2200 Series Version 2 Conveyors

Installation, Maintenance & Parts Manual

DORNER MFG. CORP.
P.O. Box 20 • 975 Cottonwood Ave.
Hartland, WI 53029-0020 USA

INSIDE THE USA
TEL: 1-800-397-8664
FAX: 1-800-369-2440

OUTSIDE THE USA
TEL: 262-367-7600
FAX: 262-367-5827

For other service manuals visit our website at:
www.dorner.com/service_manuals.asp

851-816 Rev. A

Table of Contents

Table of Contents

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 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 .

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.

⚠ WARNING

The safety alert symbol, black triangle with white exclamation, is used to alert you to potential personal injury hazards.

⚠ DANGER

SEVERE HAZARD!

KEEP OFF CONVEYORS. Climbing, sitting, walking or riding on conveyor will result in death or serious injury.

⚠ WARNING

SEVERE HAZARD!

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

⚠ WARNING

BURN HAZARD!

DO NOT TOUCH the motor while operating, or shortly after being turned off. Motors may be HOT and can cause serious burn injuries.

⚠ WARNING

PUNCTURE HAZARD!

Handle drive shaft keyway with care. It may be sharp and could puncture the skin, causing serious injury.

⚠ DANGER

EXPLOSION HAZARD!

- DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT. The electric gearmotor generates heat and could ignite combustible vapors.
- Failure to comply will result in death or serious injury.

⚠ WARNING

CRUSH HAZARD!

- DO NOT place hands or fingers inside the conveyor while it is running.
- DO NOT wear loose garments while operating the conveyor. Loose garments can become caught up in the conveyor.
- Failure to comply could result in serious injury.

⚠ WARNING

CRUSH HAZARD!

- SUPPORT CONVEYOR SECTIONS PRIOR TO LOOSENING STAND HEIGHT OR ANGLE ADJUSTMENT SCREWS.
- Loosening stand height or angle adjustment screws may cause conveyor sections to drop down, causing serious injury.

⚠ WARNING

SEVERE HAZARD!

- 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.
- Failure to comply could result in serious injury.

Product Description

Typical Conveyor Components 1:

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

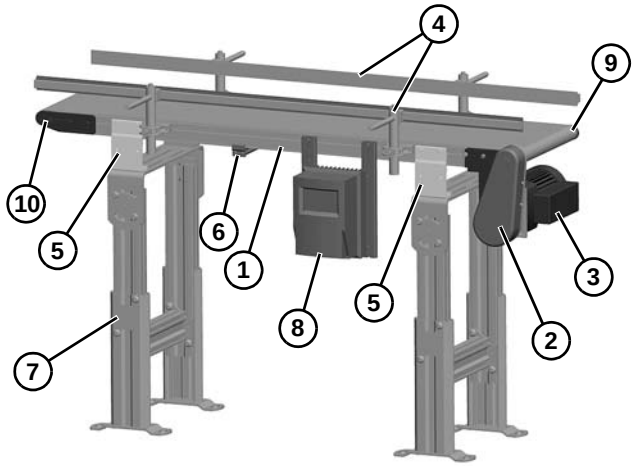


Figure 1

Typical iDrive Control Components 2:

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

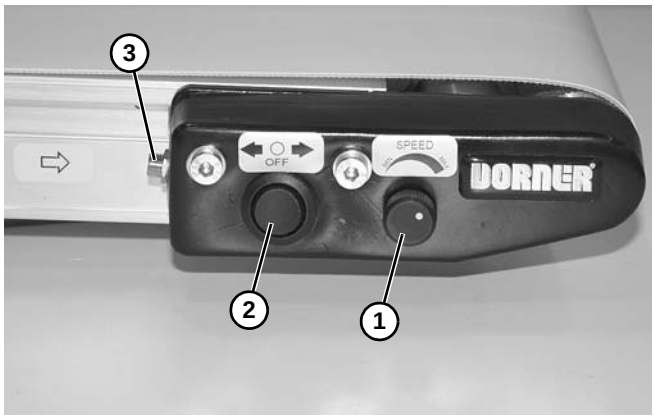
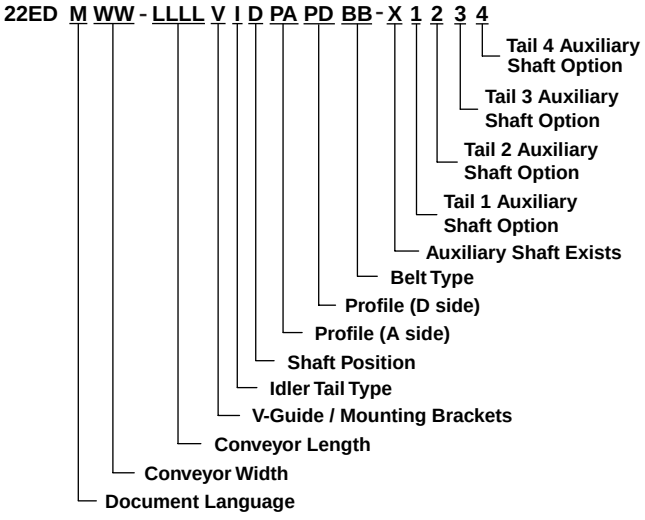


Figure 2

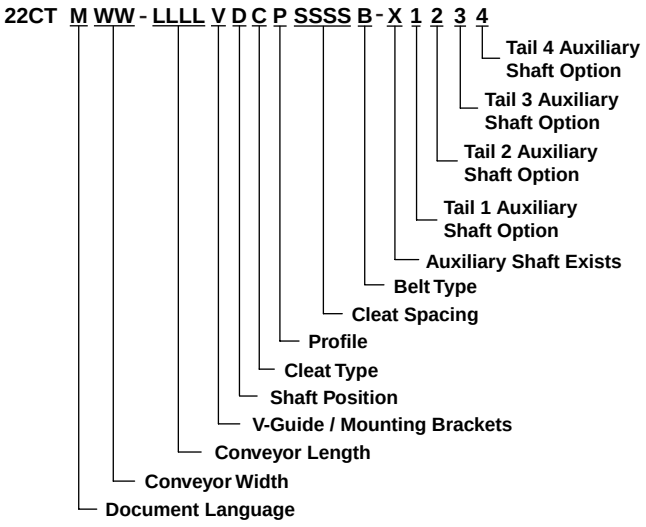
Specifications

Models:

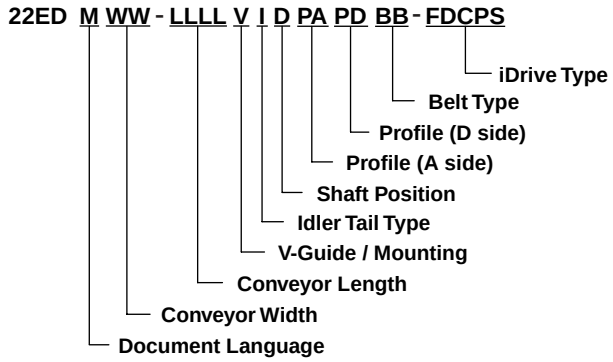
Flat Belt 2200 Series End Drive Conveyor



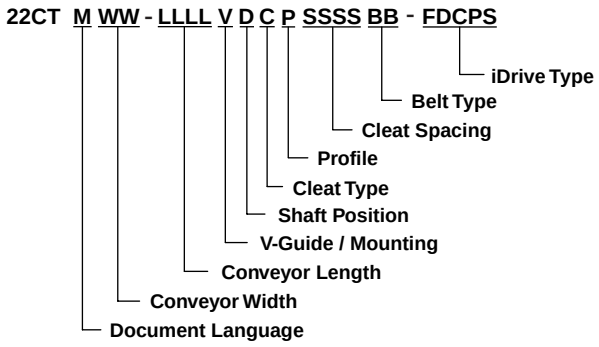
Cleated Belt 2200 Series End Drive Conveyor



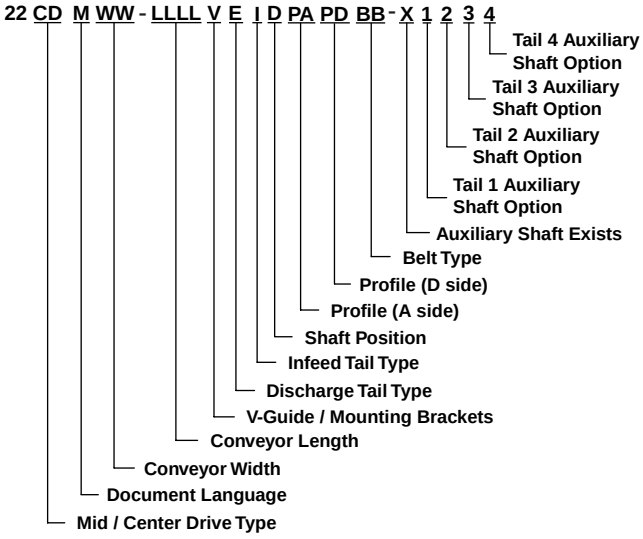
Flat Belt 2200 Series iDrive Conveyor



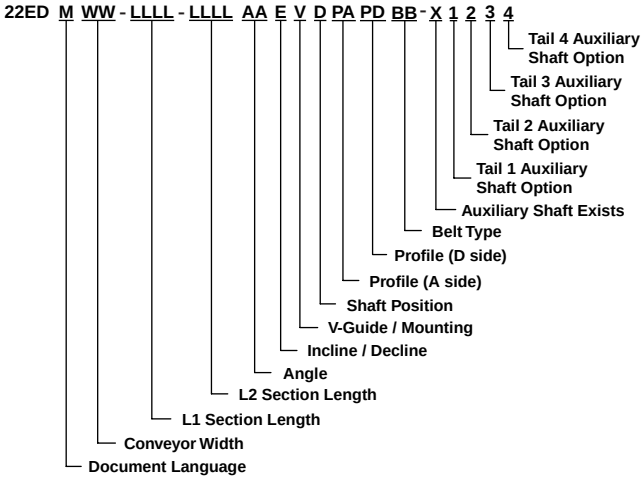
Cleated Belt 2200 Series iDrive Conveyor



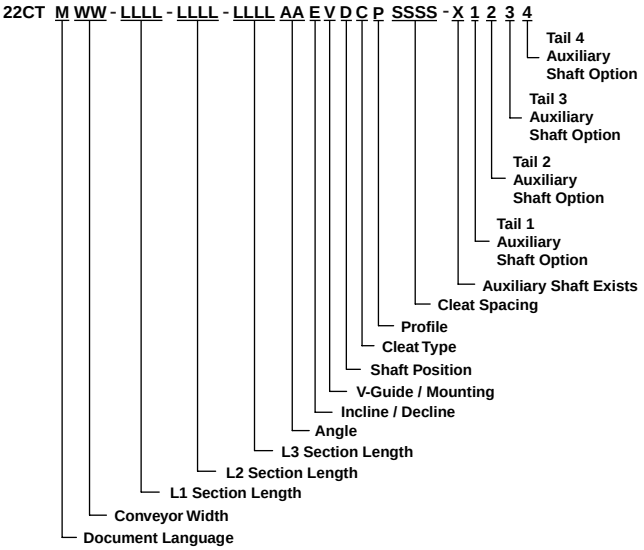
Flat Belt 2200 Series Mid / Center Drive Conveyor



Flat Belt 2200 Series LPZ End Drive Conveyor



Cleated Belt 2200 Series LPZ End Drive Conveyor



* See Ordering and Specifications Catalog for details.

Specifications

Conveyor Supports

End Drive and iDrive Conveyor Supports

Maximum Distances:

1 = 24" (610 mm)

2 = 18" (457 mm)

3 = 96" (2438 mm)

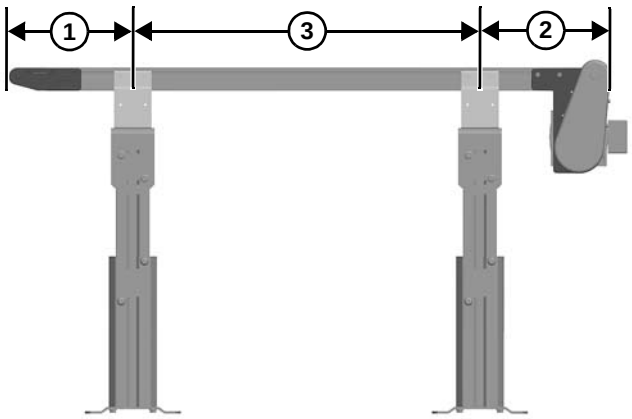


Figure 3

Mid / Center Drive Conveyor Supports

Maximum Distances:

1 = 24" (610 mm) (Idler End)

2 = 96" (2438 mm)**

** For conveyors longer than 13 ft (3962 mm), install support at joint.

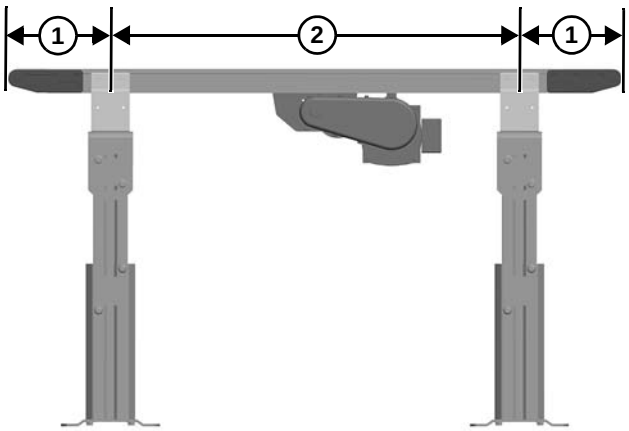


Figure 4

Flat Belt LPZ Conveyor Supports

Maximum Distances:

1 = 18" (457 mm) (Drive End)

2 = 96" (2438 mm)

3 = 24" (610 mm) (Idler End)

Maximum Angle:

4 = 5 to 20 degrees

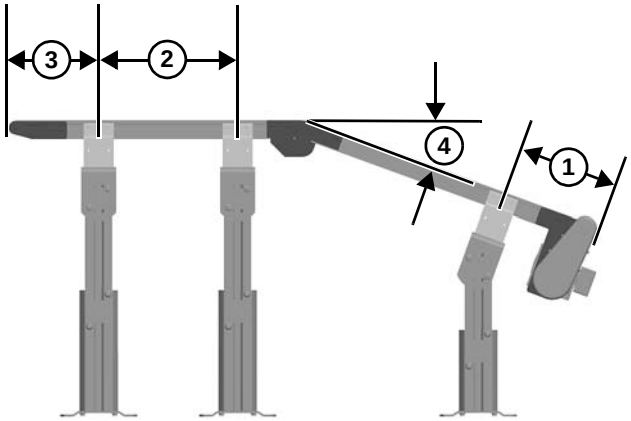


Figure 5

Cleated Belt LPZ Conveyor Supports

Maximum Distances:

1 = 18" (457 mm) (Drive End)

2 = 96" (2438 mm)

3 = 24" (610 mm) (Idler End)

Maximum Angle:

4 = 30 to 60 degrees

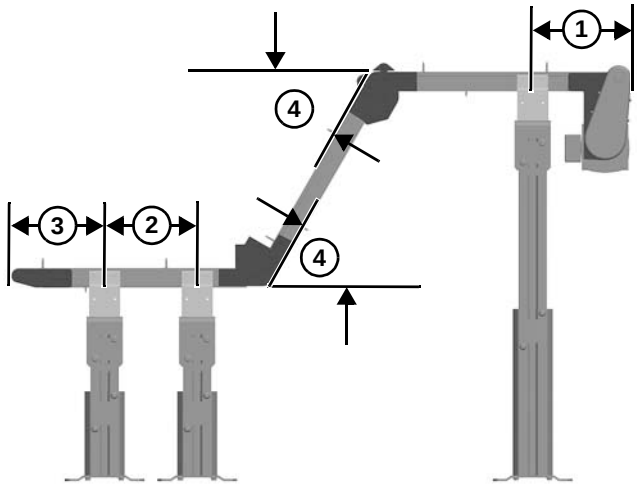


Figure 6

End/Mid Drive Conveyor Specifications

Conveyor Width Reference (WW)	02	03	04	05	06	08	10
Conveyor Belt Width	1.75" (44 mm)	2.75" (70 mm)	3.75" (95 mm)	5" (127 mm)	6" (152 mm)	8" (203 mm)	10" (254 mm)
Maximum Conveyor Load* (See NOTE Below)	30 lb (14 kg)	35 lb (16 kg)	42 lb (19 kg)	50 lb (23 kg)	60 lb (27 kg)	70 lb (32 kg)	80 lb (36 kg)
End Drive Conveyor Startup Torque**	2 in-lb (0.2 Nm)	3 in-lb (0.3 Nm)	4 in-lb (0.5 Nm)	6 in-lb (0.7 Nm)	8 in-lb (0.9 Nm)	10 in-lb (1.1 Nm)	12 in-lb (1.4 Nm)
Mid Drive Conveyor Startup Torque**	4 in-lb (0.5 Nm)	5 in-lb (0.6 Nm)	6 in-lb (0.7 Nm)	8 in-lb (0.9 Nm)	10 in-lb (1.1 Nm)	12 in-lb (1.4 Nm)	14 in-lb (1.6 Nm)
End Drive Conveyor Length Reference (LLLL)	0150 to 1800 in 0001 increments						
Mid Drive Conveyor Length Reference (LLLL)	0200 to 2400 in 0001 increments						
End Drive Conveyor Length	1.50 ft (457 mm) to 18 ft (5486 mm) in 0.12" (0.31 mm) increments						
Mid Drive Conveyor Length	2.00 ft (610 mm) to 24 ft (7315 mm) in 0.12" (0.31 mm) increments						
Belt Travel	4.0" (88 mm) per revolution of pulley						
Maximum Belt Speed*	264 ft/minute (80.5 m/minute)						
Belt Take-up	0.38" (10 mm) of stroke = 0.75" (19 mm) of belt take-up						

Conveyor Width Reference (WW)	12	14	16	18	20	22	24
Conveyor Belt Width	12" (305 mm)	14" (356 mm)	16" (406 mm)	18" (457 mm)	20" (508 mm)	22" (559 mm)	24" (609 mm)
Maximum Conveyor Load* (See NOTE Below)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)
End Drive Conveyor Startup Torque**	13 in-lb (1.5 Nm)	14 in-lb (1.6 Nm)	15 in-lb (1.7 Nm)	16 in-lb (1.8 Nm)	17 in-lb (1.9 Nm)	18 in-lb (2.0 Nm)	20 in-lb (2.3 Nm)
Mid Drive Conveyor Startup Torque**	15 in-lb (1.7 Nm)	16 in-lb (1.8 Nm)	17 in-lb (1.9 Nm)	18 in-lb (2.0 Nm)	19 in-lb (2.1 Nm)	20 in-lb (2.3 Nm)	22 in-lb (2.5 Nm)
End Drive Conveyor Length Reference (LLLL)	0150 to 1800 in 0001 increments						
Mid Drive Conveyor Length Reference (LLLL)	0200 to 2400 in 0001 increments						
End Drive Conveyor Length	1.50 ft (457 mm) to 18 ft (5486 mm) in 0.12" (0.31 mm) increments						
Mid Drive Conveyor Length	2.00 ft (610 mm) to 24 ft (7315 mm) in 0.12" (0.31 mm) increments						
Belt Travel	4.0" (88 mm) per revolution of pulley						
Maximum Belt Speed*	264 ft/minute (80.5 m/minute)						
Belt Take-up	0.38" (10 mm) of stroke = 0.75" (19 mm) of belt take-up						

* See Ordering and Specifications Catalog for details.

** Conveyor Startup Torque dependent on belt type and conveyor length.

Specifications

Center Drive Conveyor Specifications

Conveyor Width Reference (WW)	02	03	04	05	06	08	10
Conveyor Belt Width	1.75" (44 mm)	2.75" (70 mm)	3.75" (95 mm)	5" (127 mm)	6" (152 mm)	8" (203 mm)	10" (254 mm)
Maximum Conveyor Load* (See NOTE Below)	40 lb (18 kg)	50 lb (23 kg)	60 lb (27 kg)	75 lb (34 kg)	90 lb (41 kg)	105 lb (47 kg)	120 lb (54 kg)
Conveyor Startup Torque**	9 in-lb (1.0 Nm)	10 in-lb (1.1 Nm)	11 in-lb (1.2 Nm)	12 in-lb (1.4 Nm)	15 in-lb (1.7 Nm)	20 in-lb (2.3 Nm)	23 in-lb (2.6 Nm)
Conveyor Length Reference (LLLL)	0200 to 2400 in 0001 increments						
Conveyor Length	2.00 ft (457 mm) to 24 ft (7315 mm) in 0.12" (0.31 mm) increments						
Belt Travel	4.2" (107 mm) per revolution of pulley						
Maximum Belt Speed*	235 ft/minute (72 m/minute)						
Belt Take-up	1" (25 mm) of stroke = 2" (51 mm) of belt take-up (Center Drive Conveyors Only)						

Conveyor Width Reference (WW)	12	14	16	18	20	22	24
Conveyor Belt Width	12" (305 mm)	14" (356 mm)	16" (406 mm)	18" (457 mm)	20" (508 mm)	22" (559 mm)	24" (609 mm)
Maximum Conveyor Load* (See NOTE Below)	120 lb (54 kg)	120 lb (54 kg)	120 lb (54 kg)	120 lb (54 kg)	120 lb (54 kg)	120 lb (54 kg)	120 lb (54 kg)
Conveyor Startup Torque**	25 in-lb (2.8 Nm)	26 in-lb (2.9 Nm)	28 in-lb (3.2 Nm)	30 in-lb (3.4 Nm)	32 in-lb (3.6 Nm)	34 in-lb (3.8 Nm)	35 in-lb (4.0 Nm)
Conveyor Length Reference (LLLL)	0200 to 2400 in 0001 increments						
Conveyor Length	2.00 ft (457 mm) to 24 ft (7315 mm) in 0.12" (0.31 mm) increments						
Belt Travel	4.2" (107 mm) per revolution of pulley						
Maximum Belt Speed*	235 ft/minute (72 m/minute)						
Belt Take-up	1" (25 mm) of stroke = 2" (51 mm) of belt take-up (Center Drive Conveyors Only)						

* See Ordering and Specifications Catalog for details.

** Conveyor Startup Torque dependent on belt type and conveyor length.

Flat Belt LPZ Conveyor Specifications

Conveyor Width Reference (WW)	02	03	04	05	06	08	10
Conveyor Belt Width	1.75" (44 mm)	2.75" (70 mm)	3.75" (95 mm)	5" (127 mm)	6" (152 mm)	8" (203 mm)	10" (254 mm)
Maximum Conveyor Load* (See NOTE Below)	30 lb (14 kg)	35 lb (16 kg)	42 lb (19 kg)	50 lb (23 kg)	60 lb (27 kg)	70 lb (32 kg)	80 lb (36 kg)
Conveyor Startup Torque**	4 in-lb (0.5 Nm)	5 in-lb (0.6 Nm)	6 in-lb (0.7 Nm)	8 in-lb (0.9 Nm)	10 in-lb (1.1 Nm)	12 in-lb (1.4 Nm)	14 in-lb (1.6 Nm)
Conveyor Length Reference (LLLL)	0200 to 1000 in 0001 increments						
Conveyor Section Length	2.00 ft (610 mm) to 10.00 ft (3048 mm) in 0.12" (0.31 mm) increments						
Belt Travel	4.0" (88 mm) per revolution of pulley						
Maximum Belt Speed*	264 ft/minute (80.5 m/minute)						
Belt Take-up	0.38" (10 mm) of stroke = 0.75" (19 mm) of belt take-up						

Conveyor Width Reference (WW)	12	14	16	18	20	22	24
Conveyor Belt Width	12" (305 mm)	14" (356 mm)	16" (406 mm)	18" (457 mm)	20" (508 mm)	22" (559 mm)	24" (609 mm)
Maximum Conveyor Load* (See NOTE Below)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)
Conveyor Startup Torque**	15 in-lb (1.7 Nm)	16 in-lb (1.8 Nm)	17 in-lb (1.9 Nm)	18 in-lb (2.0 Nm)	19 in-lb (2.1 Nm)	20 in-lb (2.3 Nm)	22 in-lb (2.5 Nm)
Conveyor Length Reference (LLLL)	0200 to 1000 in 0001 increments						
Conveyor Section Length	2.00 ft (610 mm) to 10.00 ft (3048 mm) in 0.12" (0.31 mm) increments						
Belt Travel	4.0" (88 mm) per revolution of pulley						
Maximum Belt Speed*	264 ft/minute (80.5 m/minute)						
Belt Take-up	0.38" (10 mm) of stroke = 0.75" (19 mm) of belt take-up						

* See Ordering and Specifications Catalog for details.

** Conveyor Startup Torque dependent on belt type and conveyor length.

Specifications

Cleated Belt LPZ Conveyor Specifications

Conveyor Width Reference (WW)	02	03	04	05	06	08	10
Conveyor Belt Width	1.75" (44 mm)	2.75" (70 mm)	3.75" (95 mm)	5" (127 mm)	6" (152 mm)	8" (203 mm)	10" (254 mm)
Maximum Conveyor Load* (See NOTE Below)	30 lb (14 kg)	35 lb (16 kg)	42 lb (19 kg)	50 lb (23 kg)	60 lb (27 kg)	70 lb (32 kg)	80 lb (36 kg)
Conveyor Startup Torque**	4 in-lb (0.5 Nm)	5 in-lb (0.6 Nm)	6 in-lb (0.7 Nm)	8 in-lb (0.9 Nm)	10 in-lb (1.1 Nm)	12 in-lb (1.4 Nm)	14 in-lb (1.6 Nm)
Conveyor Length Reference (LLLL)	0200 to 1000 in 0001 increments						
Conveyor Section Length	2.00 ft (610 mm) to 10.00 ft (3048 mm) in 0.12" (0.31 mm) increments						
Total Conveyor Length							
Belt Travel	4.0" (88 mm) per revolution of pulley						
Maximum Belt Speed*	264 ft/minute (80.5 m/minute)						
Belt Take-up	0.38" (10 mm) of stroke = 0.75" (19 mm) of belt take-up						

Conveyor Width Reference (WW)	12	14	16	18	20	22	24
Conveyor Belt Width	12" (305 mm)	14" (356 mm)	16" (406 mm)	18" (457 mm)	20" (508 mm)	22" (559 mm)	24" (609 mm)
Maximum Conveyor Load* (See NOTE Below)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)
Conveyor Startup Torque**	15 in-lb (1.7 Nm)	16 in-lb (1.8 Nm)	17 in-lb (1.9 Nm)	18 in-lb (2.0 Nm)	19 in-lb (2.1 Nm)	20 in-lb (2.3 Nm)	22 in-lb (2.5 Nm)
Conveyor Length Reference (LLLL)	0200 to 1000 in 0001 increments						
Conveyor Section Length	2.00 ft (610 mm) to 10.00 ft (3048 mm) in 0.12" (0.31 mm) increments						
Total Conveyor Length							
Belt Travel	4.0" (88 mm) per revolution of pulley						
Maximum Belt Speed*	264 ft/minute (80.5 m/minute)						
Belt Take-up	0.38" (10 mm) of stroke = 0.75" (19 mm) of belt take-up						

* See Ordering and Specifications Catalog for details.

** Conveyor Startup Torque dependent on belt type and conveyor length.

iDrive Conveyor Specifications

Conveyor Width Reference (WW)	02	03	04	05	06	08
Conveyor Belt Width	1.75" (44 mm)	2.75" (70 mm)	3.75" (95 mm)	5" (127 mm)	6" (152 mm)	8" (203 mm)
Maximum Conveyor Load	See iDrive Load Capacity Chart Below					
Conveyor Length Reference (LLLL)	0150 to 0800 in 0001 increments					
Conveyor Length	1.50 ft (457 mm) to 8 ft (2438 mm) in 0.12" (0.31 mm) increments					
Belt Travel	4.0" (88 mm) per revolution of spindle					
Maximum Belt Speed*	70 ft/minute (21 m/minute)					
Belt Take-up	0.38" (10 mm) of stroke = 0.75" (19 mm) of belt take-up					

Conveyor Width Reference (WW)	10	12	14	16	18
Conveyor Belt Width	10" (254 mm)	12" (305 mm)	14" (356 mm)	16" (406 mm)	18" (457 mm)
Maximum Conveyor Load	See iDrive Load Capacity Chart Below				
Conveyor Length Reference (LLLL)	0150 to 0800 in 0001 increments				
Conveyor Length	1.50 ft (457 mm) to 8 ft (2438 mm) in 0.12" (0.31 mm) increments				
Belt Travel	4.0" (88 mm) per revolution of spindle				
Maximum Belt Speed*	70 ft/minute (21 m/minute)				
Belt Take-up	0.38" (10 mm) of stroke = 0.75" (19 mm) of belt take-up				

* See Ordering and Specifications Catalog for details.

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	7-70 Ft./Min., 5-50 Ft./Min.	2.4-24 Ft./Min., 1.7-17 Ft./Min
Duty Cycle	Non-Continuous Duty	Non-Continuous Duty
Index Capacity	Up to 30 per Minute	Up to 30 per Minute

Specifications

iDrive Load Capacity (lbs)

		7 - 70 Ft./Min. FOR BELT TYPE 09						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	13	13	13	13	12	12	0
	3	13	13	13	13	12	12	0
	4	11	11	11	11	11	10	0
	5	11	11	10	10	10	10	0
	6	10	10	10	10	9	9	0
	8	9	9	9	8	8	8	0
	10-18	0	0	0	0	0	0	0

		5 - 50 Ft./Min. FOR BELT TYPE 09						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	24	24	24	24	24	24	0
	3	24	24	24	24	24	24	0
	4	22	22	22	22	22	22	0
	5	22	22	22	21	21	21	0
	6	21	21	21	21	21	20	0
	8	20	20	20	20	19	19	0
	10	17	17	17	16	16	0	0
	12	15	15	14	0	0	0	0
	14-18	0	0	0	0	0	0	0

		2.4 - 24 Ft./Min. FOR BELT TYPE 09						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	25
	3	25	25	25	25	25	25	25
	4	25	25	25	25	25	25	25
	5	25	25	25	25	25	25	25
	6	25	25	25	25	25	25	25
	8	25	25	25	25	25	25	25
	10	25	25	25	25	25	0	0
	12	25	25	25	0	0	0	0
	14	25	25	25	0	0	0	0
	16	25	25	25	0	0	0	0
	18	25	25	0	0	0	0	0

		1.7 - 17 Ft./Min. FOR BELT TYPE 09						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	25
	3	25	25	25	25	25	25	25
	4	25	25	25	25	25	25	25
	5	25	25	25	25	25	25	25
	6	25	25	25	25	25	25	25
	8	25	25	25	25	25	25	25
	10	25	25	25	25	25	0	0
	12	25	25	25	0	0	0	0
	14	25	25	25	0	0	0	0
	16	25	25	25	0	0	0	0
	18	25	25	0	0	0	0	0

iDrive Load Capacity (lbs) (continued)

		7 - 70 Ft./Min. FOR DOUBLE CARCASS BELT TYPE 05						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	9	9	8	8	8	8	0
	3	9	9	5	8	8	8	0
	4	7	7	7	7	6	6	0
	5	6	6	6	6	6	6	0
	6	6	6	6	6	5	5	0
	8-18	0	0	0	0	0	0	0

		5 - 50 Ft./Min. FOR DOUBLE CARCASS BELT TYPE 05						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	20	20	20	20	20	20	0
	3	20	20	20	20	20	20	0
	4	18	18	18	18	18	18	0
	5	18	18	18	17	17	17	0
	6	17	17	17	17	17	17	0
	8	16	16	16	16	15	15	0
	10	13	13	13	12	12	0	0
	12	11	11	10	0	0	0	0
	14-18	0	0	0	0	0	0	0

		2.4 - 24 Ft./Min. FOR DOUBLE CARCASS BELT TYPE 05						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	25
	3	25	25	25	25	25	25	25
	4	25	25	25	25	25	25	25
	5	25	25	25	25	25	25	25
	6	25	25	25	25	25	25	25
	8	25	25	25	25	25	25	25
	10	25	25	25	25	25	0	0
	12	25	25	25	25	0	0	0
	14-18	25	25	25	25	0	0	0

		1.7 - 17 Ft./Min. FOR DOUBLE CARCASS BELT TYPE 05						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	25
	3	25	25	25	25	25	25	25
	4	25	25	25	25	25	25	25
	5	25	25	25	25	25	25	25
	6	25	25	25	25	25	25	25
	8	25	25	25	25	25	25	25
	10	25	25	25	25	25	0	0
	12	25	25	25	0	0	0	0
	14-18	25	25	0	0	0	0	0

Specifications

iDrive Load Capacity (lbs) (continued)

		7 - 70 Ft./Min. FOR SINGLE PLY BELT TYPES 19, 53, 72, 73 AND 76						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	19	19	19	19	19	19	0
	3	19	19	19	19	19	19	0
	4	17	17	17	17	17	17	0
	5	17	17	17	17	17	16	0
	6	16	16	16	16	16	16	0
	8	15	15	15	15	15	15	0
	10	12	12	12	12	12	0	0
	12	10	10	10	0	0	0	0
	14-18	0	0	0	0	0	0	0

		5 - 50 Ft./Min. FOR SINGLE PLY BELT TYPES 19, 53, 72, 73 AND 76						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	25
	3	25	25	25	25	25	25	25
	4	25	25	25	25	25	25	25
	5	25	25	25	25	25	25	25
	6	25	25	25	25	25	25	25
	8	25	25	25	25	25	25	25
	10	23	23	23	23	23	0	0
	12	21	21	21	0	0	0	0
	14-18	16	16	0	0	0	0	0

		2.4 - 24 Ft./Min. FOR SINGLE PLY BELT TYPES 19, 53, 72, 73 AND 76						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	25
	3	25	25	25	25	25	25	25
	4	25	25	25	25	25	25	25
	5	25	25	25	25	25	25	25
	6	25	25	25	25	25	25	25
	8	25	25	25	25	25	25	25
	10	25	25	25	25	25	0	0
	12	25	25	25	0	0	0	0
	14-18	25	25	0	0	0	0	0

		1.7 - 17 Ft./Min. FOR SINGLE PLY BELT TYPES 19, 53, 72, 73 AND 76						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	25
	3	25	25	25	25	25	25	25
	4	25	25	25	25	25	25	25
	5	25	25	25	25	25	25	25
	6	25	25	25	25	25	25	25
	8	25	25	25	25	25	25	25
	10	25	25	25	25	25	0	0
	12	25	25	25	0	0	0	0
	14-18	25	25	0	0	0	0	0

iDrive Load Capacity (lbs) (continued)

		7 - 70 Ft./Min. FOR ALL OTHER BELT TYPES						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	6	5	5	5	5	5	0
	3	6	5	5	5	5	5	0
	4-18	0	0	0	0	0	0	0

		5 - 50 Ft./Min. FOR ALL OTHER BELT TYPES						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	17	17	17	17	16	16	0
	3	17	17	17	17	16	16	0
	4	15	15	15	15	15	14	0
	5	15	15	14	14	14	14	0
	6	14	14	14	14	13	13	0
	8	13	13	13	12	12	12	0
	10	10	10	9	9	9	0	0
	12-18	0	0	0	0	0	0	0

		2.4 - 24 Ft./Min. FOR ALL OTHER BELT TYPES						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	25
	3	25	25	25	25	25	25	25
	4	25	25	25	25	25	25	25
	5	25	25	25	25	25	25	25
	6	25	25	25	25	25	25	25
	8	25	25	25	25	25	25	25
	10	25	25	25	25	25	0	0
	12	25	25	25	0	0	0	0
	14-18	25	25	0	0	0	0	0

		1.7 - 17 Ft./Min. FOR ALL OTHER BELT TYPES						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	25
	3	25	25	25	25	25	25	25
	4	25	25	25	25	25	25	25
	5	25	25	25	25	25	25	25
	6	25	25	25	25	25	25	25
	8	25	25	25	25	25	25	25
	10	25	25	25	25	25	0	0
	12	25	25	25	0	0	0	0
	14-18	25	25	0	0	0	0	0

Specifications

iDrive Load Capacity (lbs) (continued)

		2.4 - 24 Ft./Min. FOR NOSE BAR BELTS						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	20	20	20	20	20	20	0
	3	20	20	20	20	20	20	0
	4	18	18	18	18	18	18	0
	5	18	18	18	18	18	17	0
	6	17	17	17	17	17	17	0
	8	16	16	16	16	16	15	0
	10	13	13	13	12	12	0	0
	12	11	11	11	0	0	0	0
	14-18	0	0	0	0	0	0	0

		1.7 - 17 Ft./Min. FOR NOSE BAR BELTS						
		LENGTH						
		2	3	4	5	6	7	8
WIDTH	2	25	25	25	25	25	25	0
	3	25	25	25	25	25	25	0
	4	25	25	25	25	25	25	0
	5	25	25	25	25	25	25	0
	6	25	25	25	25	25	25	0
	8	25	25	25	25	25	25	0
	10	25	25	25	25	25	0	0
	12	25	25	25	0	0	0	0
	14-18	25	25	0	0	0	0	0

NOTE

Maximum conveyor loads based on:

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

⚠ WARNING

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

DO NOT REVERSE LPZ SERIES CONVEYORS.

NOTE

*Conveyor MUST be mounted straight, flat, and level within confines of conveyor. Use a level **(Figure 7, item 1)** for setup.*

Figure 7

Required Tools

- Hex-key wrenches: 4 mm, 5 mm, 6 mm
- Level
- Torque wrench

Recommended Installation Sequence

- 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 "Service Parts" section beginning on page 54 for details.)

Conveyors Up to 12 ft (3962 mm)

No assembly is required. Install mounting brackets and return rollers. Refer to "Mounting Brackets" on page 21 and "Return Rollers" on page 22.

Conveyors Longer Than 12 ft (3658 mm)

1. Locate and arrange conveyor sections by section labels **(Figure 8, item 1)**.

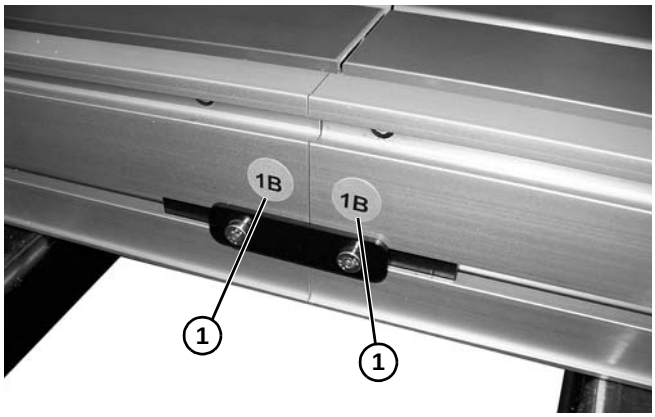


Figure 8

2. On tension end of the conveyor, identified with  a label **(Figure 9, item 1)**, push in head plate assembly **(Figure 9, item 2)**:
   a. On both sides of conveyor, loosen and move cam tracking assemblies **(Figure 9, item 3)** (if equipped) away from head plates.
   b. Loosen fastening screws **(Figure 9, item 4)** and push head plate assembly inward.

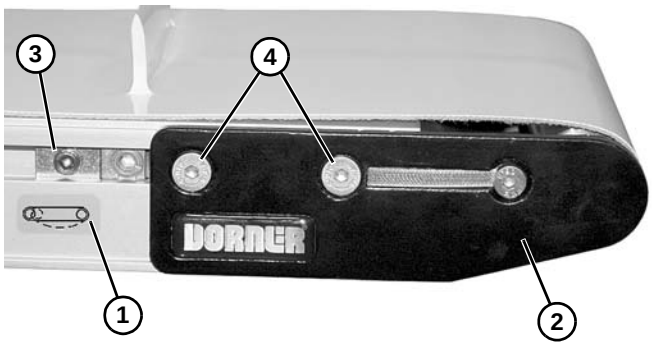


Figure 9

3. Roll out conveyor belt and place conveyor frame sections **(Figure 10, item 1)** into belt loop.

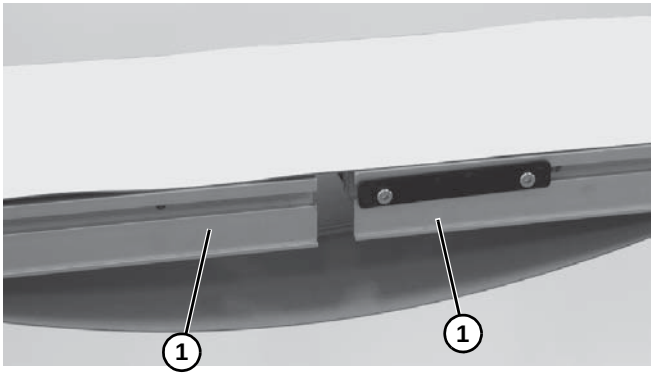


Figure 10

4. Join conveyor sections and install frame connector plates **(Figure 11, item 1)** or connector/mount brackets **(Figure 11, item 2)** and screws **(Figure 11, item 3)** on both sides as indicated. Tighten screws to 60 in-lb (7 Nm).

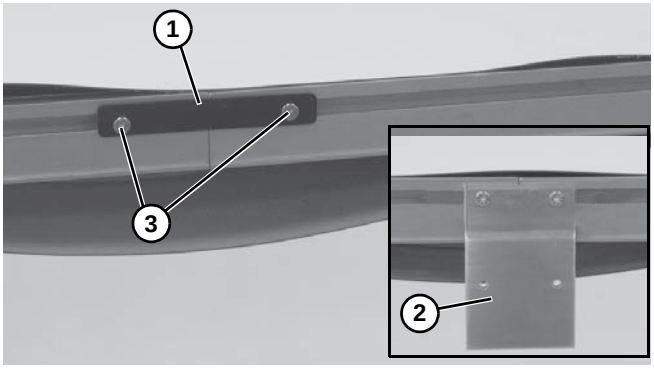


Figure 11

5. Tension conveyor belt. For proper tensioning, refer to “Conveyor Belt Tensioning” on page 39”.
6. Install mounting brackets and return rollers. Refer to “Mounting Brackets” on page 21 and “Return Rollers” on page 22.
7. If equipped with cam tracking assemblies, reposition and adjust belt tracking. Refer to “Conveyor Belt Tracking” on page 41.

Knuckles

1. Roll out conveyor belt. Loosen four screws **(Figure 12, item 1)** on both sides of knuckle **(Figure 12, item 2)**. Slide frame **(Figure 12, item 3)** into knuckle **(Figure 12, item 2)**. Tighten screws **(Figure 12, item 1)** to 60 in-lb (7 N–m) on both sides of conveyor.

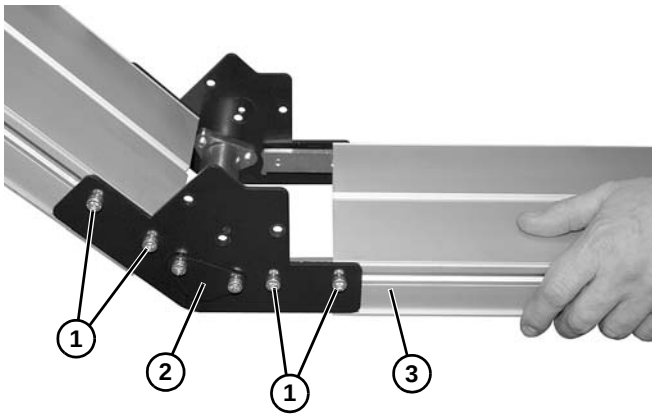


Figure 12

2. Join conveyor sections and install frame connector plates **(Figure 11, item 1)** or connector/mount brackets **(Figure 11, item 2)** and screws **(Figure 11, item 3)** on both sides as indicated. Tighten screws to 60 in-lb (7 Nm).

Mounting Brackets

1. Locate brackets. Exploded views shown in Figure 13 & Figure 14.

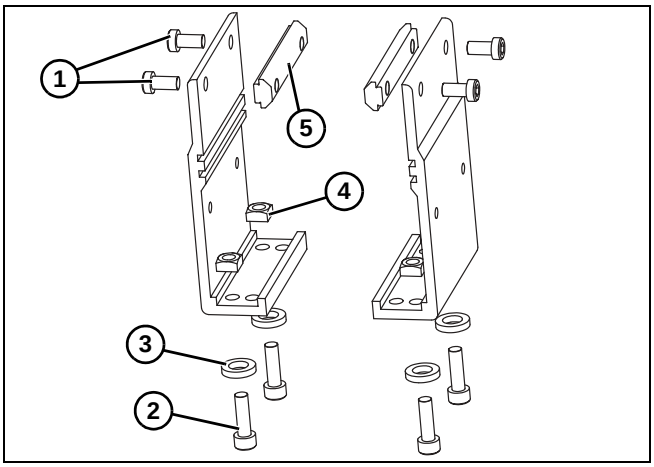


Figure 13

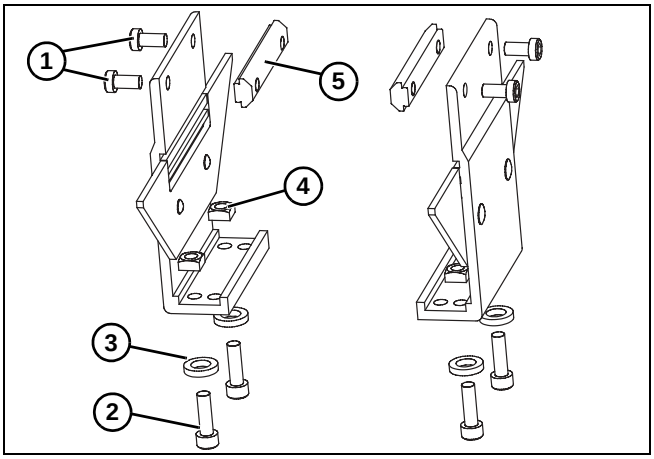


Figure 14

2. Remove screws **(Figure 13, item 1 & 2)** & **(Figure 14, item 1 & 2)**, washers **(Figure 13, item 3)** & **(Figure 14, item 3)**, nuts **(Figure 13, item 4**) & **(Figure 14, item 4)**, and T-bars **(Figure 13, item 5)** & **(Figure 14, item 5)** from brackets.
3. Insert T-bars **(Figure 13, item 5)** & **(Figure 14, item 5)** into conveyor side slots **(Figure 15, item 1)**. Fasten brackets **(Figure 15, item 2)** to conveyor with mounting screws **(Figure 15, item 3)**.

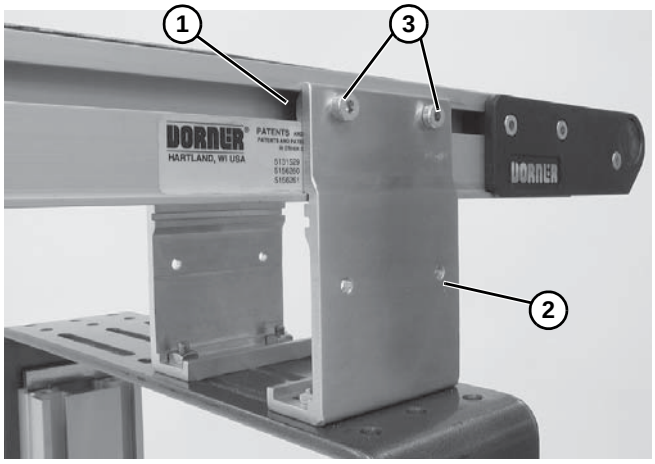


Figure 15

NOTE

Mounting brackets for flat belt conveyors shown.

4. Fasten brackets to support stand with mounting screws **(Figure 13, item 2)**, washers **(Figure 13, item 3)** and nuts **(Figure 13, item 4)**.
5. Tighten all screws to 60 in-lb (7 Nm).

Return Rollers

Cleated Belt and 2–6" (51–152 mm) Wide Flat Belt Conveyors

1. Locate return rollers. Exploded views shown in Figure 16 & Figure 17.

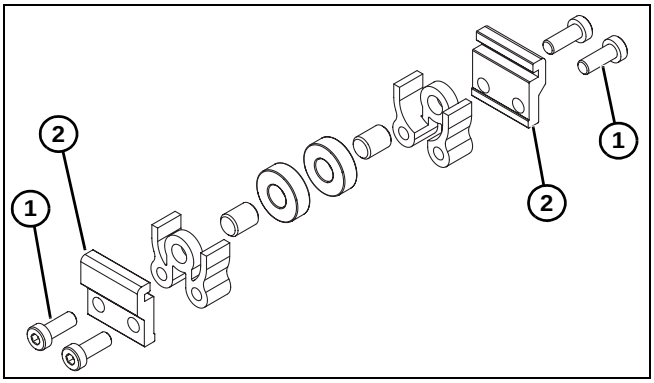


Figure 16

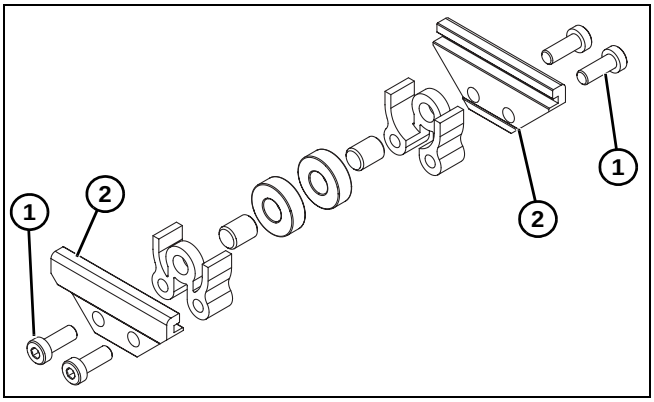


Figure 17

2. Remove screws **(Figure 16, item 1)** & **(Figure 17, item 1)** and clips **(Figure 16, item 2)** & **(Figure 17, item 2)** from roller assembly.
3. Install roller assemblies **(Figure 18, item 1)** as shown. Tighten screws **(Figure 18, item 2)** to 60 in-lb (7 Nm).

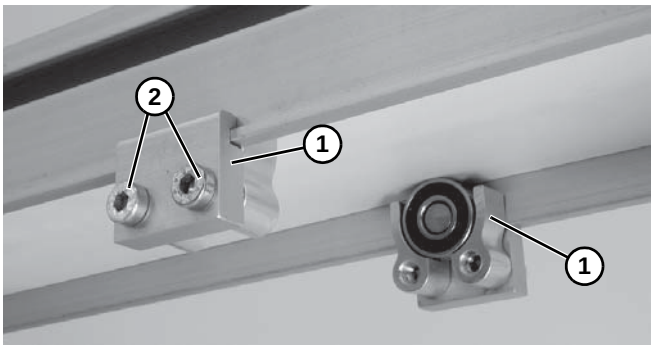


Figure 18

8–24" (203–610 mm) Wide Flat Belt Conveyors

1. Locate return rollers. Exploded view shown in Figure 19.

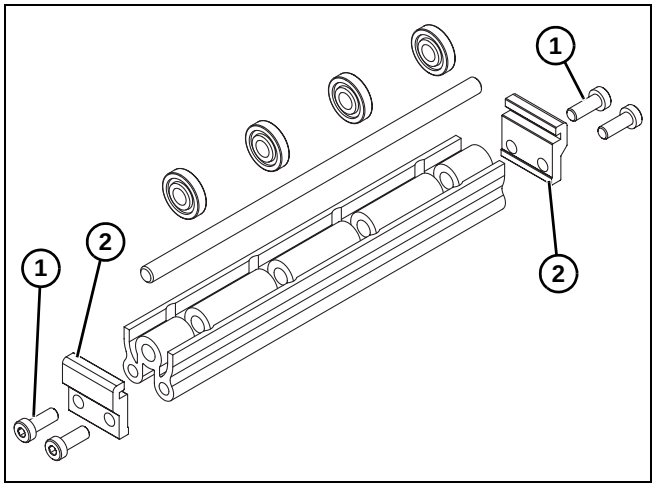


Figure 19

2. Remove screws **(Figure 19, item 1)** and clips **(Figure 19, item 2)** from roller assembly.
3. Install roller assembly as shown **(Figure 20, item 1)**. Tighten screws **(Figure 20, item 2)** to 60 in-lb (7 Nm).

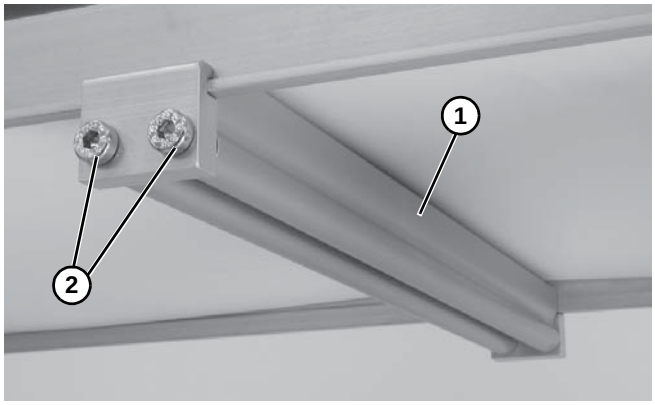


Figure 20

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 21, item 1)** of power supply **(Figure 21, item 2)** to power jack **(Figure 21, item 3)**.

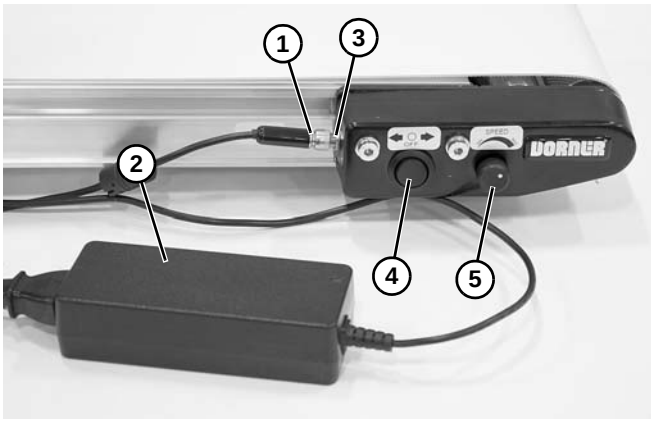


Figure 21

2. Select conveyor running direction with directional switch **(Figure 21, item 4)**.
3. Select conveyor speed with speed control knob **(Figure 21, 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 22, item 1)**.

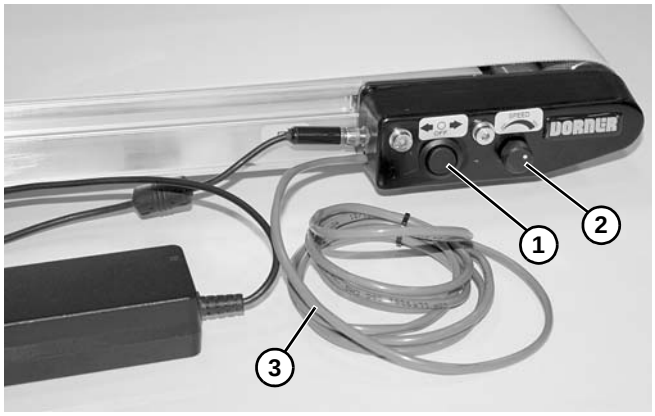


Figure 22

3. Select conveyor speed with speed control knob **(Figure 22, item 2)**.
4. Remote start/stop cable **(Figure 22, 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.*

Installation

Cover Mounted Controls with Photo Eye Option

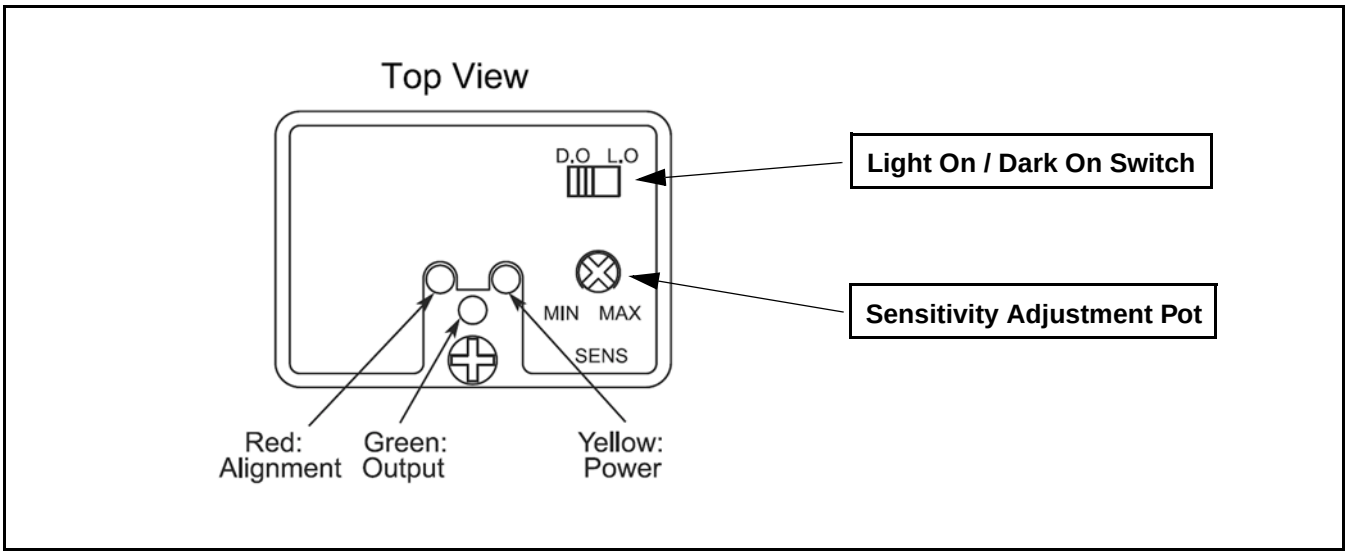


Figure 23

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 23)**.
6. Select conveyor running direction with directional switch **(Figure 22, item 1)**. If Dark-On operation is selected, temporarily block photo eye to energize conveyor.
7. Select conveyor speed with speed control knob **(Figure 22, item 2)**.

Optional Dust Cover

Idler or Drive Tail

1. Remove screw **(Figure 24, item 1)**.

Figure 24

2. Install round end **(Figure 25, item 1)** of dust cover into recessed screw hole **(Figure 25, item 2)**.

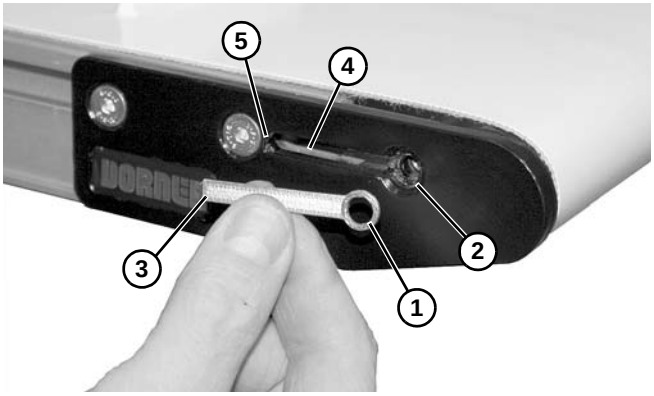


Figure 25

3. Insert flat end **(Figure 25, item 3)** of dust cover into access slot **(Figure 25, item 4),** making sure it rests against notch **(Figure 25, item 5)**.
4. Install screw **(Figure 24, item 1)** and tighten.

Nosebar Tails

1. Loosen screws **(Figure 26, item 1)**.

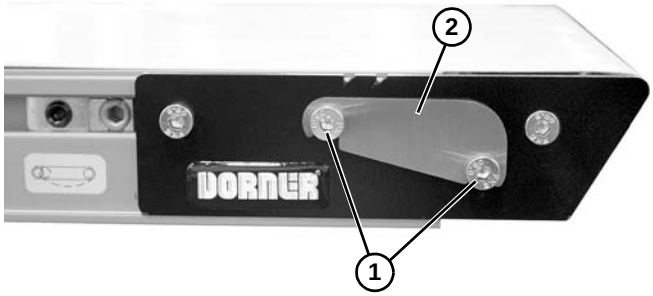


Figure 26

2. Install dust cover **(Figure 26, item 2)** behind screw heads and over access slot. Tighten screws **(Figure 26, item 1)**.

Guide Clips

1. Install guide clip assembly **(Figure 27, item 1)** into conveyor channel **(Figure 27, item 2)** as shown.

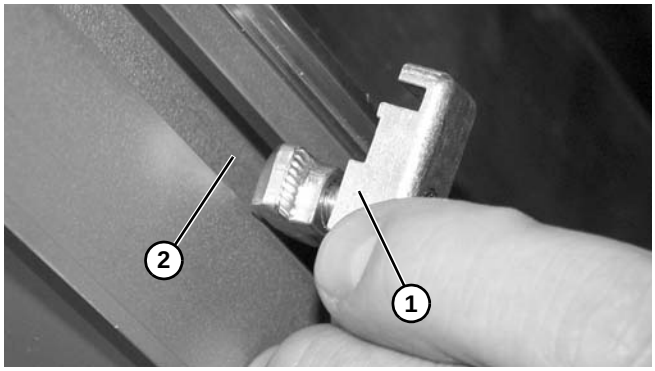


Figure 27

2. Tighten screw **(Figure 28, item 1)** making sure t-bar **(Figure 28, item 2)** rotates and engages inside of channel.

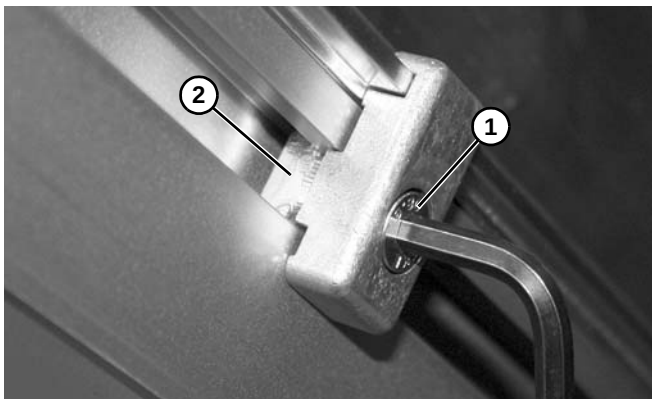


Figure 28

Preventive Maintenance and Adjustment

Required Tools

Standard Tools

- Hex-key wrenches:
  - 2.5 mm, 4 mm, 5 mm, 6 mm

Checklist

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

Lubrication

No lubrication is required. Replace bearings if worn.

Maintaining Conveyor Belt

Troubleshooting

Inspect conveyor belt for:

- Surface cuts or wear
- Stalling or slipping
- 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

Cleaning

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

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

Conveyor Belt Replacement

⚠ WARNING

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

Conveyor Belt Replacement Sequence

- Release tension
- Remove old conveyor belt:
  - Conveyor without Stands or Gearmotor Mounting Package
  - Conveyor with Stands and Gearmotor Mounting Package
- Install new conveyor belt
- Tension conveyor belt

Belt Removal for End Drive and iDrive Conveyors

Without Stands or Gearmotor Mounting Package

1. If equipped, remove return rollers and guiding and accessories from one side of conveyor.
2. On tension end of the conveyor, identified with  a label **(Figure 29, item 1)**, push in head plate assembly **(Figure 29, item 2)**:
   a. On both sides of conveyor, loosen and move cam tracking assemblies **(Figure 29, item 3)** (if equipped) away from head plates.
   b. Loosen fastening screws **(Figure 29, item 4)** and push head plate assembly inward.

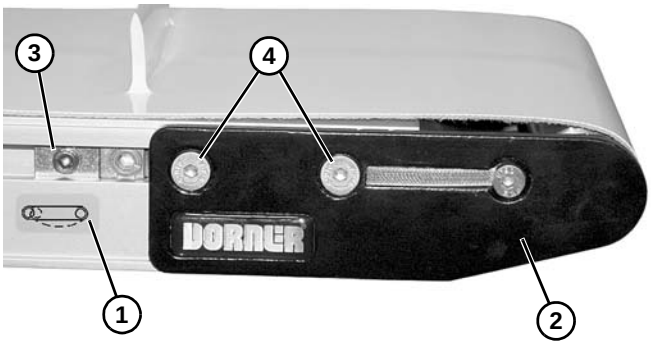


Figure 29

3. Remove conveyor belt.

With Stands and Gearmotor Mounting Package

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

1. Place temporary support stands **(Figure 30, item 1)** at both ends of the conveyor. Place an additional support stand **(Figure 30, item 2)** under the drive motor, if equipped. See WARNING.

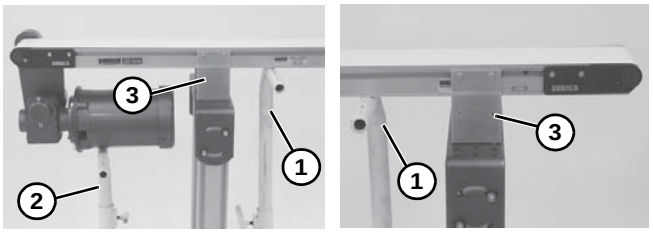


Figure 30

2. Remove mounting brackets **(Figure 30, item 3)** from one side of conveyor. (Reverse steps 3 & 4 of "Mounting Brackets" section beginning on page 21.) If equipped with heavy load drive package, remove brackets from side opposite drive cover **(Figure 31, item 1)**.
3. If equipped, remove return rollers and guiding and accessories from side opposite drive cover **(Figure 31, item 1)**.

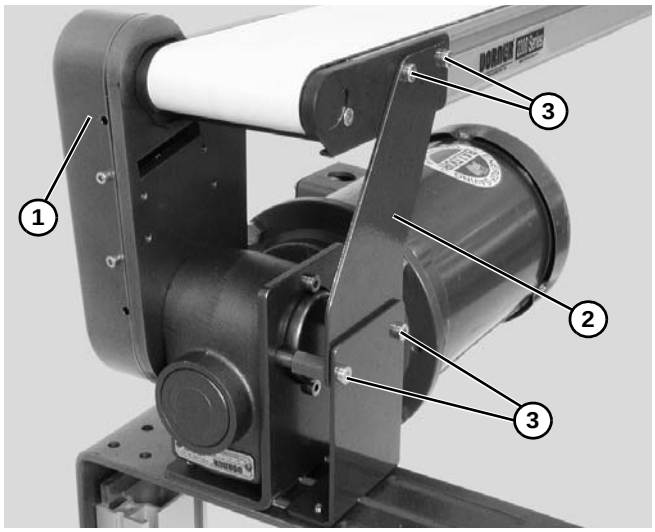


Figure 31

4. If equipped with heavy load drive package, remove drive support bracket **(Figure 31, item 2)**: Remove bracket screws **(Figure 31, item 3)** then remove bracket **(Figure 31, item 2)**.

5. On tension end of the conveyor, identified with a label **(Figure 32, item 1)**, push in head plate assembly **(Figure 32, item 2)**:
   a. On both sides of conveyor, loosen and move cam tracking assemblies **(Figure 32, item 3)** (if equipped) away from head plates.
   b. Loosen fastening screws **(Figure 32, item 4)** and push head plate assembly inward.

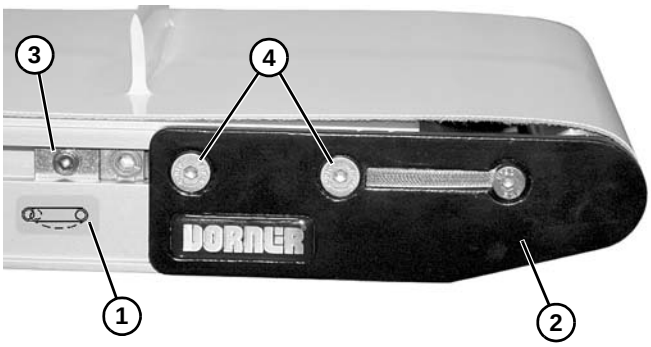


Figure 32

6. Remove belt **(Figure 33, item 1)** from conveyor.

Figure 33

Belt Removal for Center Drive Conveyors

1. If equipped, remove return rollers and guiding and accessories from one side of conveyor.
2. Loosen corner screws **(Figure 34, item 1)** on each side of the drive module **(Figure 34, item 2)**.

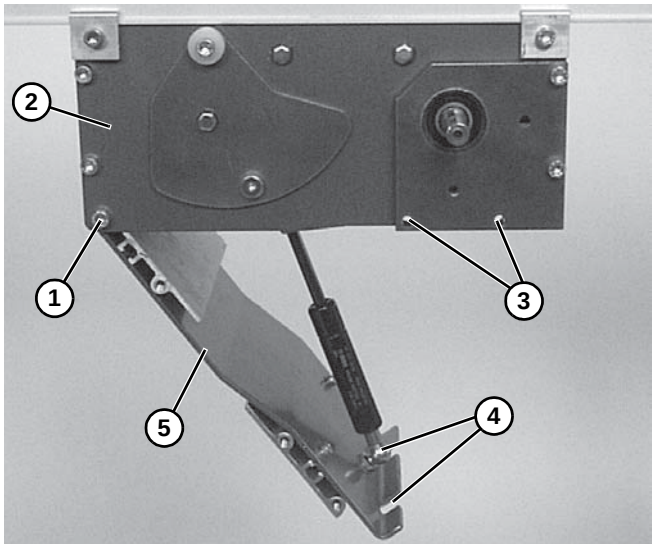


Figure 34

3. Remove tension door screws **(Figure 34, item 3)** on each side of the drive module.
4. Using finger grip holes **(Figure 34, item 4)**, open the tension door **(Figure 34, item 5)** to release conveyor belt tension.
5. On tension end of the conveyor, identified with a label **(Figure 35, item 1)**, push in head plate assembly **(Figure 35, item 2)**:
   a. On both sides of conveyor, loosen and move cam tracking assemblies **(Figure 35, item 3)** (if equipped) away from head plates.
   b. Loosen fastening screws **(Figure 35, item 4)** and push head plate assembly inward.

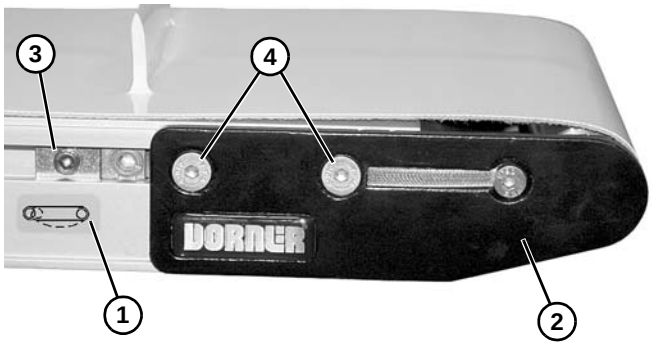


Figure 35

6. If not equipped with stands, skip to step 9.
7. Place temporary support stands **(Figure 36, item 1)** at both ends of the conveyor.

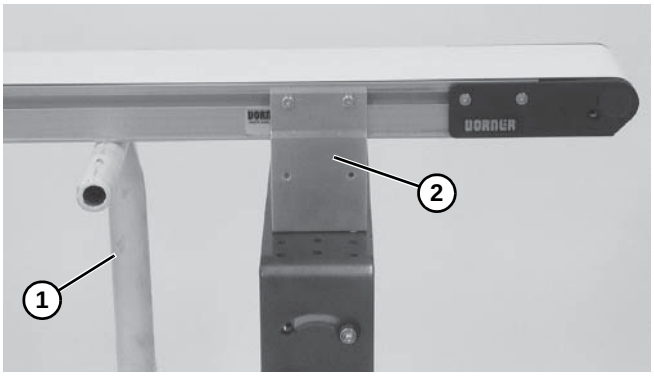


Figure 36

8. Remove mounting brackets **(Figure 36, item 2)** from one side of conveyor. (Reverse steps 3 & 4 of "Mounting Brackets" on page 21.)
9. Remove conveyor belt from conveyor ends. See NOTE.

NOTE

On conveyors 4-ft (1219 mm) and shorter by 8" (203 mm) and wider, it is be necessary to remove the drive module at the same time the conveyor belt is removed. See "Drive Module Removal" on page 30.

10. Proceed to "Drive Module Removal" on page 30 and "Belt Removal from Drive Module" on page 31.

Gearmotor Mounting Package Removal

1. Remove cover screws **(Figure 37, item 1)** and remove cover **(Figure 37, item 2)**.

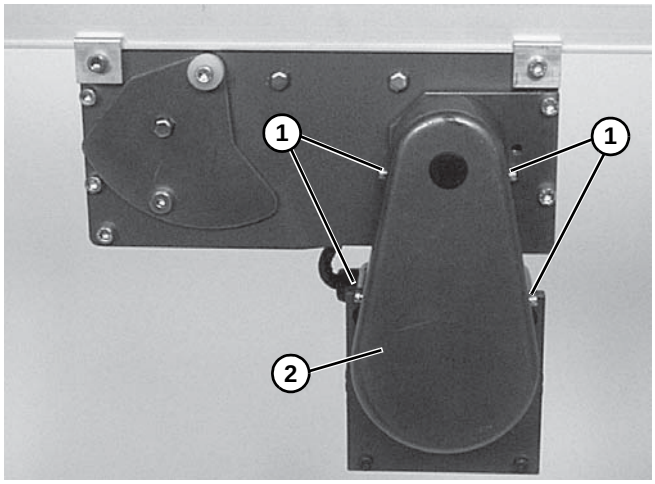


Figure 37

NOTE

Figure 37 *shows a vertically mounted gearmotor. Horizontally mounted gearmotor is similar.*

2. Loosen belt tensioner **(Figure 38, item 1)** then remove timing belt **(Figure 38, item 2)**.

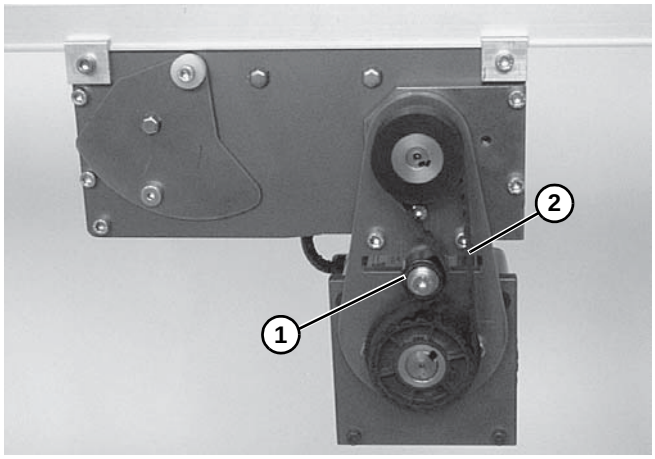


Figure 38

NOTE

*If the timing belt does not slide over the pulley flange, loosen the driven pulley set screws **(Figure 39, item 1)** and remove the pulley **(Figure 39, item 2)** with the belt **(Figure 39, item 3)**.*

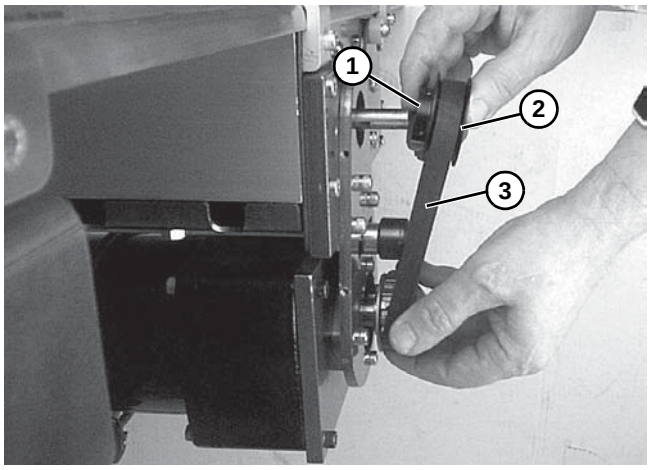


Figure 39

3. Remove four mounting screws **(Figure 40, item 1)** and remove gearmotor.

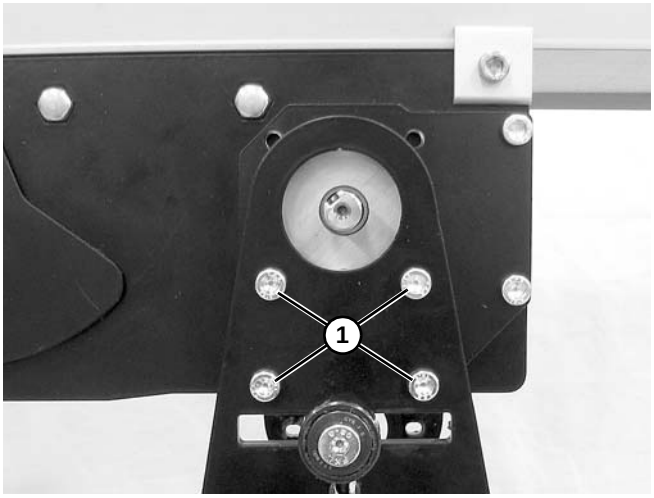


Figure 40

Drive Module Removal

⚠ WARNING

Removing drive module without support under the module may lead to personal injury.

PROVIDE SUPPORT UNDERNEATH THE DRIVE MODULE BEFORE REMOVING THE MODULE.

NOTE

If desired, mark position of drive module on conveyor before removal.

1. Place temporary support **(Figure 41, item 1)** underneath the drive module.

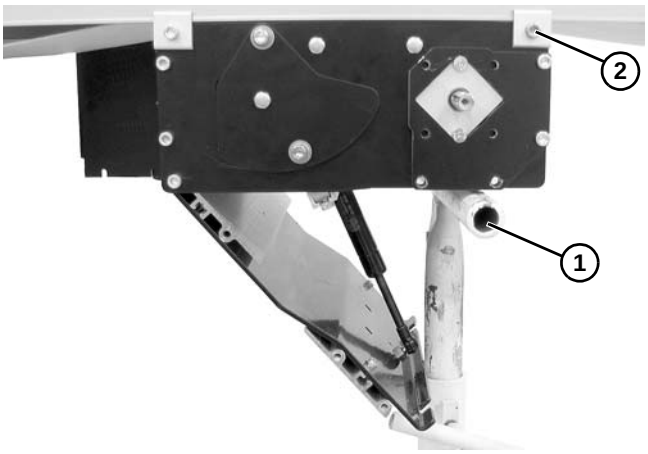


Figure 41

2. Loosen clamp screws **(Figure 41, item 2)** on each corner of the module. Remove the module.

Belt Removal from Drive Module

1. Remove screws **(Figure 42, item 1)** and remove spindle bearing block **(Figure 42, item 2)**.

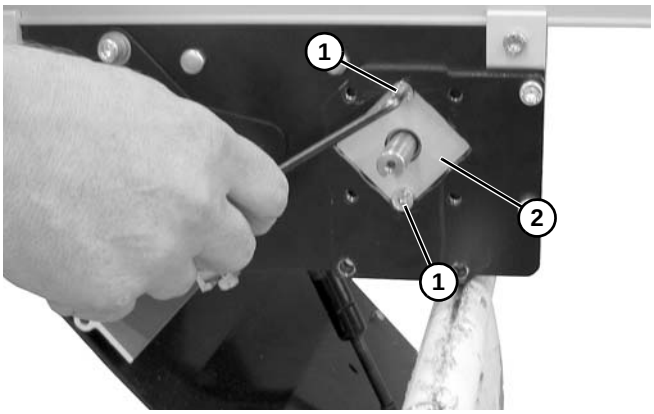


Figure 42

2. Remove drive pulley **(Figure 43, item 1)**.

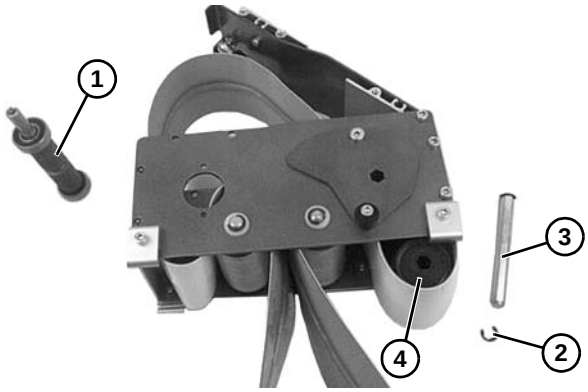


Figure 43

Figure 44

3. Remove grooved idler pulley:
   a. For 2" (44 mm), 3" (70 mm) or 4" (95 mm) wide conveyor, detach E-ring clip **(Figure 43, item 2)**. Remove pulley shaft **(Figure 43, item 3)** and remove pulley **(Figure 43, item 4)**.
   b. For 5" (127 mm) or wider conveyor, depress both sides of spring-loaded shaft and remove pulley **(Figure 44, item 5)**.
4. Remove the conveyor belt.

Belt Removal for Mid Drive Conveyors

⚠ WARNING

SEVERE HAZARD!

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

1. Remove belt tension. See "Conveyor Belt Replacement" on page 26 for releasing belt tension.
2. Remove two M6x25 socket head screws **(Figure 45, item 1)** from bottom of mid drive assembly **(Figure 45, item 2)**.

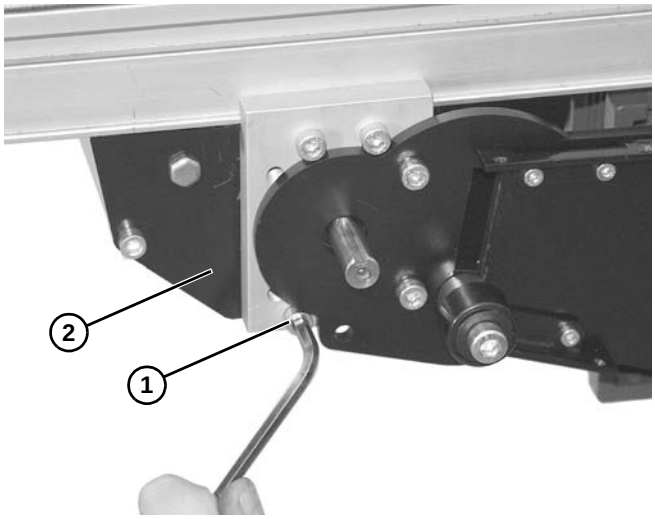


Figure 45

3. Lower and remove mid drive module **(Figure 46, item 1)** from belt **(Figure 46, item 2)**.

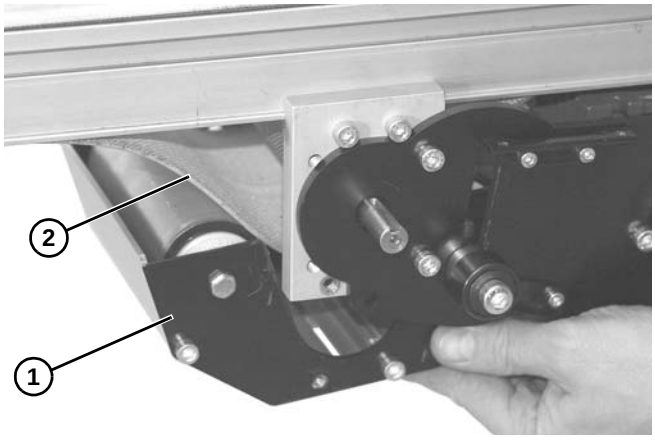


Figure 46

4. Remove belt **(Figure 47, item 1)** from conveyor frame.

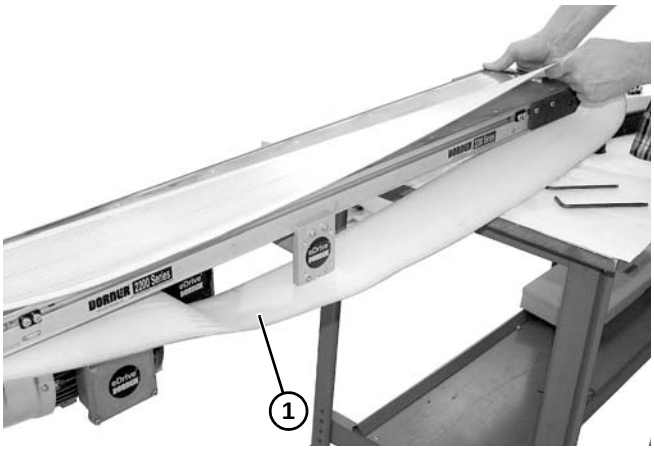


Figure 47

5. Installation of new belt is the reverse order of removal.

Belt Removal for LPZ Conveyors

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

1. Place temporary support stands **(Figure 48, item 1)** at both ends of the conveyor. Place an additional support stand **(Figure 48, item 2)** under the drive motor **(Figure 48, item 3)**, if equipped. See WARNING.

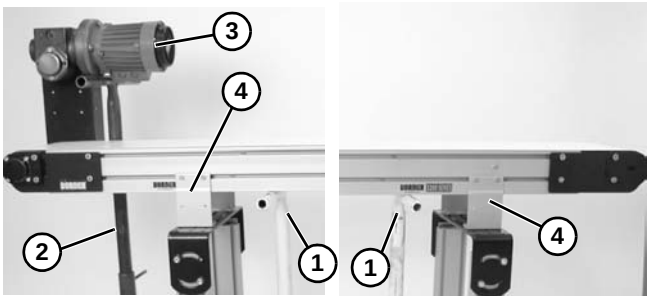
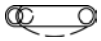


Figure 48

2. Remove mounting brackets **(Figure 48, item 4)** from one side of conveyor. (Reverse steps 2 & 3 of "Mounting Brackets" section on page 21).
3. If equipped, remove return rollers and guiding and accessories from one side of conveyor.

4. On tension end of the conveyor, identified with  a label **(Figure 49, item 1)**, push in head plate assembly **(Figure 49, item 2)**:

   a. On both sides of conveyor, loosen and move cam tracking assemblies **(Figure 49, item 3)** (if equipped) away from head plates.

   b. Loosen fastening screws **(Figure 49, item 4)** and push head plate assembly inward.

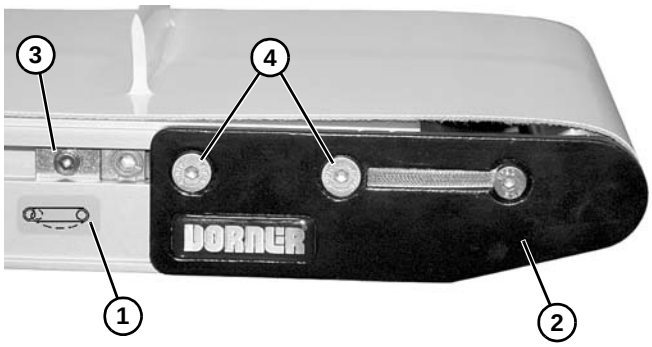


Figure 49

Cleated Belt Conveyors

1. If equipped with a lower knuckle, remove screws **(Figure 50, item 1)** and remove guards **(Figure 50, item 2)** on both sides of knuckle.

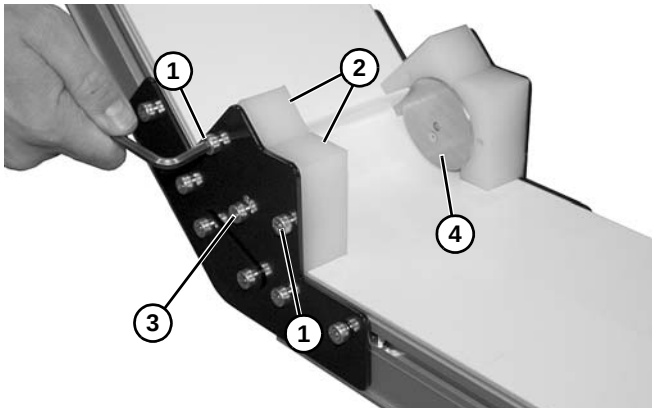


Figure 50

2. Remove screws **(Figure 50, item 3)** and remove roller bearing assembly **(Figure 50, item 4)** on both sides of knuckle.

3. If equipped with an upper knuckle, remove screws **(Figure 51, item 1)** and remove guard **(Figure 51, item 2)** on both sides of knuckle.

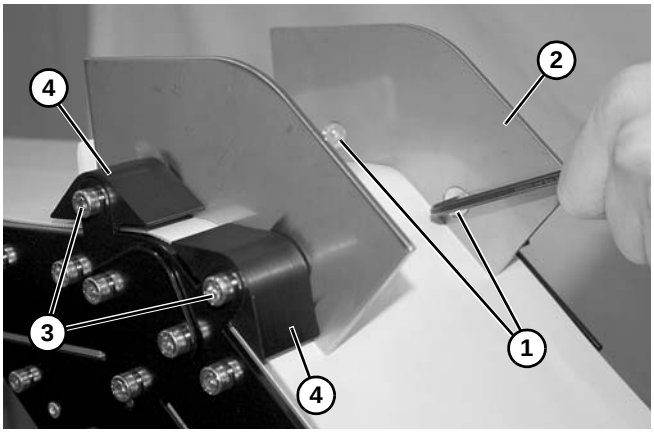


Figure 51

4. Remove screws **(Figure 51, item 3)** and remove spacers **(Figure 51, item 4)** on both sides of knuckle.
5. Remove screws **(Figure 52, item 1)** and remove guard **(Figure 52, item 2)** on both sides of knuckle.

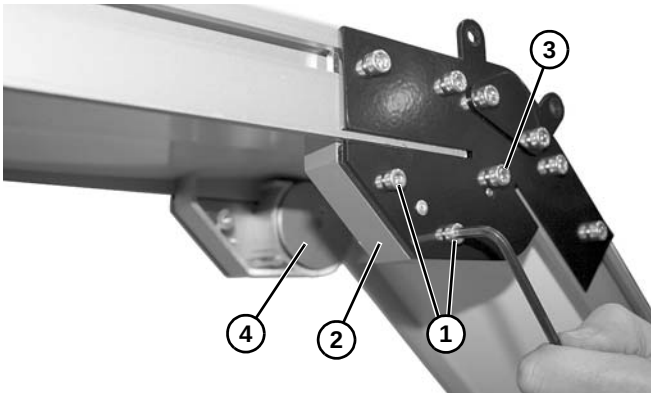


Figure 52

6. Remove screw **(Figure 52, item 3)** and remove roller bearing assembly **(Figure 52, item 4)** on both sides of knuckle.
7. Remove belt from conveyor.

Flat Belt Conveyors

1. Remove screws **(Figure 53, item 1)** on both sides of conveyor.

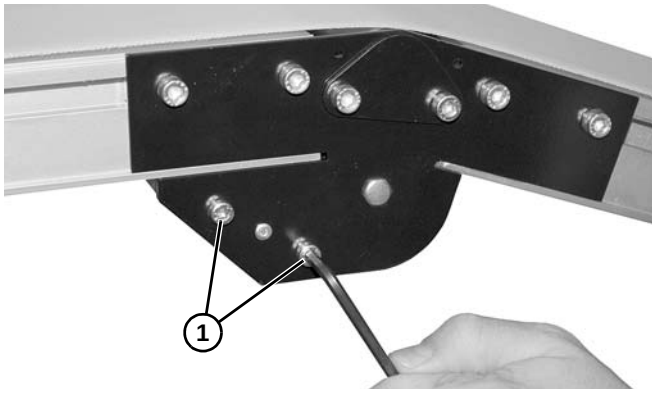


Figure 53

2. Remove guard **(Figure 54, item 1)**.

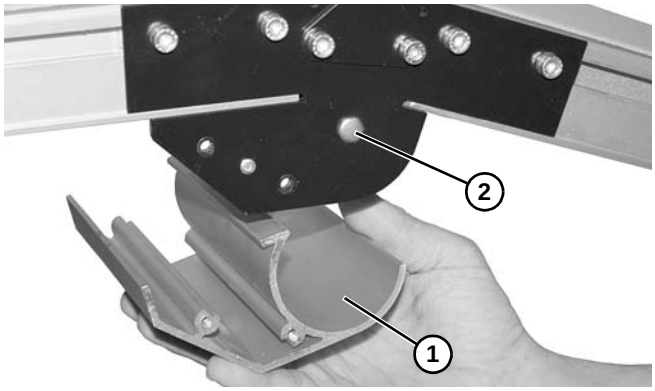


Figure 54

3. Remove idler pulley:
   a. For 2" (44 mm) through 4" (95 mm) wide conveyors, remove E-ring clip **(Figure 55, item 1)** and washer **(Figure 55, item 2)** from one side. Remove pulley shaft **(Figure 55, item 3)** and pulley **(Figure 55, item 4)**.

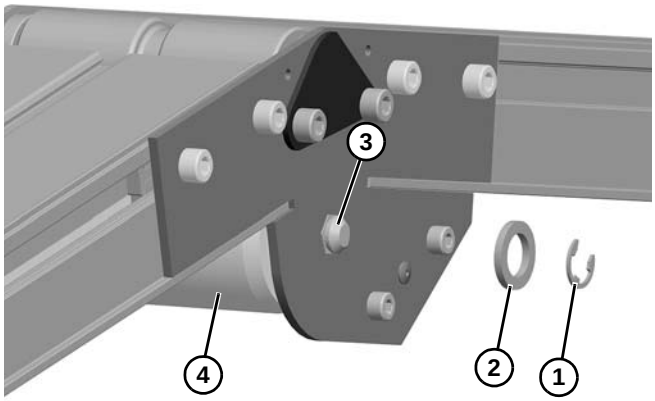


Figure 55

b. For 5" (127 mm) or wider conveyor, push spring-loaded shaft ends **(Figure 56, item 1)** inward. Remove roller **(Figure 56, item 2)**.

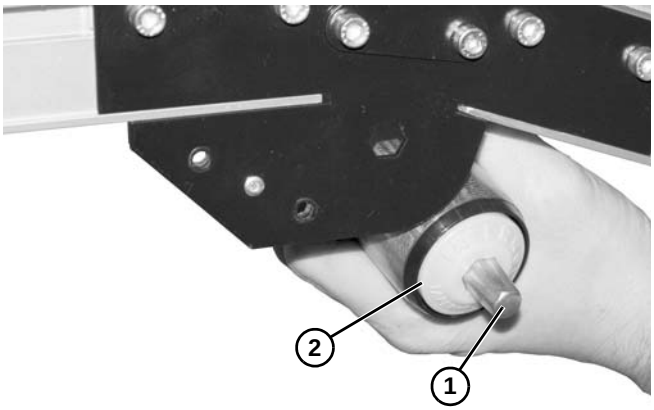


Figure 56

4. Remove belt from conveyor.

Belt Installation for End Drive and iDrive Conveyors

Without Stands or Gearmotor Mounting Package

1. Orient belt so splice leading fingers **(Figure 57, item 1)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 57, item 2)**.

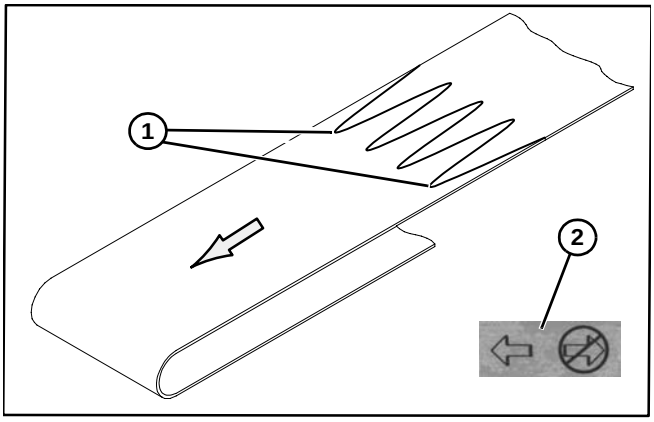


Figure 57

2. Slide belt onto the conveyor frame assembly.
3. Tension belt. Refer to “Conveyor Belt Tensioning” on page 39.
4. If equipped, install return rollers and guiding.

With Stands and Gearmotor Mounting Package

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

1. Ensure temporary support stands **(Figure 58, item 1)** are placed at both ends of the conveyor. Place an additional support stand under the drive motor **(Figure 58, item 2)**, if equipped. See WARNING.

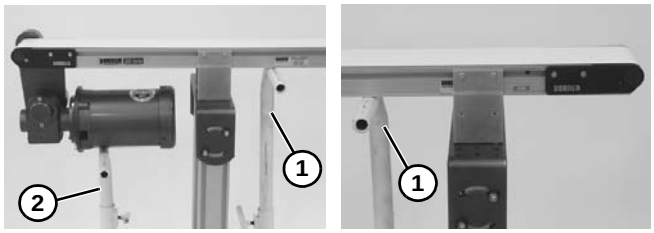


Figure 58

2. Orient belt so splice leading fingers **(Figure 57, item 1)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 57, item 2)**.
3. Install belt **(Figure 59, item 1)** on conveyor. Lift conveyor slightly to avoid pinching belt on temporary support stands.

Figure 59

4. Re-install conveyor mounting brackets. Refer to “Mounting Brackets” beginning on page 21, steps 3 through 5.

5. If equipped with a heavy load drive package, install drive support bracket **(Figure 60, item 1)**.

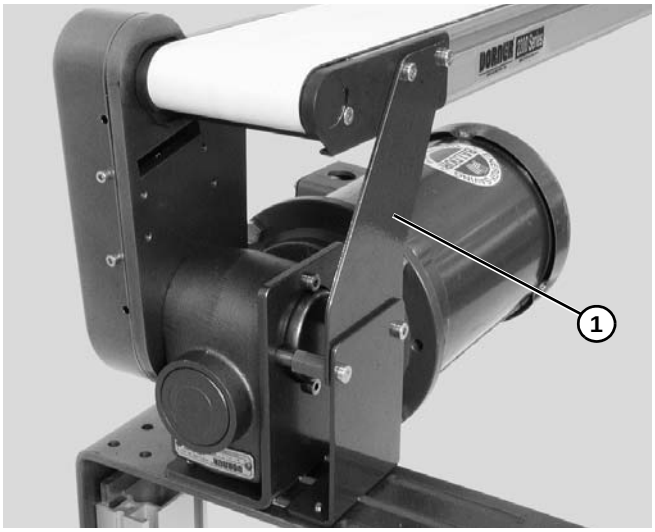


Figure 60

6. Tension belt. Refer to "Conveyor Belt Tensioning" on page 39.
7. If equipped, install return rollers and guiding.

Belt Installation for Center Drive Conveyors

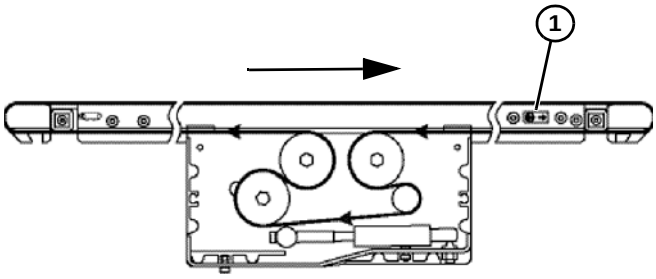


Figure 61

IMPORTANT

On a center drive conveyors, belt travel direction is identified by an arrow decal on the side of the conveyor ***(Figure 61, item 1)*** *&* ***(Figure 62, item 1)****.*

Figure 62

NOTE

It is necessary to replace the drive module at the same time the conveyor belt is replaced on conveyors 4-foot (1219 mm) and shorter by 8″ (203 mm) and wider.

1. Orient the conveyor belt so that the splice leading fingers **(Figure 63, item 1)** point in the direction of belt travel, indicated by the label **(Figure 62, item 1)**.

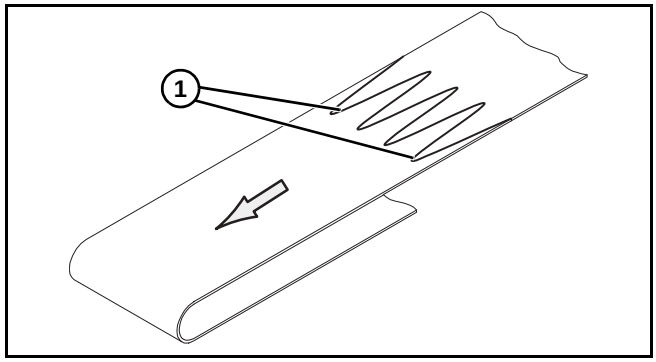


Figure 63

2. Place loop of belt **(Figure 64, item 1)** into the drive module between top idler pulleys **(Figure 64, item 2)**.

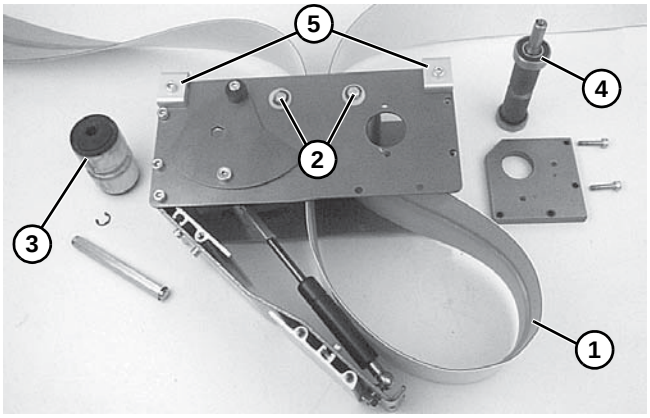


Figure 64

3. Place grooved idler pulley **(Figure 64, item 3)** into the belt loop and install it in the drive module. Refer to "Belt Removal from Drive Module" on page 31 and reverse step 3.
4. Place drive pulley **(Figure 64, item 4)** into the belt loop and install it in the drive module. Refer to "Belt Removal from Drive Module" on page 31 and reverse steps 1 and 2. Tighten screws **(Figure 42, item 1)** to 60 in-lb (6.8 Nm).
5. Install the drive module onto the conveyor and attach clamps **(Figure 64, item 5)** in each corner. Tighten screws to 60 in-lb (6.8 Nm).
6. Route and install the belt over both ends of the conveyor.
7. On conveyors with stands, re-install conveyor mounting brackets. Refer to "Mounting Brackets" on page 21, steps 3 through 5.
8. Adjust the conveyor tensioning end. See "Conveyor Belt Tensioning" on page 39.

⚠ WARNING

Tension door closes quickly, may cause injury.
KEEP FINGERS CLEAR OF TENSION DOOR.

9. Carefully close the drive module tension door **(Figure 65, item 1)**. See WARNING.

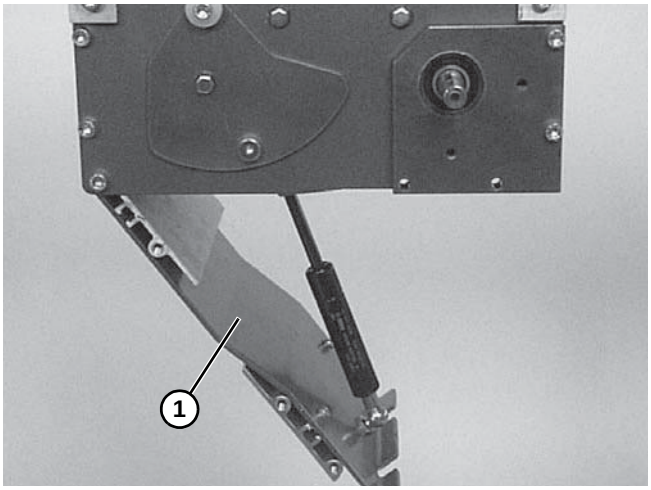


Figure 65

10. Tighten corner screws **(Figure 66, item 1)** on each side of the drive module to 80 in-lb (9 Nm).

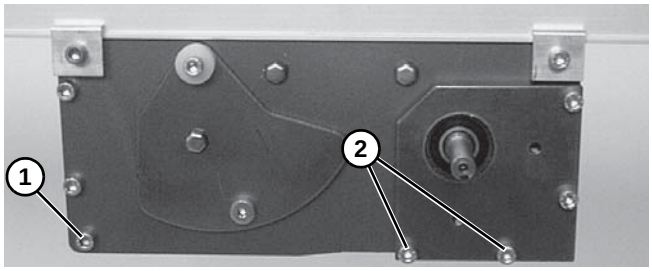


Figure 66

11. If equipped, re-install the gearmotor mounting package. Reverse steps of "Gearmotor Mounting Package Removal" on page 29.
12. Re-install tension door screws **(Figure 66, item 2)** on each side of the module. Tighten screws to 60 in-lb (6.8 Nm).

NOTE

*With vertically mounted gearmotors, tension door screws **(Figure 66, item 2)** are installed on one side when the gearmotor mounting package is installed.*

13. If equipped, replace guiding.

Belt Installation for LPZ Conveyors

⚠ WARNING

Removing mounting brackets without support under gearmotor will cause conveyor to tip, causing severe injury.

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

1. Ensure temporary support stands **(Figure 48, item 1)** are placed at both ends of the conveyor. Place an additional support stand **(Figure 48, item 2)** under the drive motor **(Figure 48, item 3)**, if equipped. See WARNING.
2. Orient belt so splice leading fingers **(Figure 67, item 1)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 67, item 2)**.

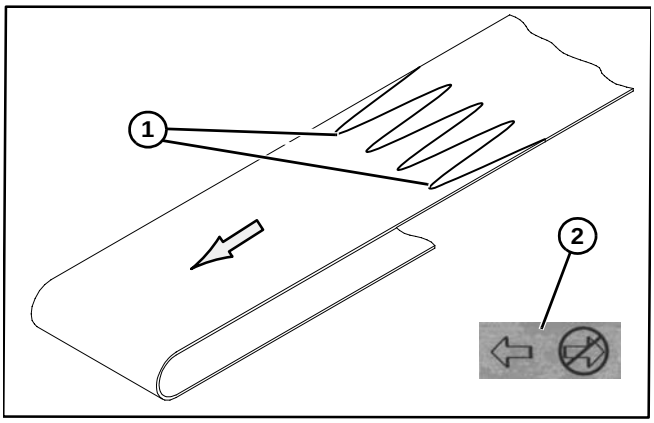


Figure 67

3. Slide belt onto the conveyor frame assembly.

Cleated Belt Conveyors

1. If equipped with an upper knuckle, install roller bearing assembly **(Figure 68, item 1)** into knuckle plate **(Figure 68, item 2)** with screws **(Figure 68, item 3)** on both sides of conveyor.

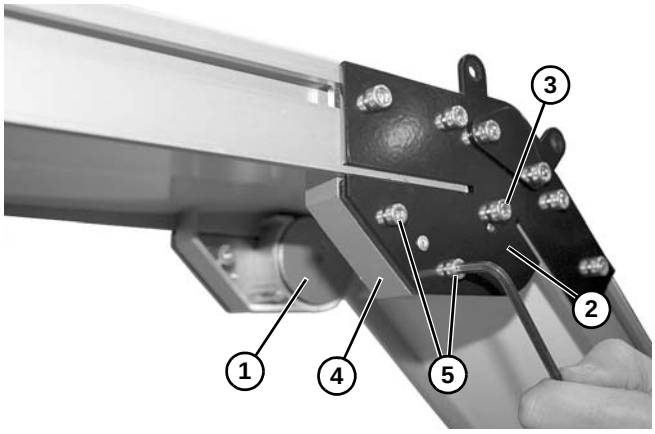


Figure 68

2. Install guard **(Figure 68, item 4)** on both sides of conveyor with screws **(Figure 68, item 5)**. Tighten screws to 25 in-lb (3 Nm).
3. Install spacers **(Figure 69, item 1)** on both sides of conveyor with screws **(Figure 69, item 2)**.

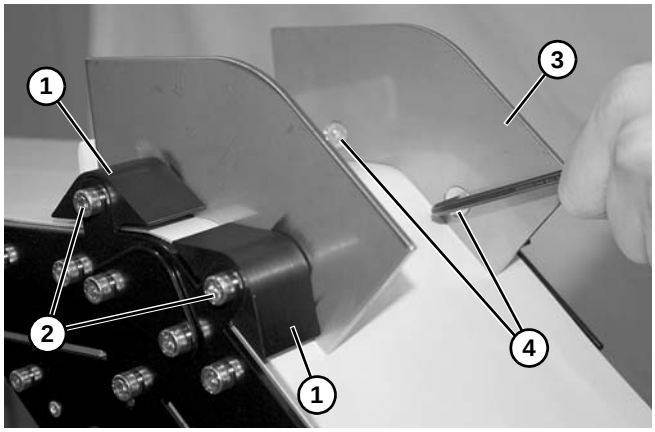


Figure 69

4. Install guard **(Figure 69, item 3)** on both sides of conveyor with screws **(Figure 69, item 4)**.

5. If equipped with a lower knuckle, install roller bearing assembly **(Figure 70, item 1)** into knuckle plate **(Figure 70, item 2)** with screws **(Figure 70, item 3)** on both sides of conveyor.

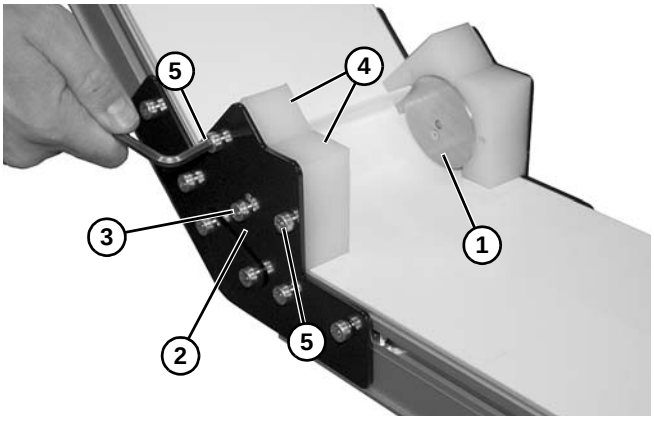


Figure 70

6. Install guards **(Figure 70, item 4)** with screws **(Figure 70, item 5)** on both sides of conveyor.
7. Tension belt. Refer to "Conveyor Belt Tensioning" on page 39.
8. If equipped, install return rollers and guiding.

Flat Belt Conveyors

1. Install idler pulley:

   a. For 2" (44 mm) through 4" (95 mm) wide conveyors, install pulley **(Figure 71, item 1)** and pulley shaft **(Figure 71, item 2)**. Install washer **(Figure 71, item 3)** and E-ring clip **(Figure 71, item 4)** on one side.

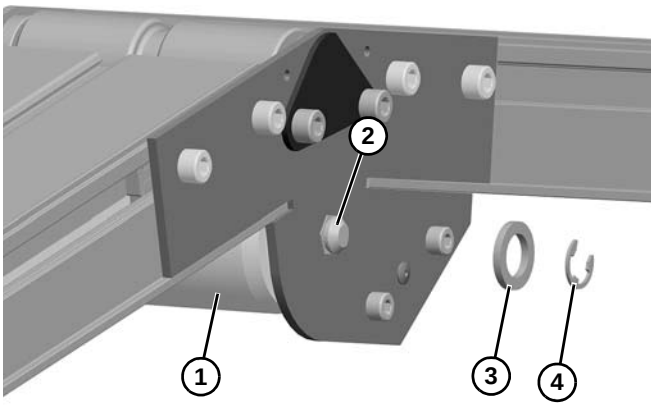


Figure 71

   b. For 5" (127 mm) or wider conveyor, push spring-loaded shaft ends **(Figure 72, item 1)** inward. Install roller **(Figure 72, item 2)**.

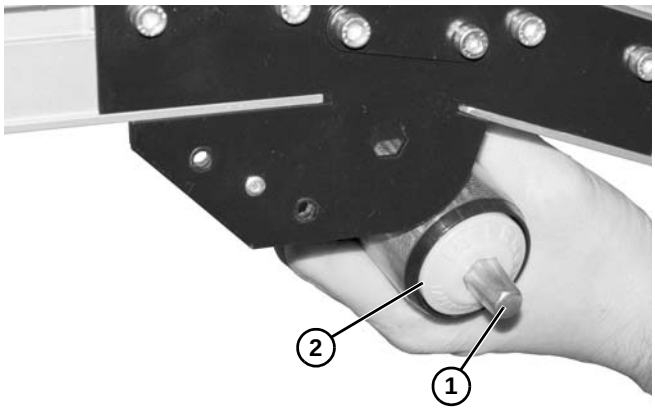


Figure 72

2. Position guard **(Figure 73, item 1)** between knuckle plates.

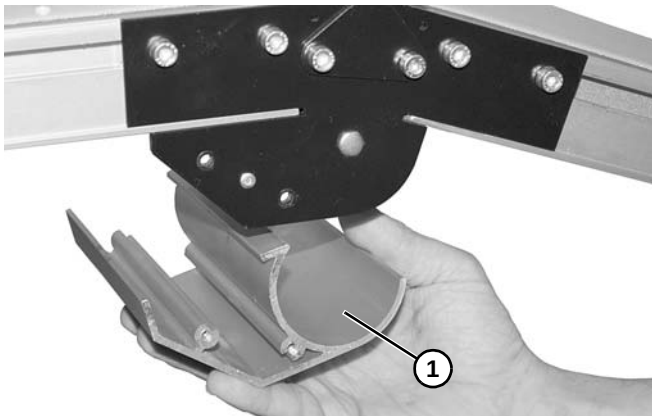


Figure 73

3. Install screws **(Figure 74, item 1)** on both sides of conveyor.

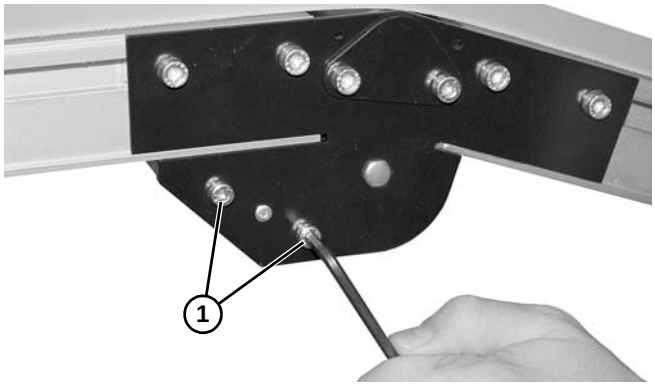


Figure 74

4. Tension belt. Refer to "Conveyor Belt Tensioning" on page 39.
5. If equipped, 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.

Conveyors with 1.25" (32 mm) Diameter Pulleys

1. On tension end of the conveyor, identified with a  label **(Figure 75, item 1)**, adjust head plate assembly **(Figure 75, item 2)**:
   a. If equipped with dust covers **(Figure 75, item 3)**, remove screw **(Figure 75, item 4)** and dust cover on both sides of conveyor. Reinstall screw **(Figure 75, item 4)**.
   b. On both sides of conveyor, loosen fastening screws **(Figure 75, item 5)** and rotate pinion gear **(Figure 75, item 6)** to adjust head plate assembly.

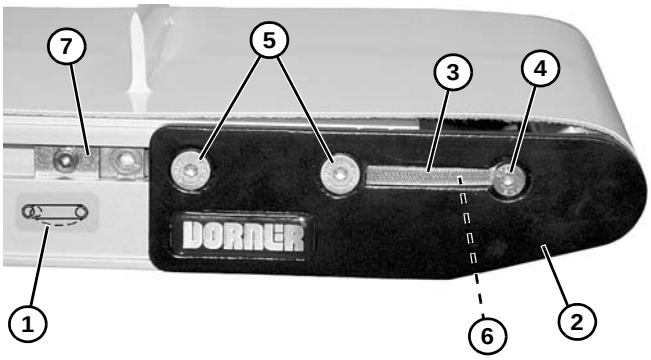


Figure 75

2. Adjust head plate assembly so end of conveyor frame aligns with or between the head plate tensioning marks **(Figure 76, item 1 & 2)**. Replace belt if proper tensioning can not be obtained while aligning the end of the conveyor frame with or between the tensioning marks. See NOTE.

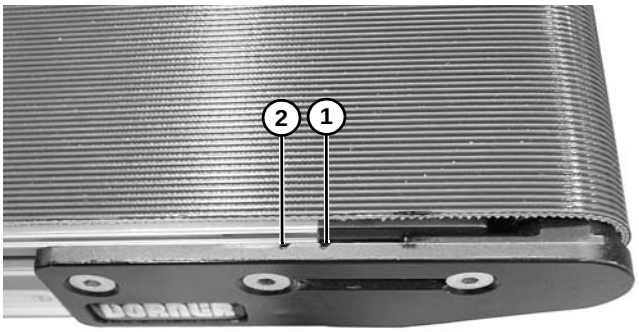


Figure 76

NOTE

On pinion gear, do not exceed a torque of 25 in-lb (2.8 Nm) for 2 – 12" (44 – 305 mm) wide conveyors and 50 in-lb (4.5 Nm) for an 18 – 24" (457 – 610 mm) wide conveyor. Over tensioning the conveyor belt could cause excessive pulley bearing load and early failure.

3. After adjusting proper tensioning, tighten fastening screws **(Figure 75, item 5)** on both sides of conveyor to 60 in-lb (7 Nm).
4. If equipped, install dust covers **(Figure 75, item 3)**.
5. If equipped with cam tracking assemblies **(Figure 75, item 7)**, position against head plates and adjust belt tracking. Refer to “Conveyor Belt Tracking” on page 41.

Center Drive Conveyors

The conveyor is equipped with an automatic tensioning cylinder. No tensioning adjustment is required.

For a new belt, the tension plate **(Figure 77, item 1)** will be in position indicated below left. When the tension plate extends to position indicated below right, the conveyor belt must be replaced.

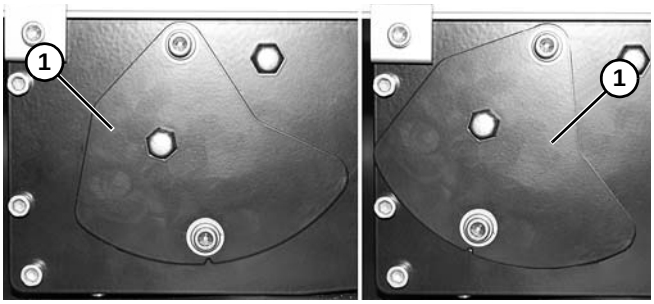


Figure 77

Conveyors with Nose Bar Idlers

1. On tension end of the conveyor, identified with a label **(Figure 78, item 1)**, adjust head plate assembly **(Figure 78, item 2)**:
   a. On both sides of conveyor, loosen fastening screws **(Figure 78, item 3)**.
   b. If equipped with dust covers **(Figure 78, item 4)**, loosen screw **(Figure 78, item 5)** and remove dust cover on both sides of conveyor. Tighten screw **(Figure 78, item 5)**.
   c. Rotate pinion gear **(Figure 78, item 6)** to adjust head plate assembly.

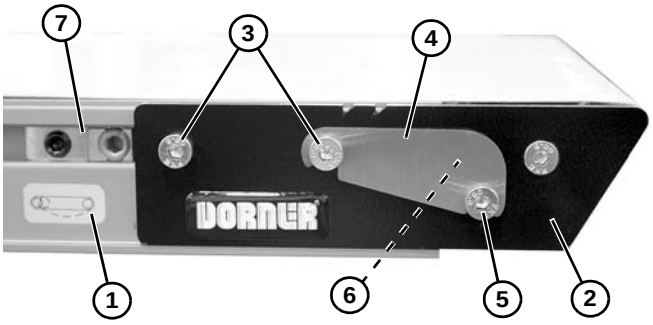


Figure 78

2. Adjust head plate assembly so end of conveyor frame aligns with or between the head plate tensioning marks **(Figure 79, item 1 & 2)**. Replace belt if proper tensioning can not be obtained while aligning the end of the conveyor frame with or between the tensioning marks. See NOTE.

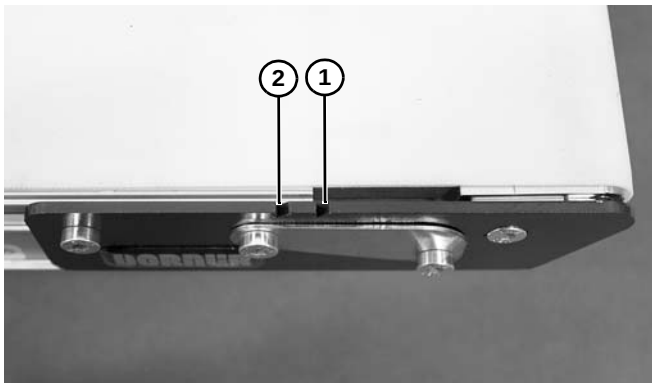


Figure 79

NOTE

On pinion gear, do not exceed a torque of 25 in-lb (2.8 Nm) for 2 – 12" (44 – 305 mm) wide conveyors and 50 in-lb (4.5 Nm) for an 18 – 24" (457 – 610 mm) wide conveyor. Over tensioning the conveyor belt could cause excessive pulley bearing load and early failure.

3. After adjusting proper tensioning, tighten fastening screws **(Figure 78, item 3)** on both sides of conveyor to 60 in-lb (7 Nm).
4. If equipped, install dust covers **(Figure 78, item 4)**.
5. If equipped with cam tracking assemblies **(Figure 78, item 7)** position against head plates and adjust belt tracking. Refer to “Conveyor Belt Tracking”, next section.

Conveyor Belt Tracking

V-Guided Belts

V-guided belts do not require tracking adjustment.

Non V-Guided Belts

Non V-guided belt conveyors are equipped with belt tracking cam assemblies **(Figure 80, item 1)** for belt tracking adjustment.

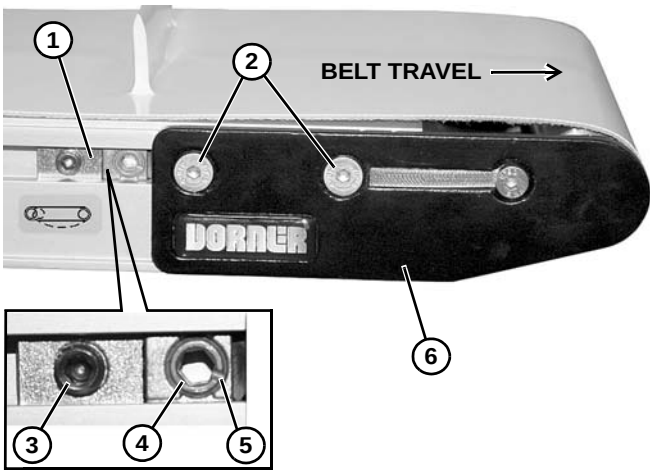


Figure 80

When adjusting belt tracking, always adjust the discharge end of the conveyor first. To adjust belt tracking:

1. Ensure head plate fastening screws **(Figure 80, item 2)** on both sides of conveyor are tightened.
2. On both sides of conveyor, loosen cam fastening screw **(Figure 80, item 3)**. Adjust cams **(Figure 80, item 4)** until indicator slots **(Figure 80, item 5)** are horizontal and facing end of conveyor. Then slide cam assemblies against head plates **(Figure 80, item 6)** and re-tighten cam fastening screws **(Figure 80, item 3)** to 60 in-lb (7 Nm).
3. On the side toward which the belt is tracking, loosen head plate fastening screws **(Figure 80, item 2)**.
4. With the conveyor running, use a 5 mm hex-key wrench to rotate the tracking cam **(Figure 80, item 4)** in small increments until the belt tracks in the center of the conveyor. Then while holding the cam in position, re-tighten the head plate fastening screws **(Figure 80, item 2)** with a 4 mm hex-key wrench to 60 in-lb (7 Nm).

Pulley Replacement

⚠ WARNING

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

Unless instructed otherwise, leave belt in place to remove the desired pulley. Follow the corresponding instructions below:

- **A** – Drive Pulley Removal
- **B** – iDrive Pulley Removal
- **C** – Idler Pulley Removal
- **D** – 5/16" Nosebar Bearing Removal
- **E** – 5/8" Nosebar Pulley Removal
- **F** – Center Drive Module Pulley Removal
- **G** – Mid Drive Module Pulley Removal
- **H** – Knuckle Idler Pulley Removal

A – Drive Pulley Removal

1. Remove belt tension.
2. On one side of the conveyor, remove screw **(Figure 81, item 1)** and remove dust cover **(Figure 81, item 2)**, if installed.

NOTE

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

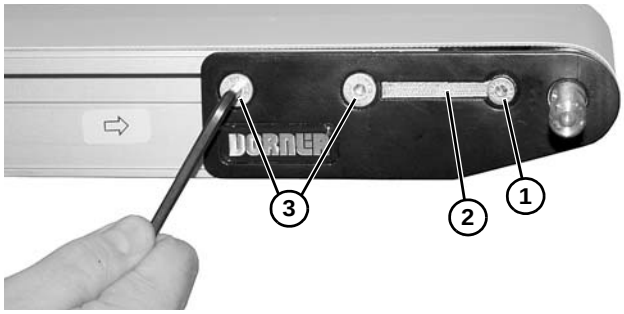


Figure 81

3. Remove two fastening screws **(Figure 81, item 3)**.

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

4. Remove the head plate **(Figure 82, item 1)** from the conveyor frame, holding spindle in place.

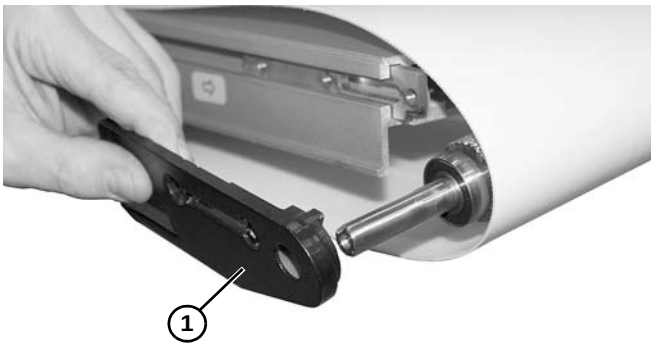


Figure 82

5. Slide the drive pulley out of the belt loop.
6. To replace the drive tail pulley, reverse the removal procedure.
7. Re-install belt on end of conveyor, then tension the belt. See “Conveyor Belt Tensioning” on page 39.
8. If installed, re-position the cam assemblies against the head plates and adjust belt tracking. See “Conveyor Belt Tracking” on page 41.

B – iDrive Pulley Removal

1. Remove belt. Refer to “Belt Removal for End Drive and iDrive Conveyors” on page 27.

NOTE

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

2. Remove drive side cover **(Figure 83, item 1)** by removing two iDrive cover screws **(Figure 83, item 2)**.

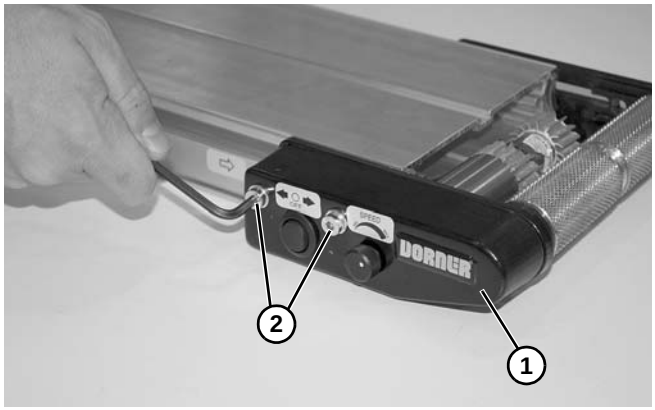


Figure 83

3. Unplug motor connector **(Figure 84, item 1)** from cover wiring connector **(Figure 84, item 2)**.

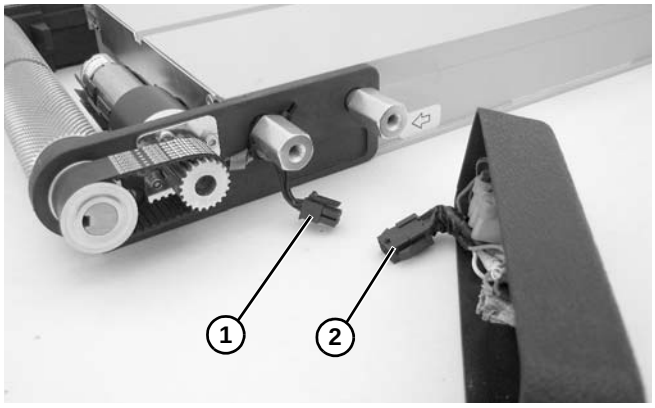


Figure 84

4. Loosen four clamp plate screws **(Figure 85, item 1)**.

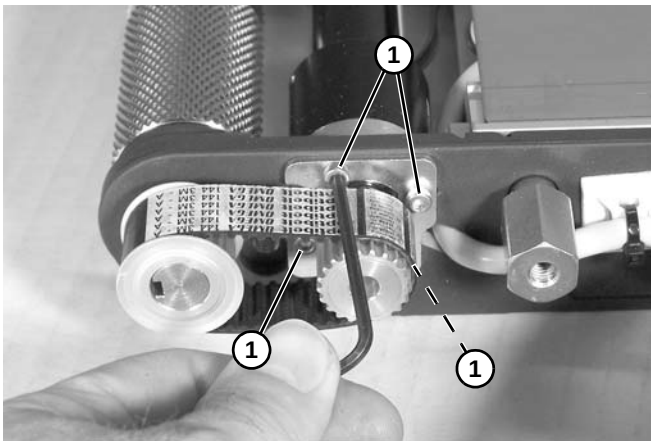


Figure 85

5. Loosen timing belt tension cam **(Figure 86, item 1)**.

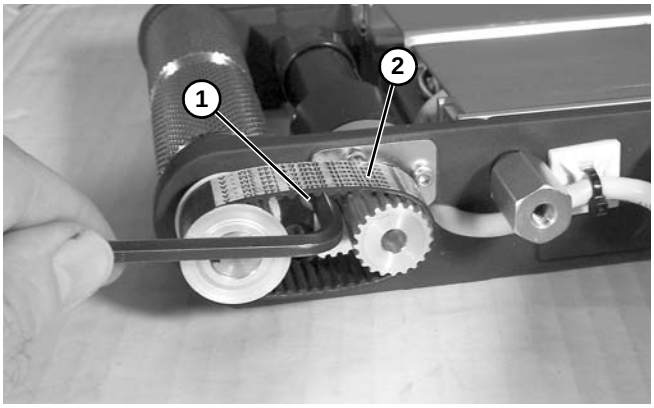


Figure 86

6. Remove timing belt **(Figure 86, item 2)**.
7. Remove two head plate fastening screws **(Figure 87, item 1)** from opposite side of conveyor.

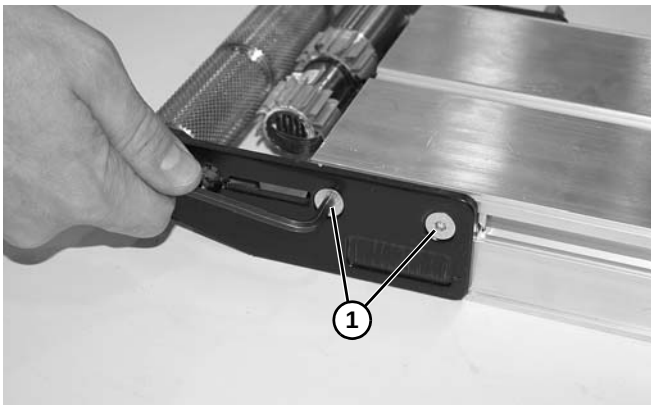


Figure 87

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

8. Loosen two set screws **(Figure 88, item 1)** on driven pulley **(Figure 88, item 2)**, and slide off shaft to remove.

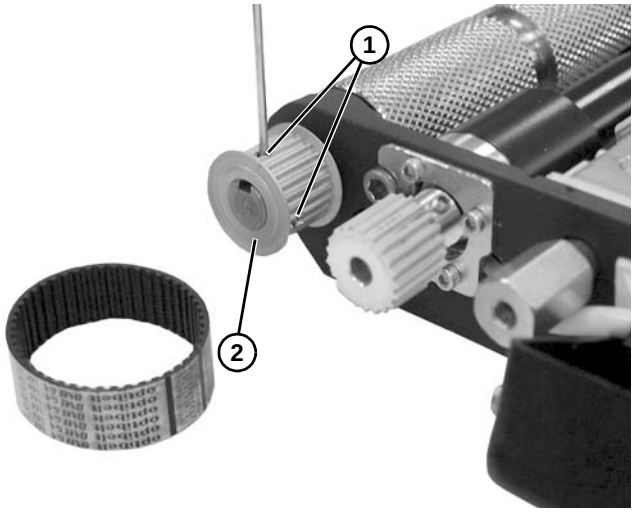


Figure 88

⚠ CAUTION

Spindle can slide out.

9. Remove head plate **(Figure 89, item 1)** from frame.

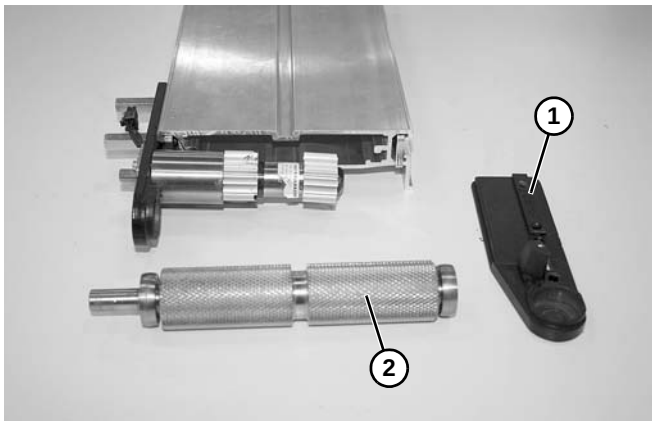


Figure 89

10. Remove and replace spindle **(Figure 89, item 2)**.
11. Re-install in the reverse order of removal.

12. Tighten timing belt tension cam **(Figure 90, item 1)**, making certain that pointer **(Figure 90, item 2)** on cam is pointing towards the motor drive spindle **(Figure 90, item 3)**.

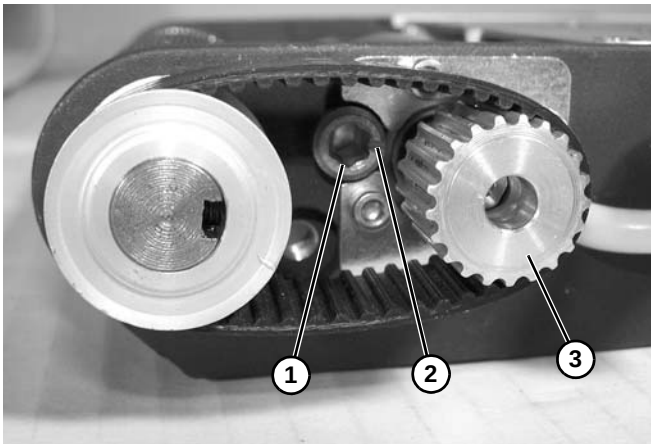


Figure 90

13. Rotate tension cam **(Figure 90, item 1)** to fully tension the timing belt **(Figure 91, item 1)**. Tighten four clamp plate screws **(Figure 91, item 2)** to 15 in-lb (1.7 Nm) to secure position.

⚠ CAUTION

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

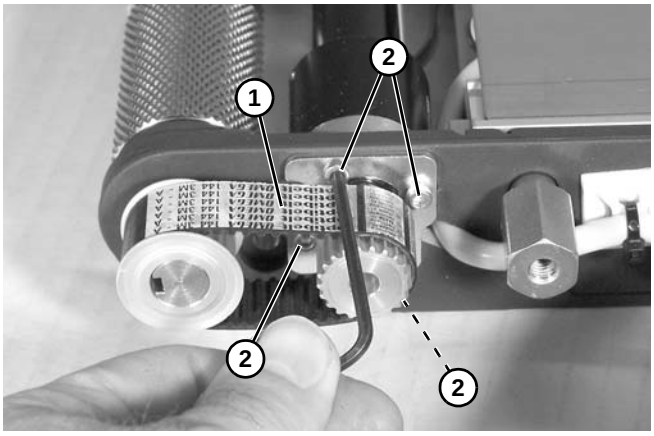


Figure 91

14. Re-install belt on end of conveyor, then tension the belt. See “Conveyor Belt Tensioning” on page 39.
15. If installed, re-position the cam assemblies against the head plates and adjust belt tracking. See “Conveyor Belt Tracking” on page 41.

C – Idler Pulley Removal

1. On one side of the conveyor, remove screw **(Figure 92, item 1)** and remove dust cover **(Figure 92, item 1)**, if installed.

NOTE

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

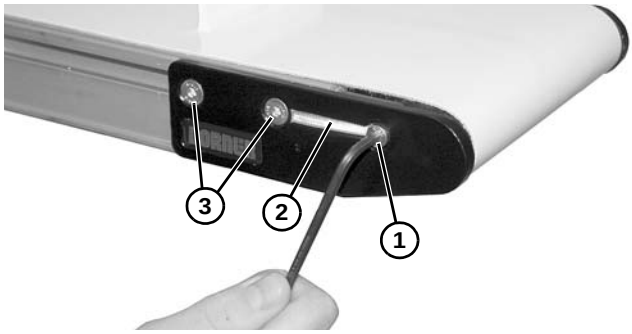


Figure 92

2. Remove two fastening screws **(Figure 92, item 3)**.
3. Remove the head plate **(Figure 93, item 1)** from the conveyor frame, holding spindle in place.

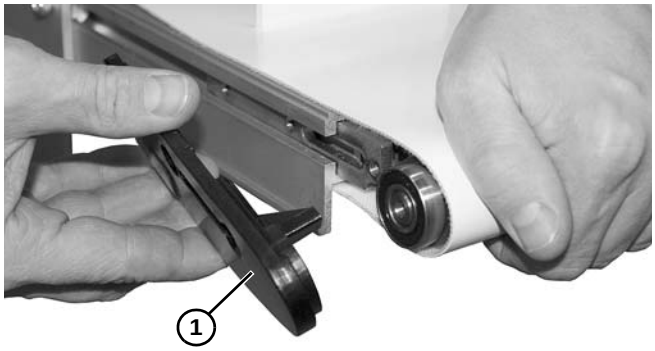


Figure 93

4. Slide spindle out of the belt loop.
5. To replace the idler tail pulley, reverse the removal procedure.
6. Re-install belt on end of conveyor, then tension the belt. See “Conveyor Belt Tensioning” on page 39.
7. If installed, re-position the cam assemblies against the head plates and adjust belt tracking. See “Conveyor Belt Tracking” on page 41.

D – 5/16" (8 mm) Tight Radius Nosebar Bearing Removal

1. On both sides of conveyor, loosen cam fastening screw **(Figure 94, item 1)** (if equipped) and slide cam assemblies toward the center of the conveyor.

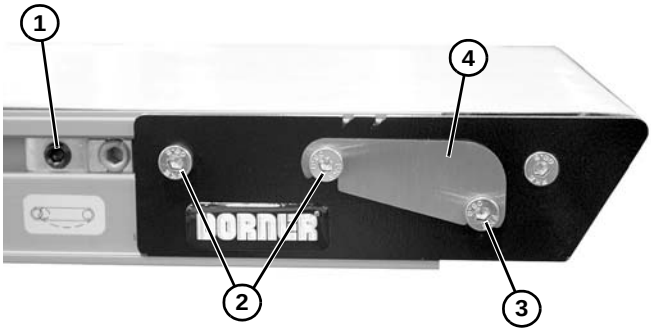


Figure 94

2. On both sides of conveyor, loosen two fastening screws **(Figure 94, item 2)** to remove belt tension. Remove belt from end of conveyor.
3. On both sides of conveyor, loosen fastening screw **(Figure 94, item 3)** and remove dust cover **(Figure 94, item 4)** (if equipped).
4. Remove nosebar tail from the conveyor and place on an open work surface. On one side of nosebar tail, remove two fastening screws **(Figure 94, item 2)**.
5. Remove lower screw **(Figure 95, item 1)** and remove tail nut bar **(Figure 95, item 2)** and side plate **(Figure 95, item 3)**.

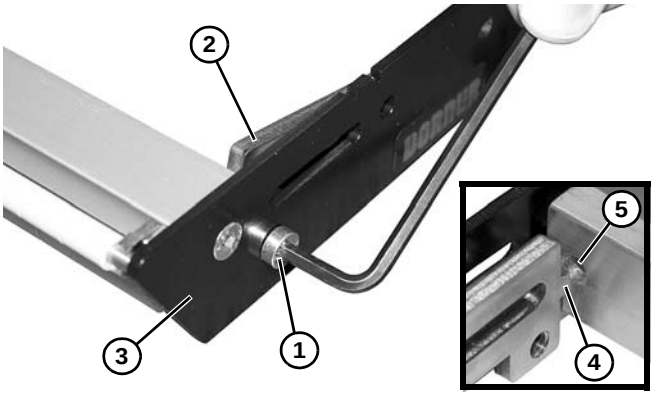


Figure 95

NOTE

*During reassembly, make certain that the tail nut bar nipple **(Figure 95, item 4)** is inserted into the support bar hole **(Figure 95, item 5)**.*

6. Remove outer and inner end plate **(Figure 96, item 1)**.

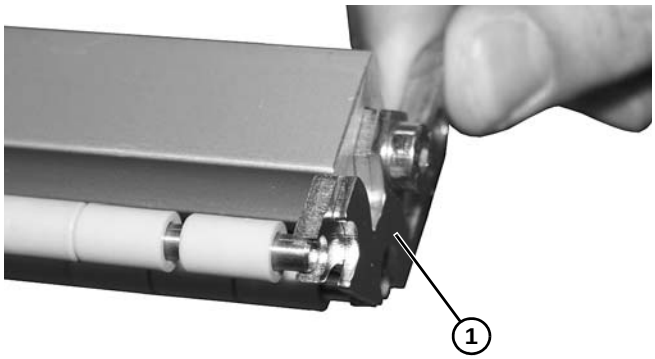


Figure 96

7. Remove and replace bearings **(Figure 97, item 1)** and rods **(Figure 97, item 2)** as necessary.

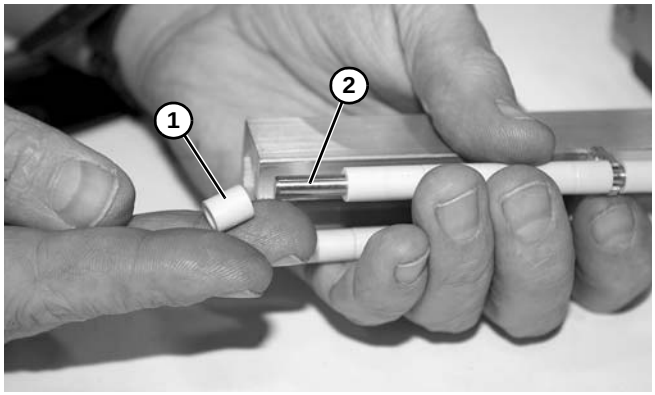


Figure 97

8. Assemble and install head plate in reverse order of removal. Use a hex-key wrench to tighten lower screw **(Figure 95, item 1)** to 30 in-lb (3.4 Nm). Leave two fastening screws **(Figure 94, item 2)** loose for belt tensioning.
9. Re-install belt on end of conveyor, then tension the belt. See “Conveyor Belt Tensioning” on page 39.
10. Re-position the cam assemblies (if equipped) against the head plates and adjust belt tracking. See “Conveyor Belt Tracking” on page 41.

E – 5/8" (16 mm) Nosebar Pulley Removal

1. On both sides of conveyor, loosen cam fastening screw **(Figure 98, item 1)** (if equipped) and slide cam assemblies toward the center of the conveyor.

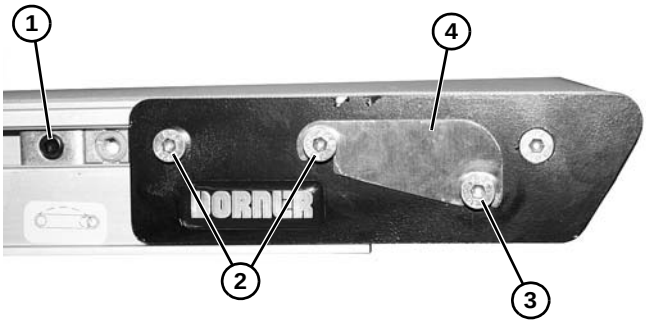


Figure 98

2. On both sides of conveyor, loosen fastening screws **(Figure 98, item 2)** to remove belt tension. Remove belt from end of conveyor.
3. On both sides of conveyor, loosen fastening screw **(Figure 98, item 3)** and remove dust cover **(Figure 98, item 4)** (if equipped).
4. Remove nosebar tail from the conveyor and place on an open work surface. On one side of nosebar tail, remove two fastening screws **(Figure 98, item 2)**.
5. Remove lower screw **(Figure 99, item 1)** and remove tail nut bar **(Figure 99, item 2)** and side plate **(Figure 99, item 3)**.

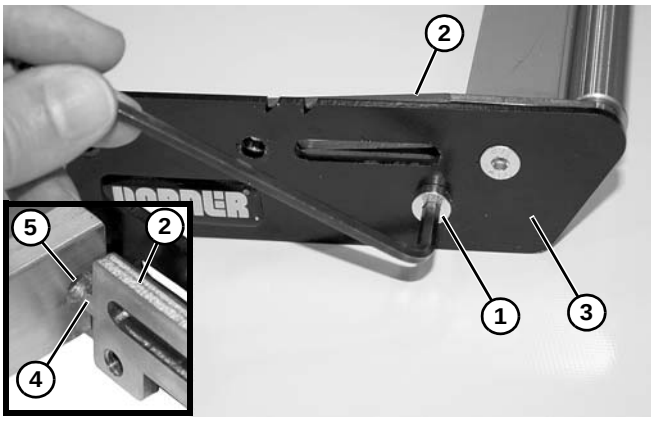


Figure 99

NOTE

*During reassembly, make certain that the tail nut bar nipple **(Figure 99, item 4)** is inserted into the support bar hole **(Figure 99, item 5)**.*

6. Remove outer and inner end plate **(Figure 100, item 1)**.

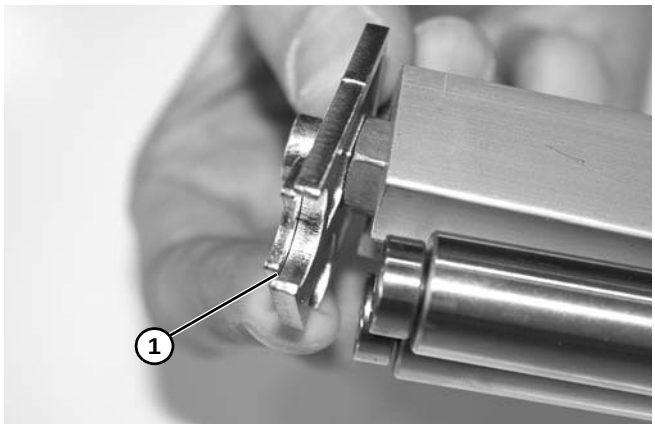


Figure 100

7. Remove spindles **(Figure 101, item 1)**.

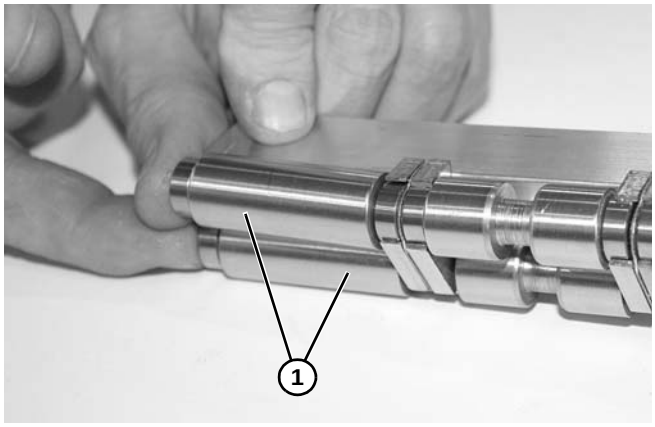


Figure 101

8. Remove bearing carrier (if installed) **(Figure 102, item 1)** and spindles **(Figure 102, item 2)**.

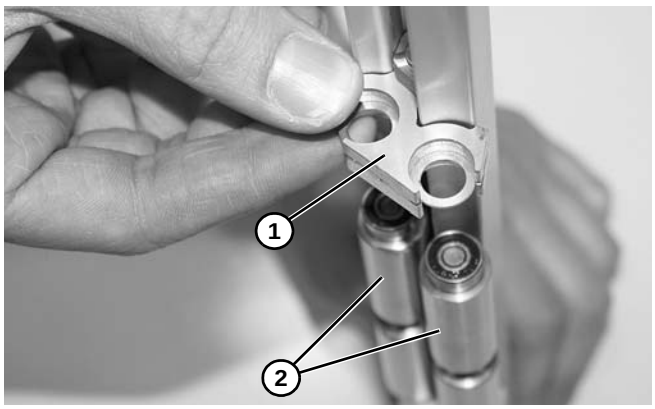


Figure 102

9. Repeat step 8 for remaining spindles.
10. Assemble and install head plate in reverse order of removal. Use a 4 mm hex-key wrench to tighten lower screw **(Figure 99, item 1)** to 30 in-lb (3.4 Nm). Leave two fastening screws **(Figure 98, item 2)** loose for belt tensioning.

11. Re-install belt on end of conveyor, then tension the belt. See “Conveyor Belt Tensioning” on page 39.
12. Re-position the cam assemblies (if equipped) against the head plates and adjust belt tracking. See “Conveyor Belt Tracking” on page 41.

F – Center Drive Module Pulley Removal

Remove the conveyor belt to access the pulley(s). Refer to “Belt Removal for Center Drive Conveyors” on page 28, steps 1 through 10.

Perform one of the following procedures to remove desired pulley:

- Drive Module Drive Pulley Removal
- Drive Module Idler Pulley Removal

Drive Module Drive Pulley Removal

1. Remove the gearmotor drive package. Refer to “Gearmotor Mounting Package Removal” on page 29.
2. Remove the drive module. Refer to “Drive Module Removal” on page 30.
3. Remove the drive pulley. Refer to “Belt Removal from Drive Module” on page 31, steps 1 and 2.
4. To replace the pulley, reverse the removal procedure.
5. Re-install belt on end of conveyor, then tension the belt. See “Conveyor Belt Tensioning” on page 39.
6. If installed, re-position the cam assemblies against the head plates and adjust belt tracking. See “Conveyor Belt Tracking” on page 41.

Drive Module Idler Pulley Removal

1. Remove the gearmotor drive package. Refer to “Gearmotor Mounting Package Removal” on page 29.
2. Remove the drive module. Refer to “Drive Module Removal” on page 30“.
3. Remove the grooved idler pulley. Refer to “Belt Removal from Drive Module” on page 31, step 3.
4. Remove smooth idler pulleys:

   a. For 2" (44 mm), 3" (70 mm) or 4" (95 mm) wide conveyor, remove E-ring clips and washers **(Figure 103, item 1)**. Remove pulley shafts **(Figure 103, item 2)** and pulleys **(Figure 103, item 3)**.

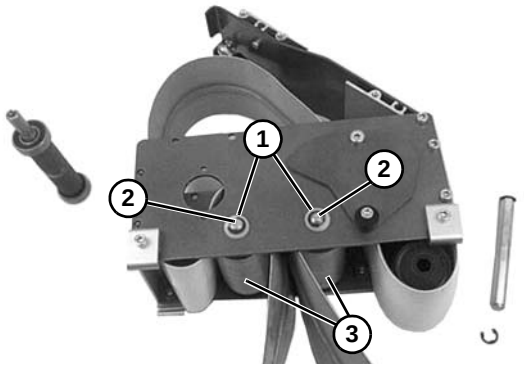


Figure 103

   b. For 5" (127 mm) or wider conveyor, depress both sides of each spring-loaded shaft **(Figure 104, item 1)**. Remove pulleys **(Figure 104, item 2)**.

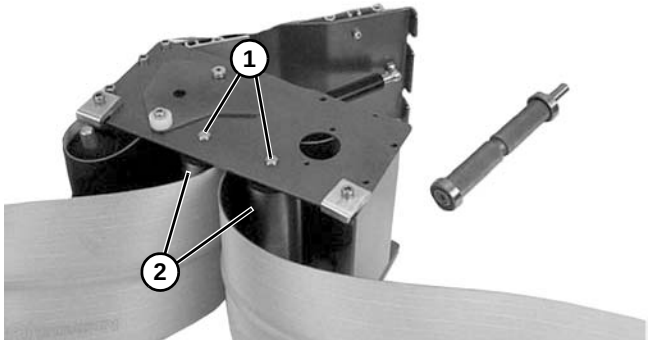
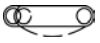


Figure 104

5. To replace the pulley, reverse the removal procedure.
6. Re-install belt on end of conveyor, then tension the belt. See “Conveyor Belt Tensioning” on page 39.
7. Re-position the cam assemblies (if equipped) against the head plates and adjust belt tracking. See “Conveyor Belt Tracking” on page 41.

G – Mid Drive Module Pulley Removal

1. On tension end of the conveyor, identified with  a label **(Figure 105, item 1)**, push in head plate assembly **(Figure 105, item 2)**:

   a. On both sides of conveyor, loosen and move cam tracking assemblies **(Figure 105, item 3)** (if equipped) away from head plates.

   b. Loosen fastening screws **(Figure 105, item 4)** and push head plate assembly inward.

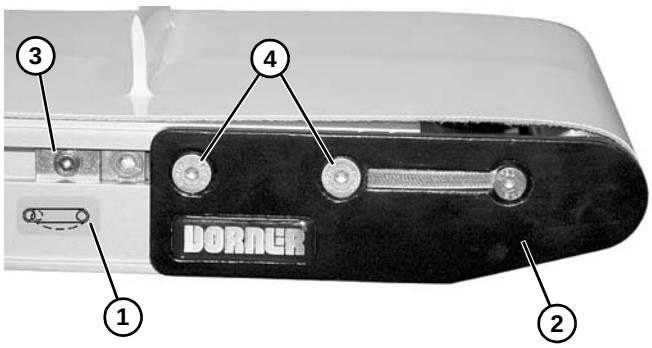


Figure 105

2. Remove drive package. See your appropriate Drive Package manual for removal procedure.

3. Loosen one socket head screw **(Figure 106, item 1)** from each side of mounting block **(Figure 106, item 2)**.

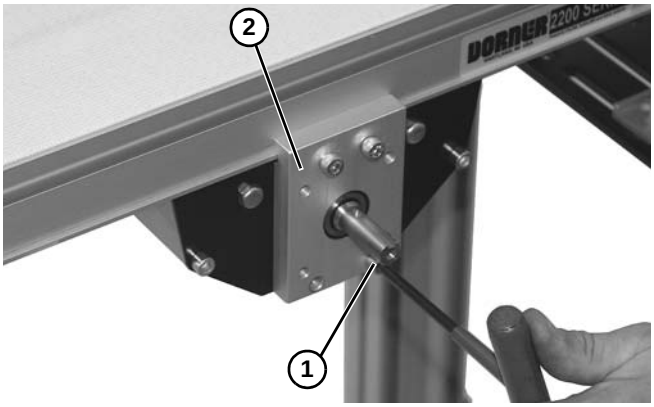


Figure 106

4. Lower and remove mid drive module **(Figure 107, item 1)** from belt **(Figure 107, item 2)**.

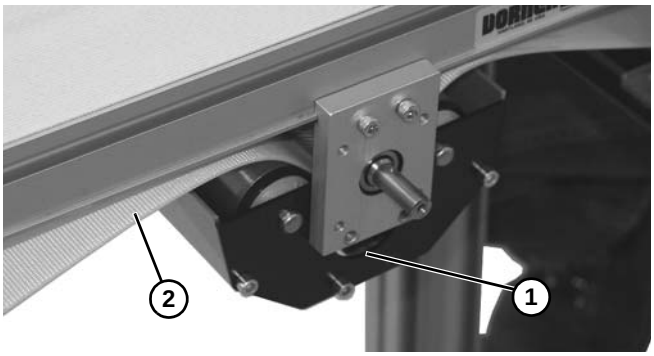


Figure 107

5. Loosen two socket head screws **(Figure 108, item 1)** from each side of mounting block **(Figure 108, item 2)**.

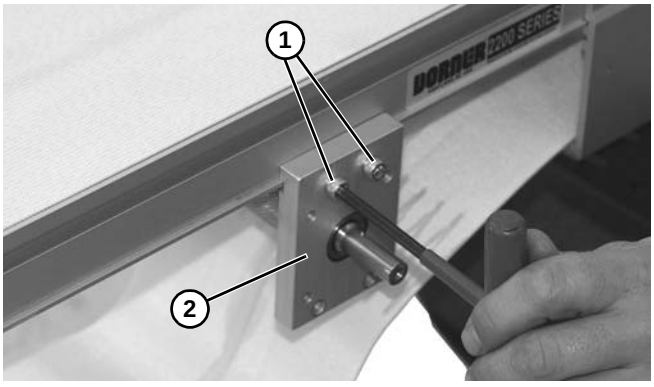


Figure 108

6. Separate mounting blocks **(Figure 109, item 1)** from spindle **(Figure 109, item 2)**.

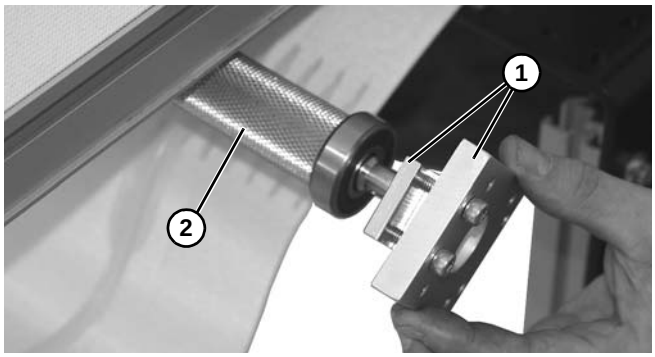


Figure 109

7. Replace spindle.
8. Install components, reverse order of removal.
9. Be certain to use a square **(Figure 110, item 1)** across mounting blocks **(Figure 110, item 2)**, so blocks are aligned to one another, before tightening hardware.

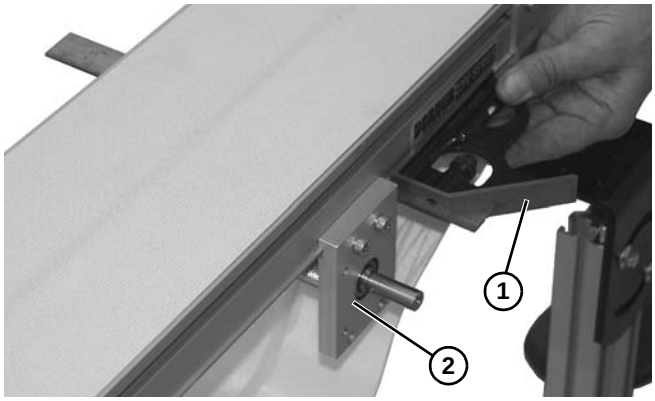


Figure 110

10. Tighten socket head screws **(Figure 106, item 1)** and **(Figure 108, item 1)** to 60 in-lb (7 Nm).
11. Tension conveyor belt. See “Conveyor Belt Tensioning” on page 39.

H – Knuckle Idler Pulley Removal

1. Remove belt. See “Belt Removal for LPZ Conveyors” on page 32.
2. Temporarily support the knuckle idler pulley.

NOTE

The procedure shown is for a knuckle on a Flat Belt conveyor. The removal procedure for other knuckle types is the same.

3. Remove two screws **(Figure 111, item 1)** and remove bearing cover **(Figure 111, item 2)** on both sides of knuckle.

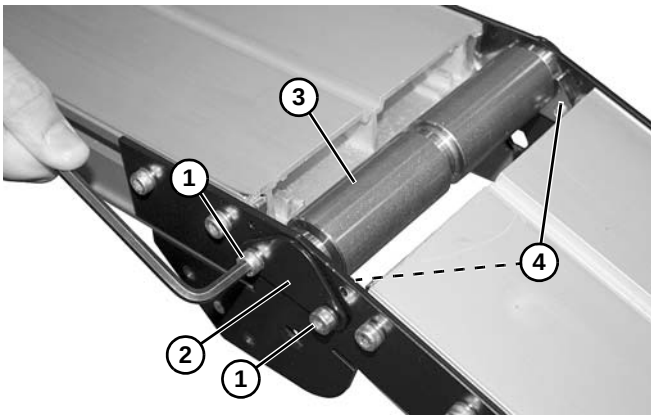


Figure 111

4. Slide idler pulley **(Figure 111, item 3)** to one side of the conveyor, remove bearing housings **(Figure 111, item 4)**, and then remove idler pulley from knuckle plates.

Bearing Removal and Replacement

Removal

IMPORTANT

Do not use any removed bearings. Replace them.

1. Place bearing removal tool part #456063 **(Figure 112, item 1)** below bearing **(Figure 112, item 2)** with lip **(Figure 112, item 3)** located in gap **(Figure 112, item 4)** between bearing and spindle hub **(Figure 112, item 5)** as shown.

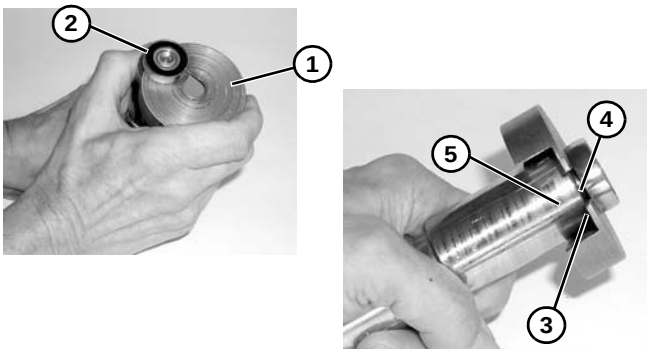


Figure 112

2. Using puller part #807–1716 **(Figure 113, item 1)**, remove and discard bearing.

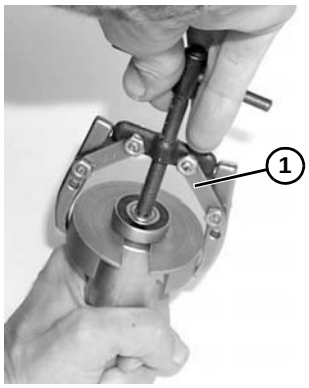


Figure 113

Replacement

1. Inspect the head plates bearing seating surface **(Figure 114, item 1)**. If they are worn or damaged, replace. See "Service Parts" on page 54.

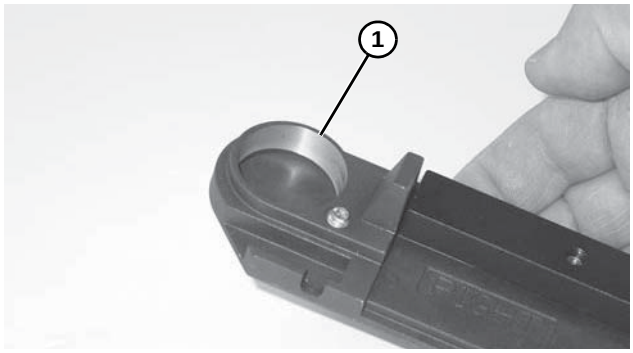


Figure 114

2. Inspect spindle **(Figure 115, item 1)**. Replace if worn.
3. Slide bearing **(Figure 115, item 2)** onto spindle.

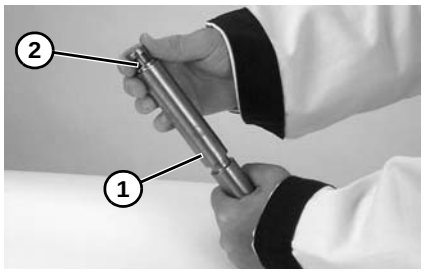


Figure 115

4. Using an arbor press or similar device, press bearing onto pulley shaft **(Figure 116)**.

⚠ WARNING

Be certain that bearing and shaft is set onto press completely flush with press cylinder plate. If not, damage to bearing or shaft could result.

Keep hands and fingers away from press and components during procedure.

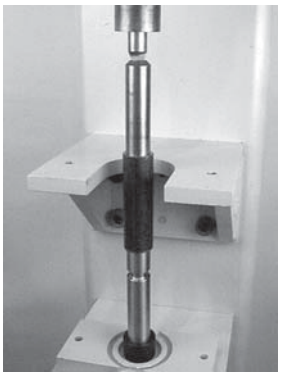


Figure 116

5. Repeat steps 1 through 4 for each bearing.

iDrive Motor Replacement

1. Remove belt. Refer to "Belt Removal for End Drive and iDrive Conveyors" on page 27.
2. Remove inframe drive side cover **(Figure 117, item 1)** by removing two head plate fastening screws **(Figure 117, item 2)**.

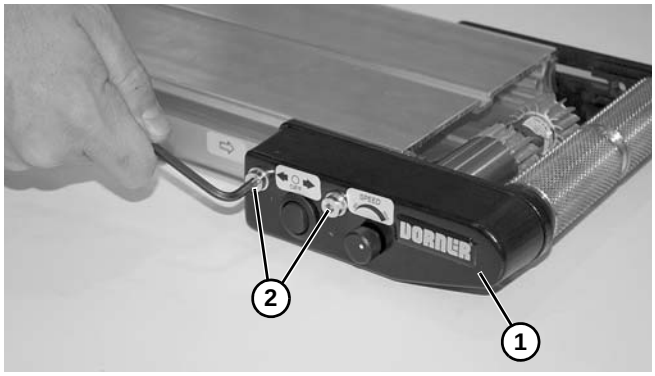


Figure 117

3. Unplug motor connector **(Figure 118, item 1)** from cover wiring connector **(Figure 118, item 2)**, and cut cable tie **(Figure 118, item 3)** from conveyor.

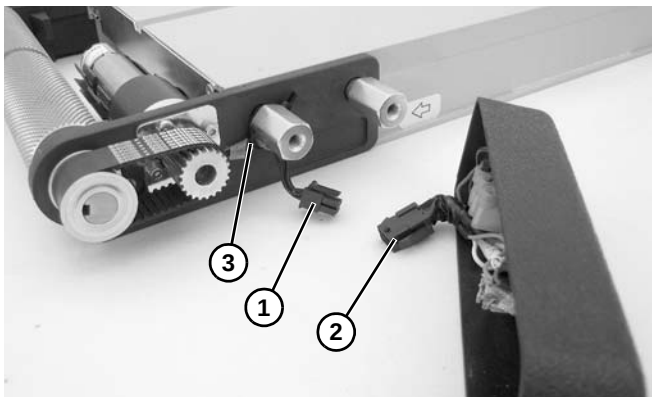


Figure 118

4. Loosen four clamp plate screws **(Figure 119, item 1)**.

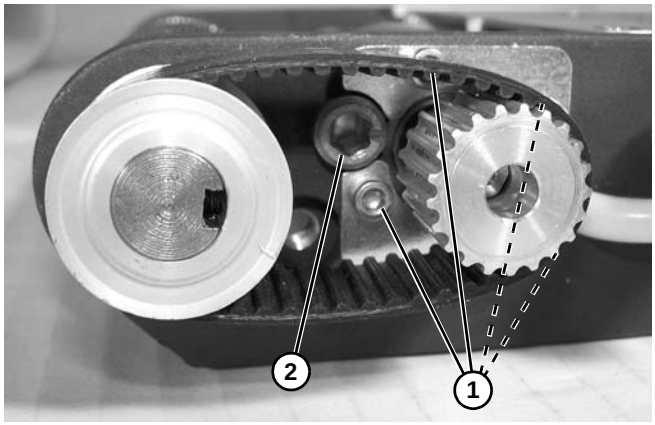


Figure 119

5. Loosen timing belt tension cam **(Figure 119, item 2)**.

6. Loosen two set screws **(Figure 120, item 1)** on drive pulley **(Figure 120, item 2)**. Slide drive pulley outward off of gearmotor shaft and remove timing belt **(Figure 120, item 3)**.

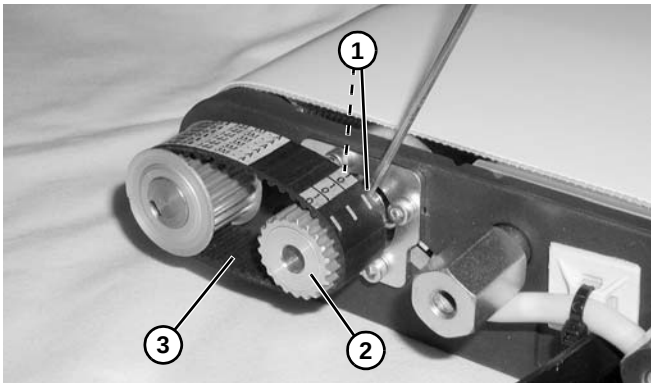


Figure 120

7. Remove four clamp plate screws **(Figure 121, item 1)** and clamp plate **(Figure 121, item 2)**.

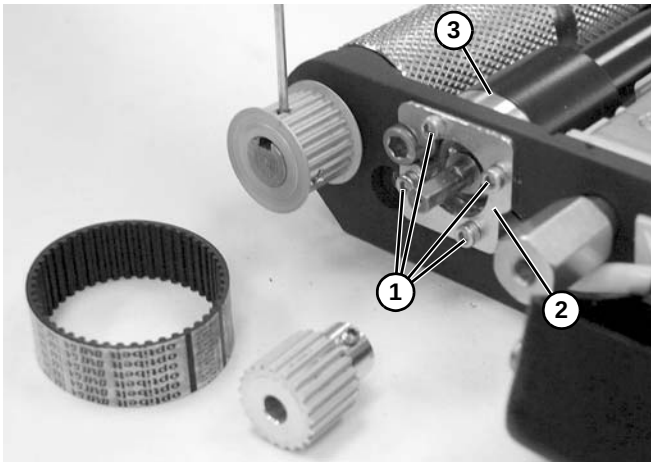


Figure 121

8. Remove and replace motor **(Figure 121, item 3)**.

NOTE
When reassembling, make sure the pointer on the timing belt tension cam is pointing towards the motor.

9. Reinstall in reverse order of removal. (Refer to steps 12 and 13 of "B – iDrive Pulley Removal" on page 42 for timing belt tensioning.)

Knuckle Return Roller Replacement

Cleated Belt Conveyor

1. Remove belt tension.
2. If equipped with a lower knuckle, remove screws **(Figure 122, item 1)** and remove guards **(Figure 122, item 2)** on both sides of knuckle.

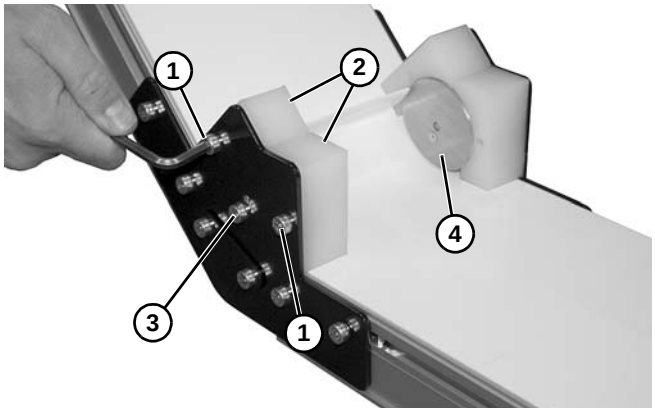


Figure 122

3. Remove screws **(Figure 122, item 3)** and remove roller bearing assembly **(Figure 122, item 4)** on both sides of knuckle.
4. If equipped with an upper knuckle, remove screws **(Figure 123, item 1)** and remove guard **(Figure 123, item 2)** on both sides of knuckle.

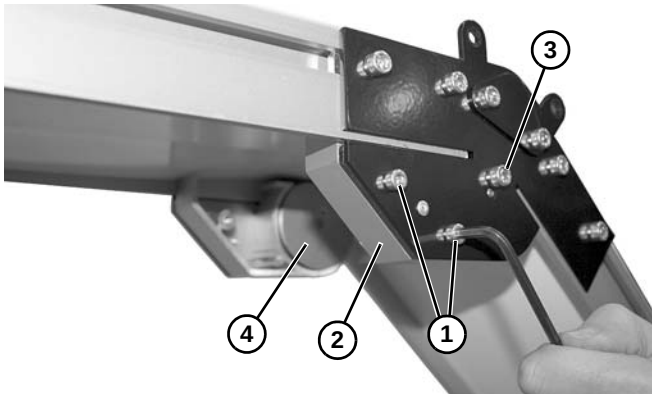


Figure 123

5. Remove screw **(Figure 123, item 3)** and remove roller bearing assembly **(Figure 123, item 4)** on both sides of knuckle.

Flat Belt Conveyor

1. Remove screws **(Figure 124, item 1)** on both sides of conveyor.

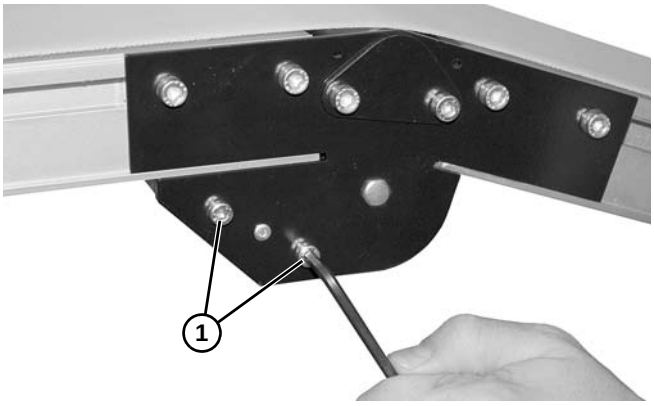


Figure 124

2. Remove guard **(Figure 125, item 1)**.

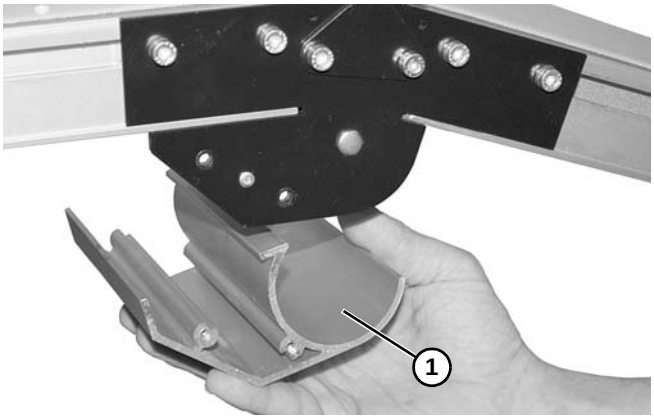


Figure 125

3. Remove idler pulley:

   a. For 2" (44 mm) through 4" (95 mm) wide conveyors, remove E-ring clip **(Figure 126, item 1)** and washer **(Figure 126, item 2)** from one side. Remove pulley shaft **(Figure 126, item 3)** and pulley **(Figure 126, item 4)**.

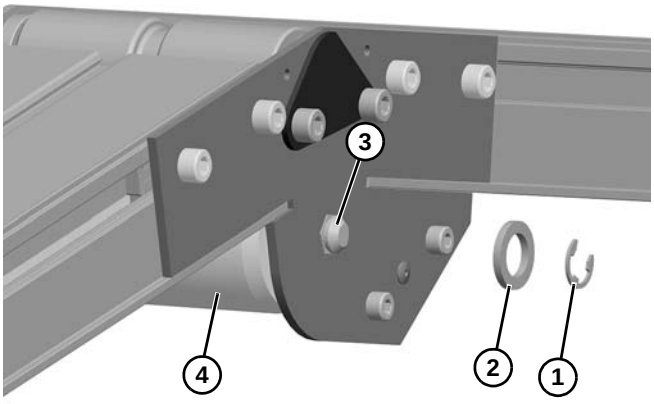


Figure 126

   b. For 5" (127 mm) or wider conveyor, push spring-loaded shaft ends **(Figure 127, item 1)** inward. Remove roller **(Figure 127, item 2)**.

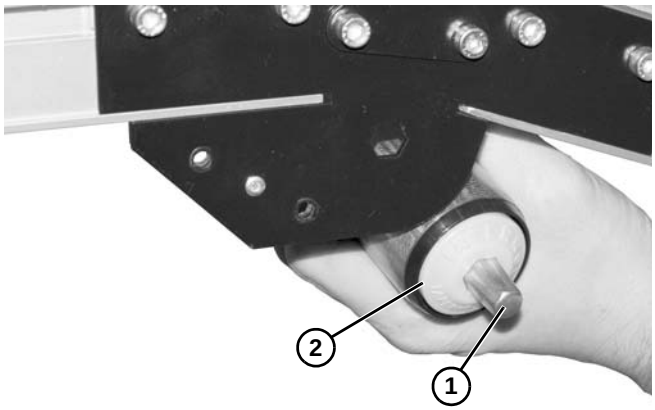


Figure 127

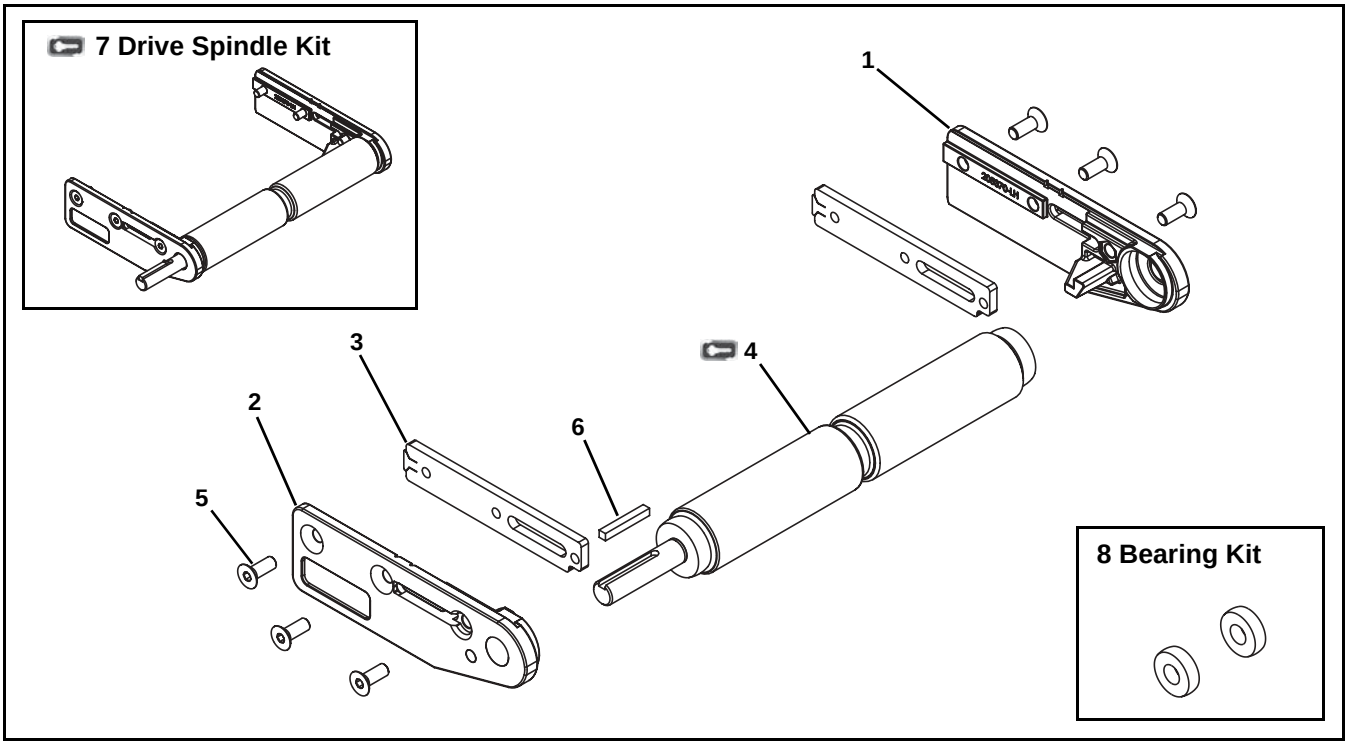
Notes

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

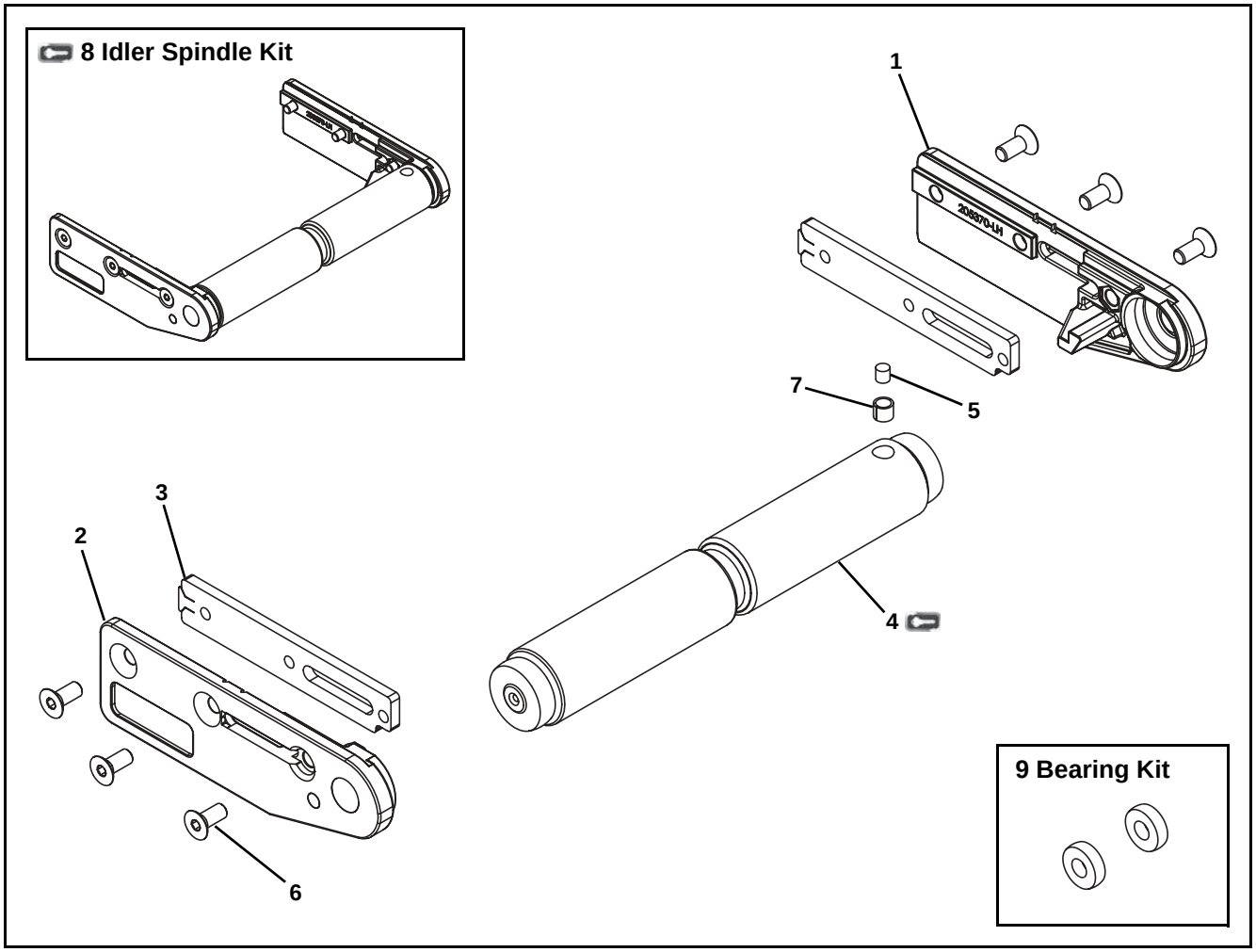


Item	Part Number	Description
1	205370-LH	Head Plate, Left Hand
2	205370-RH	Head Plate, Right Hand
3	206006	Tail Nut Bar
4	203713-WW	Drive Spindle Assembly
	203714-WW	Dual Shaft Drive Spindle Assembly
	203717-WW	Common Drive - Drive Conveyor Spindle Assembly (Drive Shaft & One Stub Shaft)
	203716-WW	Common Drive -Mid Conveyor Spindle Assembly (Two Stub Shafts)
	203715-WW	Common Drive -End Conveyor Spindle Assembly (One Stub Shaft)
	203723-WW	Lagged Drive Spindle
	203724-WW	Lagged Dual Shaft Drive Spindle
	203727-WW	Lagged Common Drive - Drive Conveyor Spindle (Drive Shaft & One Stub Shaft)
	203726-WW	Lagged Common Drive - Mid Conveyor Spindle (Two Stub Shafts)
	203725-WW	Lagged Common Drive - End Conveyor Spindle (One Stub Shaft)
5	930614M	Flat Head Screw, M6-1.00 x 10.7 mm
6	980428M	Square Key, 4 mm x 28 mm

Item	Part Number	Description
7	22V2FO-WW	Drive Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FK-WW	Dual Shaft Drive Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FS-WW	Common Drive - Drive Conveyor Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FLO-WW	Lagged Drive Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FLK-WW	Lagged Dual Shaft Drive Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
	22V2FLS-WW	Lagged Common Drive - Drive Conveyor Spindle Kit (Includes Items 1, 2, 4, 5 and 6)
8	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)

WW = Conveyor width reference: 02, 03, 04, 05, 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24

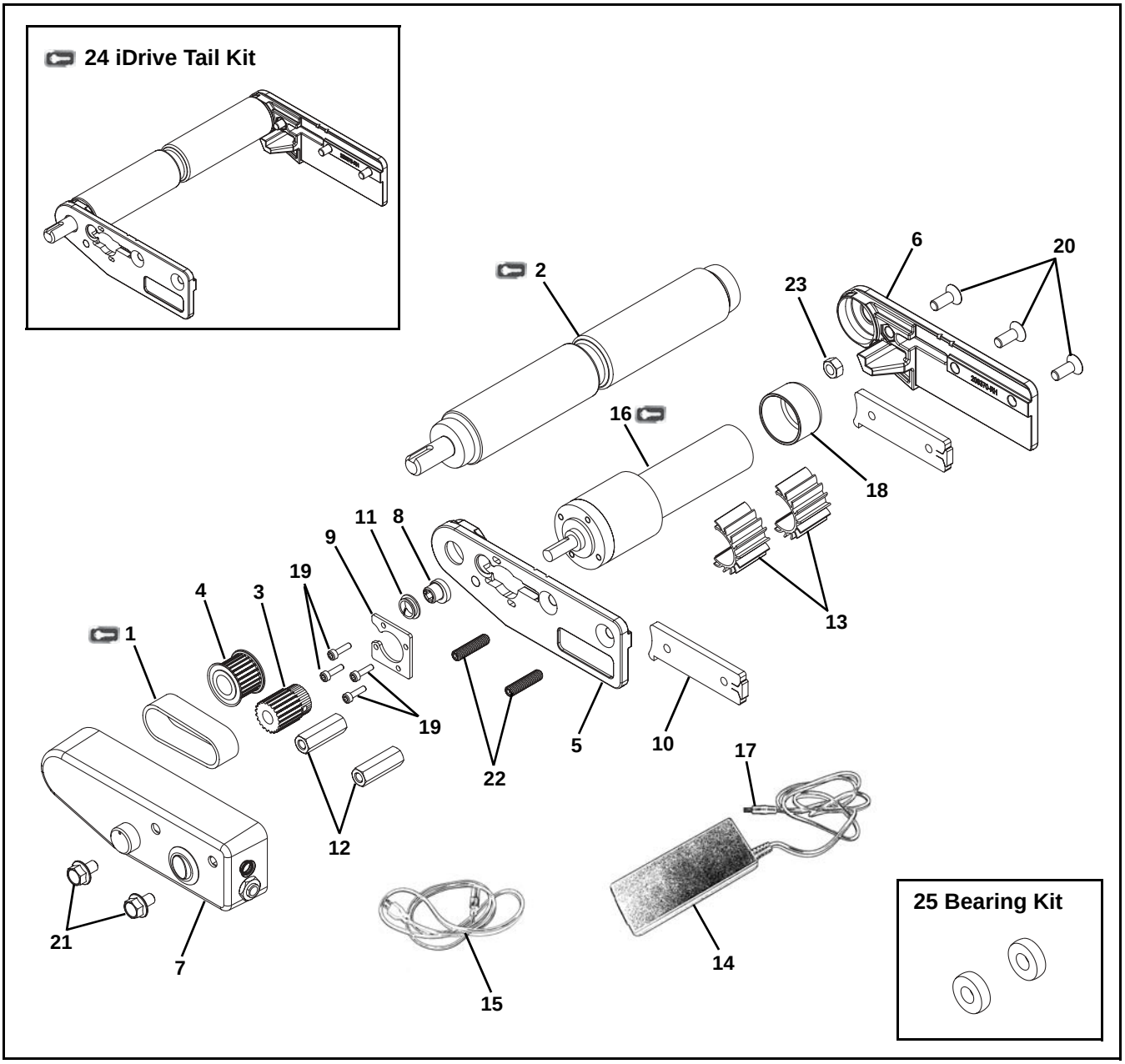
Idler Tail



Item	Part Number	Description
1	205370-LH	Head Plate, Left Hand
2	205370-RH	Head Plate, Right Hand
3	206006	Tail Nut Bar
4	201273-WW	Standard Spindle Assembly
	203715-WW	Spindle with One Stub Shaft Assembly
	203716-WW	Spindle with Two Stub Shafts Assembly
5	808-020	Magnet (Optional)
6	930614M	Flat Head Screw, M6-1.00 x 10.7 mm
7	450226SSP	Magnet Sleeve (Optional)
8	22V2TO-WW	Standard Idler Spindle Kit (Includes Items 1, 2, 4, and 6)
	22V2TM-WW	Idler Spindle Kit with Magnet (Includes Items 1, 2, 4, 5, 6, and 7)
	22V2TS-WW	Idler Spindle Kit with One Stub Shaft (Includes Items 1, 2, 4, and 6)
9	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)
WW = Conveyor width reference: 02, 03, 04, 05, 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24		

Service Parts

iDrive Tail



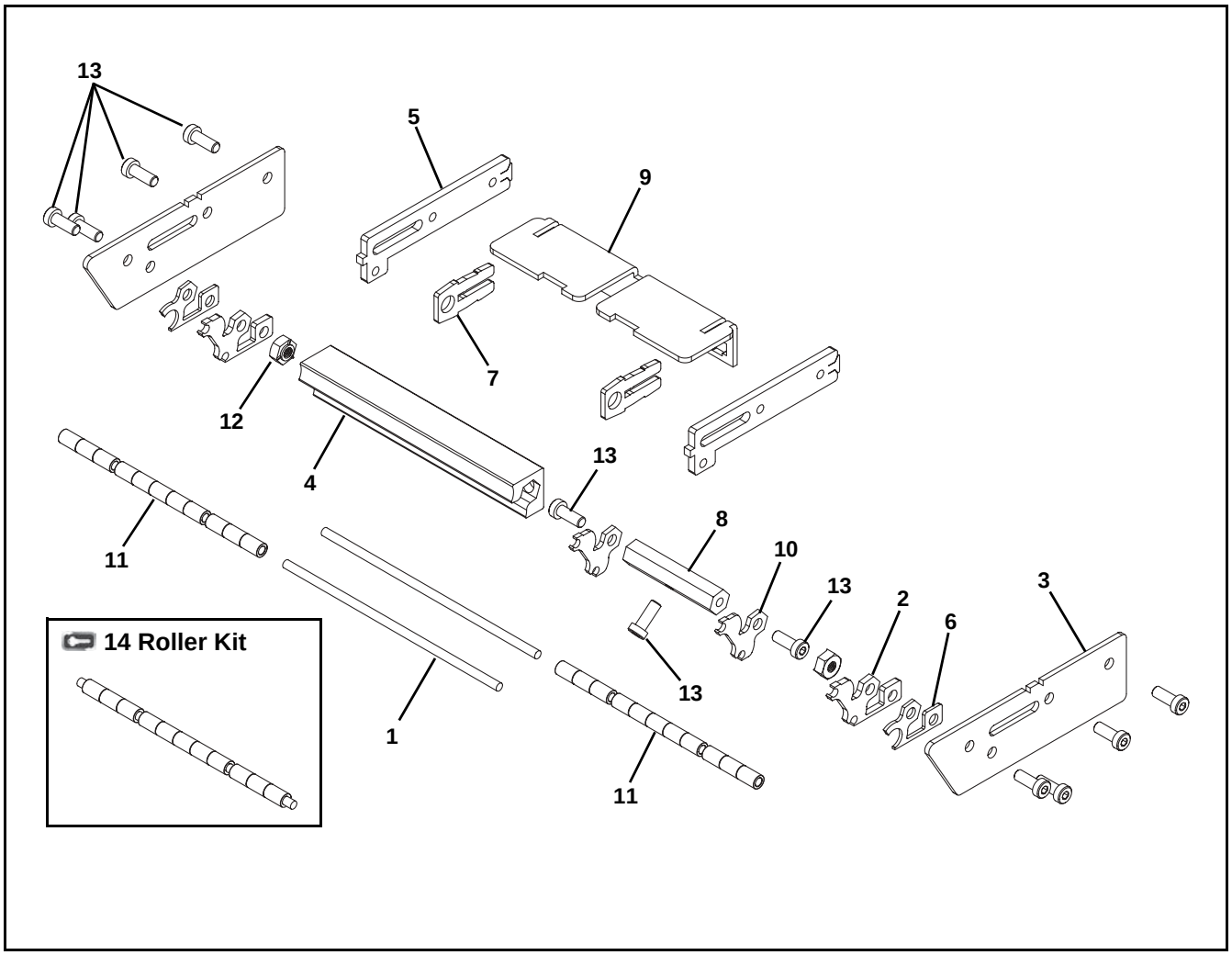
Item	Part Number	Description
1	814-450	Timing Belt, 3 mm x 50 teeth
2	201272-WW	Drive Spindle Assembly
	201278-WW	Lagged Drive Spindle Assembly
3	201330	Drive Pulley - 17 Tooth
	201331	Drive Pulley - 21 Tooth
4	203203	Driven Pulley - 24 Tooth
	203204	Driven Pulley - 28 Tooth
5	206795-LH	Head Plate, A position
	206795-RH	Head Plate, D position
6	206799-LH	Non-Drive Head Plate, for 2" - 4" wide A position
	206799-RH	Non-Drive Head Plate, for 2" - 4" wide D position
	205370-LH	Non-Drive Head Plate, for 5" wide and wider A position
	205370-RH	Non-Drive Head Plate, for 5" wide and wider D position
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	200039P	Timing Belt Tension Cam
9	206045	Clamp Plate
10	203639	Nut Bar
11	801-183	Clip
12	807-983	Hex Standoff
13	807-1982	Heat Sink
14	831-139	Power Supply
15	818-164	Cord, 115V
16	22FDGM023	Gearmotor, 23:1
	22FDGM066	Gearmotor, 66:1
17	805-1316	Plug
18	807-2006	Motor Cap, for 2"-3" wide
19	920312M	Socket Head Screw, M3-.50 x 12 mm
20	930616M	Flat Head Screw, M6-1.00 x 16 mm

Item	Part Number	Description
21	960681M	Flange Head Hex Screw, M6 x 10 mm
22	970625MSS	Set Cup Screw, M6-1.00 x 25 mm
23	990601M	Hex Nut
24	22V2FDKA-WW	iDrive Tail Kit for A position with Knurled Spindle (Includes Items 2, 5, 6 and 20)
	22V2FDKD-WW	iDrive Tail Kit for D position with Knurled Spindle (Includes Items 2, 5, 6 and 20)
	22V2FDLA-WW	iDrive Tail Kit for A position with Lagged Spindle (Includes Items 2, 5, 6 and 20)
	22V2FDLD-WW	iDrive Tail Kit for D position with Lagged Spindle (Includes Items 2, 5, 6 and 20)
25	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)

WW = Conveyor width reference: 02, 03, 04, 05, 06, 08, 10, 12, 14, 16 & 18

Service Parts

5/16" (8 mm) Tight Radius Nosebar Tail

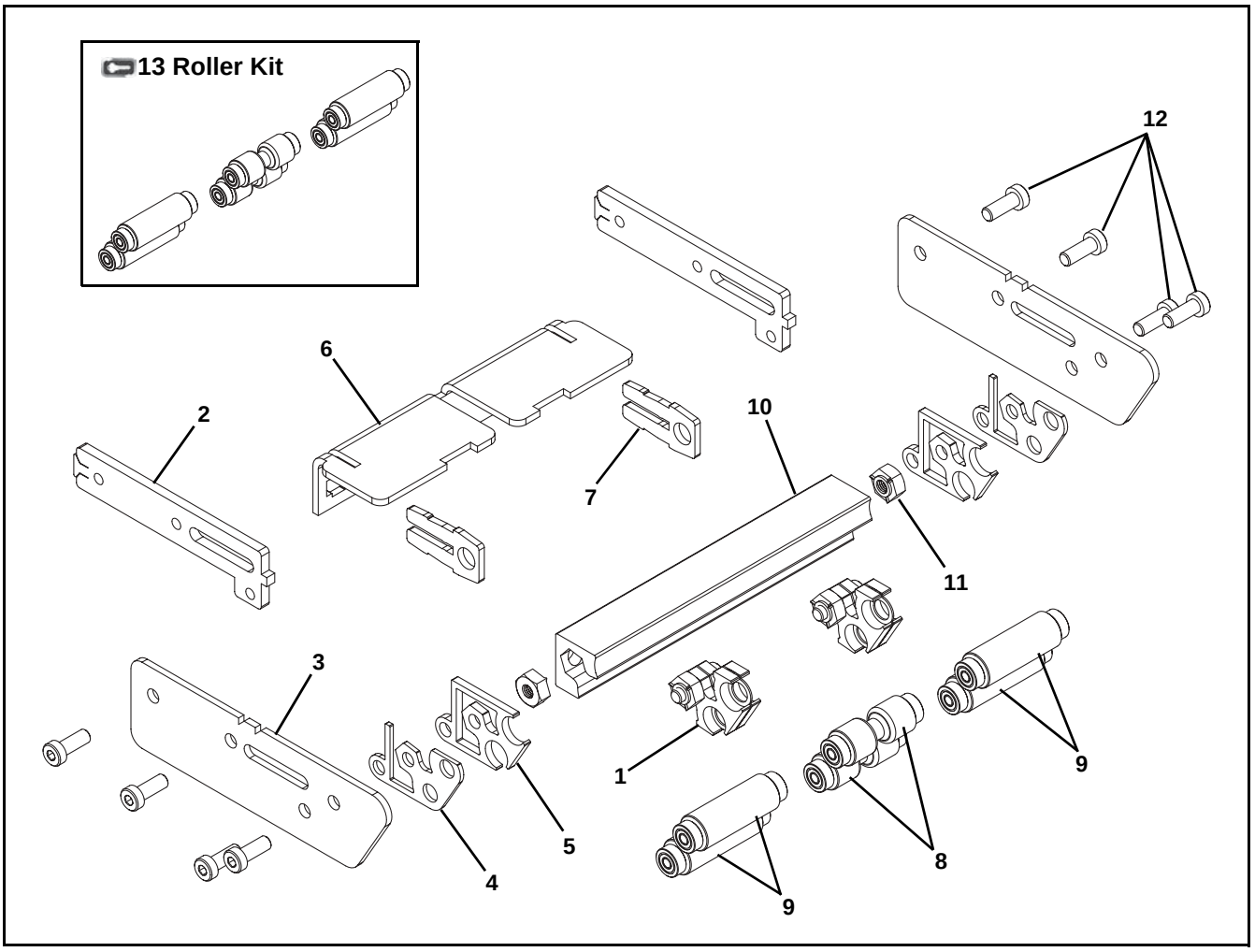


Item	Part Number	Description
1	2413WW	Rod
2	206778	Inner End Plate
3	206777	Side Plate
4	206005-WW	Support Bar
5	206007	Tail Nut Bar
6	206010	Outer End Plate
7	205450	Retaining Plate
8	See Chart	Hex Rod
9	206061-WW	Support Bracket
10	206779	Rod Carrier Plate
11	810-180	Bearing
12	807-2873	Weld Nut
13	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
14	22V2L-WW	Roller Kit (Includes Items 1 and 11)

WW = Conveyor width reference: 02, 03, 04, 05, 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24

Item #8 Hex Rod		
Width	**Part Number**	**Quantity**
02	N/A	0
03	N/A	0
04	206060	1
05	206059	1
06	206059	1
08	206059	1
10	206060	2
12	206059	2
14	206060	3
16	206060	3
18	206060	4
20	206060	4
22	206059	4
24	206059	4

5/8" (16 mm) Nosebar Tail

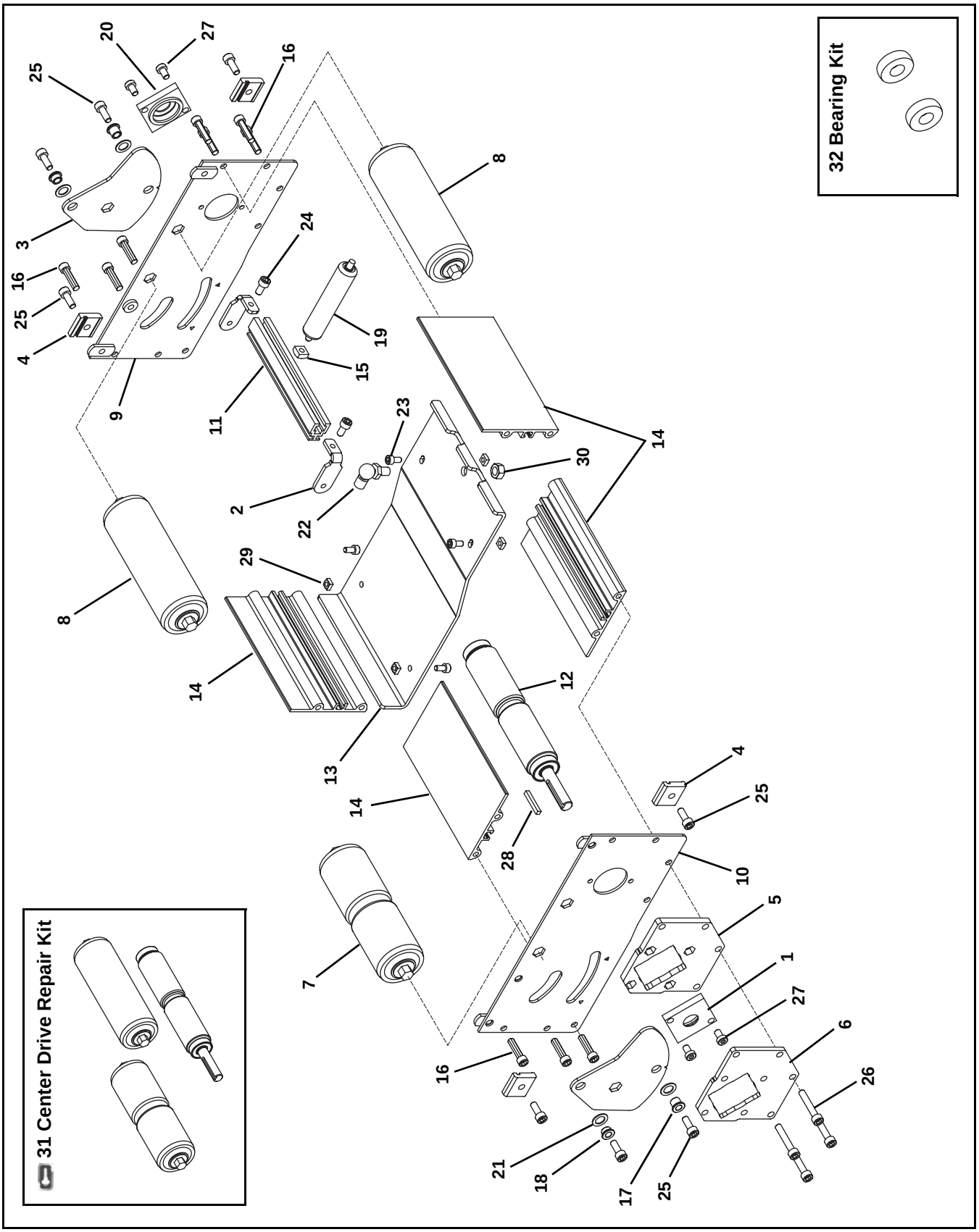


Item	Part Number	Description
1	205523	Carrier Bearing (for conveyors 5" wide and wider)
2	206007	Tail Nut Bar
3	206009	Tail Plate
4	206010	Outer End Plate
5	206011	Inner End Plate
6	206061-WW	Support Bracket
7	205450	Retaining Plate
8	205526-WW	V-Groove Spindle Assembly
9	205527-WW	Smooth Spindle Assembly (for conveyors 5" wide and wider)
10	206005-WW	Support Bar
11	807-2873	Weld Nut
12	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
13	22V2H-WW	Roller Kit (Includes Items 8 and 9)

WW = Conveyor width reference: 02, 03, 04, 05, 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24

Service Parts

Center Drive Module

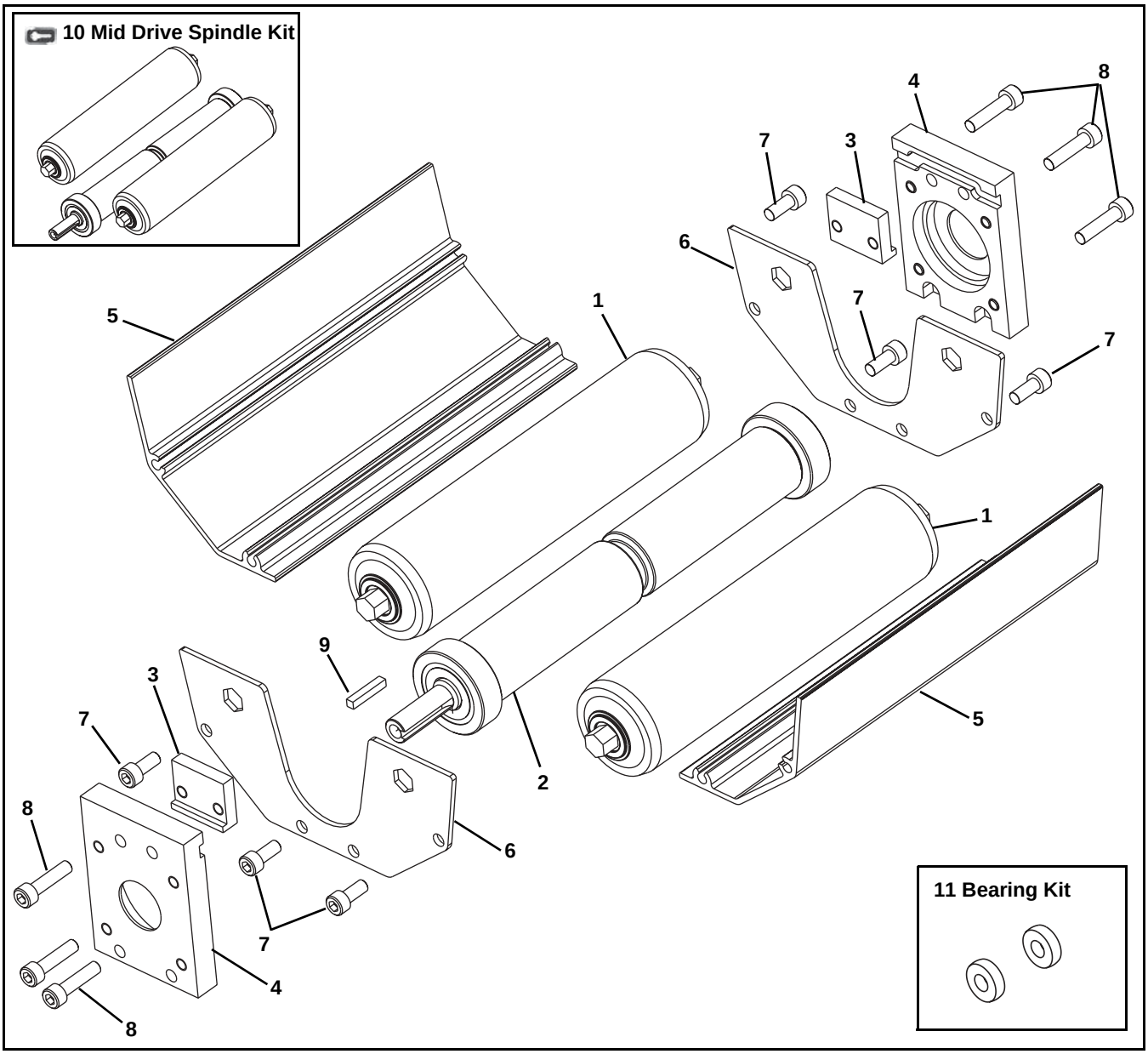


Item	Part Number	Description
1	203628	Bearing Mounting Block w/Hole
2	203632	Tensioner Bar Tab
3	203681	Pivot Tension Plate
4	204566	Mounting Clip
5	205446	Inside Mounting Plate
6	205447	Outside Mounting Plate
7	463037	Grooved Roller, for 2" wide Conveyor
	463038	Grooved Roller, for 3" wide Conveyor
	463039	Grooved Roller, for 4" wide Conveyor
	203633-WW	Grooved Roller, for 5"- 24" wide Conveyors
8	463040	Smooth Roller, for 2" wide Conveyor
	463041	Smooth Roller, for 3" wide Conveyor
	463042	Smooth Roller, for 4" wide Conveyor
	203635-WW	Smooth Roller, for 5"- 24" wide Conveyors
9	202633M	Side Plate, Left Hand
10	202634M	Side Plate, Right Hand
11	203631-WW	Tensioner Rail
12	203713-WW	Drive Spindle Assembly
	203714-WW	Dual Shaft Drive Spindle Assembly
	203723-WW	Lagged Drive Spindle
	203724-WW	Lagged Dual Shaft Drive Spindle
13	4632WWM	Bottom Cover, for 2"- 14" & 18" wide Conveyors
	463208M	Bottom Cover, for 16" wide Conveyors (qty. 2)
	463210M	Bottom Cover, for 20" wide Conveyors (qty. 2)
	463212M	Bottom Cover, for 22" wide Conveyors
	463205M	Bottom Cover, for 22" wide Conveyors (qty. 2)
	463212M	Bottom Cover, for 24" wide Conveyors (qty. 2)
14	4638WW	Support Rail
15	674175MP	Square Nut, M6
16	708180P	Trilobe Screw, M6-1.00 x 25 mm
17	801-138	Bearing
18	801-173	Bearing
19	807–1040	Gas Spring, for 2" wide Conveyor
	807–986	Gas Spring, for 3" wide Conveyor
	807–985	Gas Spring, for 4"- 6" & 12"- 24" wide Conveyors
	807–984	Gas Spring, for 8"- 10" wide Conveyors
20	203728	Bearing Mounting Block
21	807-2885	Washer
22	807-987	Steel Ball Joint M6 x M8
23	920510M	Socket Head Screw, M5-.80 x 10 mm
24	920612M	Socket Head Screw, M6-1.00 x 12 mm
25	920616M	Socket Head Screw, M6-1.00 x 16 mm
26	920635M	Socket Head Screw, M6-1.00 x 35 mm
27	950610M	Low Head Cap Screw, M6-1.00 x 10 mm
28	980428M	Square Key, 4mm x 28 mm
29	990503M	Square Nut, M5
30	990801M	Hex Nut, M8
31	22V2CDKO–WW	Center Drive Repair Kit (Includes Items 7, 8, & 12)
	22V2CDKE–WW	Center Drive Repair Kit for Dual Shaft Spindle (Includes Items 7, 8, & 12)
	22V2CDLO–WW	Center Drive Repair Kit for Lagged Drive Spindle (Includes Items 7, 8, & 12)
	22V2CDLE–WW	Center Drive Repair Kit for Lagged Dual Shaft Spindle (Includes Items 7, 8, & 12)
32	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)

WW = Conveyor width ref.: 02, 03, 04, 05, 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24

Service Parts

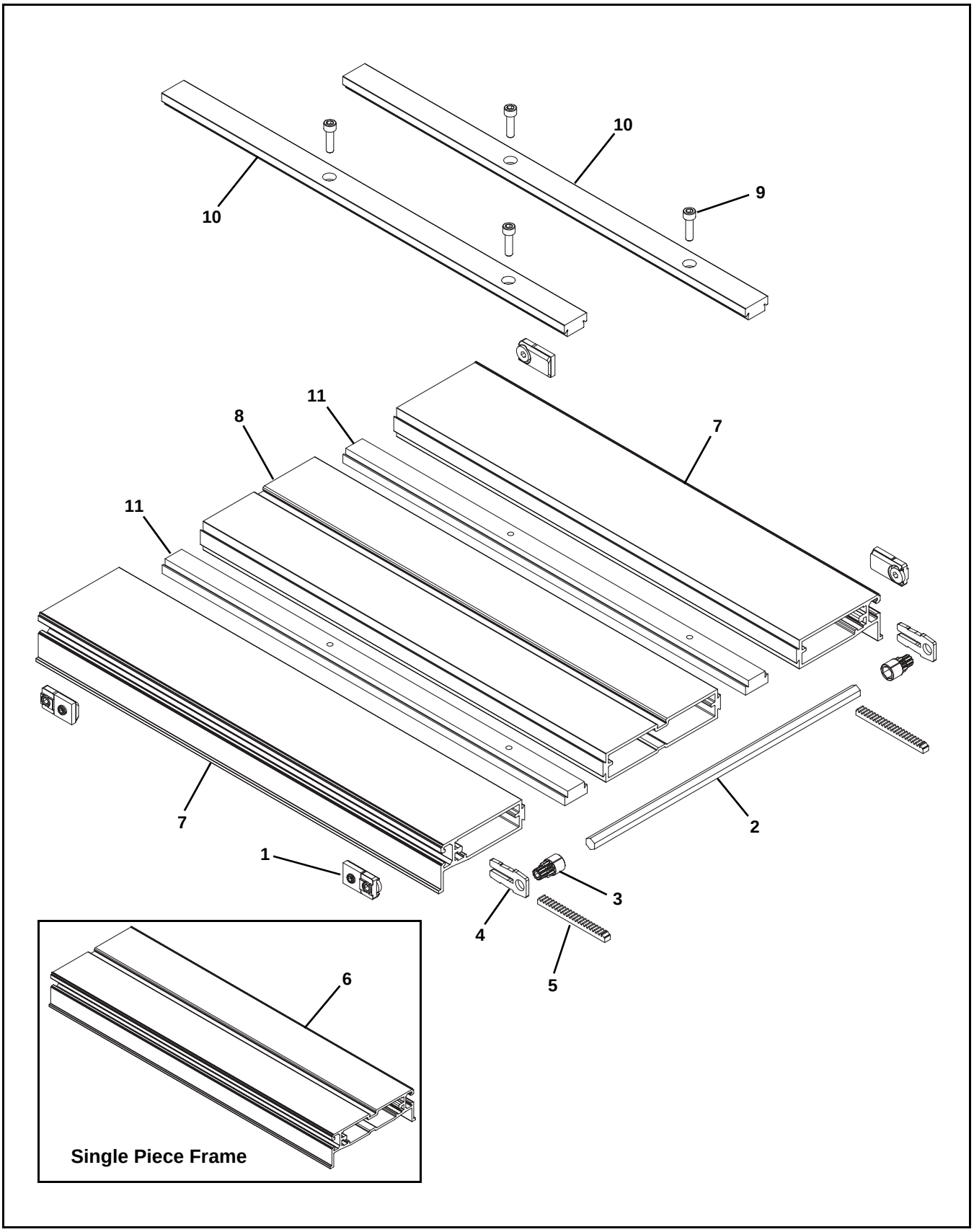
Mid Drive Module



Item	Part Number	Description
1	463040	Idler Roller Assembly for 2" wide Conveyor
	463041	Idler Roller Assembly for 3" wide Conveyor
	463042	Idler Roller Assembly for 4" wide Conveyor
	807-1009	Idler Roller for 5" wide Conveyor
	807-1010	Idler Roller for 6" wide Conveyor
	807-1011	Idler Roller for 8" wide Conveyor
	807-1012	Idler Roller for 10" wide Conveyor
	807-1013	Idler Roller for 12" wide Conveyor
	807-1222	Idler Roller for 14" wide Conveyor
	807-1483	Idler Roller for 16" wide Conveyor
	807-1088	Idler Roller for 18" wide Conveyor
	807-1224	Idler Roller for 20" wide Conveyor
	807-1225	Idler Roller for 22" wide Conveyor
	807-1090	Idler Roller for 24" wide Conveyor
2	203713-WW	Knurled Spindle Assembly
	203714-WW	Knurled Spindle Assembly - Dual Shaft
	203723-WW	Lagged Spindle Assembly
	203724-WW	Lagged Spindle Assembly - Dual Shaft
3	202353	Clamp Block
4	203637	Mounting Block
5	202455-WW	Bottom Guard
6	202456	Side Plate
7	920614M	Socket Head Screw, M6-1.00 x 14 mm
8	920625M	Socket Head Screw, M6-1.00 x 25 mm
9	980428M	Square Key 4 mm x 28 mm
10	22V2MDKO-WW	Mid Drive Spindle Kit for Knurled Spindle
	22V2MDKE-WW	Mid Drive Spindle Kit for Knurled Spindle - Dual Shaft
	22V2MDLO-WW	Mid Drive Spindle Kit for Lagged Spindle
	22V2MDLE-WW	Mid Drive Spindle Kit for Lagged Spindle - Dual Shaft
11	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)
WW = Conveyor Width Reference: 02, 03, 04, 05, 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24		

Service Parts

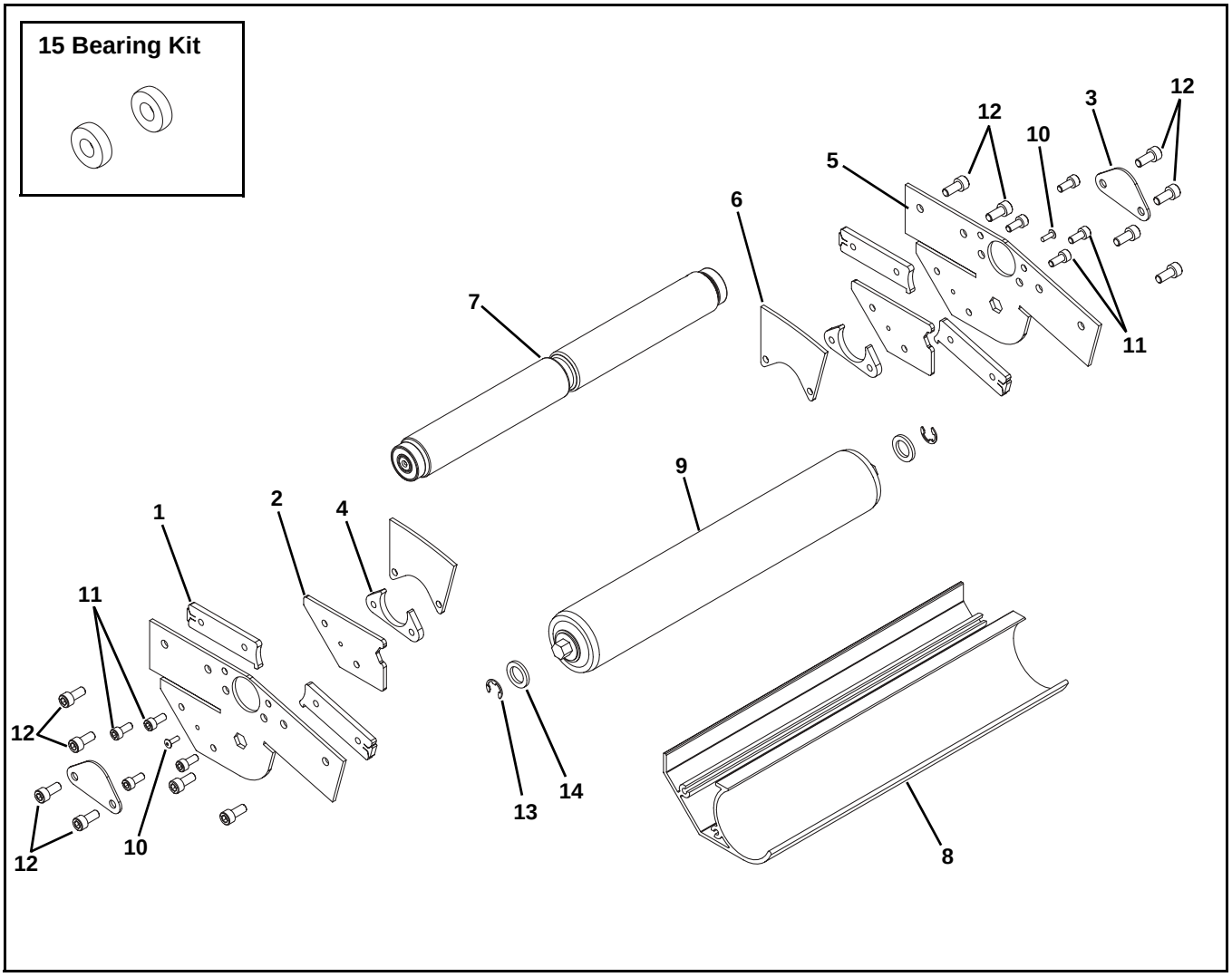
Frame Assembly



Item	Part Number	Description
1	203597	Tracking Block Assembly
2	205469-WW	Hex Pinion, for 3"- 24" wide Conveyors
3	207145	Pinion End Gear, for 2" wide Conveyors
	205383	Pinion End Gear, for 3"- 24" wide Conveyors
4	205450	Retaining Plate
5	203596	Gear Rack
6	203629-WW-LLLLL	Single Piece Frame, for 2"- 12" wide Conveyors
7	205393-LLLLL	Outside Frame, for Multi Piece 14" & 20" wide Conveyors (Qty. 2)
	205394-LLLLL	Outside Frame, for Multi Piece 16" & 22" wide Conveyors (Qty. 2)
	205395-LLLLL	Outside Frame, for Multi Piece 18" & 24" wide Conveyors (Qty. 2)
8	205396-LLLLL	Mid Frame, for Multi Piece 14"- 18" wide Conveyors
	205398-LLLLL	Mid Frame, for Multi Piece 20"- 24" wide Conveyors
9	920622M	Socket Head Screw, M6-1.00 x 22 mm
10	206505-LLLLL	Upper Connecting Strip
11	206506-LLLLL	Lower Connecting Strip
WW = Conveyor width reference: 02, 03, 04, 05, 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24		
LLLLL = part length in inches with 2 decimal places		
Example: Part length = 35.25" LLLLL = 03525		

Service Parts

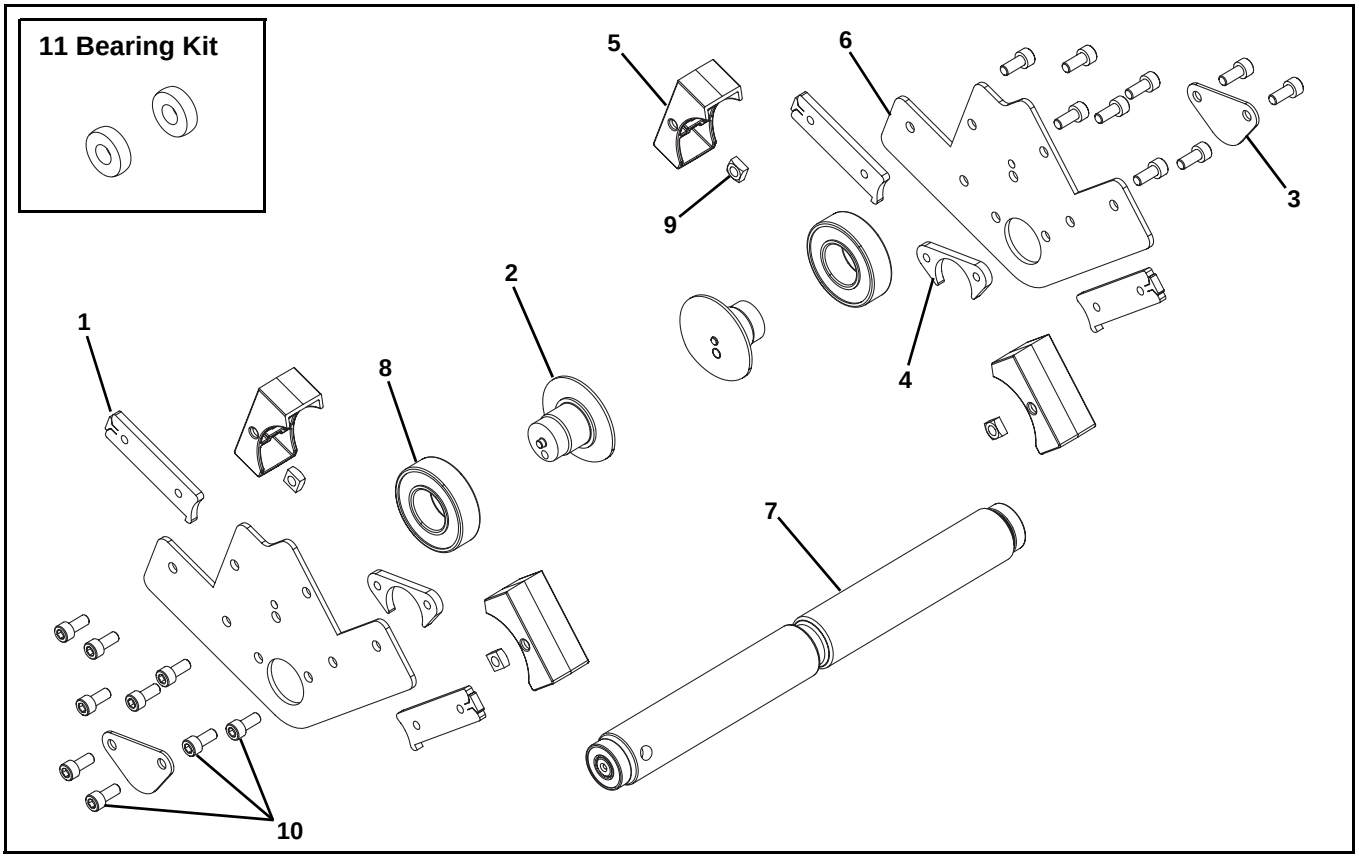
Flat Belt Knuckle



Item	Part Number	Description
1	203639	Nut Bar
2	206394	Spacer
3	206690	Bearing Cover
4	206691	Bearing Housing
5	206393-AA	Outer Plate
6	206688-AA	Knuckle Guide for # 04 Profiles only
	206689-AA	Knuckle Guide for # 05 Profiles only
7	201273-WW	Spindle Assembly
8	207221-WW	Return Roller Cover
9	463040	Roller Assembly for 2" wide Conveyor
	463041	Roller Assembly for 3" wide Conveyor
	463042	Roller Assembly for 4" wide Conveyor
	807-1009	Roller for 5" wide Conveyor
	807-1010	Roller for 6" wide Conveyor
	807-1011	Roller for 8" wide Conveyor
	807-1012	Roller for 10" wide Conveyor
	807-1013	Roller for 12" wide Conveyor
	807-1222	Roller for 14" wide Conveyor
	807-1483	Roller for 16" wide Conveyor
	807-1088	Roller for 18" wide Conveyor
	807-1224	Roller for 20" wide Conveyor
	807-1225	Roller for 22" wide Conveyor
	807-1090	Roller for 24" wide Conveyor
10	914-005	Rivet
11	920512M	Socket Head Screw, M5-.80 x 12 mm
12	950616M	Low Head Screw, M6-1.00 x 16 mm
13	915-215	Retaining Ring (for 2" - 4" wide only)
14	801-115	Washer (for 2" - 4" wide only)
15	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)
AA = Angle 5, 10, 15, and 20		
WW = Conveyor width reference: 02, 03, 04, 05, 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24		

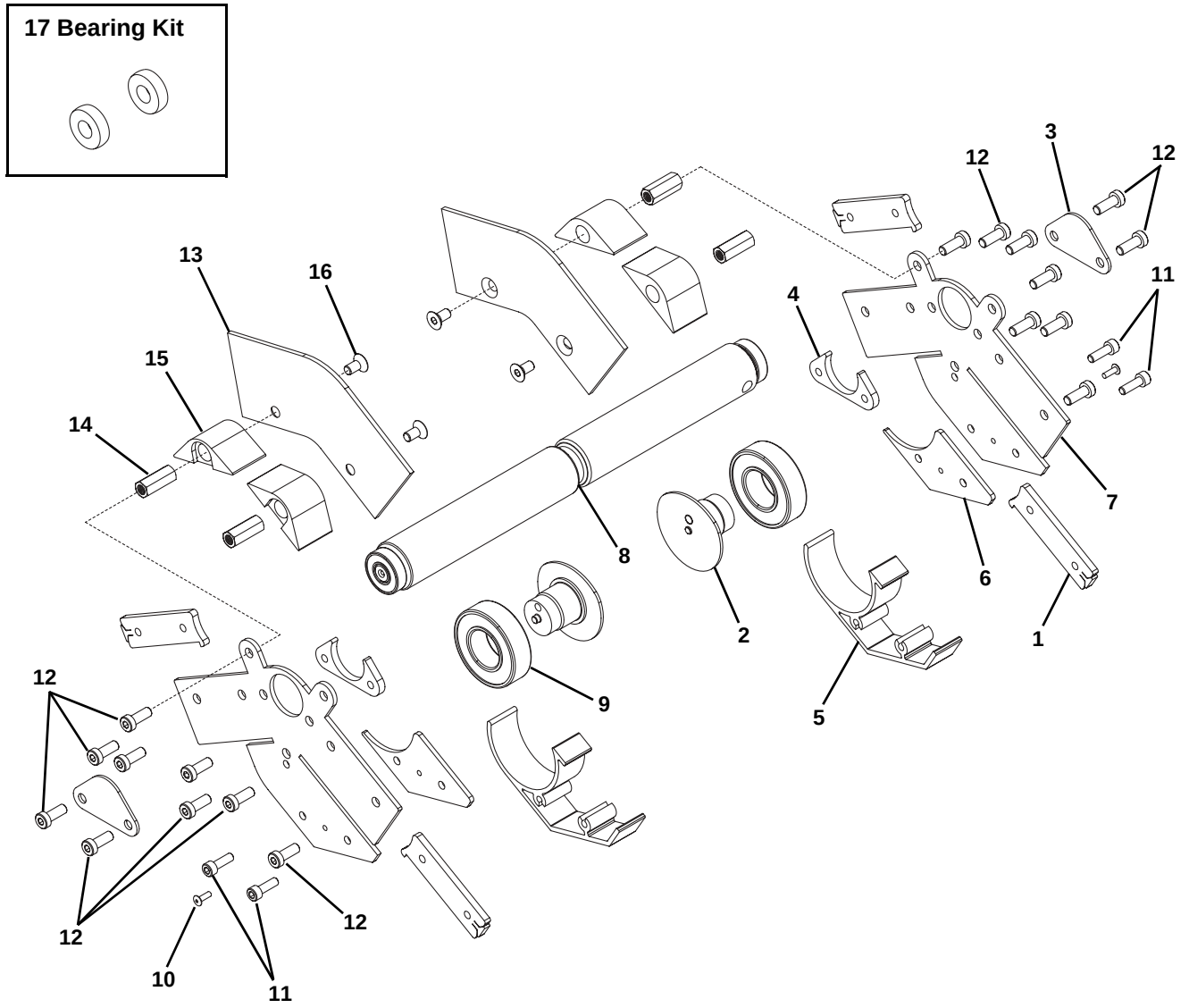
Service Parts

Cleated Belt Lower Knuckle



Item	Part Number	Description
1	203639	Nut Bar
2	206021	Bearing Stub Assembly
3	206690	Bearing Cover
4	206691	Bearing Housing
5	206693	Bearing Guard for 30°
	206379-AA	Bearing Guard for 45° and 60°
6	206387-AA	Outer Plate
7	201273-WW	Spindle Assembly
8	802-109	Bearing 25 mm x 52 mm
9	807-920	Square Nut
10	950616M	Low Head Screw, M6-1.00 x 16 mm
11	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)
AA = Angle 30, 45, 60		
WW = Conveyor width reference: 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24		

Cleated Belt Upper Knuckle

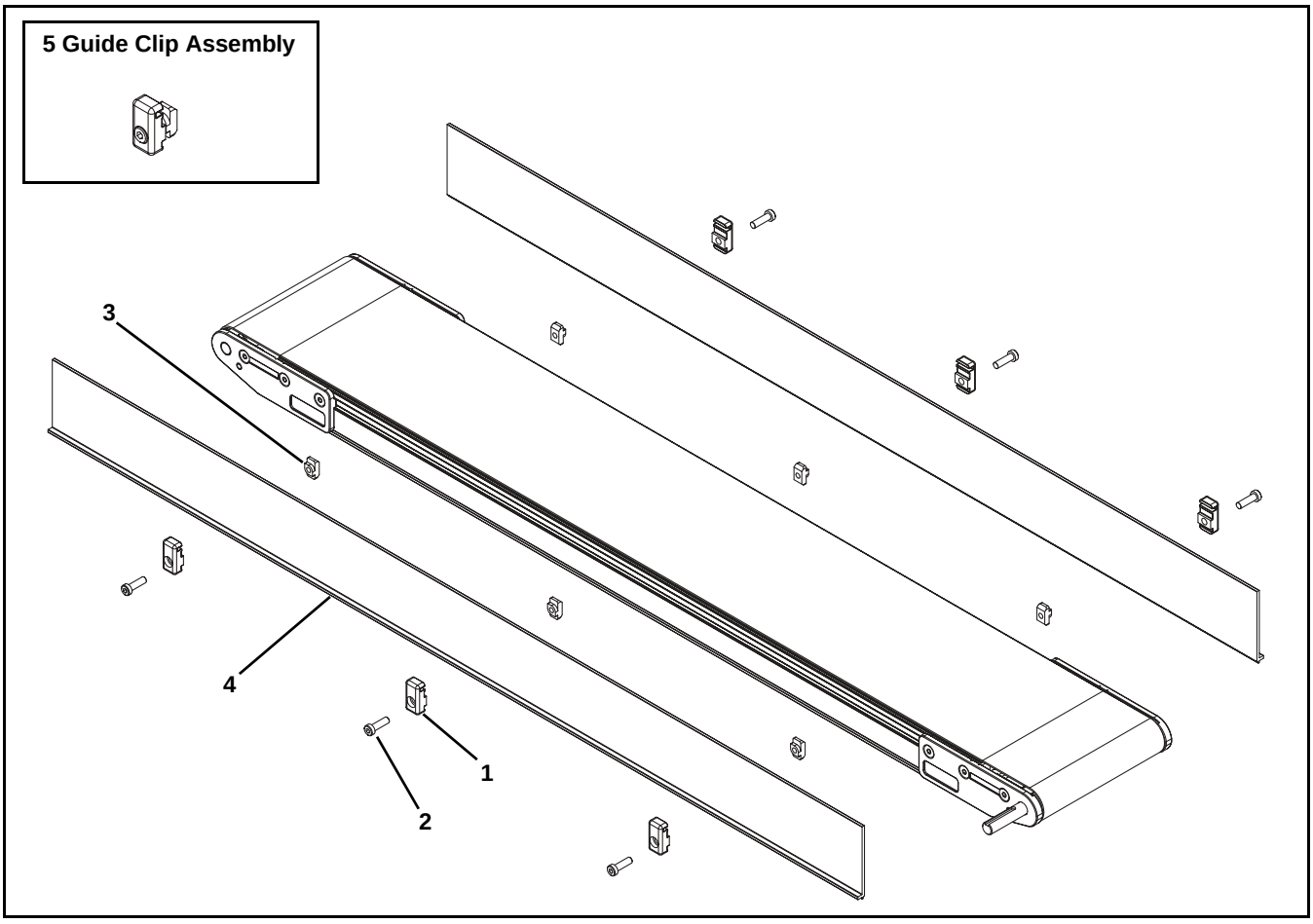


Item	Part Number	Description
1	203639	Nut Bar
2	206021	Bearing Stub Assembly
3	206690	Bearing Cover
4	206691	Bearing Housing
5	322501	Return Roller Cover
6	206390	Spacer
7	206391-AA	Outer Plate
8	201273-WW	Spindle Assembly
9	802-109	Bearing 25 mm x 52 mm
10	914-005	Rivet
11	920516M	Socket Head Screw, M5-.80 x 16 mm

Item	Part Number	Description
12	950616M	Low Head Screw, M6-1.00 x 16 mm
13	206049-AA	Guide
14	807-2853	Nut
15	206389	Spacer
16	930612M	Flat Head Screw, M6-1.00 x 12 mm
17	22BK2	Bearing Kit (2 Pack)
	22BK4	Bearing Kit (4 Pack)
AA = Angle 30, 45, 60		
WW = Conveyor width reference: 06, 08, 10, 12, 14, 16, 18, 20, 22, & 24		

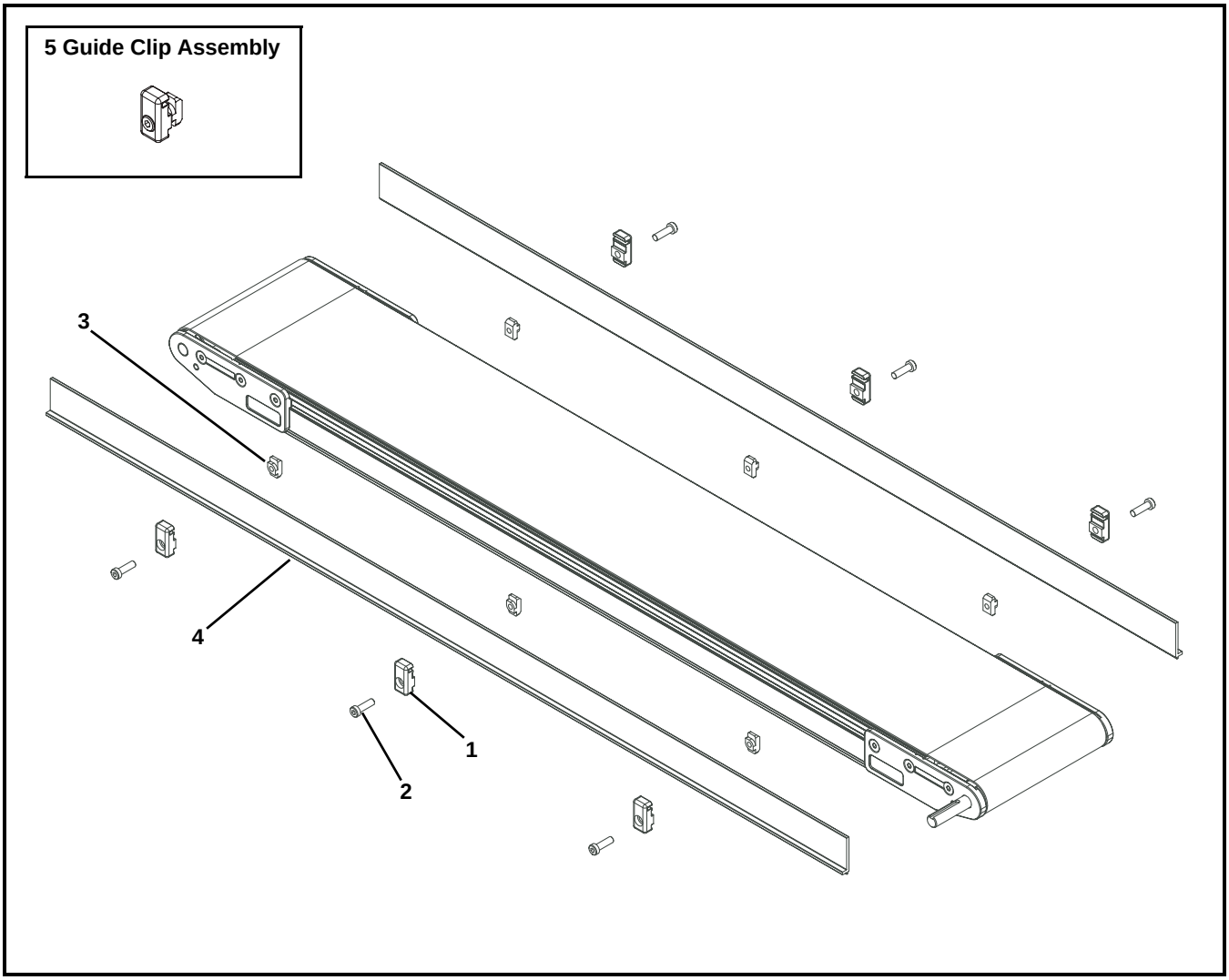
Service Parts

#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		

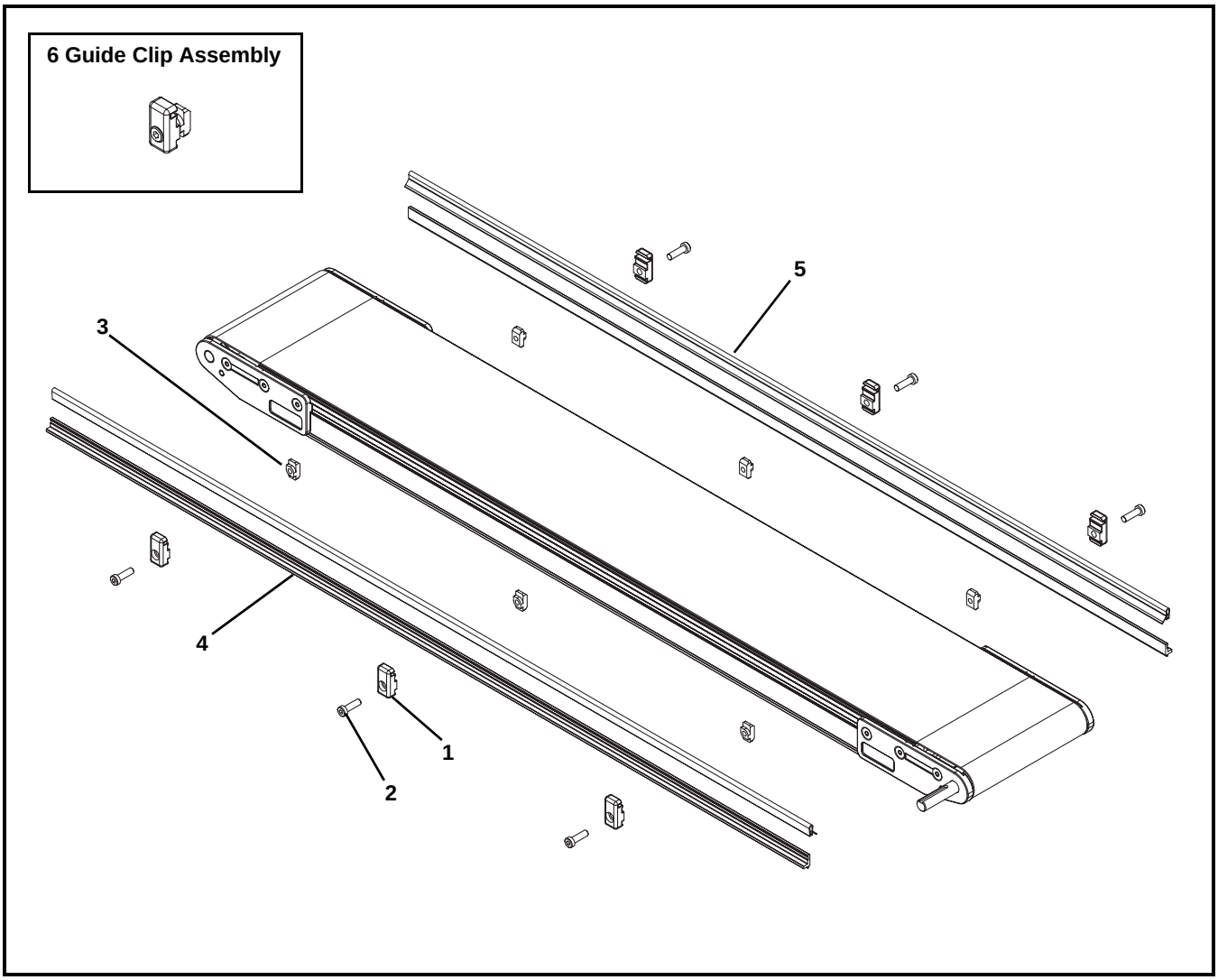
#05 Profile - 1.50" (38 mm) Aluminum Side



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		

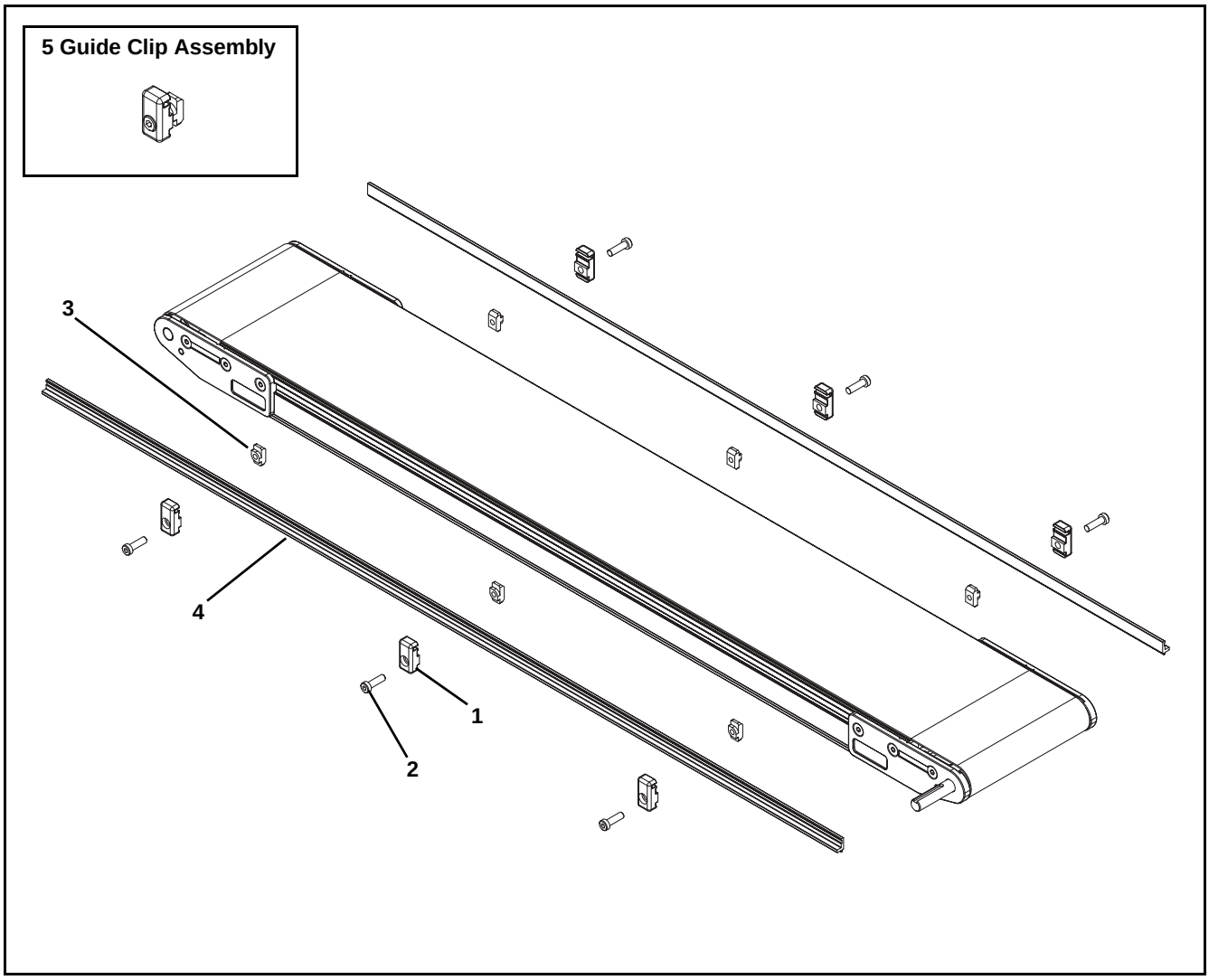
Service Parts

#07 Profile - Low to Side Wiper



Item	Part Number	Description
1	207136	Guide Clip
2	807-2878	Low Head Cap Screw, M6-1.00 x 16 mm
3	206685	T-Nut
4	206512-LLLLL	.50" Guides
	GTB09A04	.50" Guides 4' long
	GTB09A08	.50" Guides 8' long
5	41-00-24	Side Wiper (per foot)
6	203662	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		

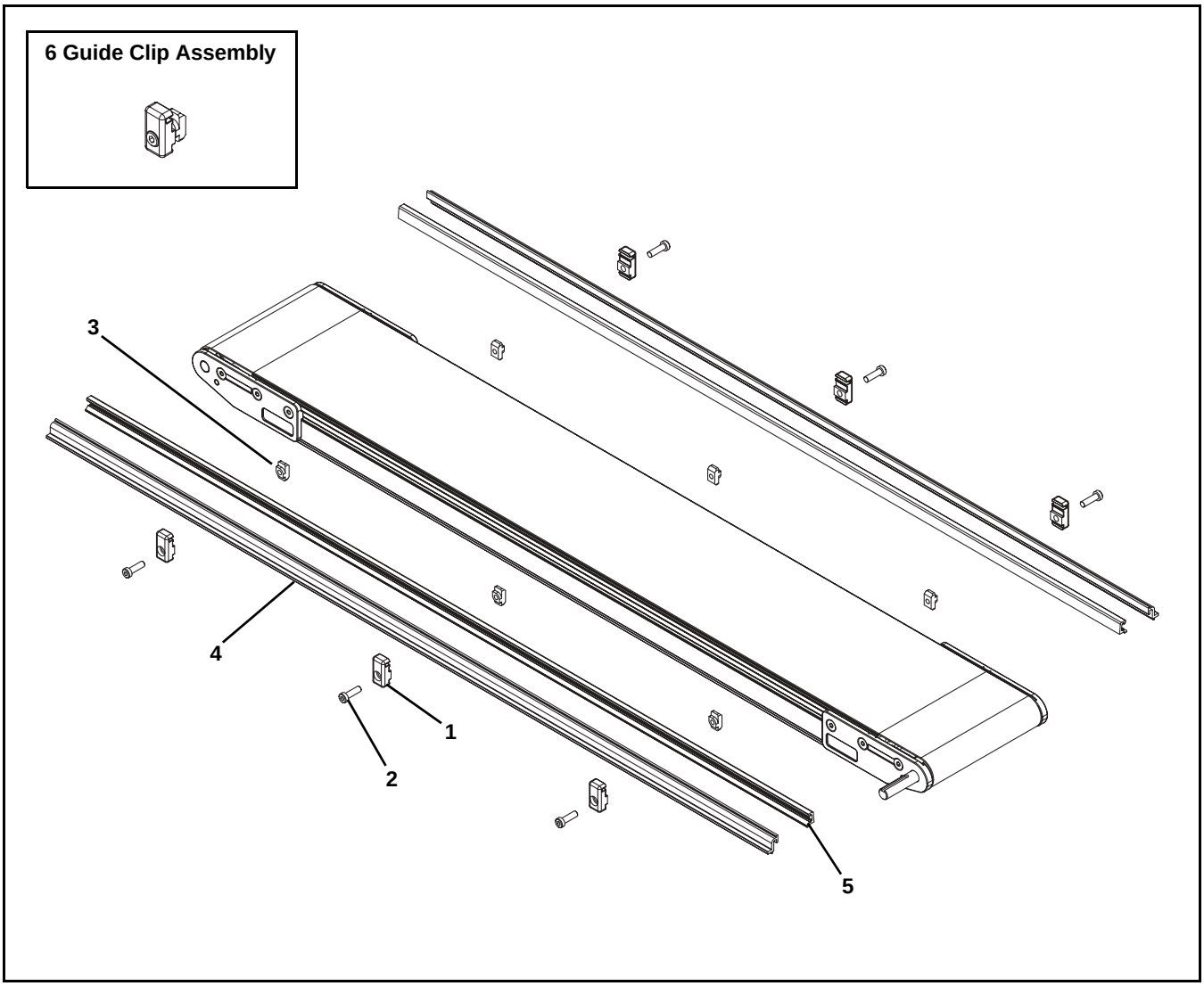
#09 Profile - Low to High Side



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	206512-LLLLL	.50" Guides
	GTB09A04	.50" Guides 4' long
	GTB09A08	.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		

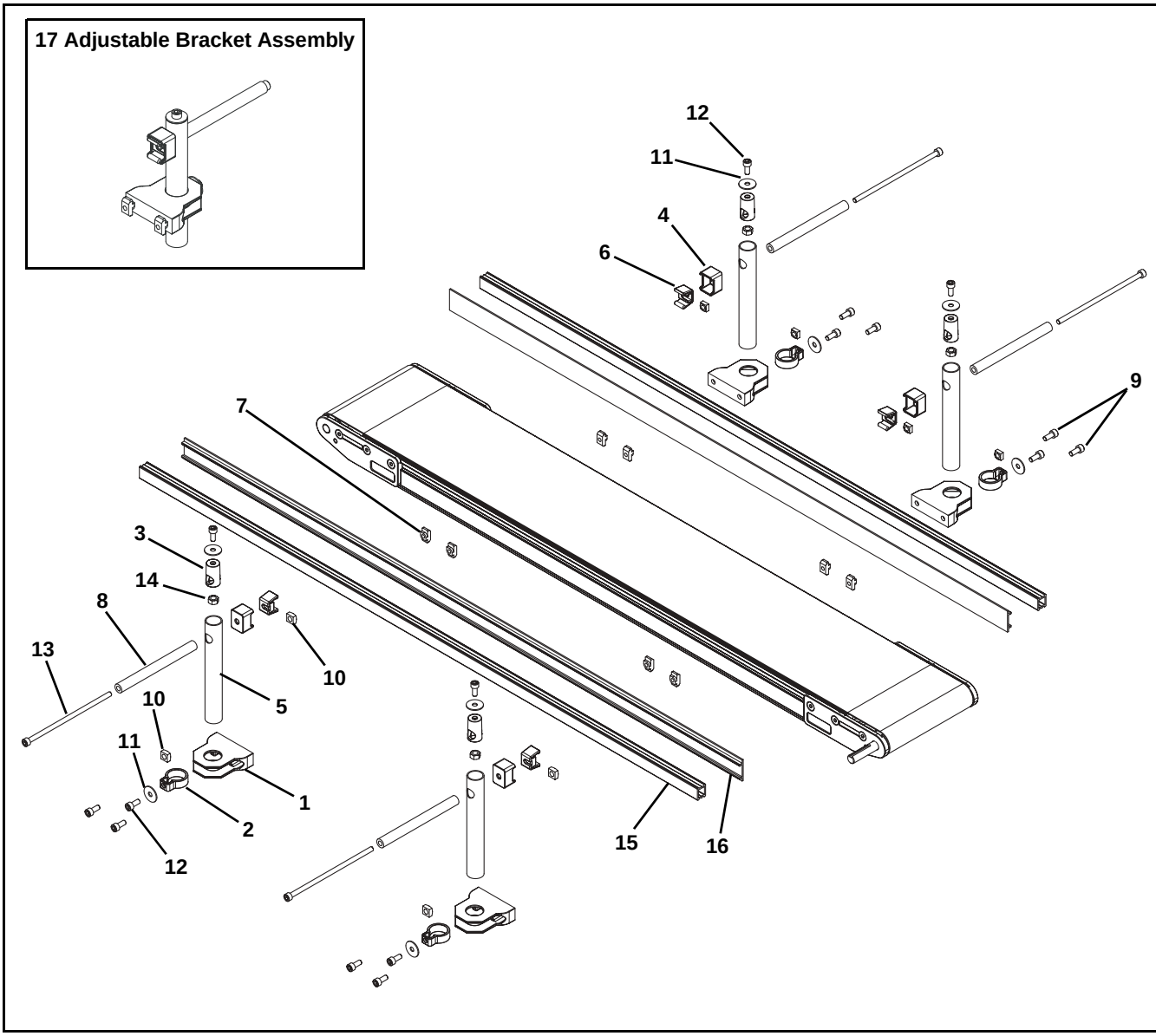
Service Parts

#10 Profile - .5" (13 mm) Extruded Plastic 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	206511-LLLLL	.50" Guides
	GTB09A04	.50" Guides 4' long
	GTB09A08	.50" Guides 8' long
5	200054P	Snap-On Guides (per foot)
6	203661P	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

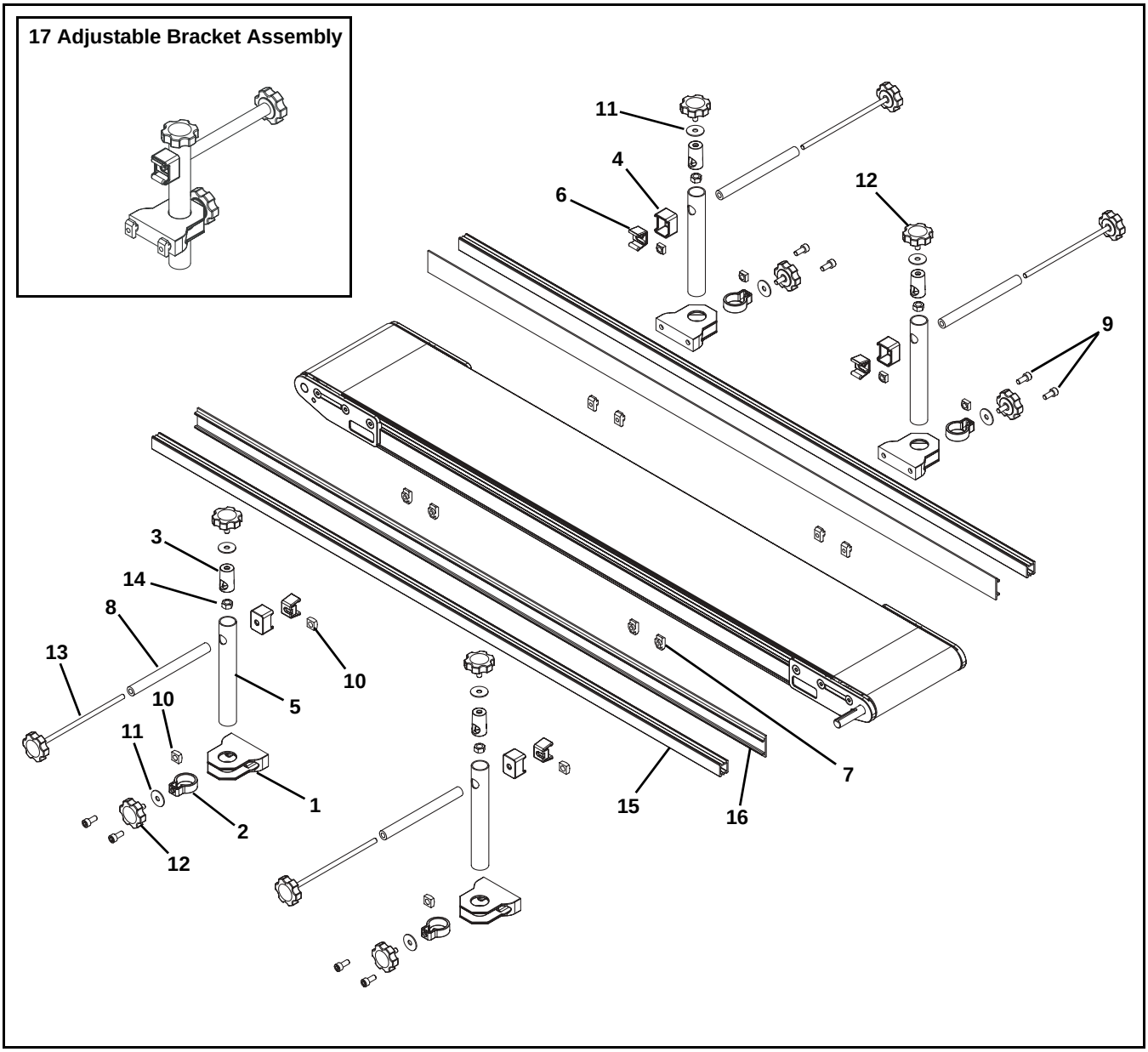


Item	Part Number	Description
1	206380	Base
2	206381	Base Clamp
3	206382	Insert Clamp
4	206383	Guide Ring
5	206385	Tube
6	206397	Clip
7	206685	T-Nut
8	206692	Guide Tube
9	807-2859	Nylon Cap Screw, N6 x 16 mm
10	807-920	Square Nut, M6-1.0
11	911-710	Washer
12	920616M	Socket Head Screw, M6-1.00 x 16 mm
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	834-240	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

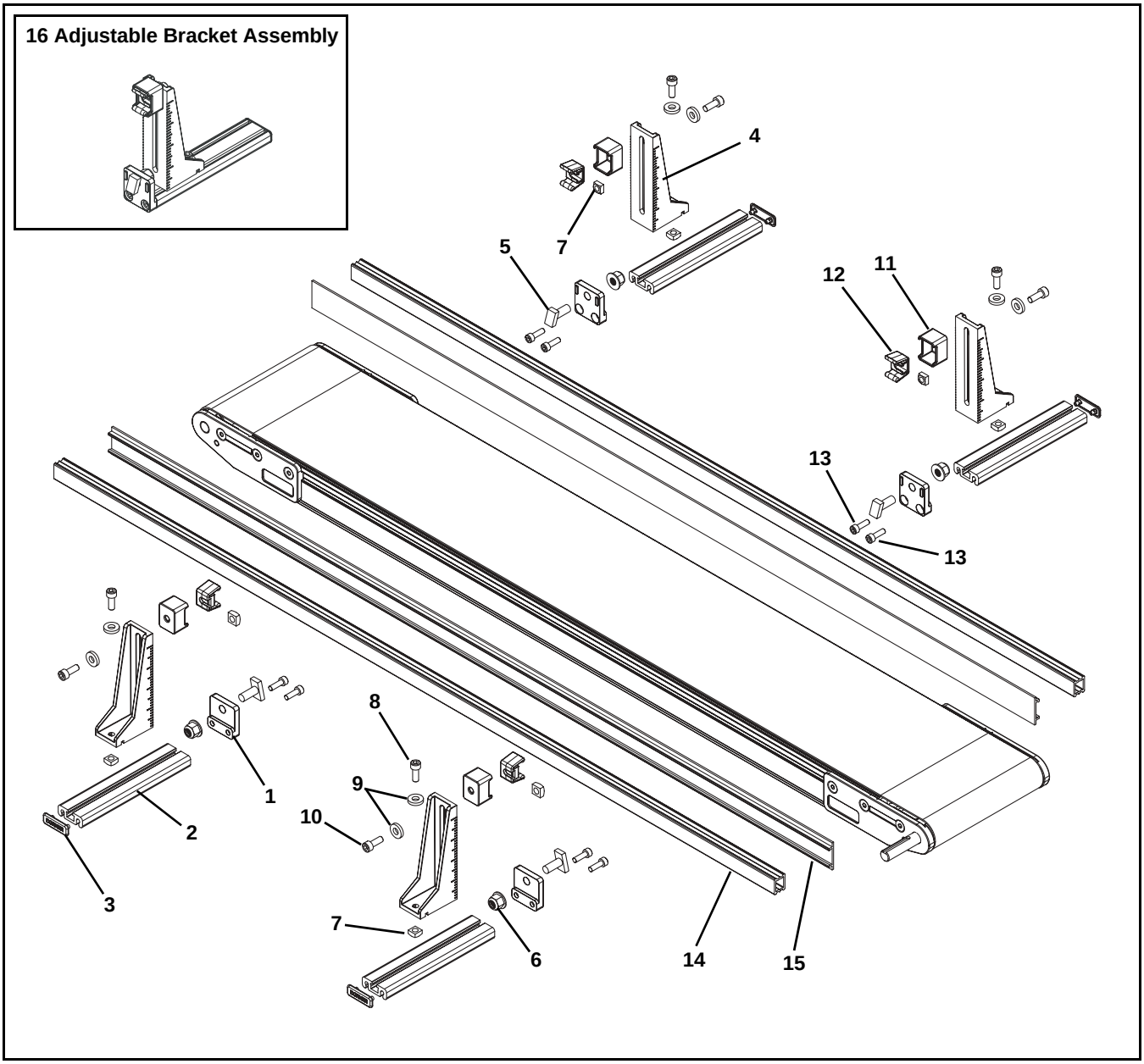
#14, 34 & 44 Profile - Tool-Less Adjustable Guiding



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	834-240	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

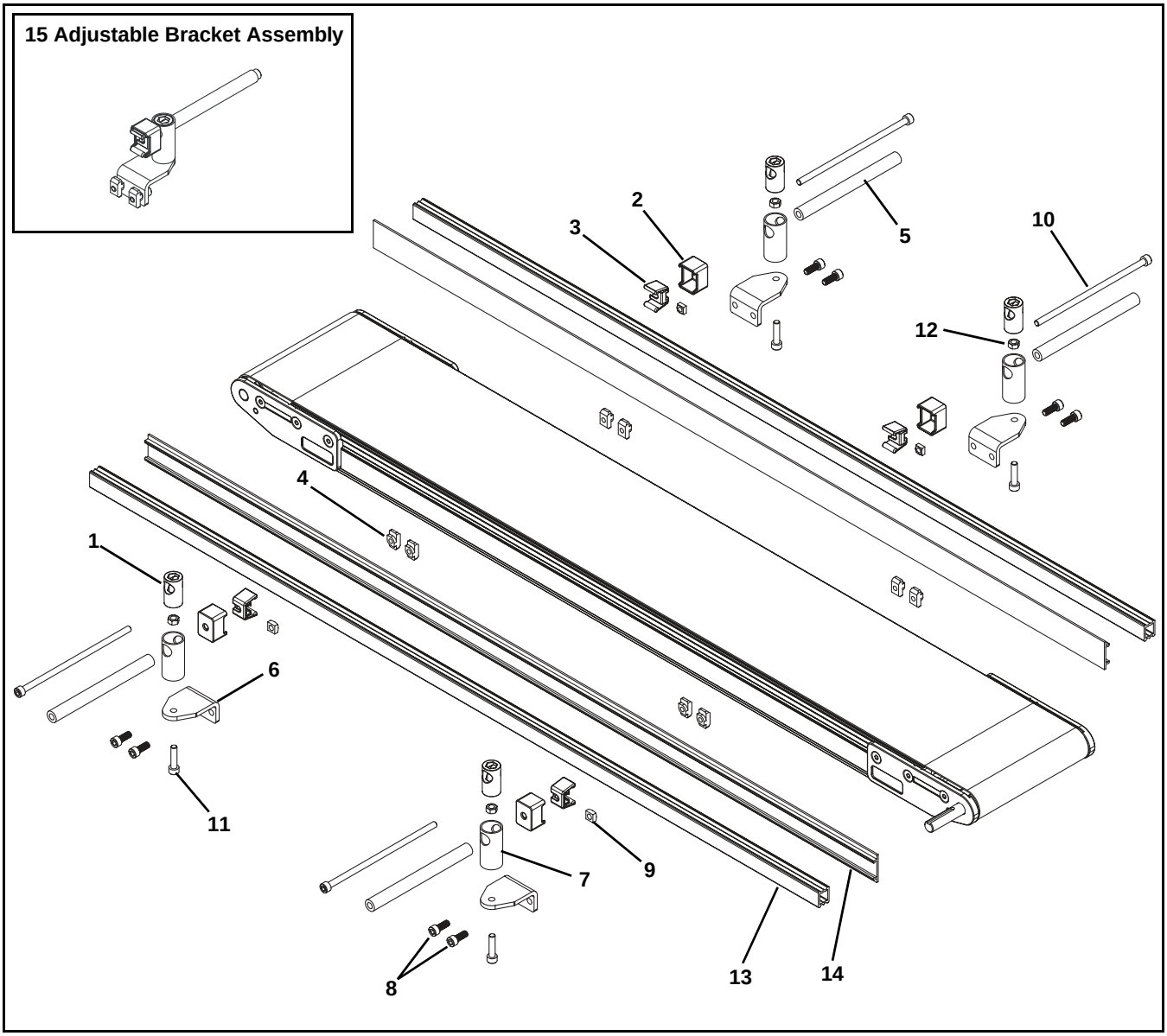


Item	Part Number	Description
1	210848	Mounting Block
2	210846-00600	Extrusion Base
3	210849	Cap
4	210847	Mounting Bracket
5	834-007	Stud, M8 x 20 mm
6	990812M	Hex Nut, M8-1.25
7	807-920	Square Nut, M6-1.0
8	920616M	Socket Head Screw, M6-1.00 x 16 mm
9	605279P	Washer
10	920622M	Socket Head Screw, M6-1.00 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	834-240	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

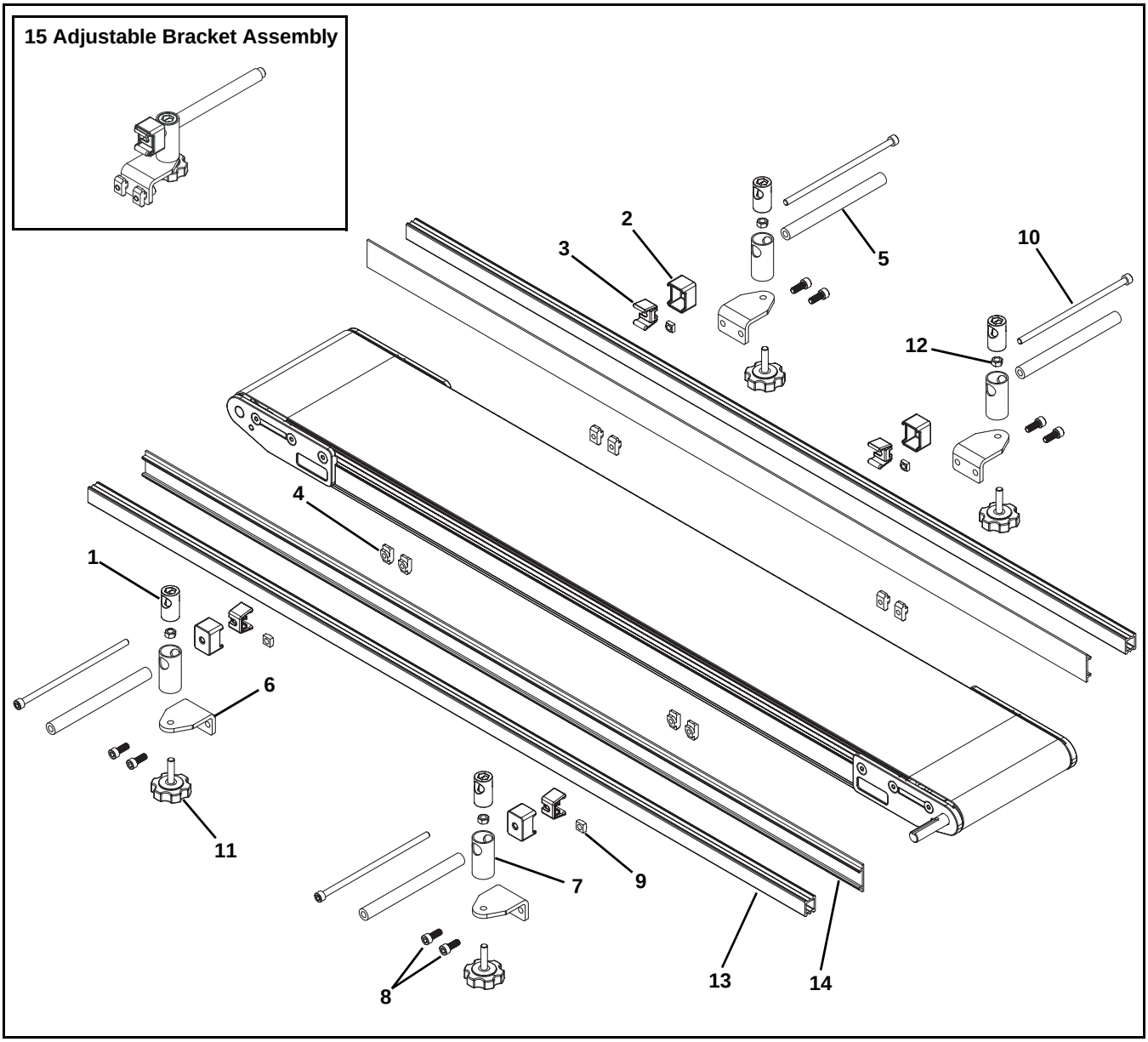
#19, 39 & 49 Profile - Horizontal Adjustable Guiding



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	207147	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	920625M	Socket Head Screw, M6-1.00 x 25 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	834-240	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

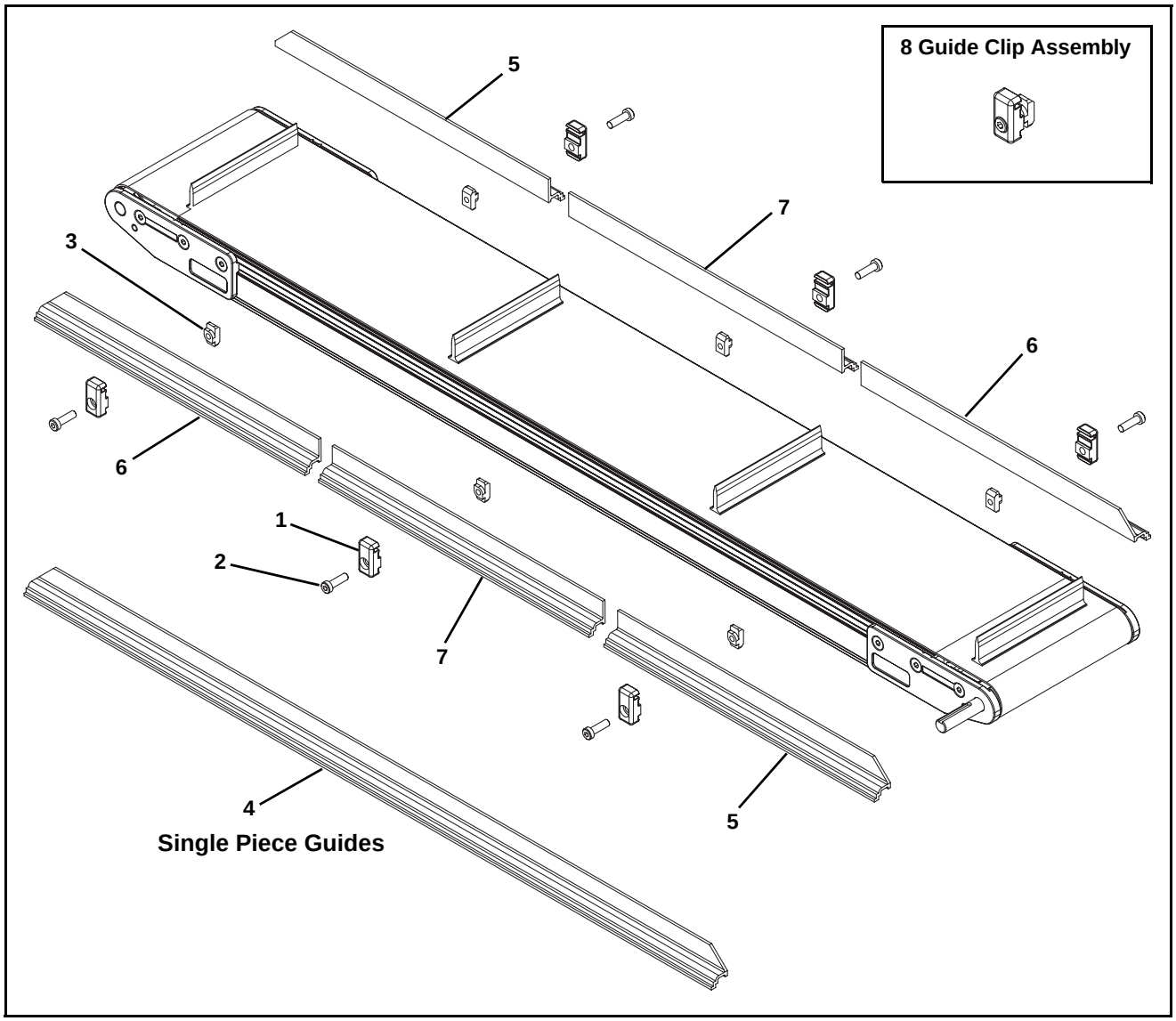


Item	Part Number	Description
1	206382	Insert Clamp
2	206383	Guide Ring
3	206397	Clip
4	206685	T-Nut
5	206692	Guide Tube
6	207146	Bracket
7	207147	Guide Tube
8	807-2859	Nylon Cap Screw, N6 x 16 mm
9	807-920	Square Nut, M6-1.0
10	9206150M	Socket Head Screw, M6-1.00 x 150 mm
11	207155	Knob, 18 mm
12	990601M	Hex Nut

Item	Part Number	Description
13	834-238-LLLLL	Guide Rail
	GTB13A04	Guide Rail 4' long
	GTB13A08	Guide Rail 8' long
14	834-240	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		

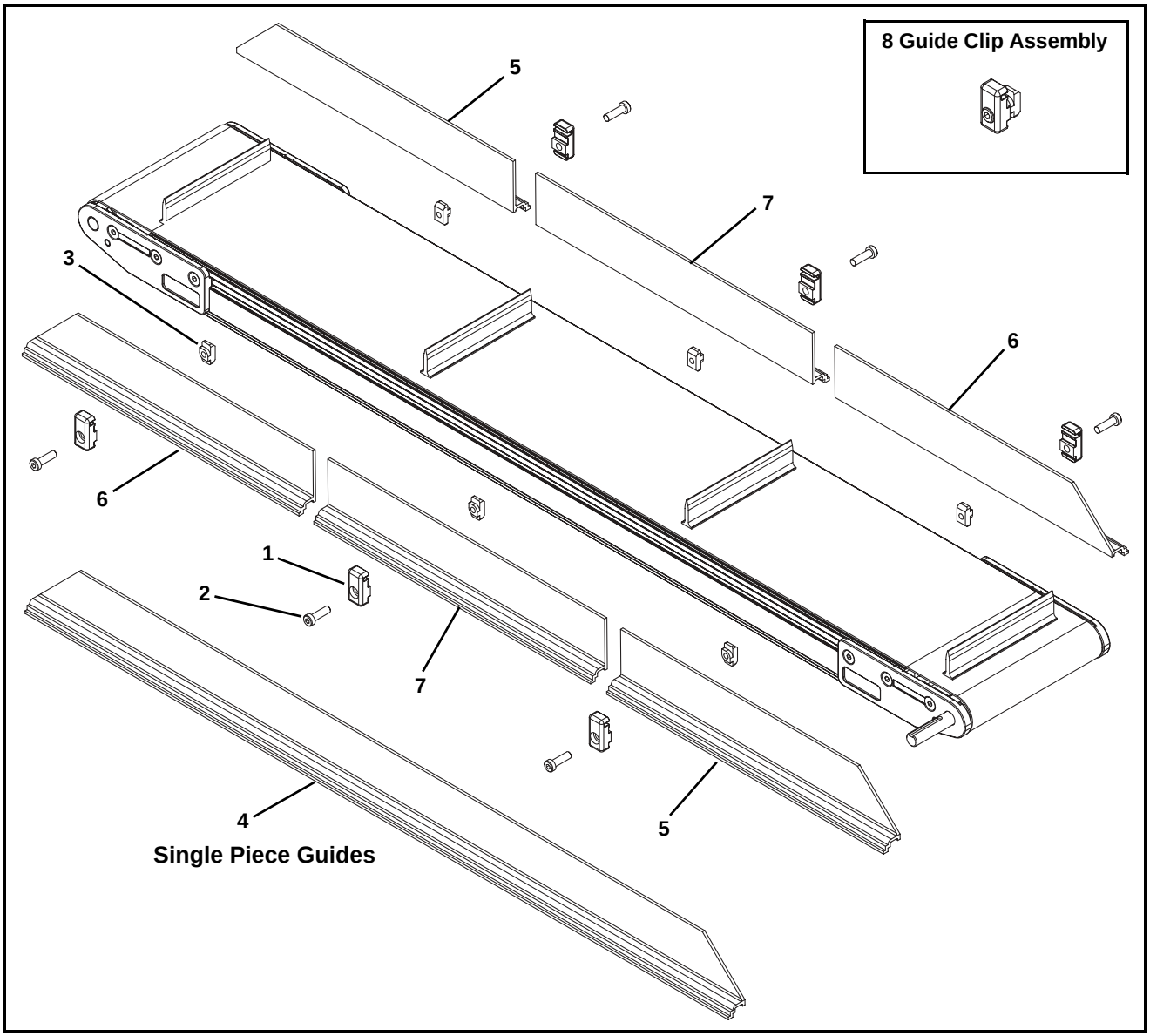
Service Parts

#2 Cleated Profile - 1.00" (25 mm) High 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	280203-LLLLL	1.00" Cleated Guiding for Single Piece Guides
5	280202-LLLLL	1.00" End 1 Section Cleated Guiding for Multi Piece Guides
6	280201-LLLLL	1.00" End 2 Section Cleated Guiding for Multi Piece Guides
7	206515-LLLLL	1.00" Mid Section Cleated Guiding for Multi Piece Guides
8	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		

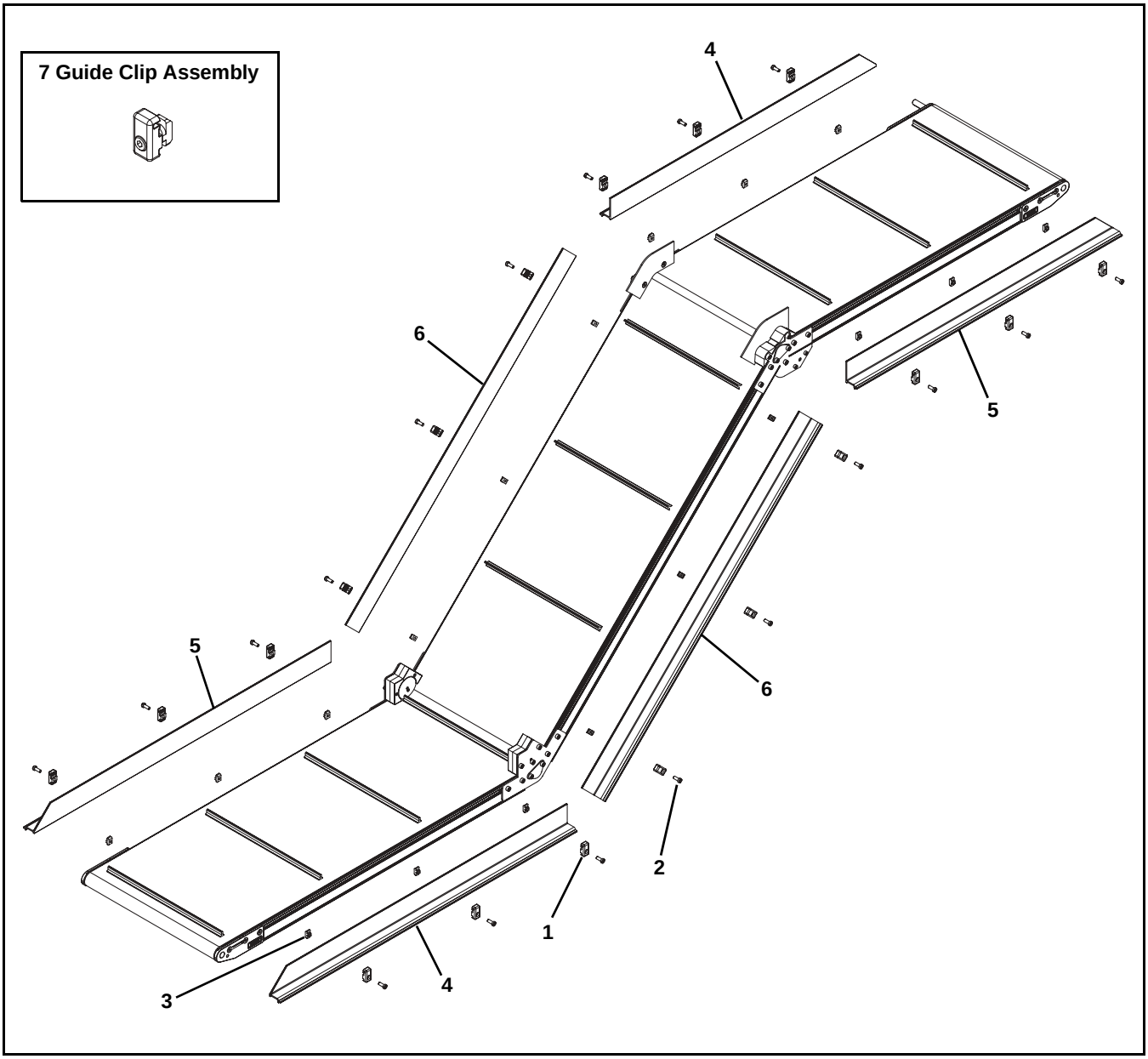
#3 Cleated Profile - 2.50" (64 mm) High Side



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	280303-LLLLL	2.50" Cleated Guiding for Single Piece Guides
5	280302-LLLLL	2.50" End 1 Section Cleated Guiding for Multi Piece Guides
6	280301-LLLLL	2.50" End 2 Section Cleated Guiding for Multi Piece Guides
7	206516-LLLLL	2.50" Mid Section Cleated Guiding for Multi Piece Guides
8	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		

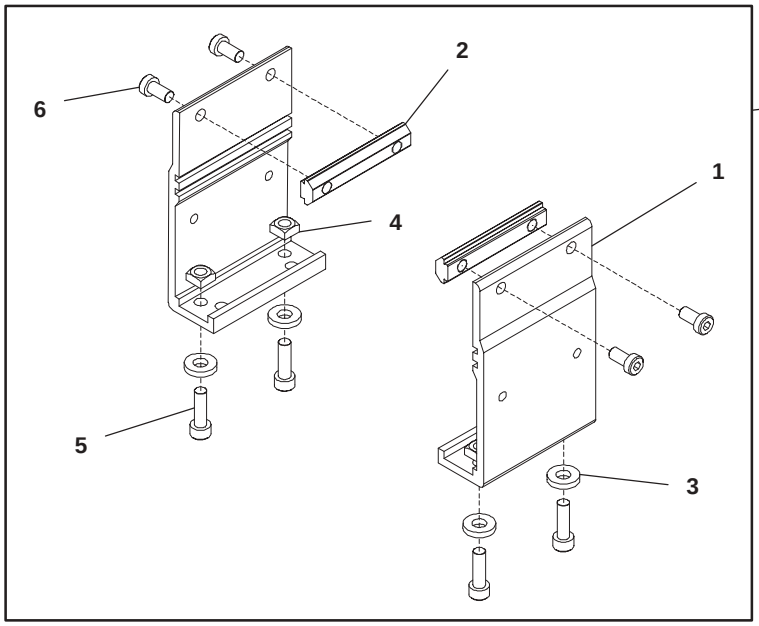
Service Parts

#3 Cleated LPZ Profile - 2.50" (64 mm) High 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	280101-LLLLL	2.50" End 1 Section Cleated Guiding
5	280102-LLLLL	2.50" End 2 Section Cleated Guiding
6	206517-LLLLL	2.50" Mid Section Cleated Guiding
7	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		

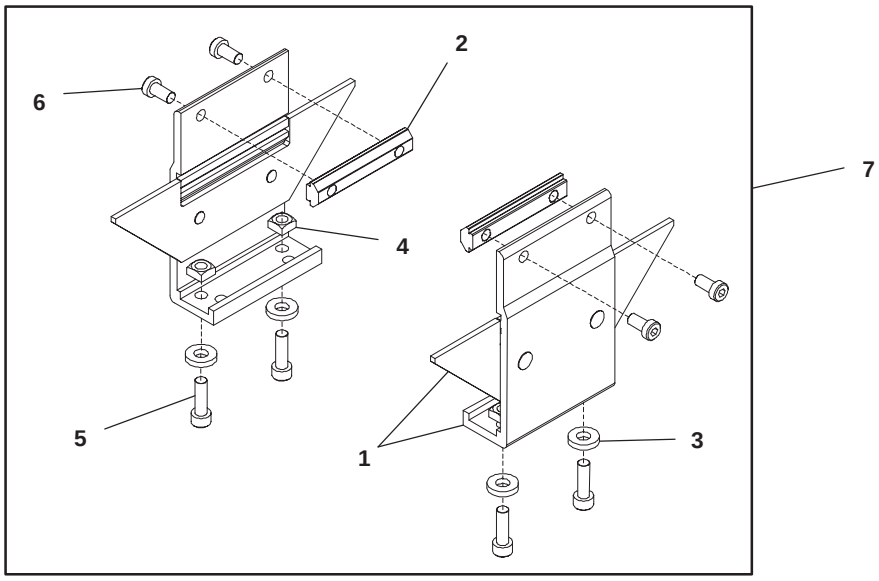
Flat Belt Mounting Brackets



Item	Part Number	Description
1	240831	Stand Mount
2	300150MK4	Drop–In Tee Bar (x4)
3	605279P	Washer
4	807–920	Square Nut M6

Item	Part Number	Description
5	920620M	Socket Head Screw M6 x 20 mm
6	950616M	Low Head Cap Screw M6 x 16 mm
7	240839	Flat Belt Stand Mount Assembly

Cleated Belt Mounting Brackets

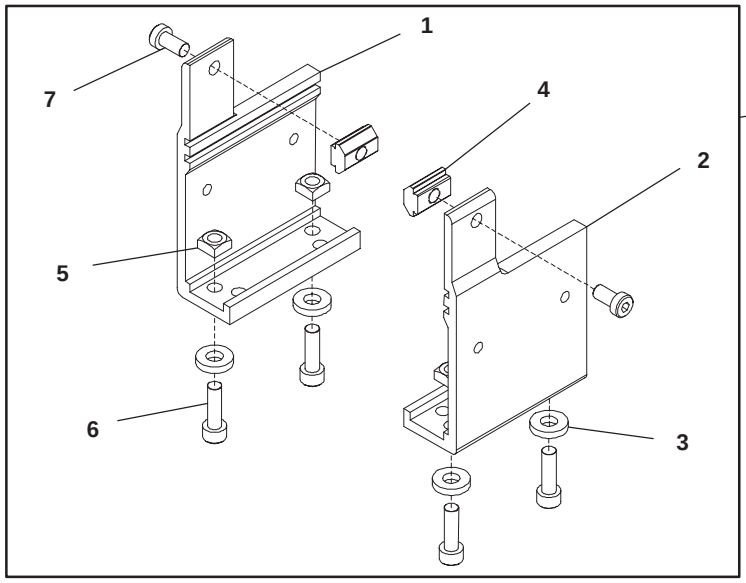


Item	Part Number	Description
1	240836	Cleated Mount Assembly
2	300150MK4	Drop–In Tee Bar (x4)
3	605279P	Washer

Item	Part Number	Description
4	807–920	Square Nut M6
5	920620M	Socket Head Screw M6 x 20 mm
6	950616M	Low Head Cap Screw M6x16 mm
7	240838	Cleated Stand Mount Assembly

Service Parts

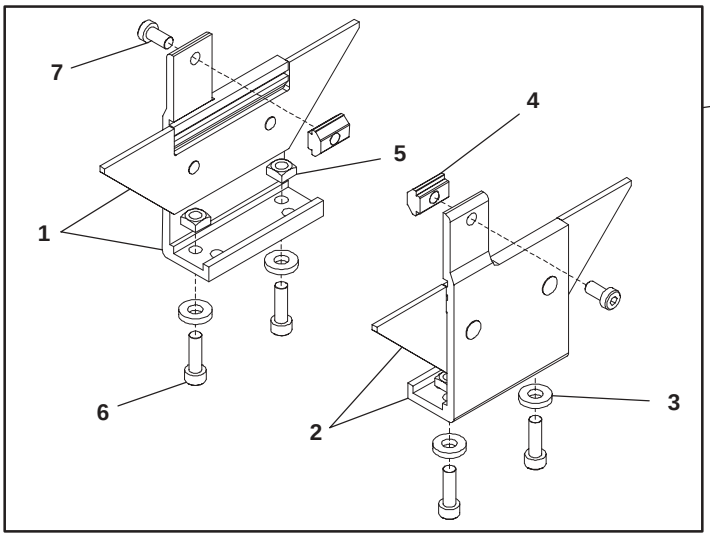
Flat Belt Mounting Brackets for Short Conveyors



Item	Part Number	Description
1	240833	Stand Mount, LH 2’ (610mm)
2	240834	Stand Mount, RH 2’ (610mm)
3	605279P	Washer
4	639971MK10	Drop–In Tee Bar (x10)

Item	Part Number	Description
5	807–920	Square Nut M6
6	920620M	Socket Head Screw M6 x 20 mm
7	950616M	Low Head Cap Screw M6 x 16 mm
8	240847	Flat Belt Stand Mount Assembly for 2’ (610mm) Conveyors

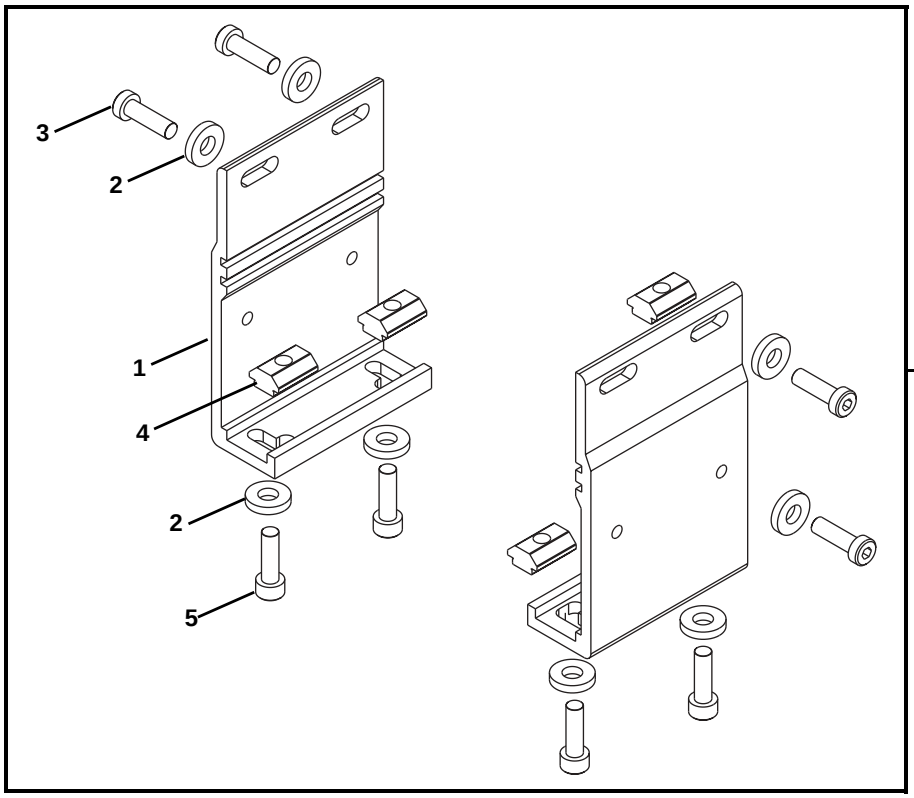
Cleated Belt Mounting Brackets for Short Conveyors



Item	Part Number	Description
1	240852	Cleated Stand Bracket Assembly LH 2’ (610mm) Conveyor
2	240853	Cleated Stand Bracket Assembly RH 2’ (610mm) Conveyor
3	605279P	Washer
4	639971MK10	Drop–In Tee Bar (x10)

Item	Part Number	Description
5	807–920	Square Nut M6
6	920620M	Socket Head Screw M6 x 20 mm
7	950616M	Low Head Cap Screw M6 x 16 mm
8	240851	Cleated Belt Stand Mount Assembly for 2’ (610mm) Conveyors

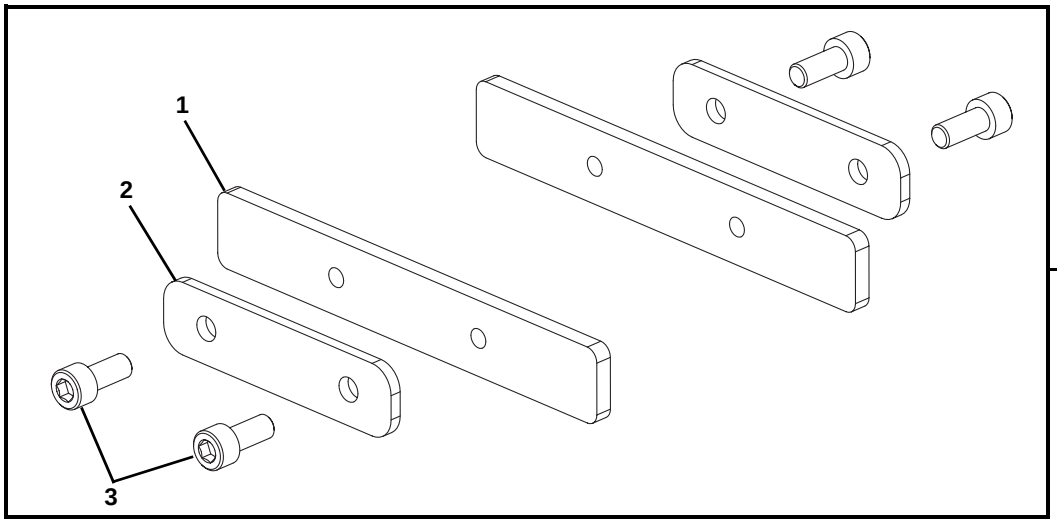
Flat Belt Mounting Brackets Assembled to the Tail



Item	Part Number	Description
1	240850	Stand Mount
2	605279P	Washer
3	950620M	Socket Low Head Screw M6 x 20 mm

Item	Part Number	Description
4	639971MK10	Drop–In Tee Bar (x10)
5	920620M	Socket Head Screw M6 x 20 mm
6	240854	Flat Belt Stand Mount Assembly for Tail Mounts

Connecting Assembly without Stand Mount

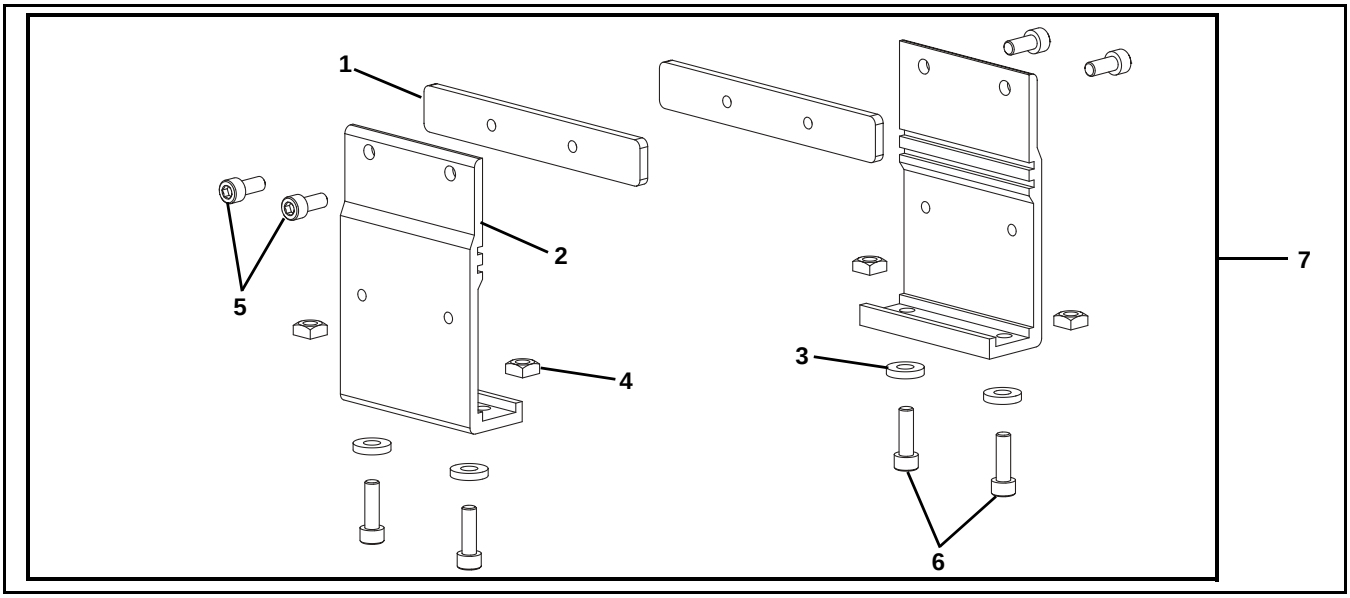


Item	Part Number	Description
1	206520	Connecting Bar
2	240859	Plate

Item	Part Number	Description
3	920614M	Socket Head Screw, M6-1.00 x 14 mm
4	206519	Connecting Assembly

Service Parts

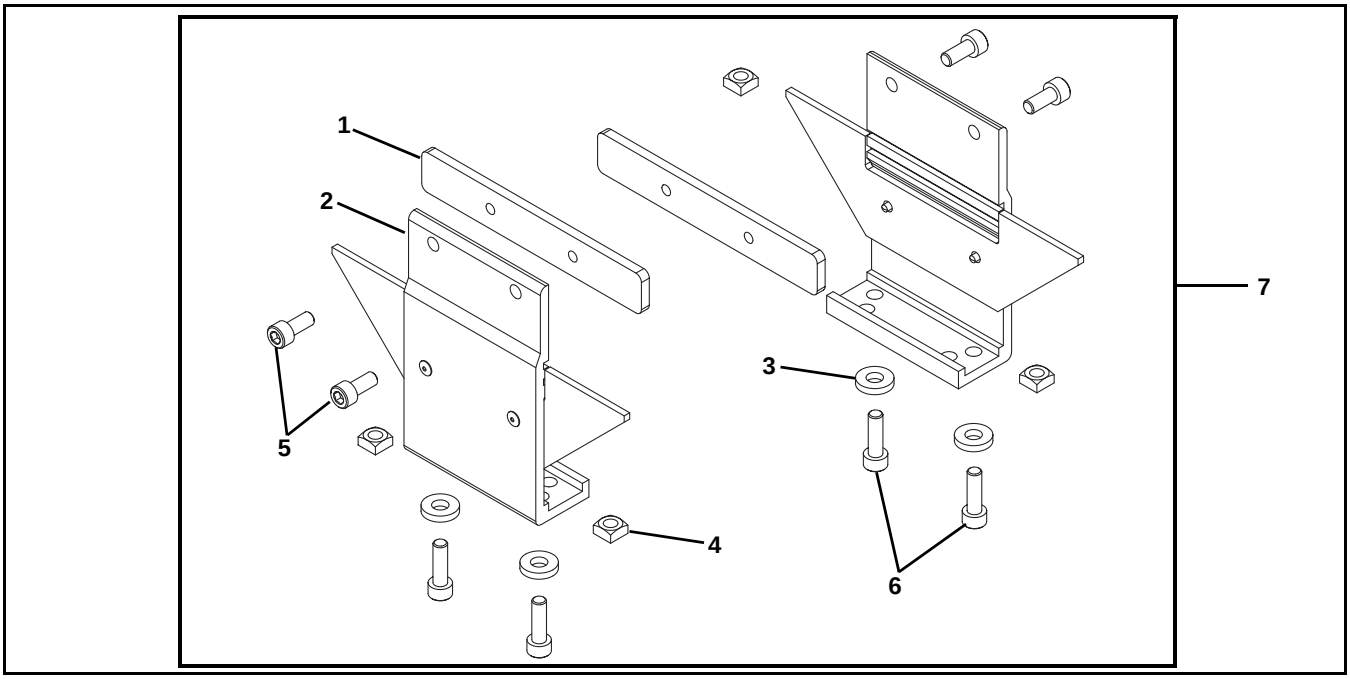
Flat Belt Connecting Assembly with Stand Mount



Item	Part Number	Description
1	206520	Connecting Bar
2	240831	Stand Mount
3	605279P	Washer
4	807-920	Square Nut M6

Item	Part Number	Description
5	920614M	Socket Head Screw, M6-1.00 x 14 mm
6	920620M	Socket Head Screw, M6-1.00 x 20 mm
7	206518	Connecting Assembly

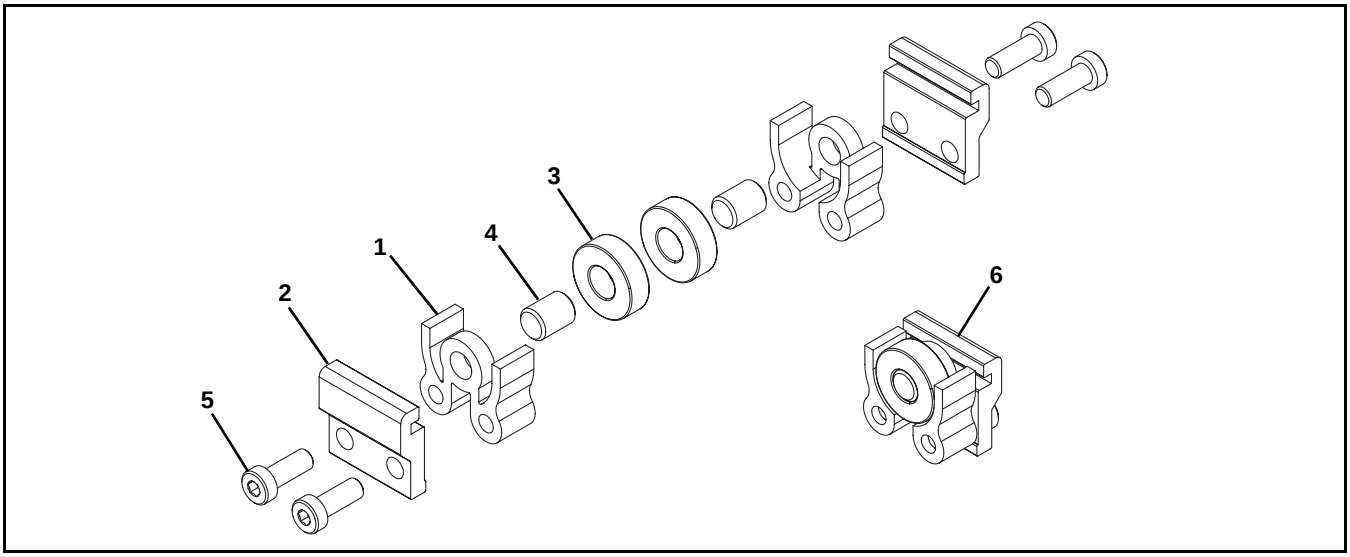
Cleated Belt Connecting Assembly with Stand Mount



Item	Part Number	Description
1	206520	Connecting Bar
2	240836	Cleated Stand Mount Assembly
3	605279P	Washer
4	807-920	Square Nut M6

Item	Part Number	Description
5	920614M	Socket Head Screw, M6-1.00 x 14 mm
6	920620M	Socket Head Screw, M6-1.00 x 20 mm
7	240929	Connecting Assembly

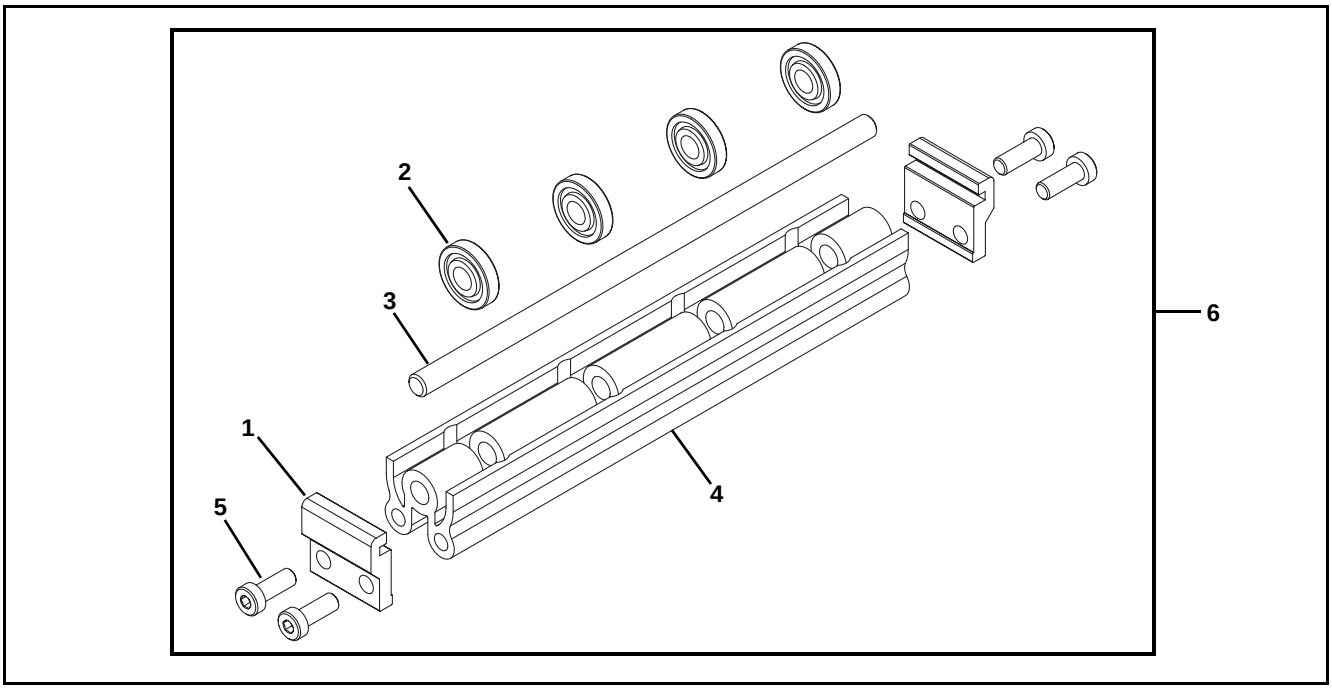
2" (51 mm) to 6" (152 mm) Flat Belt Return Roller



Item	Part Number	Description
1	240825	Return Roller Guard – Short
2	205978	Flat Return Roller Clip
3	802–027	Bearing
4	913–100	Dowel Pin

Item	Part Number	Description
5	950616M	Low Head Cap Screw M6-1.00 x 16 mm
6	206522	Return Roller Assembly

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

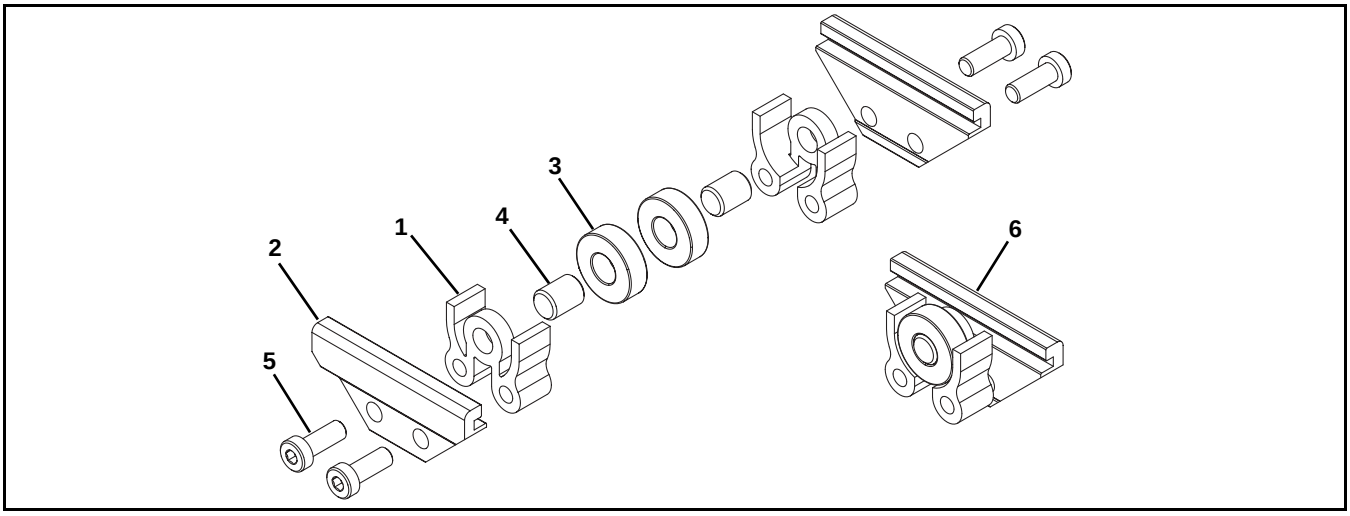


Item	Part Number	Description
1	205978	Flat Return Roller Clip
2	240826	Return Roller
3	2410WW	Return Roller Rod
4	2436WW	Return Roller Guard

Item	Part Number	Description
5	950616M	Low Head Cap Screw, M6-1.00 x 16 mm
6	206523-WW	Return Roller Assembly
WW.= Conveyor width reference: 08, 10, 12, 14, 16, 18, 20, 22, & 24		

Service Parts

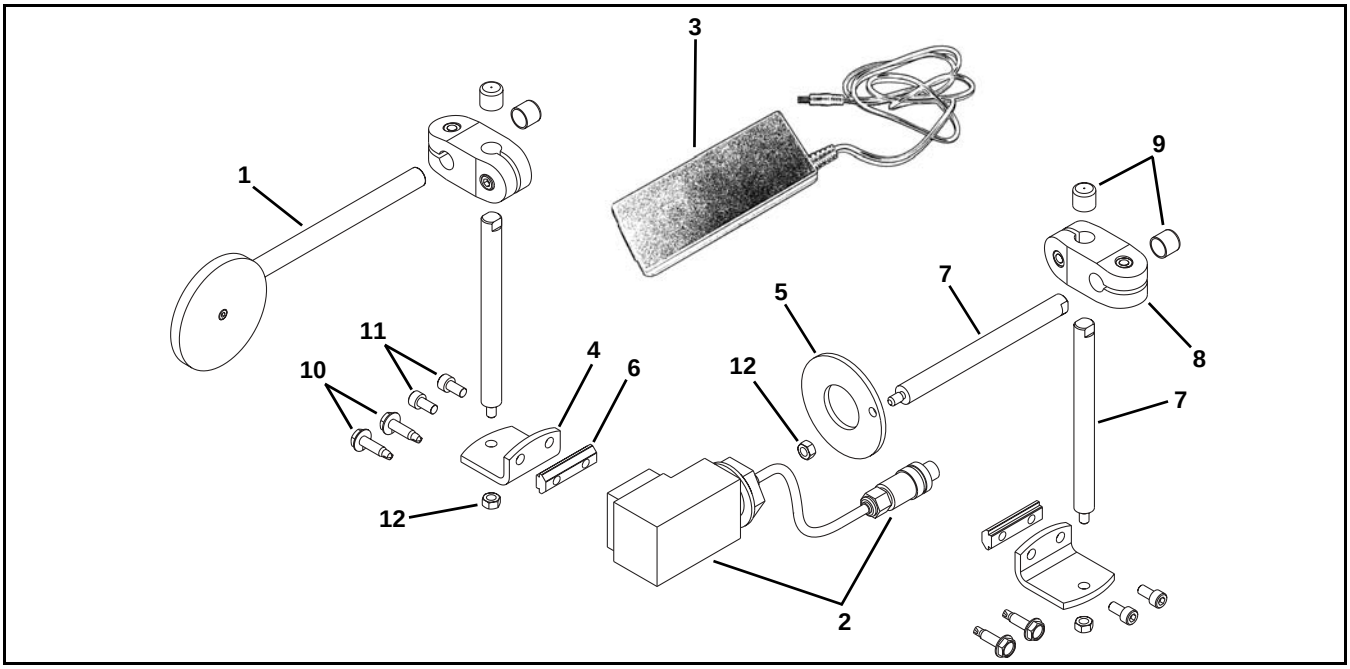
Cleated Belt Return Roller



Item	Part Number	Description
1	240825	Return Roller Guard – Short
2	205979	Cleated Return Roller Clip
3	802–027	Bearing
4	913–100	Dowel Pin

Item	Part Number	Description
5	950616M	Low Head Cap Screw M6-1.00 x 16 mm
6	206521	Cleated Belt Return Roller Assembly

Photo Eye



Item	Part Number	Description
1	201880	Reflector Mounting Assembly
2	201881	Eye Assembly with Plug
3	201882	Transformer with Plug
4	202004	Mounting Bracket
5	205109	Washer
6	200830M	Drop-In Tee Bar

Item	Part Number	Description
7	202028M	Mounting Shaft
8	807-652	Cross Block
9	807-948	Cap
10	807-1937	Drilling Screw, 1/4-20 x 1" (2300 Series)
11	920612M	Socket Head Screw, M6-1.00 x 12 mm (2200 Series)
12	990601M	Hex Nut

Conveyor Belt Part Number Configuration

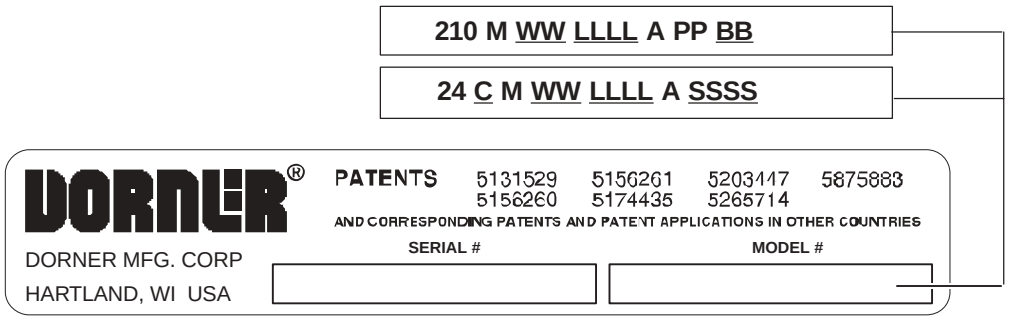


Figure 128

Flat Belt Part Number Configuration

Refer to Dorner patent plate **Figure 128)**. From the model number, determine conveyor width (“WW”), length (“LLLL”) and belt type (“BB”). Use data to configure belt part number as indicated below. *Add “V” for V-guided belts.

22 - WW LLLL / BB V *

22 – __ __ __ __ __ __ / __ __ V*

(Fill In)

Cleated Belt Part Number Configuration

Refer to Dorner patent plate **Figure 128)**. From the model number, determine conveyor type (”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 belts.

2T - WW LLLL C SSSS V *

2 __ – __ __ __ __ __ __ / __ __ __ __ V*

(Fill In)

Return Policy

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

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

DORNER MFG. CORP.
975 Cottonwood Ave., PO Box 20
Hartland, WI 53029-0020 USA
TEL 1-800-397-8664 (USA)
FAX 1-800-369-2440 (USA)
Internet: www.dorner.com

Outside the USA:
TEL 1-262-367-7600
FAX 1-262-367-5827

851-816 Rev. A

Printed in U.S.A.