Part length in inches with 2 decimal places		
YYYYY = Length from end of center drive cut out to discharge end of frame with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

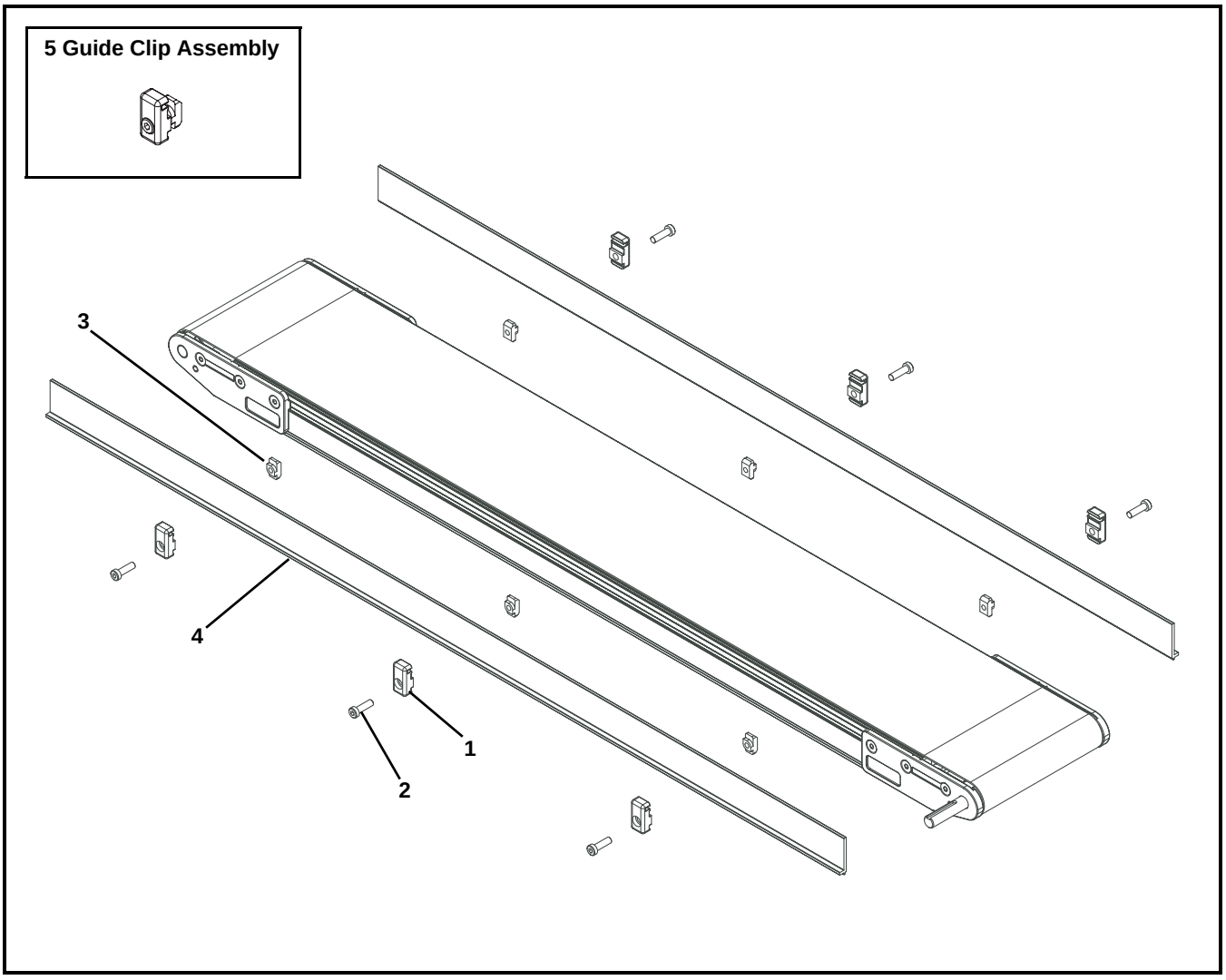
#04 Profile - 3.00" (76 mm) Aluminum Side



Item	Part Number	Description
1	206503	Guide Clip
2	807-2878	Low Head Cap Screw, M6-1.00 x 16 mm
3	206685	T-Nut
4	206514-LLLLL	3.00" Guides
	GTB04A04	3.00" Guides 4' long
	GTB04A08	3.00" Guides 8' long
5	203661	Guide Clip Assembly (Includes items 1, 2, and 3)
LLLLL = part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

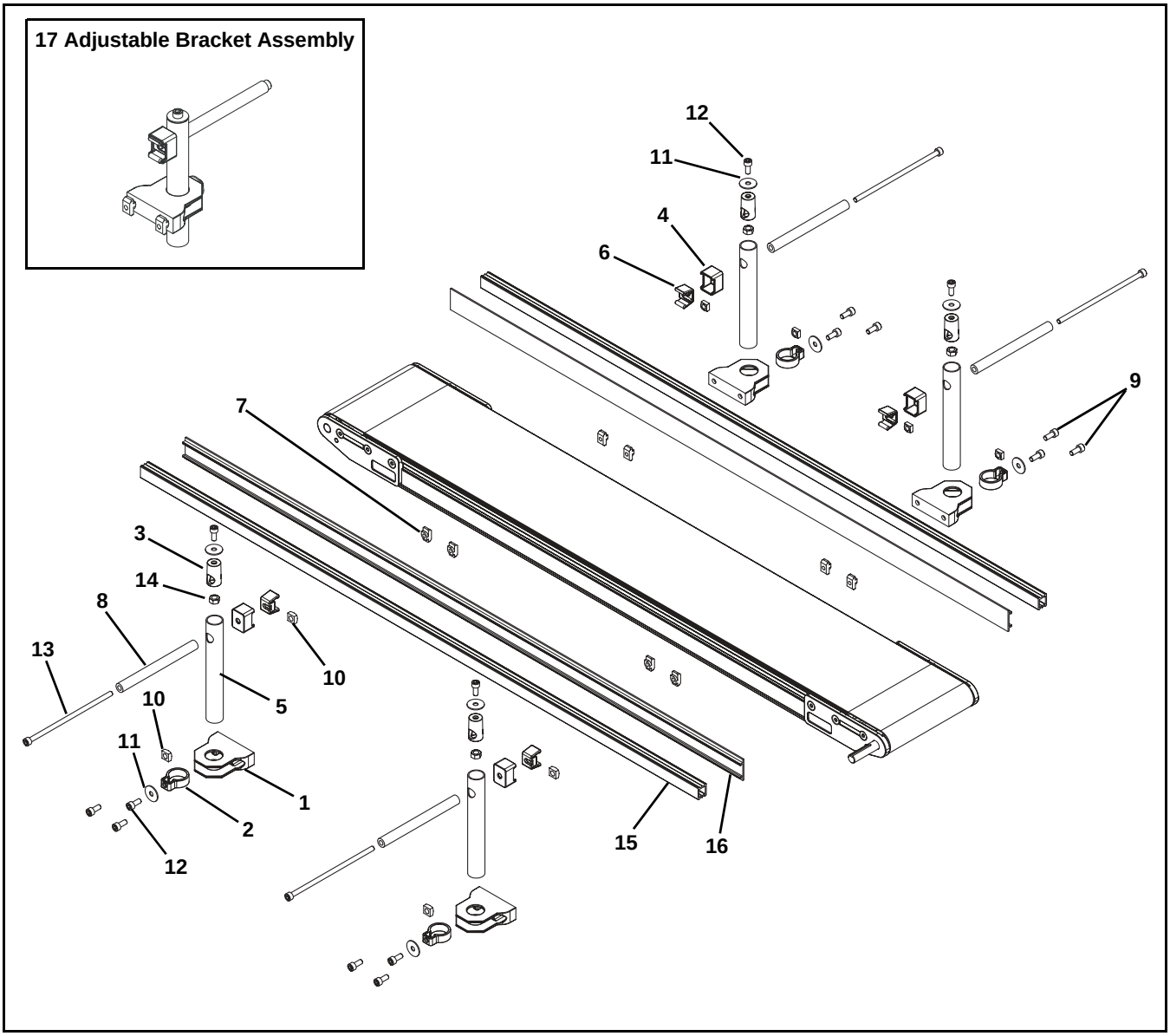
Service Parts

#05 Profile - 1.50" (38 mm) Aluminum Side



Item	Part Number	Description
1	206503	Guide Clip
2	807-2878	Low Head Cap Screw, M6-1.00 x 16 mm
3	206685	T-Nut
4	206513-LLLLL	1.50" Guides
	GTB05A04	1.50" Guides 4' long
	GTB05A08	1.50" Guides 8' long
5	203661	Guide Clip Assembly (Includes items 1, 2, and 3)
LLLLL = part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

#13, 33 & 43 Profile - Adjustable Guiding

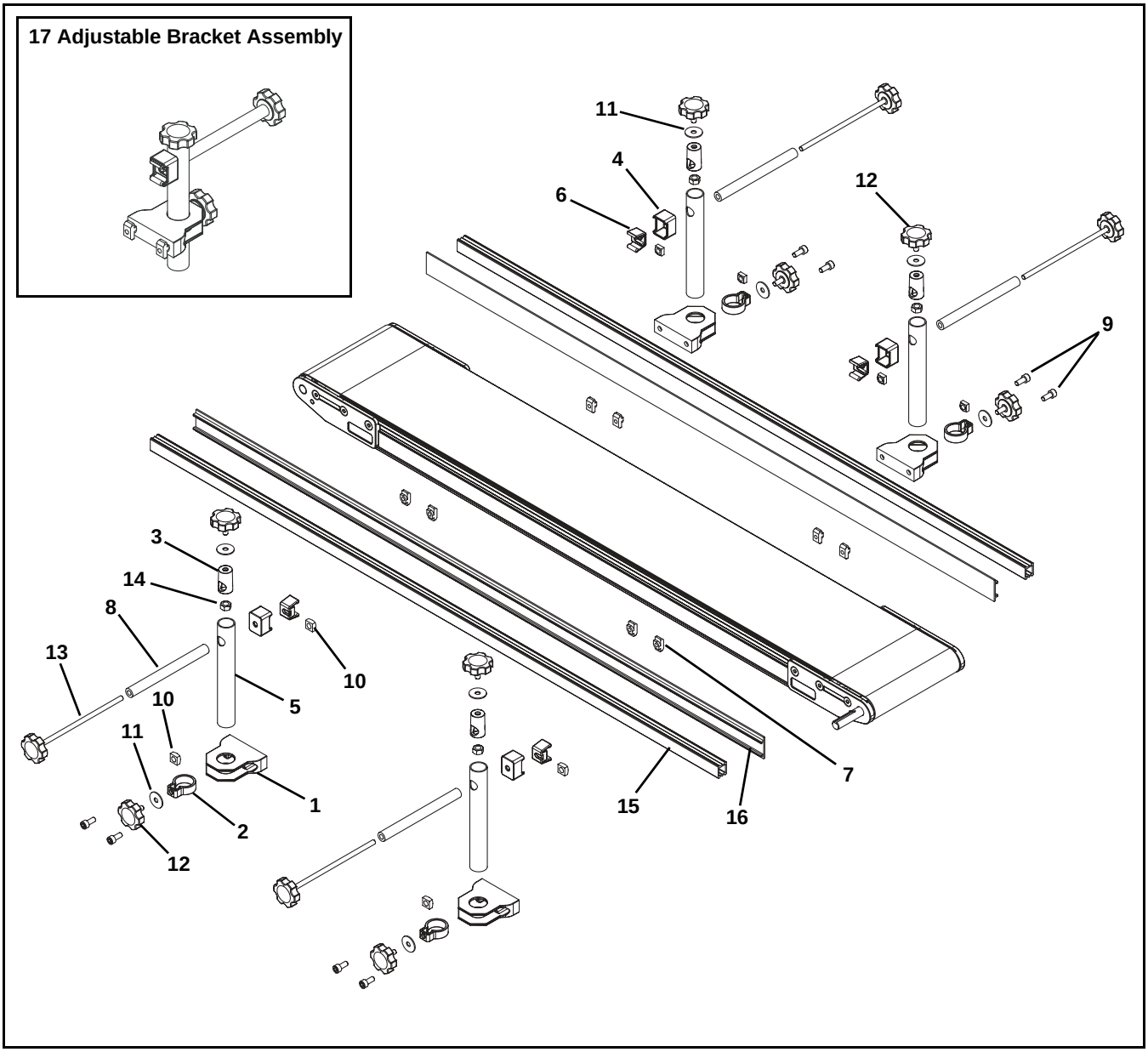


Item	Part Number	Description
1	206380	Base
2	206381	Base Clamp
3	206382	Insert Clamp
4	206383	Guide Ring
5	206385	Tube
6	206397	Clip
7	206685	T-Nut
8	206692	Guide Tube
9	807-2859	Nylon Cap Screw, N6 x 16 mm
10	807-920	Square Nut, M6-1.0
11	911-710	Washer
12	920616M	Socket Head Screw, M6-1.00 x 16 mm
13	9206150M	Socket Head Screw, M6-1.00 x 150 mm

Item	Part Number	Description
14	990601M	Hex Nut
15	834-238-LLLLL	Guide Rail
	GTB13A04	Guide Rail 4' long
	GTB13A08	Guide Rail 8' long
16	834-241	1.3" UHMW Guiding (per foot)
	GTB13B04	1.3" UHMW Guiding 4' long
	GTB13B08	1.3" UHMW Guiding 8' long
	206683	2" UHMW Guiding (per foot)
	GTB13C04	2" UHMW Guiding 4' long
	GTB13C08	2" UHMW Guiding 8' long
17	206686	Adjustable Bracket Assembly (Includes Items 1 through 14)
LLLLL = part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

Service Parts

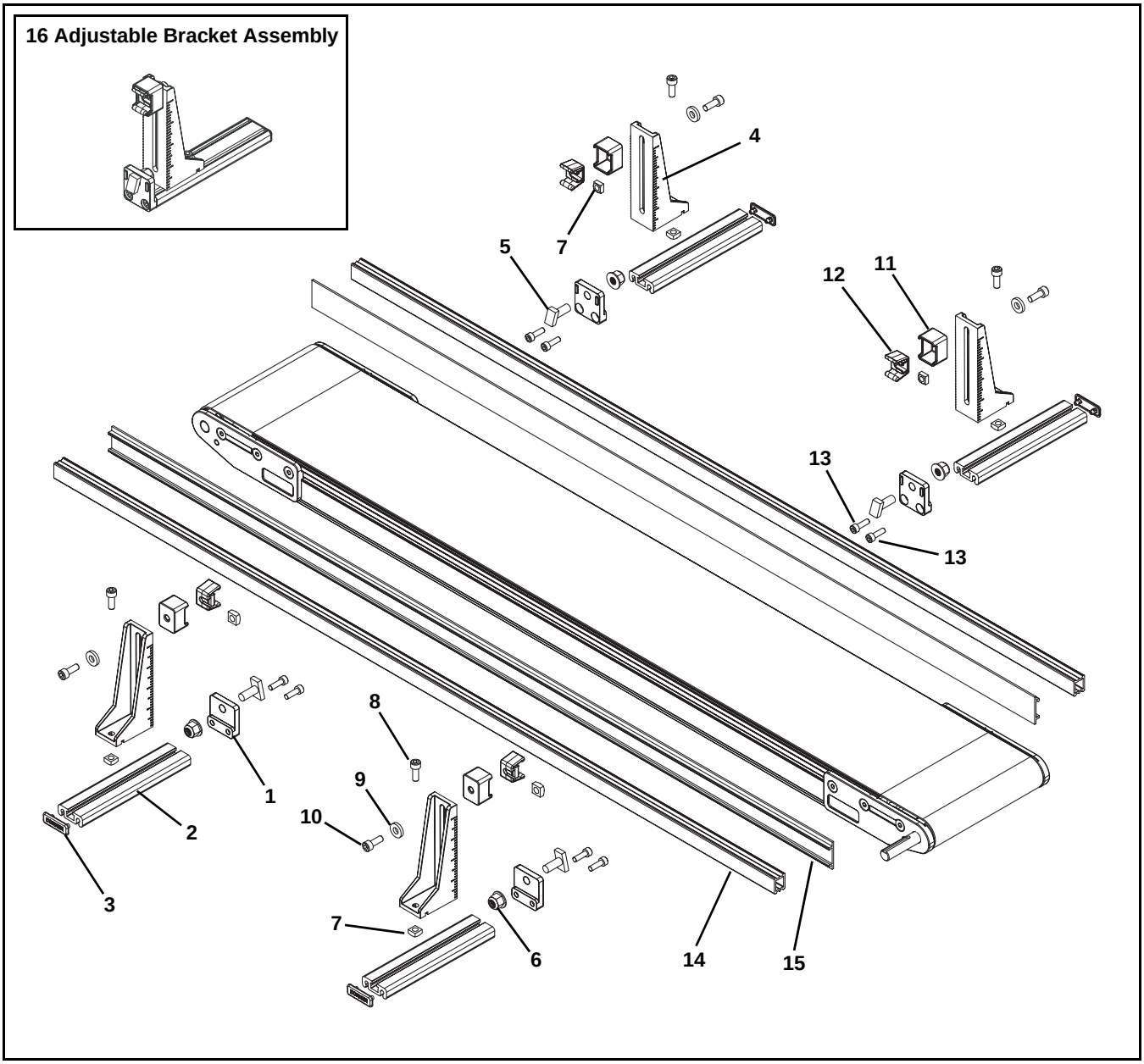
#14, 34 & 44 Profile - Tool-Less Adjustable Guiding



Item	Part Number	Description
1	206380	Base
2	206381	Base Clamp
3	206382	Insert Clamp
4	206383	Guide Ring
5	206385	Tube
6	206397	Clip
7	206685	T-Nut
8	206692	Guide Tube
9	807-2859	Nylon Cap Screw, N6 x 16 mm
10	807-920	Square Nut, M6-1.0
11	911-710	Washer
12	206698	Knob, 12 mm
13	206697	Knob, 150 mm
14	990601M	Hex Nut

Item	Part Number	Description
15	834-238-LLLLL	Guide Rail
	GTB13A04	Guide Rail 4' long
	GTB13A08	Guide Rail 8' long
16	834-241	1.3" UHMW Guiding (per foot)
	GTB13B04	1.3" UHMW Guiding 4' long
	GTB13B08	1.3" UHMW Guiding 8' long
	206683	2" UHMW Guiding (per foot)
	GTB13C04	2" UHMW Guiding 4' long
	GTB13C08	2" UHMW Guiding 8' long
17	206687	Tool-Less Adjustable Bracket Assembly (Includes Items 1 through 14)
LLLLL = part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

#16, 36 & 46 Profile - Outboard Adjustable Guiding

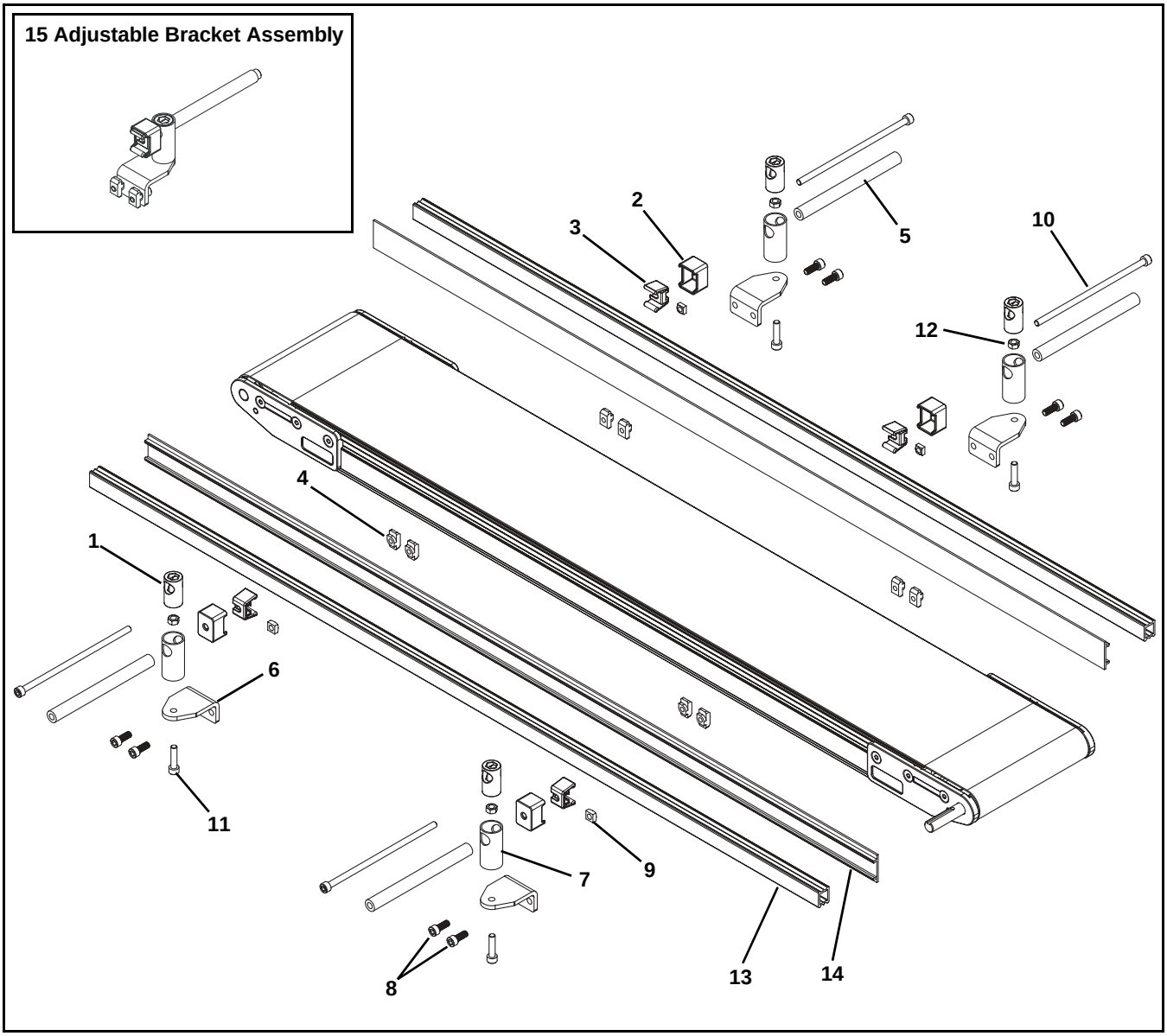


Item	Part Number	Description
1	210848	Mounting Block
2	210846-00600	Extrusion Base
3	210849	Cap
4	210847	Mounting Bracket
5	834-007	Stud, M8 x 20 mm
6	990812M	Hex Nut, M8-1.25
7	807-920	Square Nut, M6-1.0
8	920616M	Socket Head Screw, M6-1.00 x 16 mm
9	605279P	Washer
10	920622M	Socket Head Screw, M6-1.00 x 22 mm
11	206383	Guide Ring
12	206397	Clip
13	920516M	Socket Head Screw, M5-.80 x 16 mm

Item	Part Number	Description
14	834-238-LLLLL	Guide Rail
	GTB13A04	Guide Rail 4' long
	GTB13A08	Guide Rail 8' long
15	834-241	1.3" UHMW Guiding (per foot)
	GTB13B04	1.3" UHMW Guiding 4' long
	GTB13B08	1.3" UHMW Guiding 8' long
	206683	2" UHMW Guiding (per foot)
	GTB13C04	2" UHMW Guiding 4' long
	GTB13C08	2" UHMW Guiding 8' long
16	206193	Adjustable Bracket Assembly (Includes Items 1 through 13)
LLLLL = part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

Service Parts

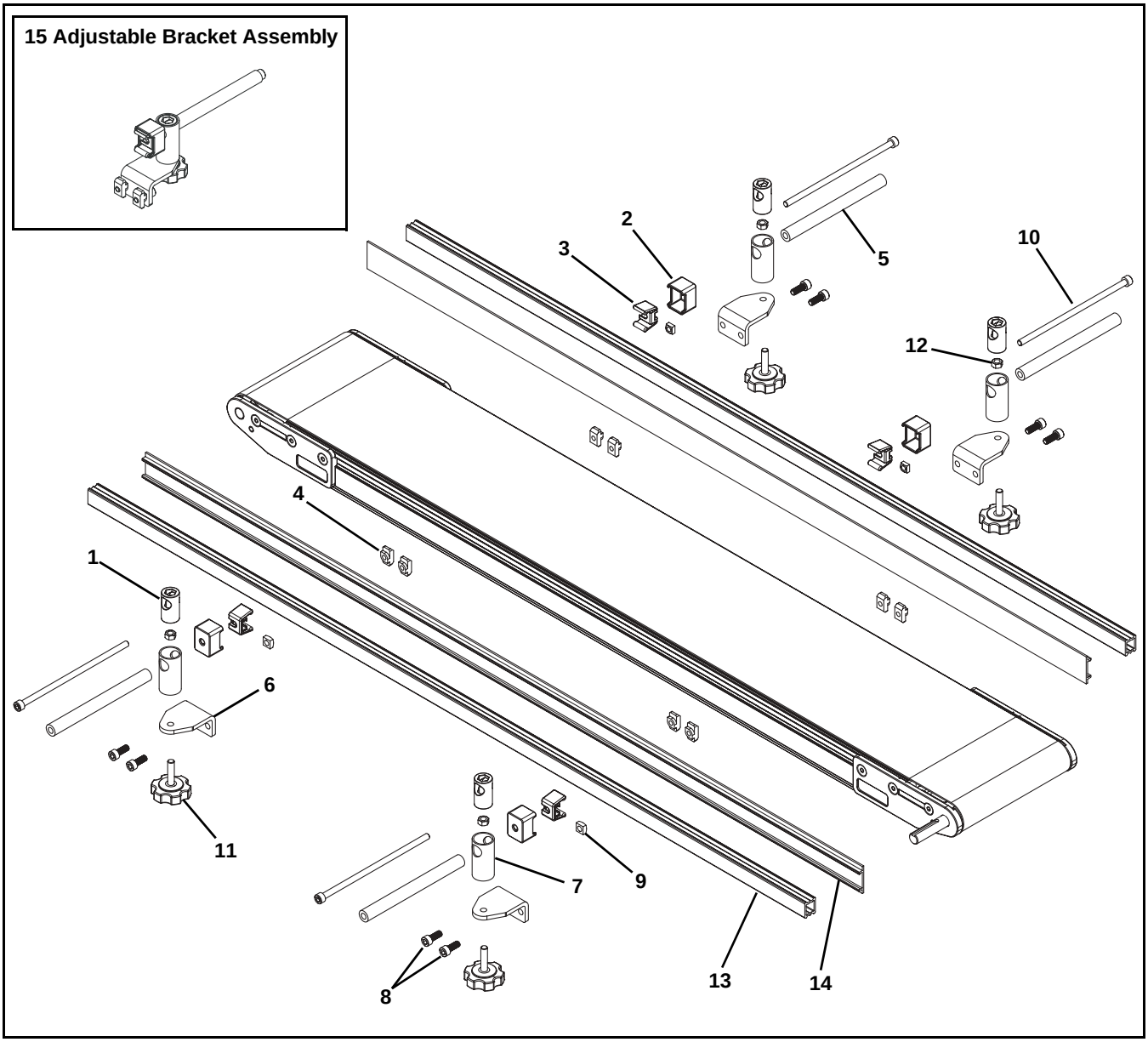
#19, 39 & 49 Profile - Horizontal Adjustable Guiding



Item	Part Number	Description
1	206382	Insert Clamp
2	206383	Guide Ring
3	206397	Clip
4	206685	T-Nut
5	206692	Guide Tube
6	207146	Bracket
7	207154	Guide Tube
8	807-2859	Nylon Cap Screw, N6 x 16 mm
9	807-920	Square Nut, M6-1.0
10	9206150M	Socket Head Screw, M6-1.00 x 150 mm
11	920630M	Socket Head Screw, M6-1.00 x 30 mm
12	990601M	Hex Nut

Item	Part Number	Description
13	834-238-LLLLL	Guide Rail
	GTB13A04	Guide Rail 4' long
	GTB13A08	Guide Rail 8' long
14	834-241	1.3" UHMW Guiding (per foot)
	GTB13B04	1.3" UHMW Guiding 4' long
	GTB13B08	1.3" UHMW Guiding 8' long
	206683	2" UHMW Guiding (per foot)
	GTB13C04	2" UHMW Guiding 4' long
	GTB13C08	2" UHMW Guiding 8' long
15	207150	Adjustable Bracket Assembly (Includes Items 1 through 13)
LLLLL = part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

#20, 40 & 50 Profile - Tool-Less Horizontal Adjustable Guiding

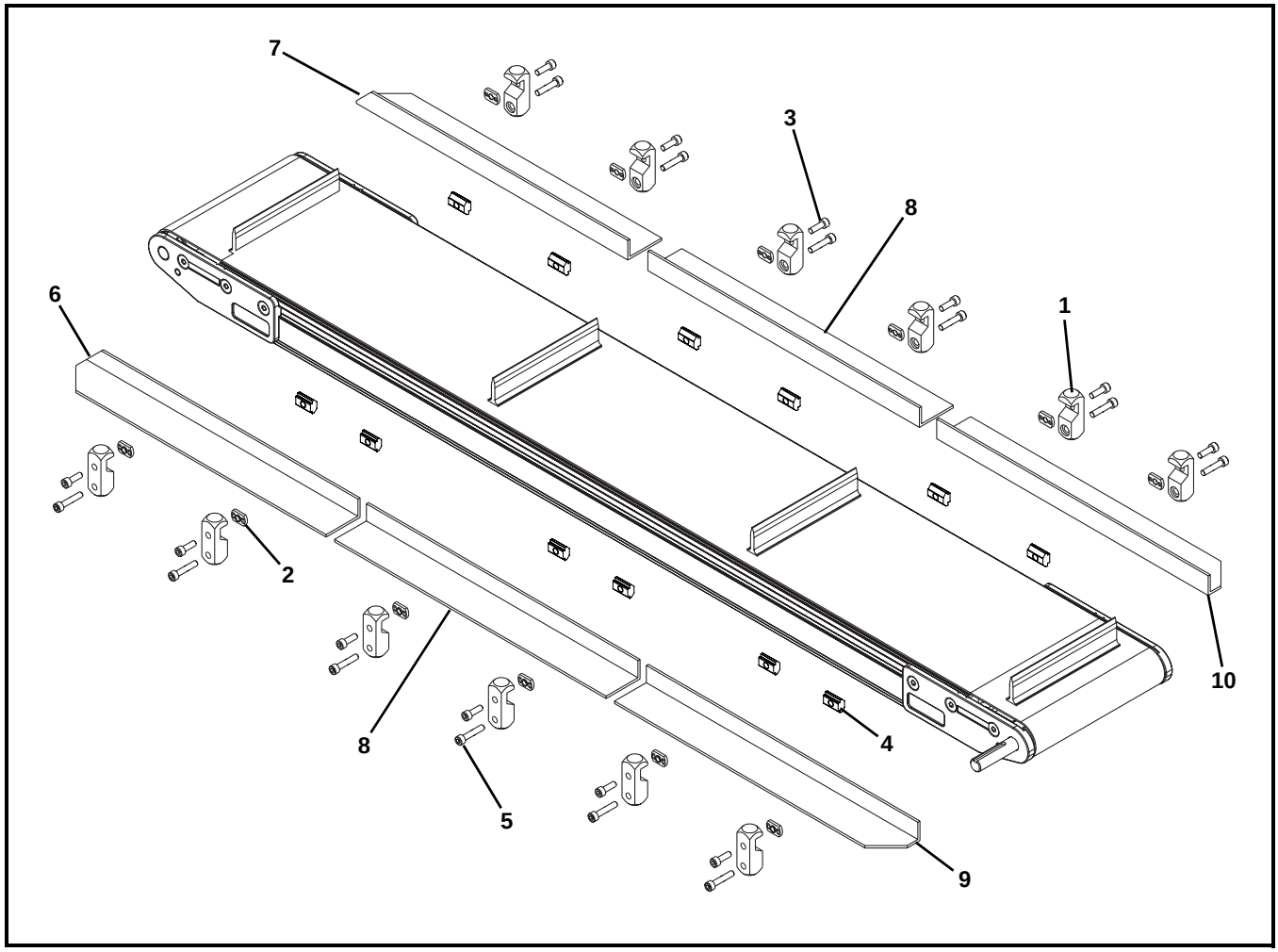


Item	Part Number	Description
1	206382	Insert Clamp
2	206383	Guide Ring
3	206397	Clip
4	206685	T-Nut
5	206692	Guide Tube
6	207146	Bracket
7	207154	Guide Tube
8	807-2859	Nylon Cap Screw, N6 x 16 mm
9	807-920	Square Nut, M6-1.0
10	9206150M	Socket Head Screw, M6-1.00 x 150 mm
11	207156	Knob, 30 mm
12	990601M	Hex Nut

Item	Part Number	Description
13	834-238-LLLLL	Guide Rail
	GTB13A04	Guide Rail 4' long
	GTB13A08	Guide Rail 8' long
14	834-241	1.3" UHMW Guiding (per foot)
	GTB13B04	1.3" UHMW Guiding 4' long
	GTB13B08	1.3" UHMW Guiding 8' long
	206683	2" UHMW Guiding (per foot)
	GTB13C04	2" UHMW Guiding 4' long
	GTB13C08	2" UHMW Guiding 8' long
15	207151	Tool-Less Adjustable Bracket Assembly (Includes Items 1 through 13)
LLLLL = part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

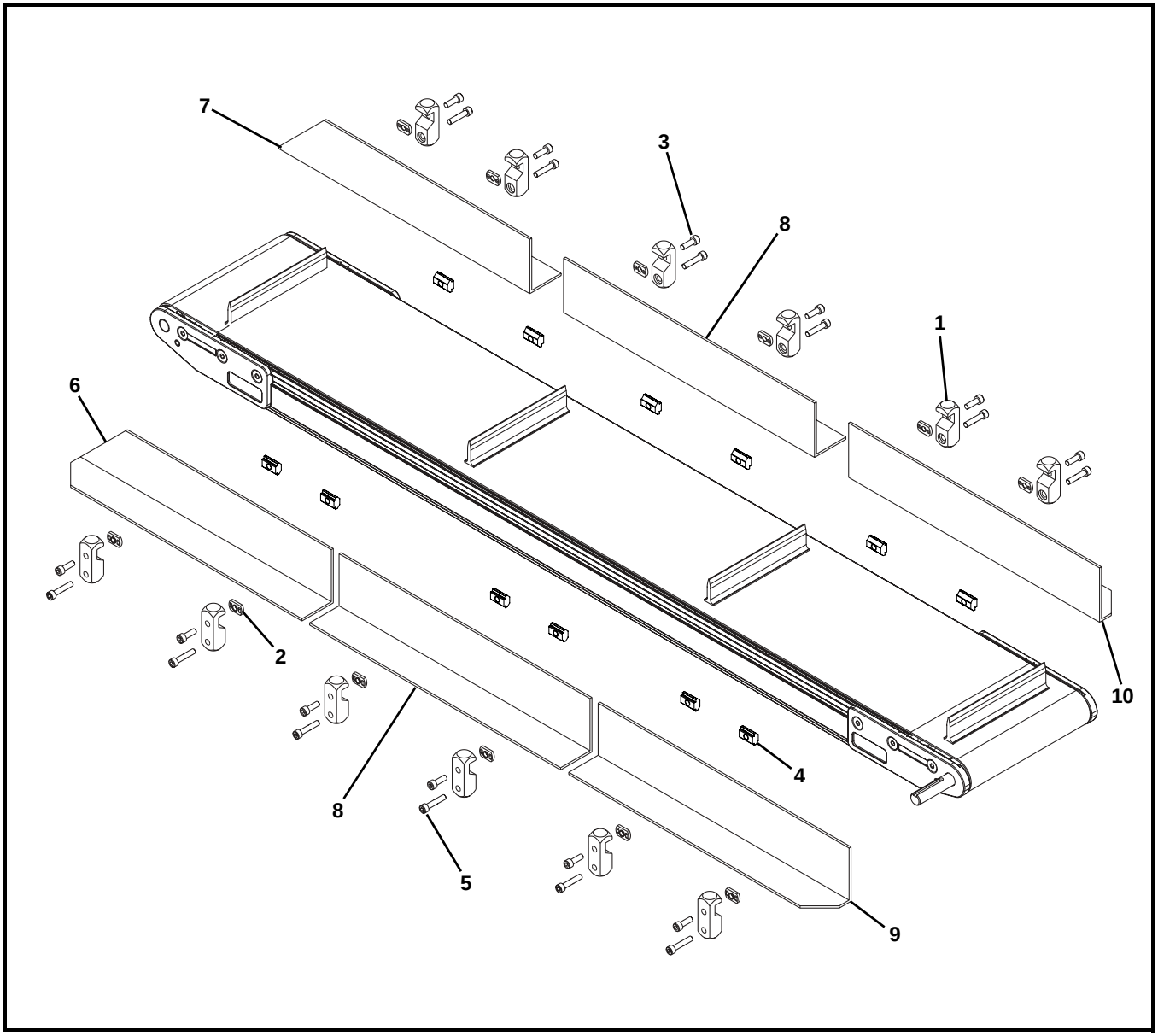
Service Parts

1" Cleated Profiles



Item	Part Number	Description
1	207161	Clamping Block
2	807-2005	Weld Nut
3	920618M	Socket Head Screw, M6-1.00 x 18 mm
4	639971M	Drop-In Tee Bar
5	920630M	Socket Head Screw, M6-1.00 x 30 mm
6	204603-LLLLL	One Piece Guiding Right Hand (for Conveyors up to 12' long)
	204603D-LLLLL	One Piece Guiding Right Hand Drive Side (for Conveyors up to 12' long)
	204603-LLLLL	Infeed Guiding Right Hand
7	204602-LLLLL	One Piece Guiding Left Hand (for Conveyors up to 12' long)
	204602D-LLLLL	One Piece Guiding Left Hand Drive Side (for Conveyors up to 12' long)
	204602-LLLLL	Infeed Guiding Left Hand
8	204601-LLLLL	Mid Guiding
9	204601-LLLLL	Exit Guiding Right Hand
	204601D-LLLLL	Exit Guiding Right Hand Drive Side
10	204601-LLLLL	Exit Guiding Left Hand
	204601A-LLLLL	Exit Guiding Left Hand Drive Side
LLLLL = Part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

2" Cleated Profiles

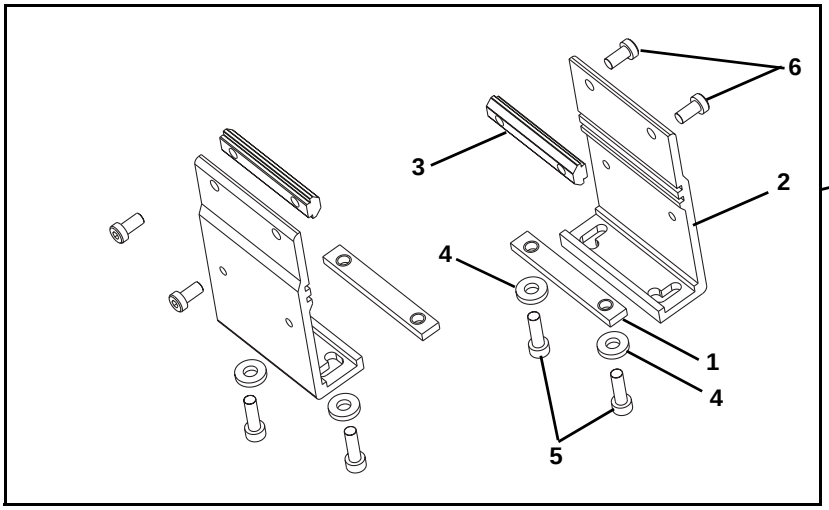


Item	Part Number	Description
1	207161	Clamping Block
2	807-2005	Weld Nut
3	920618M	Socket Head Screw, M6-1.00 x 18 mm
4	639971M	Drop-In Tee Bar
5	920630M	Socket Head Screw, M6-1.00 x 30 mm
6	208103-LLLLL	One Piece Guiding Right Hand (for Conveyors up to 12' long)
	208103D-LLLLL	One Piece Guiding Right Hand Drive Side (for Conveyors up to 12' long)
	208103-LLLLL	Infeed Guiding Right Hand
7	208102-LLLLL	One Piece Guiding Left Hand (for Conveyors up to 12' long)
	208102D-LLLLL	One Piece Guiding Left Hand Drive Side (for Conveyors up to 12' long)
	208102-LLLLL	Infeed Guiding Left Hand

Item	Part Number	Description
8	208101-LLLLL	Mid Guiding
9	208101-LLLLL	Exit Guiding Right Hand
	208101D-LLLLL	Exit Guiding Right Hand Drive Side
10	208101-LLLLL	Exit Guiding Left Hand
	208101A-LLLLL	Exit Guiding Left Hand Drive Side
LLLLL = Part length in inches with 2 decimal places		
Length Example: Length = 35.25" LLLLL = 03525		

Service Parts

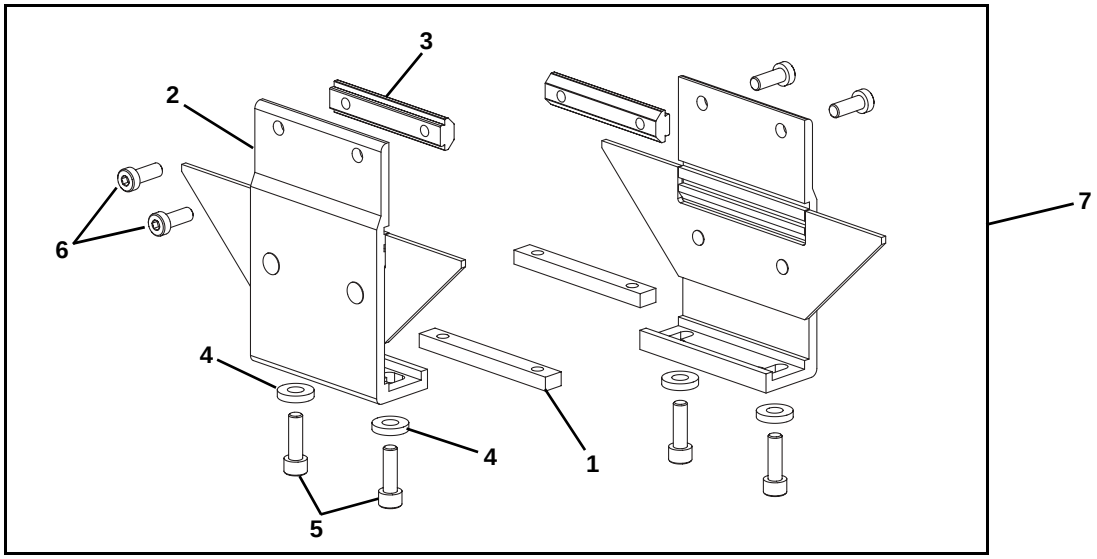
Flat Belt Mounting Brackets



Item	Part Number	Description
1	202303	Connector Bar
2	202394	Stand Mount
3	300150M	Drop-in Tee Bar
4	605279P	Washer

Item	Part Number	Description
5	920620M	Socket Head Screw, M6 - 1.00 x 20 mm
6	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
7	202389	Stand Mount Assembly

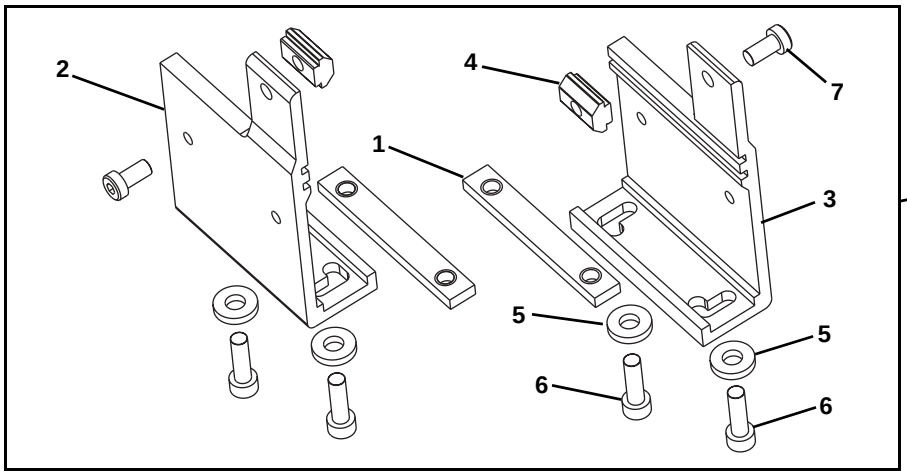
Cleated Belt Mounting Brackets



Item	Part Number	Description
1	202303	Connector Bar
2	207529	Cleated Stand Bracket Assembly
3	300150M	Drop-in Tee Bar
4	605279P	Washer

Item	Part Number	Description
5	920620M	Socket Head Screw, M6 - 1.00 x 20 mm
6	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
7	207526	Cleated Stand Mount Assembly

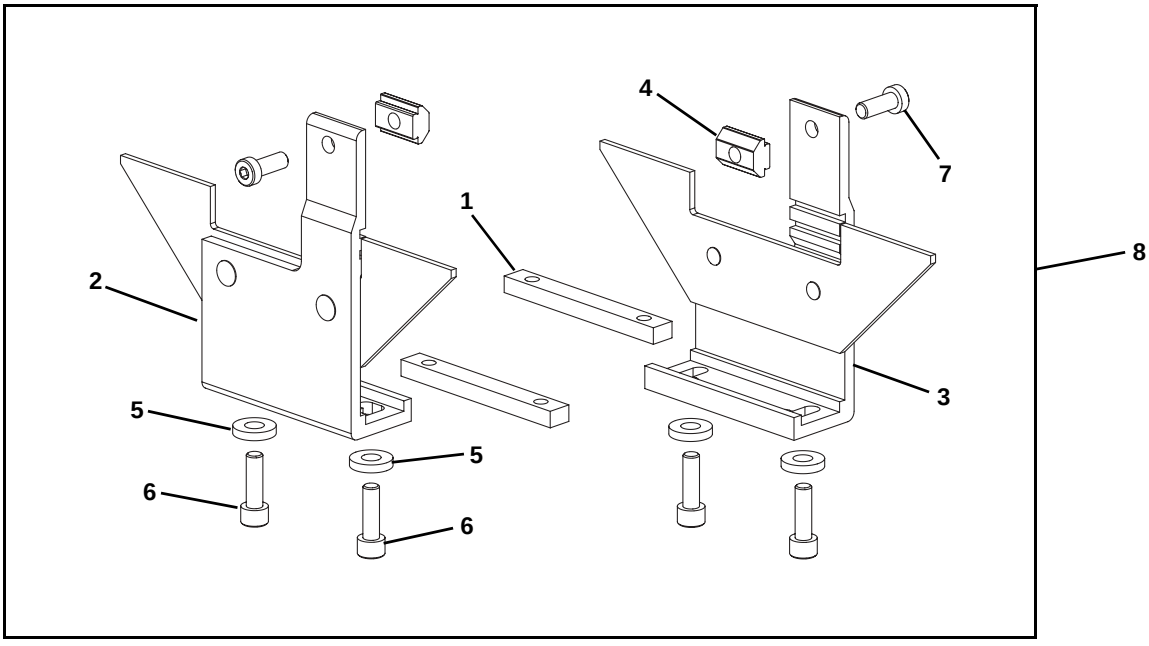
Flat Belt Mounting Brackets for Short Conveyors



Item	Part Number	Description
1	202303	Connector Bar
2	202304	2' Stand Mount Left Hand
3	202305	2' Stand Mount Right Hand
4	639971M	Drop-in Tee Bar

Item	Part Number	Description
5	605279P	Washer
6	920620M	Socket Head Screw, M6 - 1.00 x 20 mm
7	950616M	Low Head Cap Screw, M6 - 1.00 x 16 mm
8	202392	Stand Mount Assembly

Cleated Belt Mounting Brackets for Short Conveyors

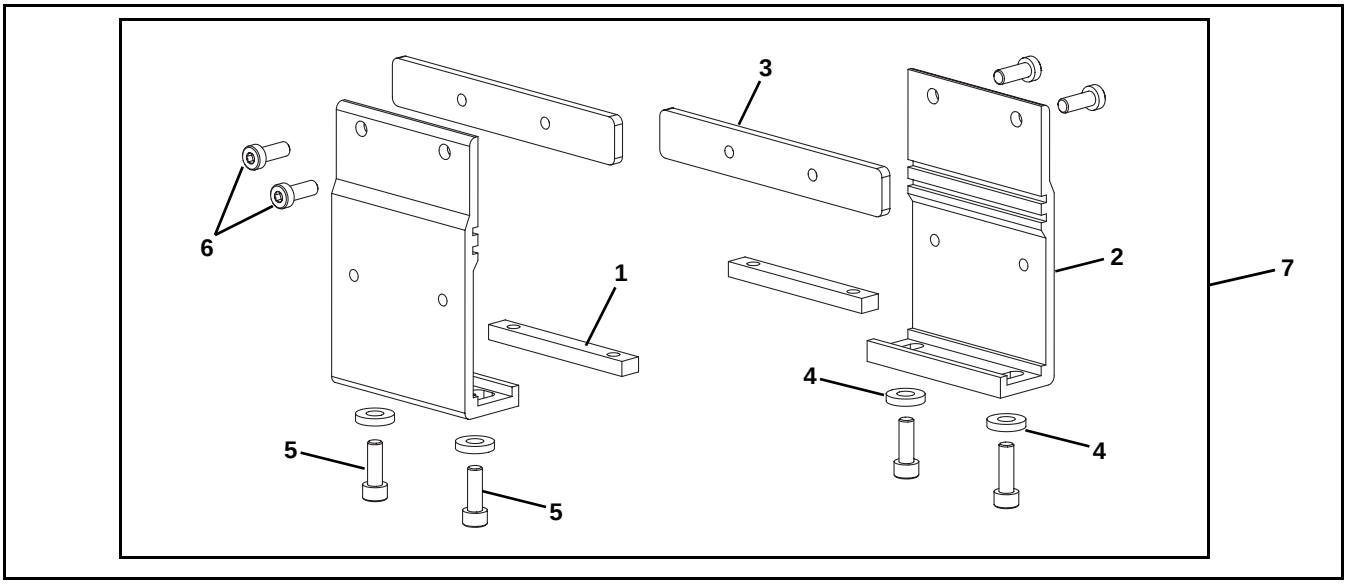


Item	Part Number	Description
1	202303	Connector Bar
2	207530	2' Cleated Stand Bracket Assembly Left Hand
3	207531	2' Cleated Stand Bracket Assembly Right Hand
4	639971M	Drop-in Tee Bar

Item	Part Number	Description
5	605279P	Washer
6	920620M	Socket Head Screw, M6 - 1.00 x 20 mm
7	950616M	Low Head Cap Screw, M6 - 1.00 x 16 mm
8	207527	Cleated Stand Mount Assembly

Service Parts

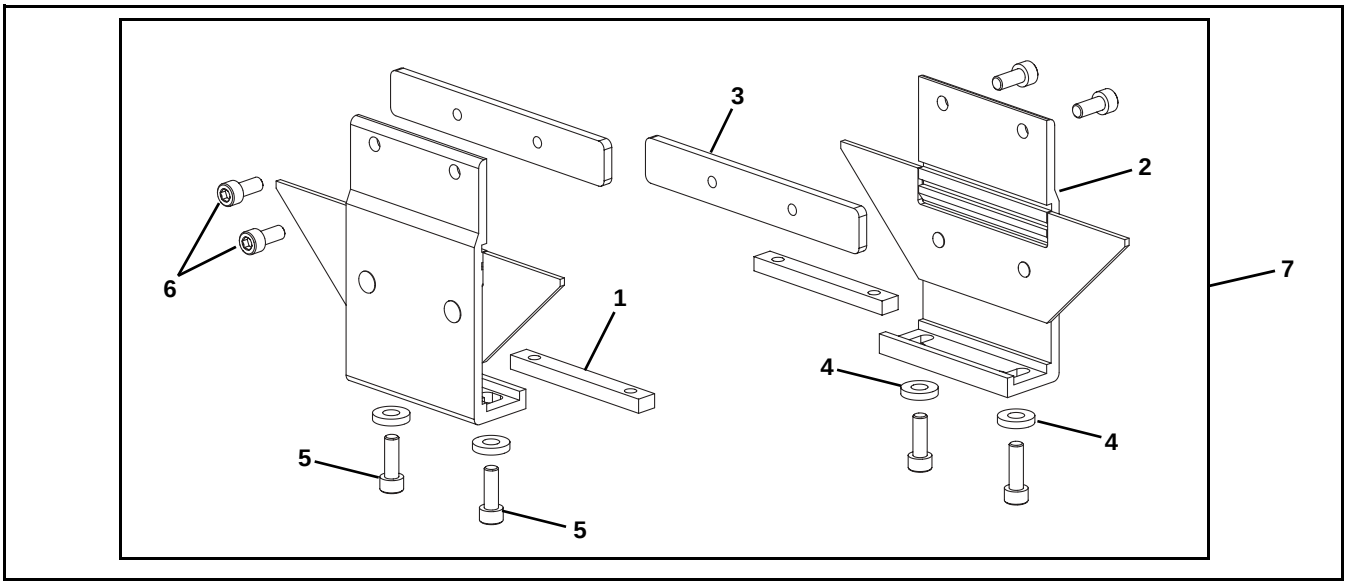
Flat Belt Connecting Assembly with Stand Mount



Item	Part Number	Description
1	202303	Connector Bar
2	202394	Stand Mount
3	206520	Frame Connector
4	605279P	Washer

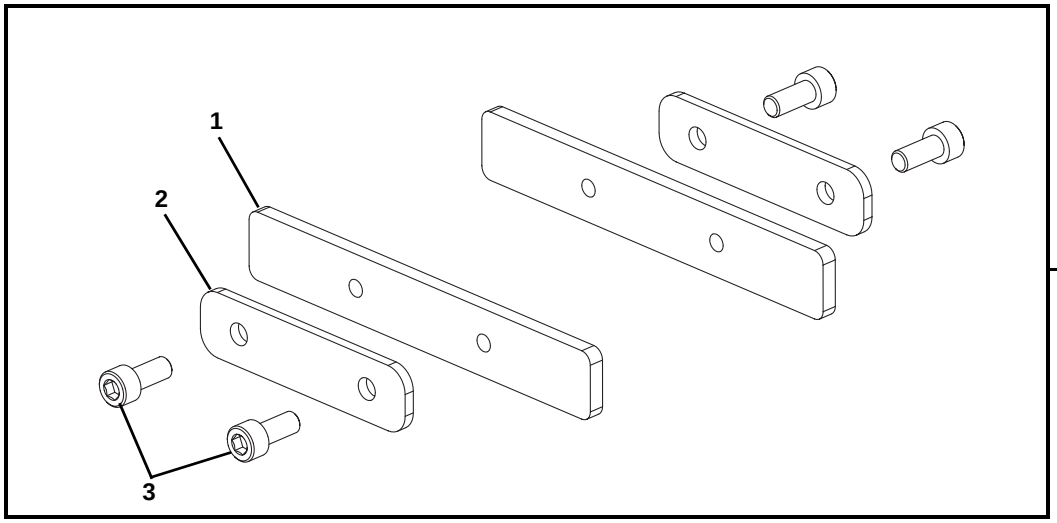
Item	Part Number	Description
5	920620M	Socket Head Screw, M6-1.00 x 20 mm
6	920614M	Socket Head Screw, M6-1.00 x 14 mm
7	203771	Connecting Stand Mount Assembly

Cleated Belt Connecting Assembly with Stand Mount



Item	Part Number	Description
1	202303	Connector Bar
2	207529	Cleated Stand Bracket Assembly
3	206520	Frame Connector
4	605279P	Washer
5	920620M	Socket Head Screw, M6-1.00 x 20 mm
6	920614M	Socket Head Screw, M6-1.00 x 14 mm
7	207528	Cleated Stand Mount Assembly

Connecting Assembly without Stand Mount



Item	Part Number	Description
1	206520	Connecting Bar
2	240859	Plate
3	920614M	Socket Head Screw, M6-1.00 x 14 mm
4	206519	Connecting Assembly

Service Parts

Micropitch Conveyor Belting

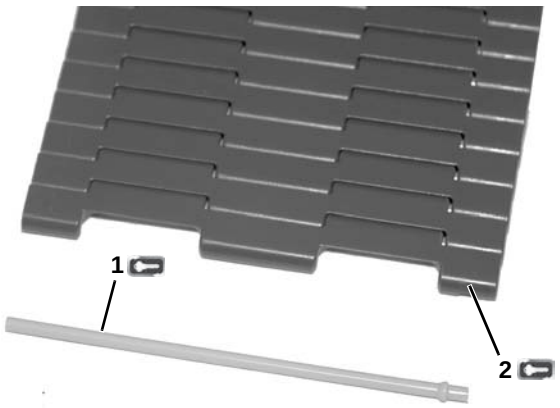


Figure 94

Item	Part Number	Description
1	807-2103	4" Belt Rod
	807-3011	6" Belt Rod
	807-2104	8" Belt Rod
	807-2105	12" Belt Rod
	807-2400	18" Belt Rod
	807-2106	24" Belt Rod
2	2P-WW/BB	Micropitch Belting per 1 ft
WW = Conveyor width reference: 04, 06, 08, 12, 18, 24		
BB = Belt Types 01, 02		

Metal Working Conveyor Belting

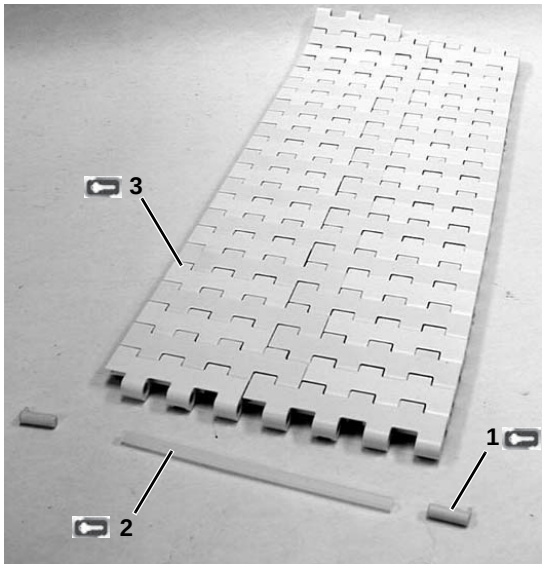


Figure 95

Item	Part Number	Description
1	807-1118	Retaining Pin for Metal Working Belt Only
2	807-1113	3" Belt Rod for Metal Working Belt
	807-3021	6" Belt Rod for Metal Working Belt
	807-3013	9" Belt Rod for Metal Working Belt
	807-3014	12" Belt Rod for Metal Working Belt
	807-3015	18" Belt Rod for Metal Working Belt
	807-3016	24" Belt Rod for Metal Working Belt
3	22P-WW/BB	Metal Working Belt per 1 ft
WW = Conveyor width reference: 03, 06, 09, 12, 18, 24		
BB = Belt Types: 30, 31, 32, 40, 41, 42		

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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