5300 Series DustPruf Curve Conveyors

Installation, Maintenance and Parts Manual

Featuring: SmartSlot™

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851-706 Rev. A

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Introduction

⚠ CAUTION

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.

The Dorner Limited Warranty applies.

Dorner 5300 Series conveyors have patents pending.

Dorner reserves the right to make changes at any time without notice or obligation.

Dorner has convenient, pre-configured kits of Key Service Parts for all conveyor products. These time saving kits are easy to order, designed for fast installation, and guarantee you will have what you need when you need it. Key Parts and Kits are marked in the Service Parts section of this manual with the Performance Parts Kits logo .

⚠ DANGER

SEVERE HAZARD!

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

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.

⚠ 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

Refer to **(Figure 1)** for typical conveyor components.

Typical Components	
1	Conveyor
2	Gearmotor
3	Belt (Flat Belt Shown)
4	Motor Controller
5	Drive End
6	Idler End

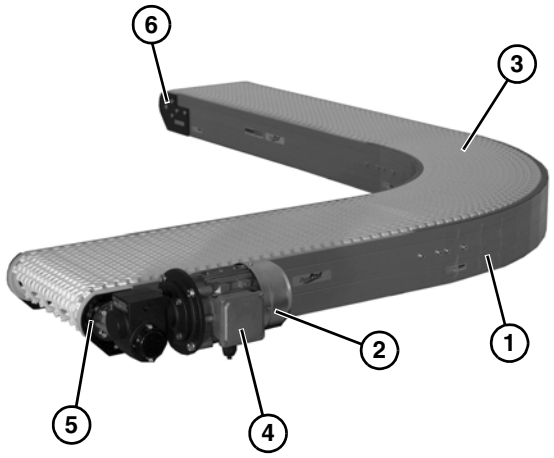
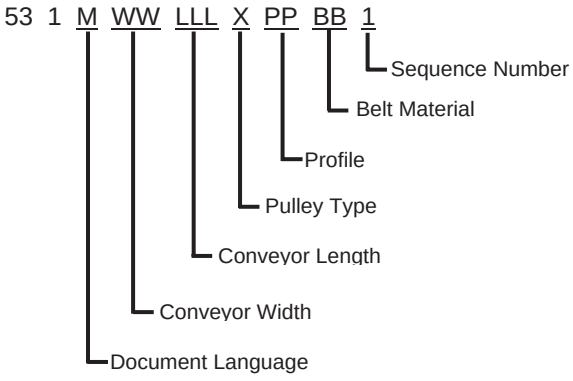


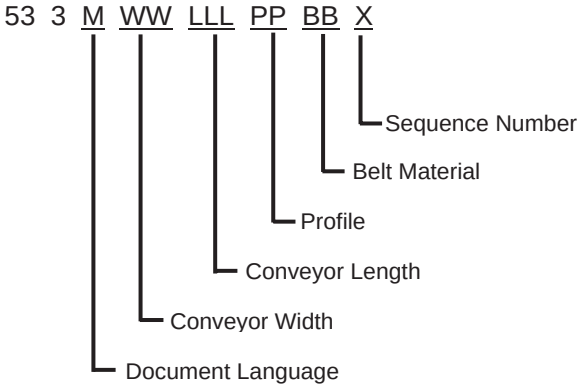
Figure 1

Specifications

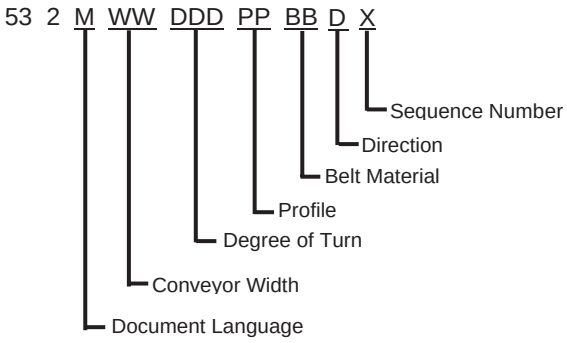
5300 Series Infeed / Idler Module



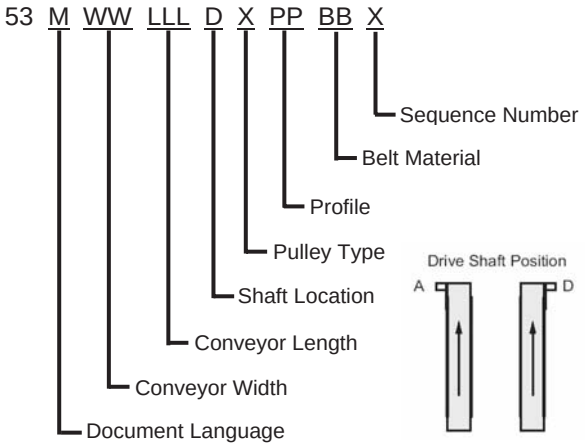
5300 Series Intermediate Module



5300 Series Curve Module



5300 Series Exit / Drive Module



Conveyor Supports

Infeed / Idler Module:

- "A" = 3 ft (914 mm) maximum (See Figure 2)
- Modules 24" - 47" long get 1 support stand
- All other lengths get 2 support stands, evenly spaced, plus an additional support stand at each straight section break (over 13' straight frame module)

Intermediate Module:

- Modules 24" - 59" long get 1 support stand
- All other lengths get 2 support stands, evenly spaced, plus an additional support stand at each straight section break (modules over 13')

Exit / Drive Module:

- "B" = 3 ft (914 mm) maximum (See Figure 2)
- Modules 24" - 47" long get 1 support stand
- All other lengths get 2 support stands, evenly spaced, plus an additional support stand at each straight section break (modules over 13')

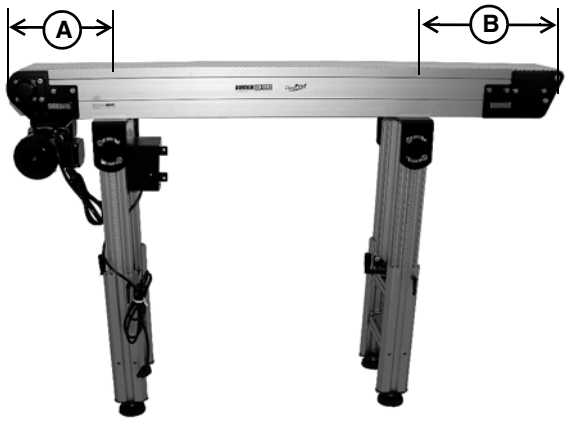


Figure 2

Curve Module:

- Reference chart for support stand quantities, evenly spaced along curve (see chart).

Width / Degree	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"
45°	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
90°	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
135°	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3
180°	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3

Specifications

Flat Belt Conveyor Width Reference (WW)	08 - 36 in 02 increments
Flat Belt Conveyor Belt Width	8" (203 mm) - 36" (914 mm) in 2" (51 mm) increments
Maximum Conveyor Load	20 lbs. / ft^2 (97 kg/ m^2) with a maximum of 500 lbs. (227 kg)
Belt Travel	12" (305 mm) per revolution of pulley
Maximum Belt Speed	250 ft/minute (76 m/minute)

Conveyor Module Length Reference (LLL)	021 - 999 in 001 increments
Conveyor Module Length	21" (533 mm) - 999" (25.4 m) in 1" (25 mm) increments

IMPORTANT

Maximum conveyor loads are based on:

- *Non-accumulating product*
- *Product moving toward gearmotor*
- *Conveyor being mounted horizontally*
- *Conveyor being located in a dry environment*
- *Conveyor equipped with standard belt only*

Installation

CAUTION

Conveyor MUST be mounted straight, flat and level within confines of conveyor. Use a level (Figure 3, item 1) during setup.

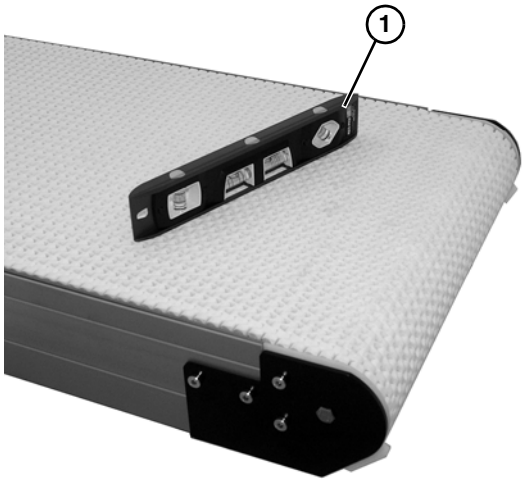


Figure 3

Required Tools

- Level
- Torque wrench
- 4 mm hex wrench
- 5 mm hex wrench

Recommended Installation Sequence

1. Assemble the conveyor (if required). Refer to "Conveyor Sections Longer than 12 ft (3658 mm)" on page 6 and "All Conveyors" on page 7.
2. Attach the stands. Refer to "Stand Installation" on page 7.
3. Install the belt. Refer to "Belt Installation" on page 8.
4. Install the guiding. Refer to "Guiding" on page 11.
5. Install the gearmotor. Refer to "Drive Package Installation" on page 11.

Conveyor Sections Longer than 12 ft (3658 mm)

Connecting Components

Typical Connecting Components **(Figure 4)**

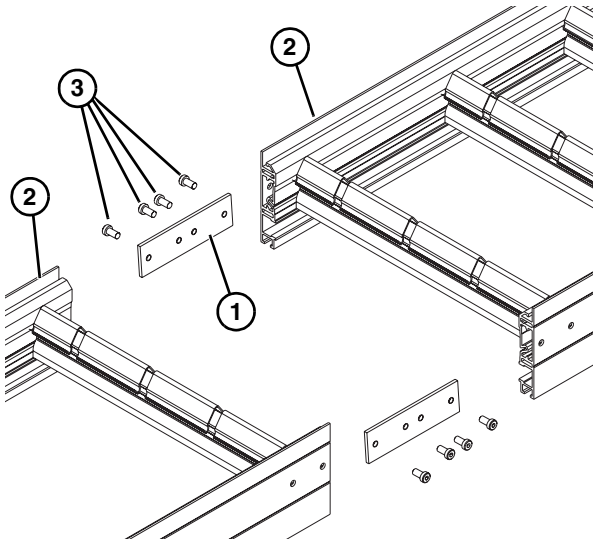


Figure 4

1	Clamp Plate
2	Conveyor frames
3	Low Head Cap Screw, M8 - 1.25 x 16 mm

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

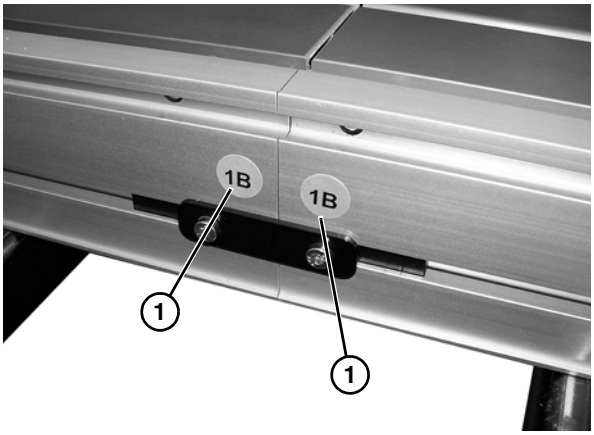


Figure 5

2. Install two clamp plates **(Figure 4, item 1)** into one conveyor section **(Figure 4, item 2)** by lining up two holes in clamp plate with two holes in conveyor frame. Install two M8x16 low head cap screws **(Figure 4, item 3)** to secure each clamp plate.
3. Join both conveyor sections, and secure with two M8x16 low head cap screws **(Figure 4, item 3)** on both sides. Tighten all cap screws to 84 in-lb (9 Nm).

All Conveyors

Curve Connecting Components

Typical Curve Connecting Components **(Figure 6)**

1	Clamp Plate
2	Conveyor frames
3	Low Head Cap Screw, M8 - 1.25 x 16 mm

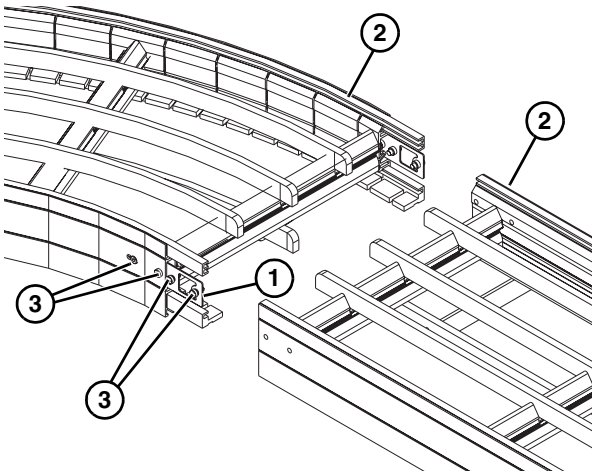


Figure 6

1. Locate and arrange conveyor sections by section labels **(Figure 7, item 1)**.

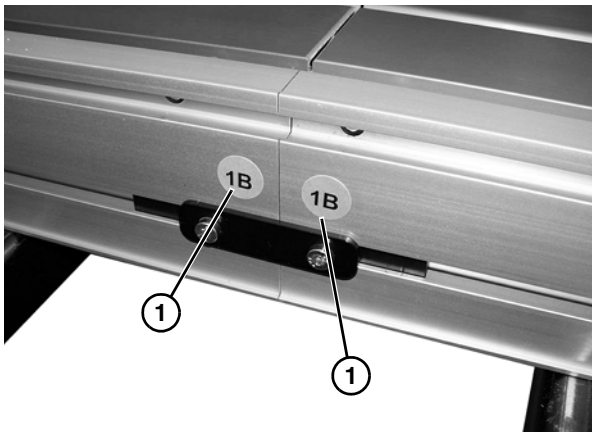


Figure 7

2. Install two clamp plates **(Figure 6, item 1)** into one conveyor section **(Figure 6, item 2)** by lining up two holes in clamp plate with two holes in conveyor frame. Install two M8x16 low head cap screws **(Figure 6, item 3)** to secure each clamp plate.
3. Join both conveyor sections, and secure with two M8x16 low head cap screws **(Figure 6, item 3)** on both sides. Tighten all cap screws to 84 in-lb (9 Nm).

Stand Installation

NOTE

For detailed assembly instructions, please see your appropriate support stand manual.

Typical stand components **(Figure 8)**

1	Conveyor Frame
2	Stand
3	M6 - 1.0 x 20 mm socket head cap screws (x4)

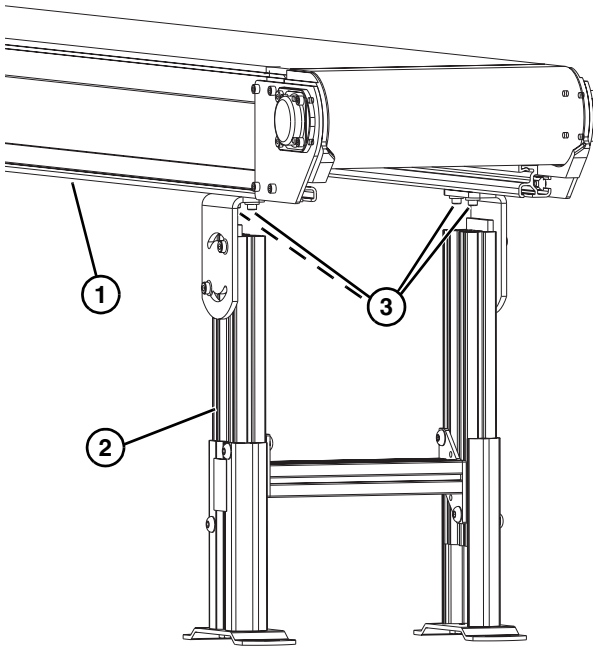


Figure 8

1. Properly support the conveyor.
2. Attach stands **(Figure 9, item 1)** to the bottom of the conveyor frame **(Figure 9, item 2)**. Tighten socket head screws **(Figure 9, item 3)**, on each side, to secure in place.

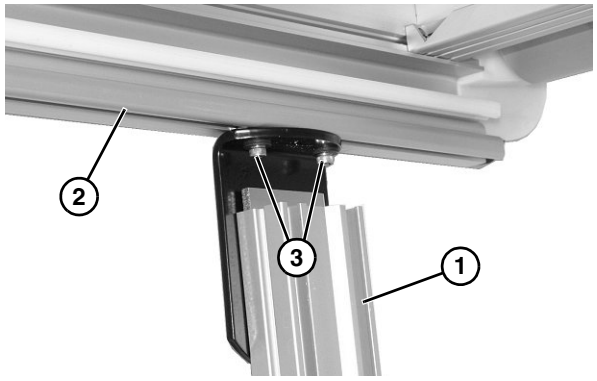


Figure 9

Installation

Belt Installation

Typical Belt Components **(Figure 10)**.

1	Chain Belt
2	Belt Rod

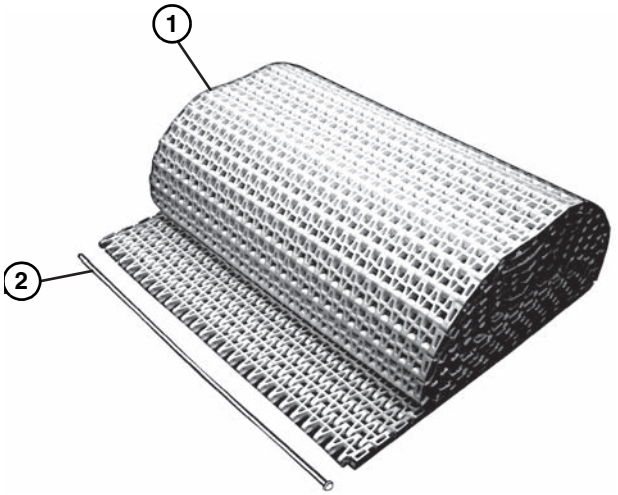


Figure 10

1. Position the belt on the conveyor frame.
2. Orient the belt direction such that the pin heads **(Figure 11, item 1)** are on the outside of the belt radius **(Figure 11, item 2)**. The straight portion on the pin **(Figure 11, item 3)** will be on the inside radius.

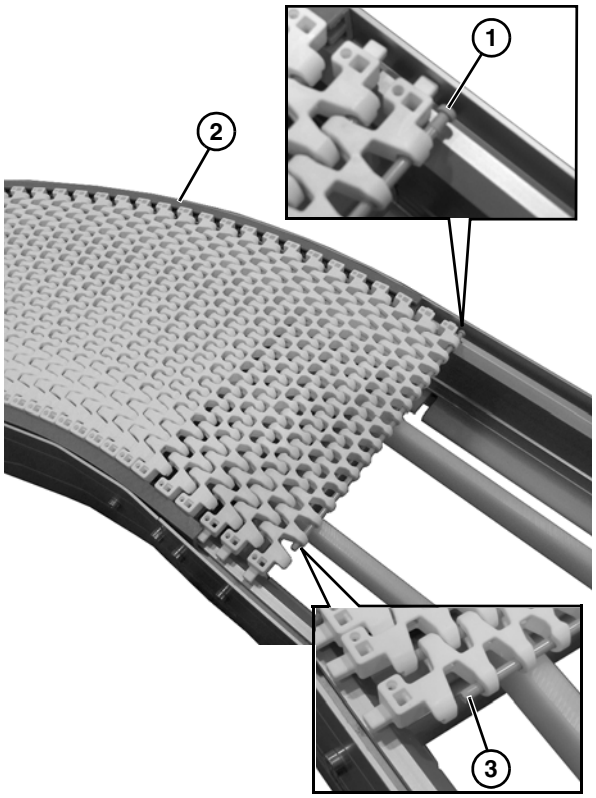


Figure 11

3. Wrap belt around idler tail **(Figure 12, item 1)**.

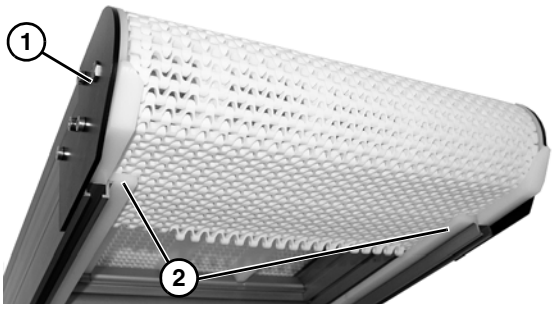


Figure 12

4. Install belt around lower frame section and above lower wear strips **(Figure 12, item 2)**.
5. On curve conveyors, install belt through wear strip **(Figure 13, item 1)** and install wear strip **(Figure 13, item 2)** on straight conveyor sections before installing and connecting belt.

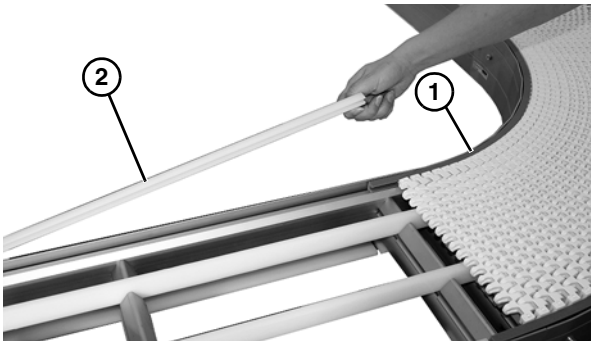


Figure 13

6. Wrap the belt around the drive end of the conveyor, making sure the sprocket teeth have engaged the belt, with concave teeth **(Figure 14, item 1)** mating with rounded section **(Figure 14, item 2)** of belt.

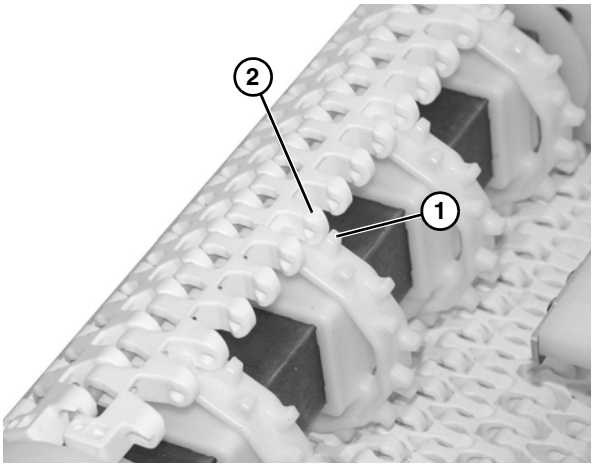


Figure 14

7. Bring the ends of the belt together **(Figure 15)**.

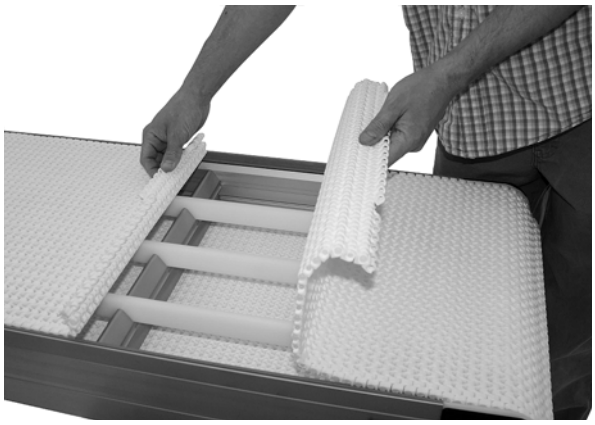


Figure 15

8. Insert the belt rod **(Figure 16, item 1)**.

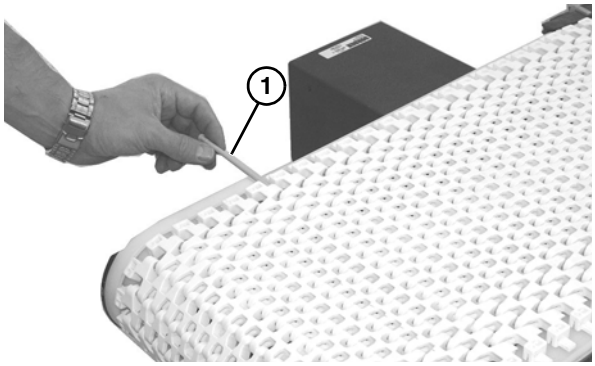


Figure 16

9. Push the belt rod in as far as possible.
10. Lightly tap the head of the rod with a hammer until it snaps into position.
11. Lift belt off of frame and insert each edge strip **(Figure 17, item 1)** into side tabs of belt. Set belt and edge strips back into frame.

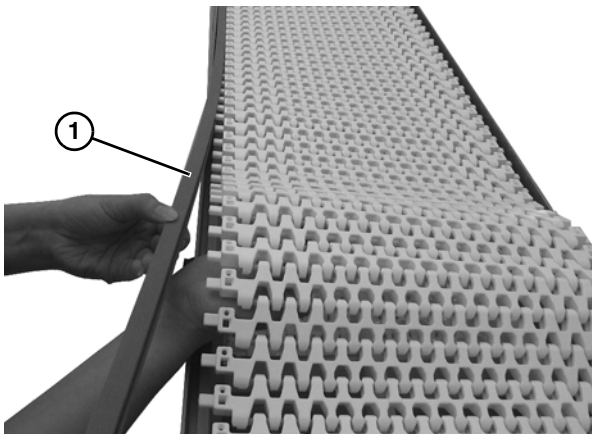


Figure 17

Proper Methods of Attachment to Side Rails

⚠ WARNING

Installing self-drilling screws into the dustpruf side rail requires substantial force.

Failure to properly support the conveyor while installing self-drilling screws may cause the operator or conveyor to slip, causing severe injury.

SUPPORT CONVEYOR FRAMES WHILE INSTALLING SELF-DRILLING SCREWS.

The 5300 DustPruf side rail is designed for self-drilling attachment of brackets and accessories. This can be done in two methods: self-drilling screws or pre-drill for standard screws.

Self-Drilling Screws

All Dorner accessories are provided with 1/4-20 self-drilling screws.

1. Locate guide **(Figure 18, item 1)** and retaining clip **(Figure 18, item 2)** and hold to side rail. Hole should line up with notch **(Figure 18, item 3)** in side rail.

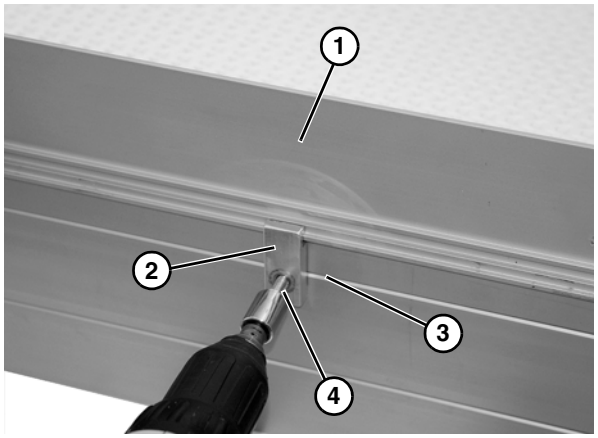


Figure 18

2. With a cordless drill or equivalent install self-drilling screw **(Figure 18, item 4)**. Use high speed setting to drill through side wall. Once the tap portion is started switch drill power to a lower speed. Do not fully tighten with drill.

3. Hand tighten the screws to secure **(Figure 19)**. Recommended torque is 150 in-lb (17 Nm).

Figure 19

Pre-Drill for Standard Screws

The DustPruf side rail will also accept standard screws. M6-1.0 and 1/4-20 are acceptable. Strength grade 8 is recommended.

1. Locate guide **(Figure 20, item 1)** and retaining clip **(Figure 20, item 2)** and hold to side rail. Hole should line up with notch **(Figure 20, item 3)** in side rail. Mark the hole locations with a center punch **(Figure 20, item 4)** and remove the bracket.

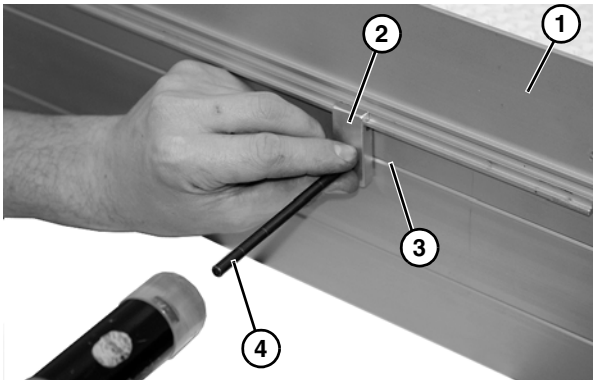


Figure 20

2. Drill the hole locations **(Figure 21, item 1)** with a 3/16" drill bit **(Figure 21, item 2)**.

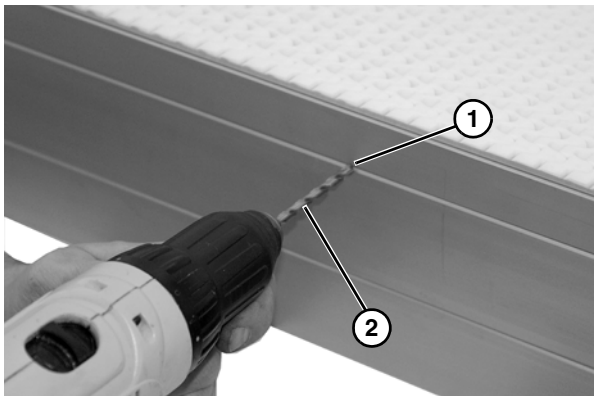


Figure 21

3. Position and hold bracket **(Figure 22, item 1)** to side rail. With a standard M6-1.0 or 1/4-20 screw, install screws **(Figure 22, item 2)** with cordless drill or equivalent. Do not fully tighten with drill.

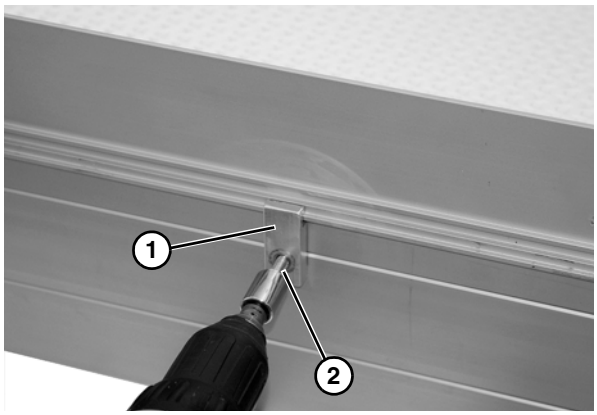


Figure 22

4. Hand tighten the screws to secure **(Figure 23)**. Recommended torque is 150 in-lb (17 Nm).

Figure 23

Guiding

⚠ WARNING

Installing self-drilling screws into the dustpruf side rail requires substantial force.

Failure to properly support the conveyor while installing self-drilling screws may cause the operator or conveyor to slip, causing severe injury.

SUPPORT CONVEYOR FRAMES WHILE INSTALLING SELF-DRILLING SCREWS.

Due to the DustPruf construction ALL guiding must be located and installed by the end user. Take care in locating retaining clips prior to final installation.

1. Lay out retaining clip **(Figure 24, item 1)** locations. The end clips should be no greater than 12" from end of the conveyor. Hole should line up with notch **(Figure 24, item 2)** in side rail.

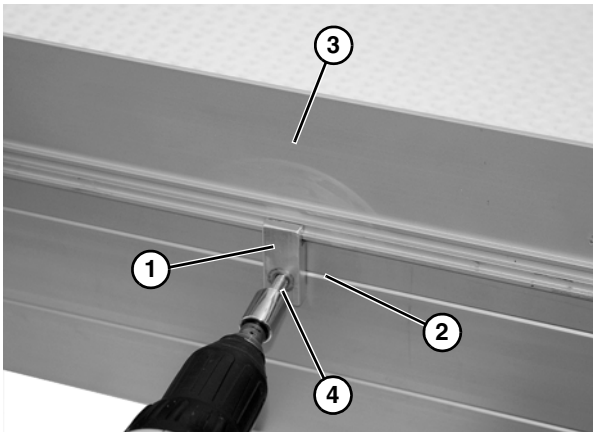


Figure 24

2. Hold guide **(Figure 24, item 3)** and retaining clip **(Figure 24, item 1)** to conveyor side rail. Install self-drilling screws **(Figure 24, item 4)** following the "Proper Methods of Attachment to Side Rails" on page 9 procedure.

Drive Package Installation

NOTE

For detailed assembly instructions, refer to the appropriate Drive Packages Installation, Maintenance and Parts Manual.

1. Attach the motor **(Figure 25, item 1)** to the gear reducer **(Figure 25, item 2)**. (End Drive shown below.)

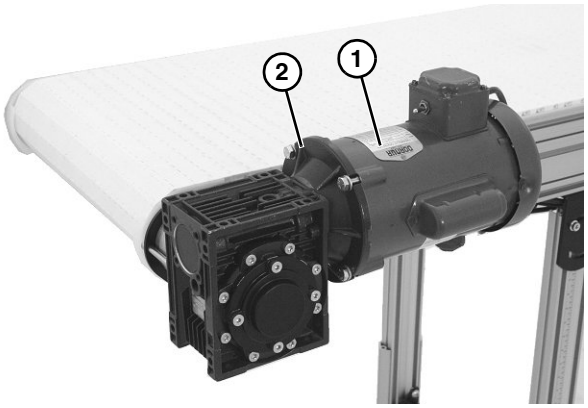


Figure 25

Preventive Maintenance and Adjustment

Required Tools

- 4 mm hex wrench
- 5 mm hex wrench
- 6 mm hex wrench
- 8 mm hex wrench
- Punch and hammer (to remove belt rod)

Checklist

- Keep service parts on hand. Refer to the "Service Parts" section starting on page 24 for recommendations.
- Replace any worn or damaged parts.

Lubrication

No lubrication is required. Replace bearings if worn.

Maintaining the Conveyor Belt

Troubleshooting

NOTE

Visit www.dorner.com for complete list of troubleshooting solutions.

Inspect conveyor belt for:

- Surface cuts or wear
- Skipping

Damage to belt links or rods, surface cuts and / or wear indicate:

- Sharp or heavy parts impacting belt
- Jammed parts
- Accumulated dirt
- Foreign material inside the conveyor
- Improperly positioned accessories

Skipping indicates:

- Excessive load on belt
- Worn spindle or impacted dirt on drive spindle

Conveyor Belt Replacement

⚠ WARNING

SEVERE HAZARD!

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

Replacing a Section of Belt

1. Lift belt off of frame and remove each edge strip **(Figure 26, item 1)** from side tabs of belt.

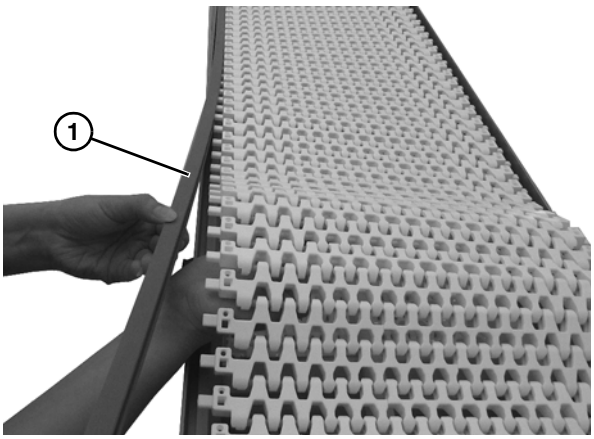


Figure 26

2. Use a punch and hammer to push the belt rod **(Figure 27, item 1)** out by striking the rod end opposite the retaining head.

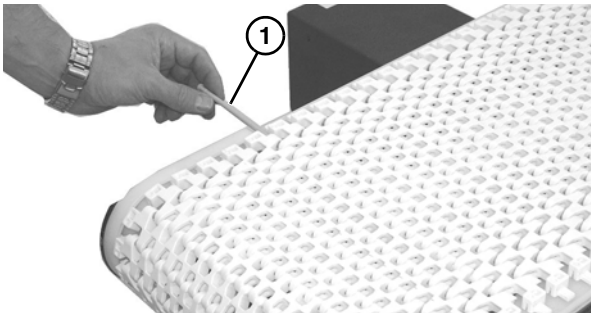


Figure 27

⚠ WARNING

SEVERE HAZARD!

If conveyor belt is damaged or worn, replace belt section.

3. Remove the belt rods on both sides of the section of belt being replaced.
4. Replace old section of belt.

CAUTION

DO NOT reuse belt rods that are damaged or show signs of wear.

Replacing the Entire Belt

1. Lift belt off of frame and remove each edge strip **(Figure 28, item 1)** from side tabs of belt.

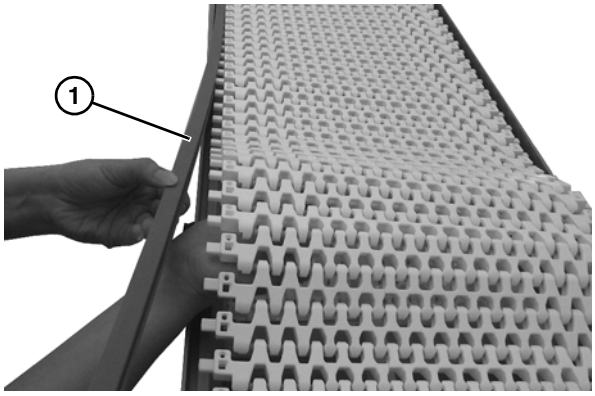


Figure 28

2. Use a punch and hammer to push the belt rod **(Figure 29, item 1)** out by striking the rod end opposite the retaining head.

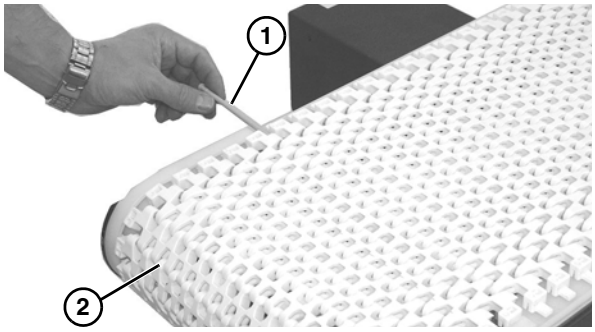


Figure 29

3. Slide the old belt **(Figure 29, item 2)** off the conveyor frame.
4. Replace the old belt with a new one. Refer to “Belt Installation” on page 8.

CAUTION

DO NOT reuse belt rods that are damaged or show signs of wear.

Conveyor Belt Tensioning

⚠ WARNING

SEVERE HAZARD!

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

NOTE

Belt should not be stretched during installation. A proper length of belt can be installed by interlocking the ends by hand without excess links.

1. Remove one or more belt links to take up tension. Refer to “Replacing a Section of Belt” on page 12.

Wear Strips

Replace the wear strips if they become worn.

Typical Standard Wear Strips **(Figure 30)**

1	Wear Strips, Side
2	Wear Strips, Upper - Belt Running Surface
3	Wear Strips, Lower - Belt Return Surface

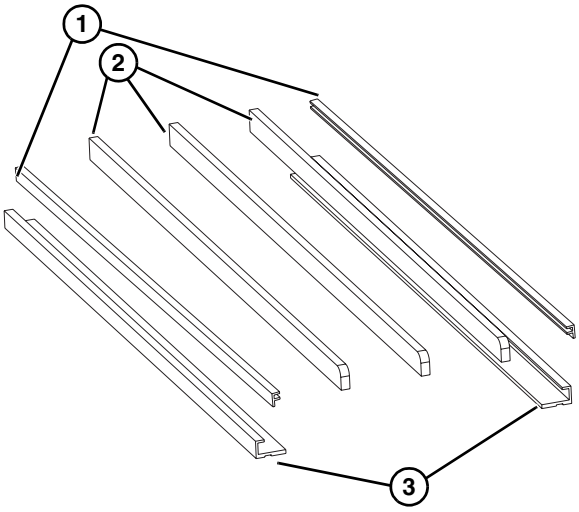


Figure 30

Removal of Upper Wear Strips

1. Remove belt. See “Conveyor Belt Replacement” on page 12.
2. Remove inner spacer **(Figure 31, item 1)** from top of frame assembly.

NOTE

*The upper wearstrips **(Figure 31, item 2)** have a screw **(Figure 31, item 3)** on end of wearstrip that is retained by the inner spacers **(Figure 31, item 1)**.*

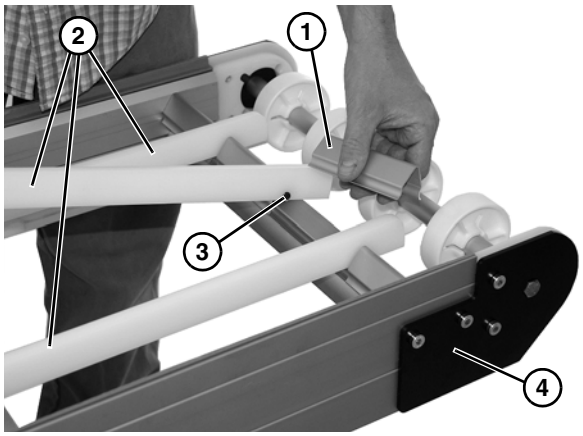


Figure 31

3. Remove upper wear strips **(Figure 31, item 2)**.

Removal of Lower and Side Wear Strips

1. Remove conveyor idler end **(Figure 32, item 1)**. See “C - Idler Spindle Removal” on page 20.

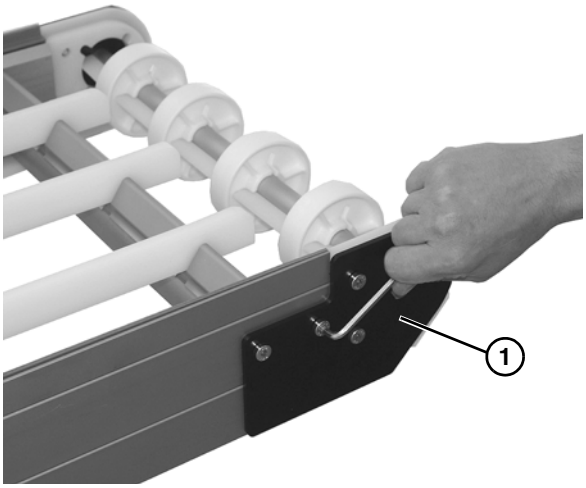


Figure 32

2. Slide lower wear strips **(Figure 33, item 1)**, and raise wear strips **(Figure 33, item 2)** from frame assembly.

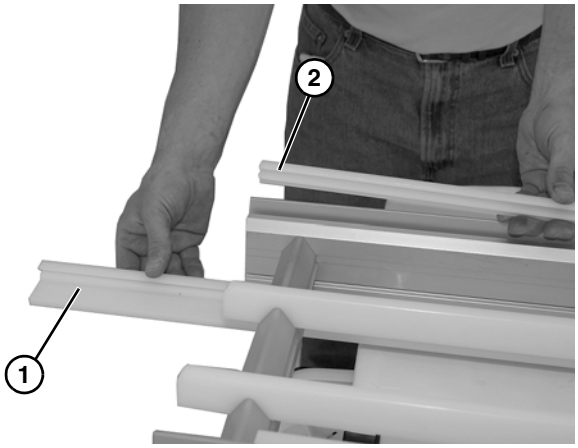


Figure 33

3. Slide lower curve wear strips **(Figure 34, item 1)**, and upper wear strips **(Figure 34, item 2)** from curve frame assembly.

NOTE

These wearstrips extend 3” beyond frame on each end.

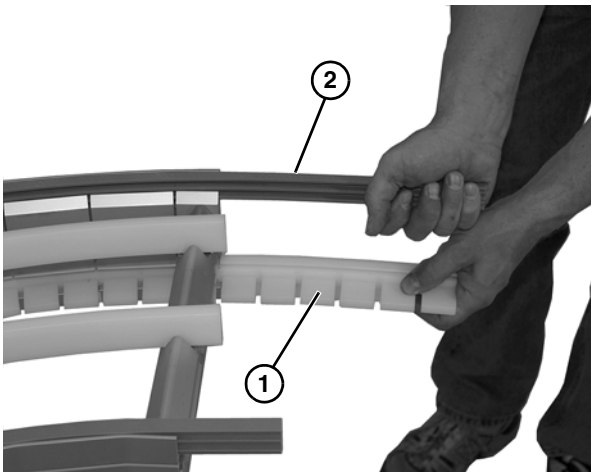


Figure 34

Removal of Belt Returns

Replace the wear strips if they become worn.

Typical Standard Wear Strips **(Figure 35)**

1	Return Support Bracket
2	Return Strip

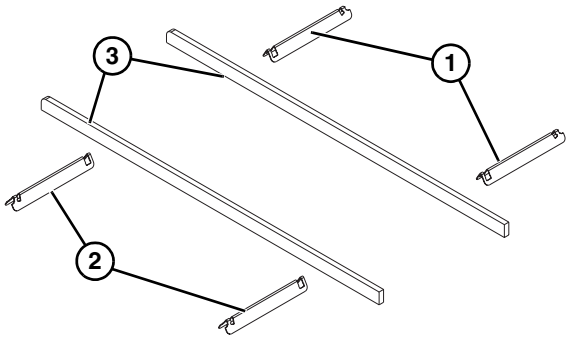


Figure 35

1. Remove return strips **(Figure 36, item 1)**, from brackets **(Figure 36, item 2)**.

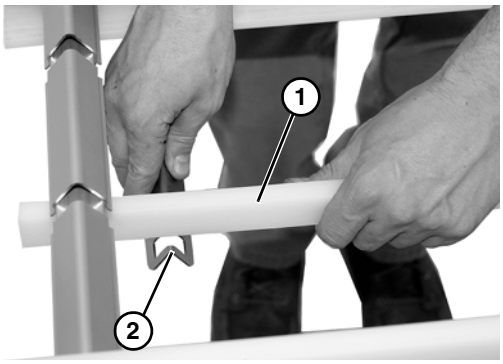


Figure 36

2. If necessary, rotate upward and remove bracket **(Figure 37, item 1)**, from frame channel **(Figure 37, item 2)**.

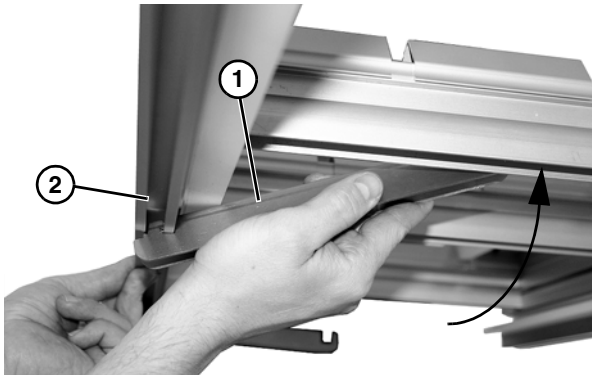


Figure 37

Installation

NOTE

*The rounded ends of top wear strips **(Figure 38, item 1)** faces the idler end **(Figure 38, item 2)** of the conveyor.*

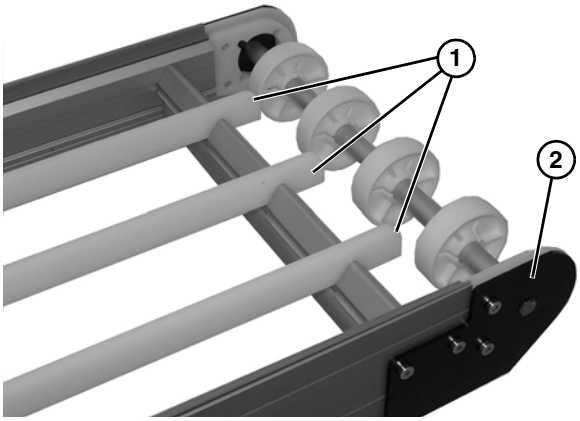


Figure 38

Install components reverse of removal.

Spindle Removal

⚠ WARNING

SEVERE HAZARD!

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

Remove conveyor belt to access spindle(s). See “Replacing the Entire Belt” on page 13. Remove the desired spindle following the corresponding instructions below:

- **A** – Drive Spindle Removal
- **B** – Nose Bar Drive Spindle Removal
- **C** – Idler Spindle Removal
- **D** – Nose Bar Idler Spindle Removal

A – Drive Spindle Removal

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

1. Remove the gearmotor. For detailed instructions, refer to the appropriate drive package manual.
2. Remove the two socket head screws **(Figure 39, item 1)**. Repeat on opposite side.

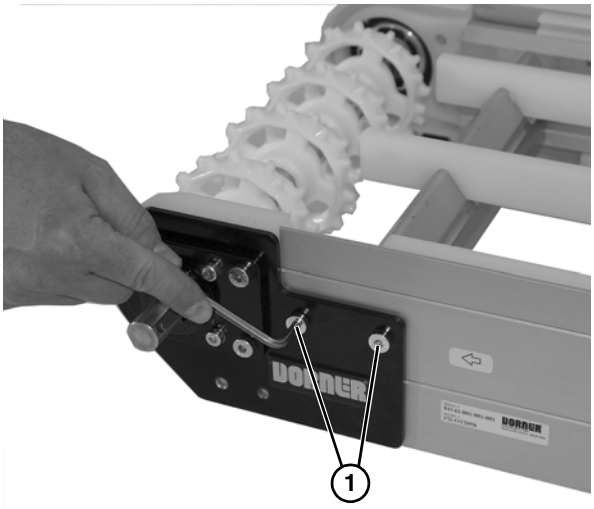


Figure 39

3. Remove the drive tail assembly **(Figure 40, item 1)** from the frame **(Figure 40, item 2)**.

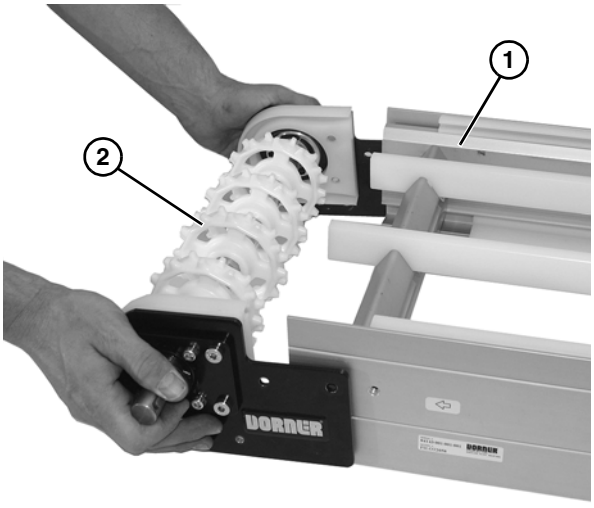


Figure 40

4. Remove the four socket head screws **(Figure 41, item 1)** and cover **(Figure 41, item 2)**.

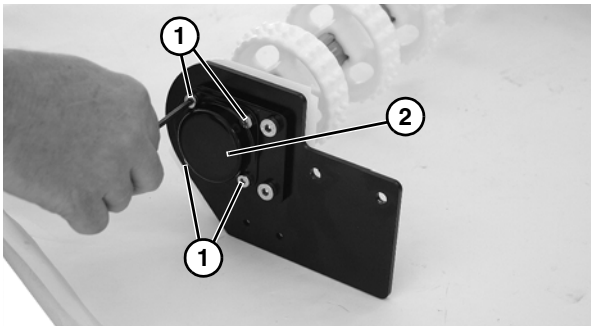


Figure 41

5. Loosen set screw **(Figure 42, item 1)** and remove clamp collar **(Figure 42, item 2)**.

Figure 42

6. Remove end plate **(Figure 43, item 1)** from shaft **(Figure 43, item 2)**.

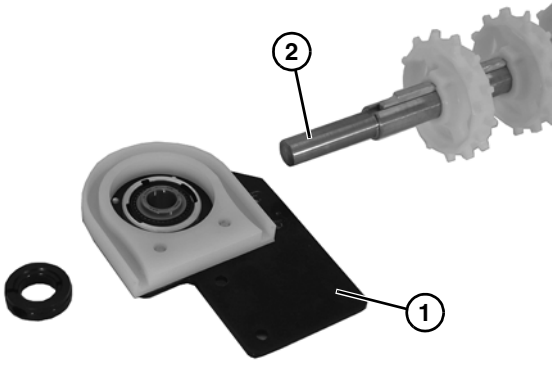


Figure 43

7. Slide entire sprocket assembly slightly outward, and remove the first sprocket **(Figure 44, item 1)** off the drive spindle **(Figure 44, item 2)** and alignment bar **(Figure 44, item 3)**.

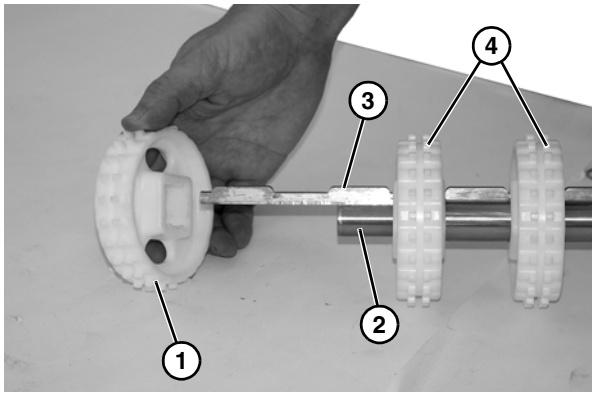


Figure 44

8. Remove remaining sprockets **(Figure 44, item 4)** off the alignment bar as you slide entire assembly off the drive spindle.
9. To assemble sprockets onto drive spindle, slide one sprocket onto alignment bar and slide assembly onto drive spindle.
10. Install second sprocket and subsequent sprockets **(Figure 44, item 4)** one by one, while sliding entire assembly onto alignment bar **(Figure 44, item 3)** and spindle **(Figure 44, item 2)**.
11. Check drive terminal assembly **(Figure 45, item 1)** for wear. If worn, remove two low head cap screws **(Figure 45, item 2)** and replace.

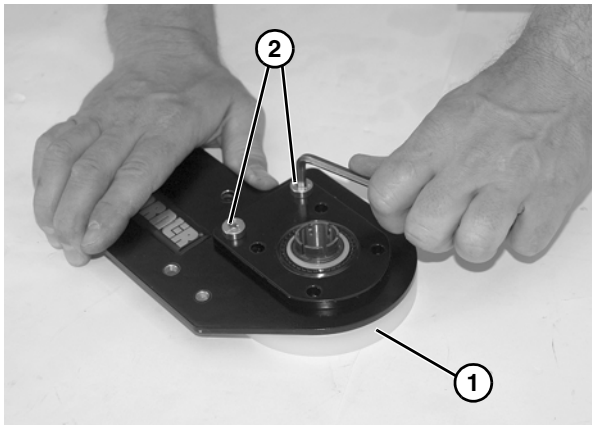


Figure 45

NOTE

When reinstalling the drive spindle tail assembly, the drive tail assembly ***(Figure 46, item 1)*** *should mate flush with the conveyor frame* ***(Figure 46, item 2)****.*

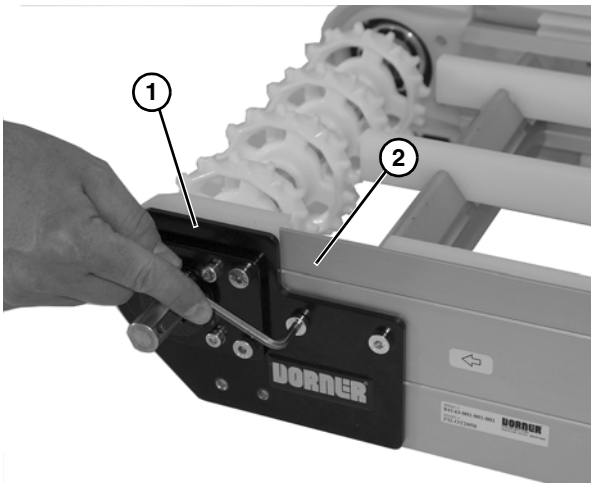


Figure 46

B – Nose Bar Drive Spindle Removal

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

1. Remove the gearmotor. For detailed instructions, refer to the appropriate drive package manual.
2. Remove two socket head bolts **(Figure 47, item 1)** on each side of drive tail assembly **(Figure 47, item 2)**.

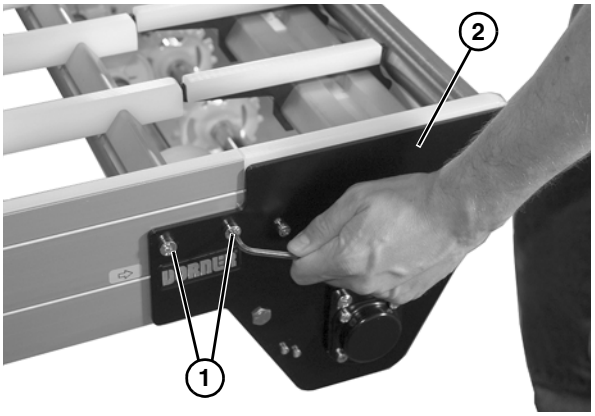


Figure 47

3. Remove the drive tail assembly **(Figure 48, item 1)** from the frame **(Figure 48, item 2)**.

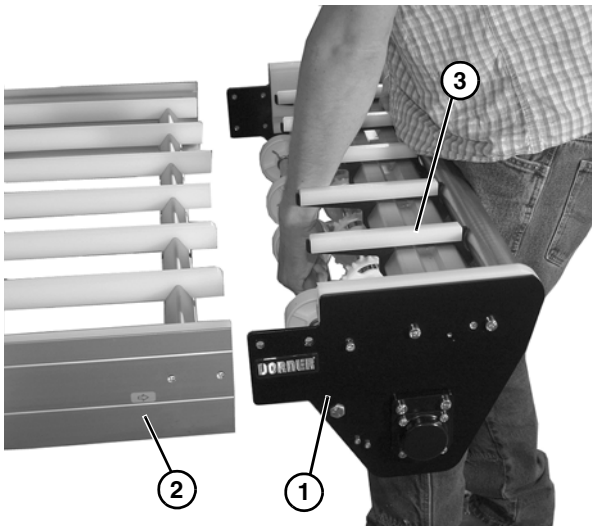


Figure 48

4. Remove wear strips, **(Figure 48, item 3)**, as necessary.
5. Remove two socket head screws **(Figure 49, item 1)** on both sides of the conveyor.

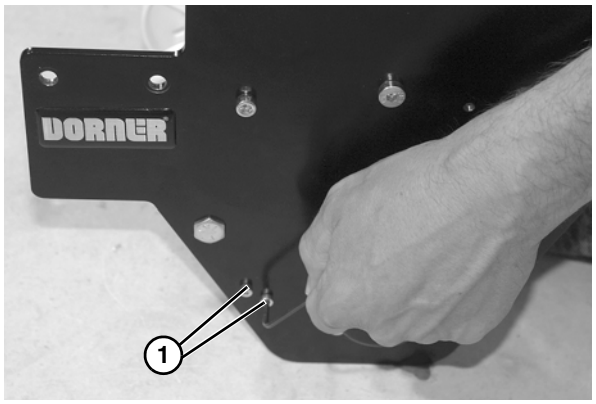


Figure 49

6. Remove pinch guard **(Figure 50, item 1)**.

NOTE
*Note orientation of guard **(Figure 50, item 1)** before removing from end plates.*

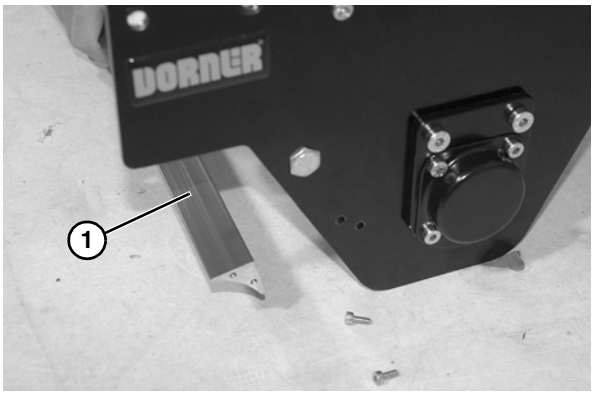


Figure 50

7. On the non-drive side, remove four socket head screws **(Figure 51, item 1)** and cover **(Figure 51, item 2)**.

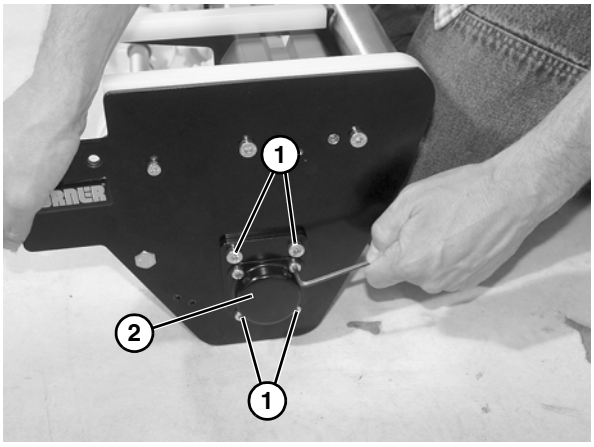


Figure 51

8. Loosen the bearing collar set screw **(Figure 52, item 1)** and remove bearing collar **(Figure 52, item 2)**.

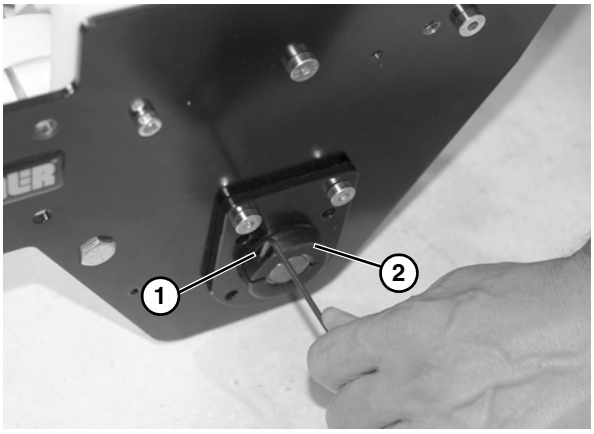


Figure 52

9. Remove two socket head screws **(Figure 53, item 1)** and remove plate **(Figure 53, item 2)**.

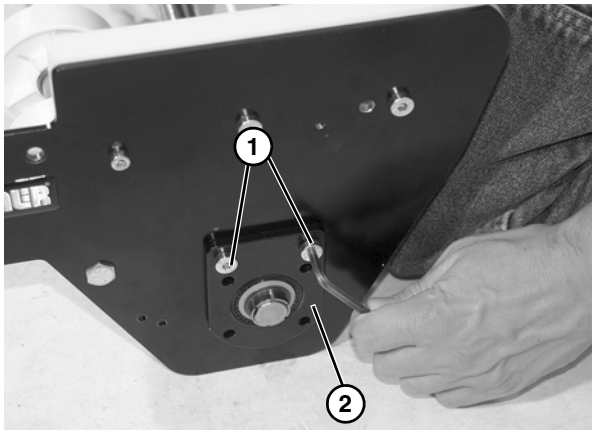


Figure 53

10. Remove two socket head screws **(Figure 54, item 1)** from end plate **(Figure 54, item 2).**

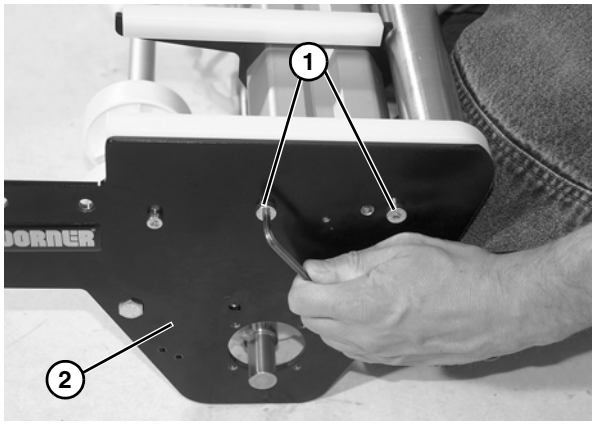


Figure 54

11. Remove end plate **(Figure 55, item 1),** and remove lower roller assembly **(Figure 55, item 2)** from end plate and opposite end plate.

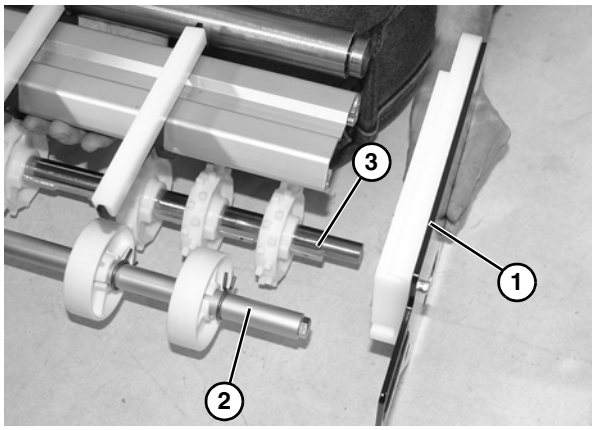


Figure 55

12. Remove drive spindle **(Figure 55, item 3)** from terminal assembly.

13. Remove shaft assembly **(Figure 56, item 1)** from end plate **(Figure 56, item 2)**.

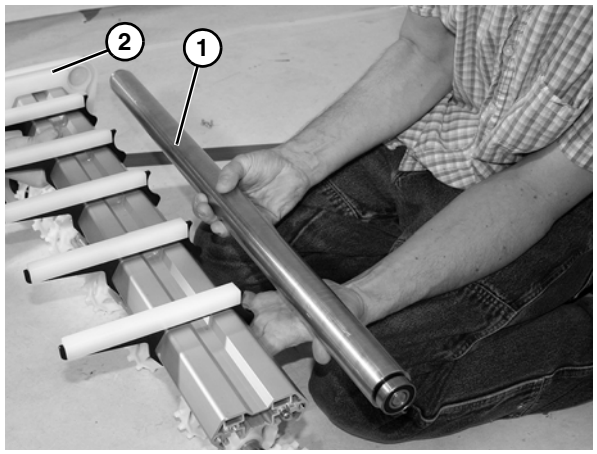


Figure 56

14. Remove each extrusion **(Figure 57, item 1)** and support plate **(Figure 57, item 2)** from crossmember **(Figure 57, item 3)**.

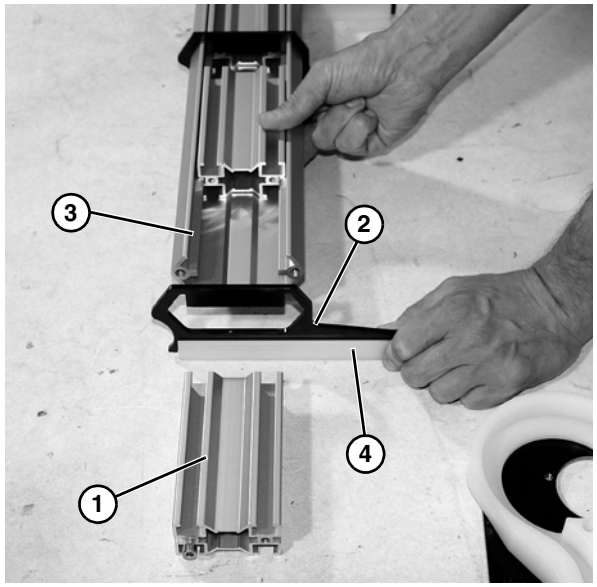


Figure 57

15. Inspect and replace wear strip **(Figure 57, item 4)** if necessary.

16. Check idler terminal assembly **(Figure 58, item 1)** for wear. If worn, remove two low head cap screws **(Figure 58, item 2)** and replace.

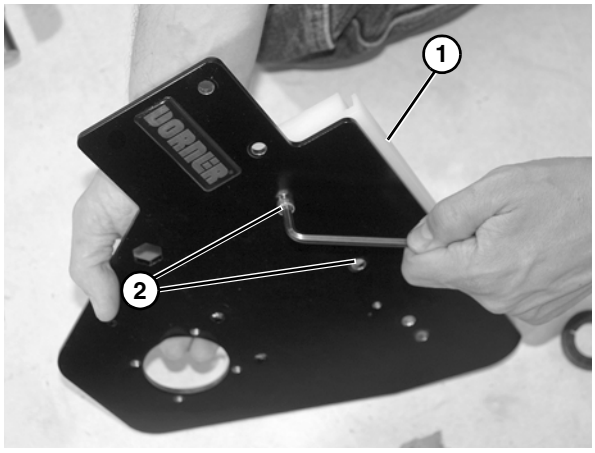


Figure 58

17. Remove rollers **(Figure 59, item 1)** and alignment bar **(Figure 59, item 2)** from shaft **(Figure 59, item 3)**. Inspect and replace if worn.

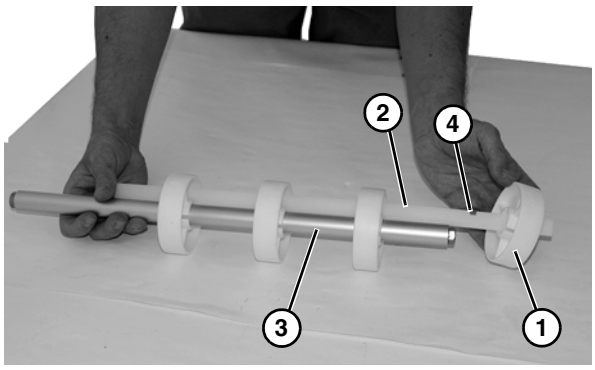


Figure 59

18. Reinstall rollers and alignment bar, with each roller lining up with cutout area **(Figure 59, item 4)** on alignment bar.
19. Slide entire sprocket assembly slightly outward, and remove the first sprocket **(Figure 60, item 1)** off the drive spindle **(Figure 60, item 2)** and alignment bar **(Figure 60, item 3)**.

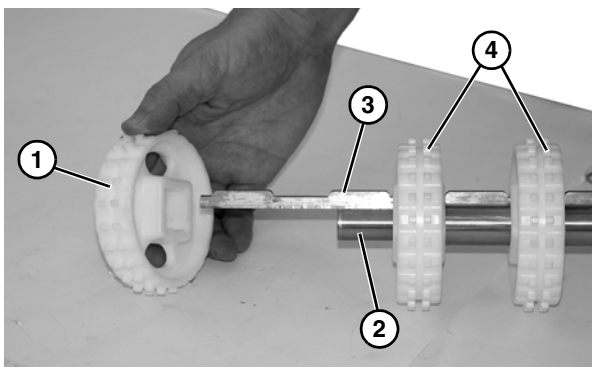


Figure 60

20. Remove remaining sprockets **(Figure 60, item 4)** off the alignment bar as you slide entire assembly off the drive spindle.
21. To assemble sprockets onto drive spindle, slide one sprocket onto alignment bar and slide assembly onto drive spindle.
22. Install second sprocket and subsequent sprockets **(Figure 60, item 4)** one by one, while sliding entire assembly onto alignment bar **(Figure 60, item 3)** and spindle **(Figure 60, item 2)**.

NOTE

*After installing components and belt, secure assembly by backing out socket head screw **(Figure 61, item 1)**. This prevents any rattling of components that may occur during use of conveyor.*

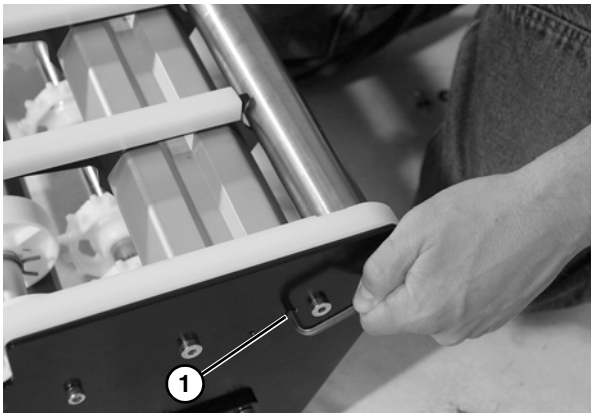


Figure 61

C – Idler Spindle Removal

1. Be sure the conveyor is supported.
2. On one side of conveyor, remove the two socket head screws **(Figure 62, item 1)**.

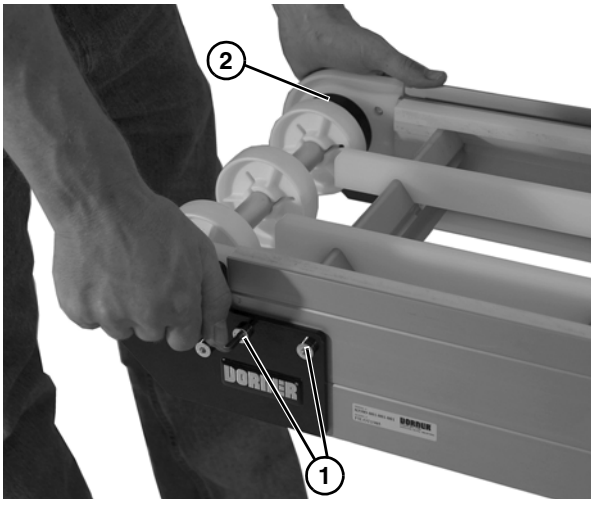


Figure 62

3. Remove idler assembly **(Figure 63, item 1)** from conveyor **(Figure 63, item 2).**

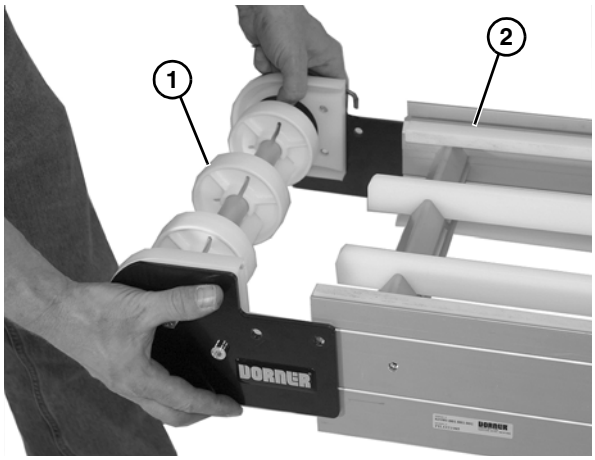


Figure 63

4. Remove end plate **(Figure 64, item 1)** from roller assembly **(Figure 64, item 2)**. Remove opposite end.

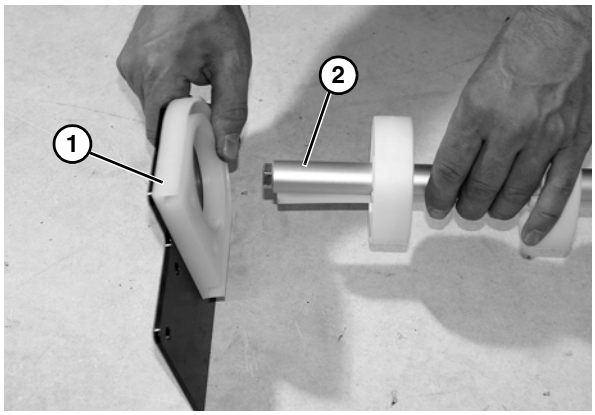


Figure 64

5. Remove rollers **(Figure 65, item 1)** and alignment bar **(Figure 65, item 2)** from shaft **(Figure 65, item 3)**. Inspect and replace if worn.

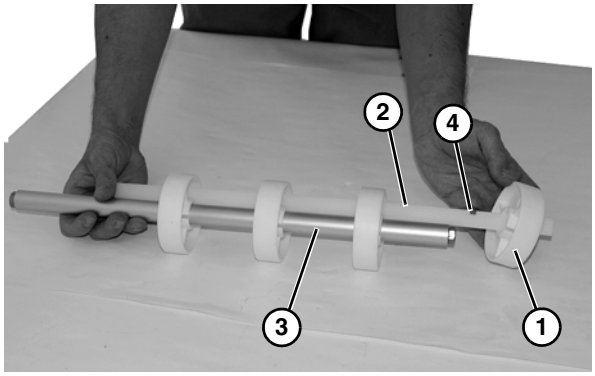


Figure 65

6. Reinstall rollers and alignment bar, with each roller lining up with cutout area **(Figure 65, item 4)** on alignment bar.

7. Check idler terminal assembly **(Figure 66, item 1)** for wear. If worn, remove two low head cap screws **(Figure 66, item 2)** and replace.

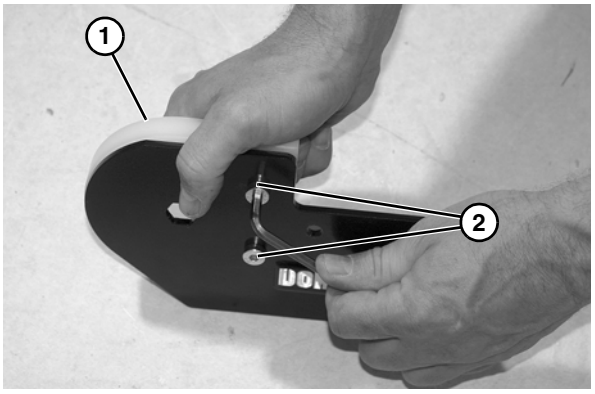


Figure 66

D – Nose Bar Idler Spindle Removal

1. Be sure the conveyor is supported.
2. On one side of conveyor, remove the two socket head screws **(Figure 67, item 1)**. Repeat on opposite side.

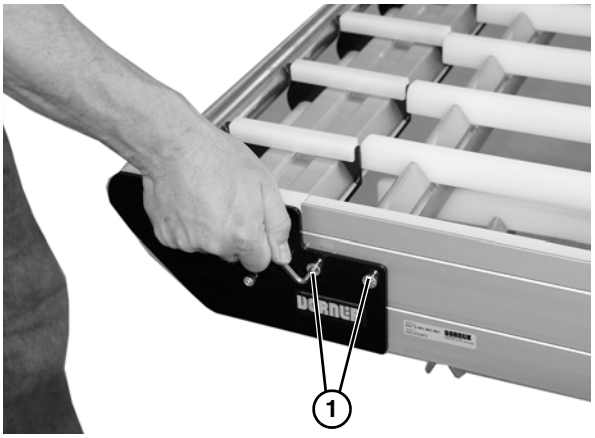


Figure 67

3. Remove idler tail assembly **(Figure 68, item 1)**.

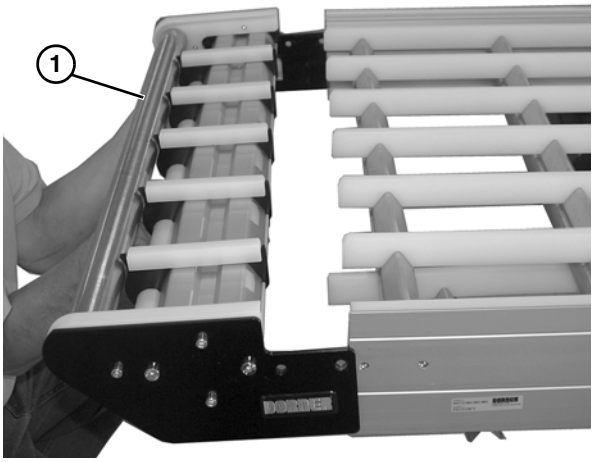


Figure 68

4. Remove two low head cap screws **(Figure 69, item 1)** from plate **(Figure 69, item 2)**. Repeat procedure on opposite side.

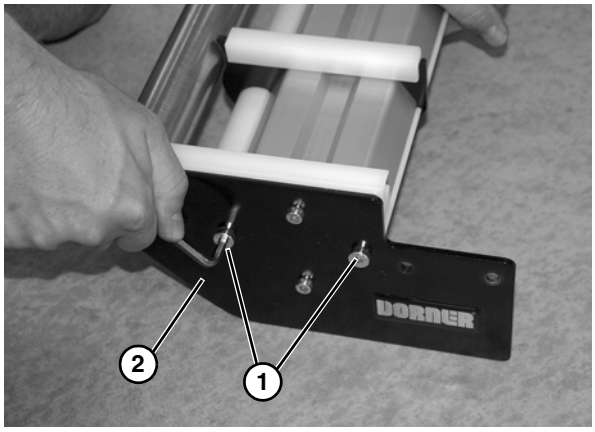


Figure 69

5. Remove plate **(Figure 70, item 1)** from shaft bearing **(Figure 70, item 2)** and crossmember **(Figure 70, item 3)**. Repeat procedure on opposite side.

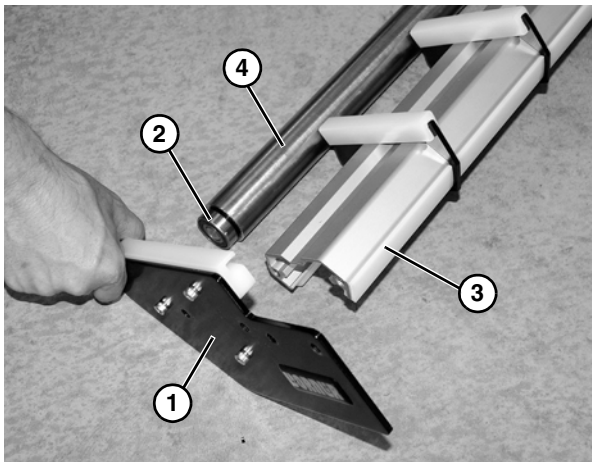


Figure 70

6. Remove shaft **(Figure 70, item 4)** from opposite end plate.

7. Remove each extrusion **(Figure 71, item 1)** and support plate **(Figure 71, item 2)** from crossmember **(Figure 71, item 3)**.

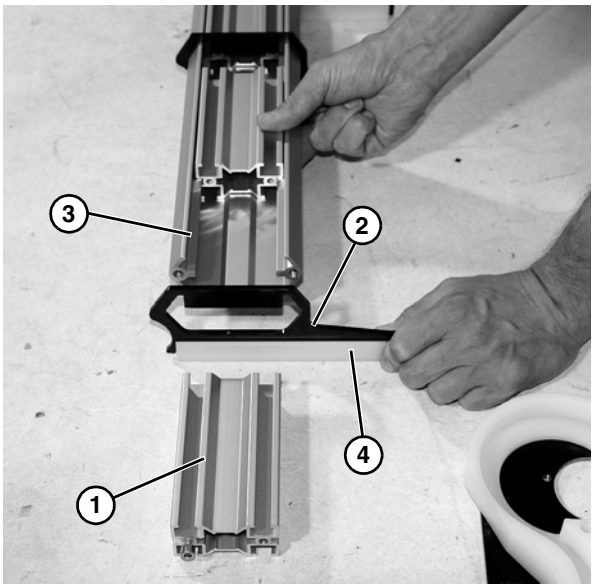


Figure 71

8. Inspect and replace wear strip **(Figure 71, item 4)** if necessary.
9. Check idler terminal assembly **(Figure 72, item 1)** for wear. If worn, remove three low head cap screws **(Figure 72, item 2)** and replace.

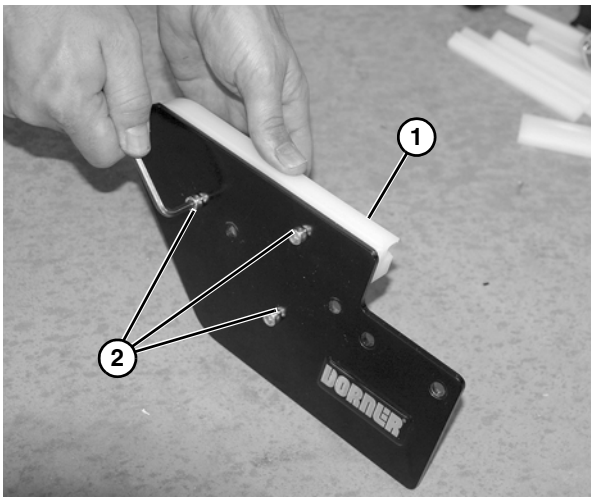


Figure 72

NOTE

*After installing components and belt, secure assembly by backing out socket head screw **(Figure 61, item 1)**. This prevents any rattling of components that may occur during use of conveyor.*

Figure 73

Spindle Replacement

Drive Spindle

To replace the drive spindle, reverse the procedure “A - Drive Spindle Removal” on page 16.

Nose Bar Drive Spindle

To replace the nose bar drive spindle, reverse the procedure “B - Nose Bar Drive Spindle Removal” on page 17.

Idler Spindle

To replace the idler spindle, reverse the procedure “C - Idler Spindle Removal” on page 20.

Nose Bar Idler Spindle

To replace the idler spindle, reverse the procedure “D - Nose Bar Idler Spindle Removal” on page 21.

Bearing Replacement

⚠ WARNING

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

Drive Bearing Removal and Replacement

⚠ WARNING

Drive shaft keyway may be sharp. HANDLE WITH CARE.

Removal

1. Turn bearing **(Figure 74, item 1)** to align with slots **(Figure 74, item 2)** in bearing housing. Then remove bearing.

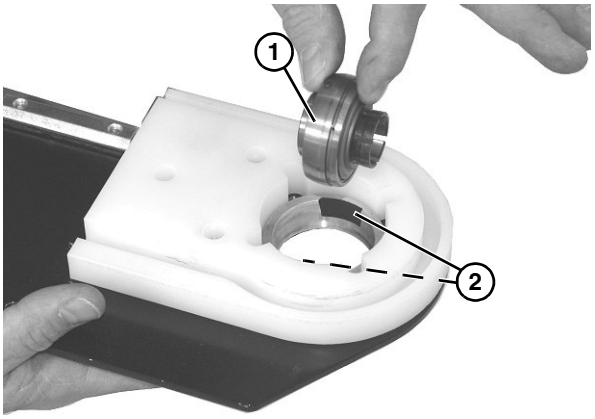


Figure 74

Replacement

1. Inspect bearing housing bearing surface. If worn or damaged, replace. See “Service Parts” on page 24.
2. Insert bearing **(Figure 75, item 1)** into housing slot: Locate anti–rotation nub **(Figure 75, item 2)** to align with slot **(Figure 75, item 3)**, and twist bearing into housing.

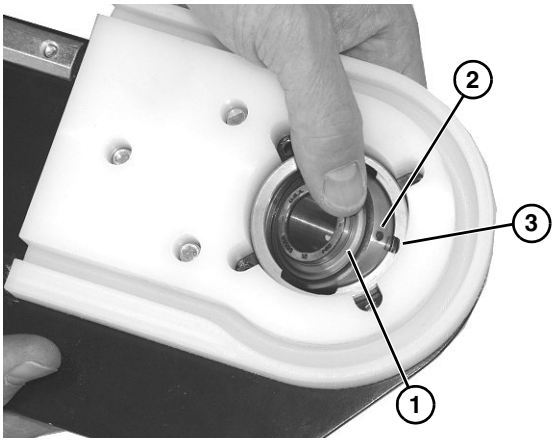


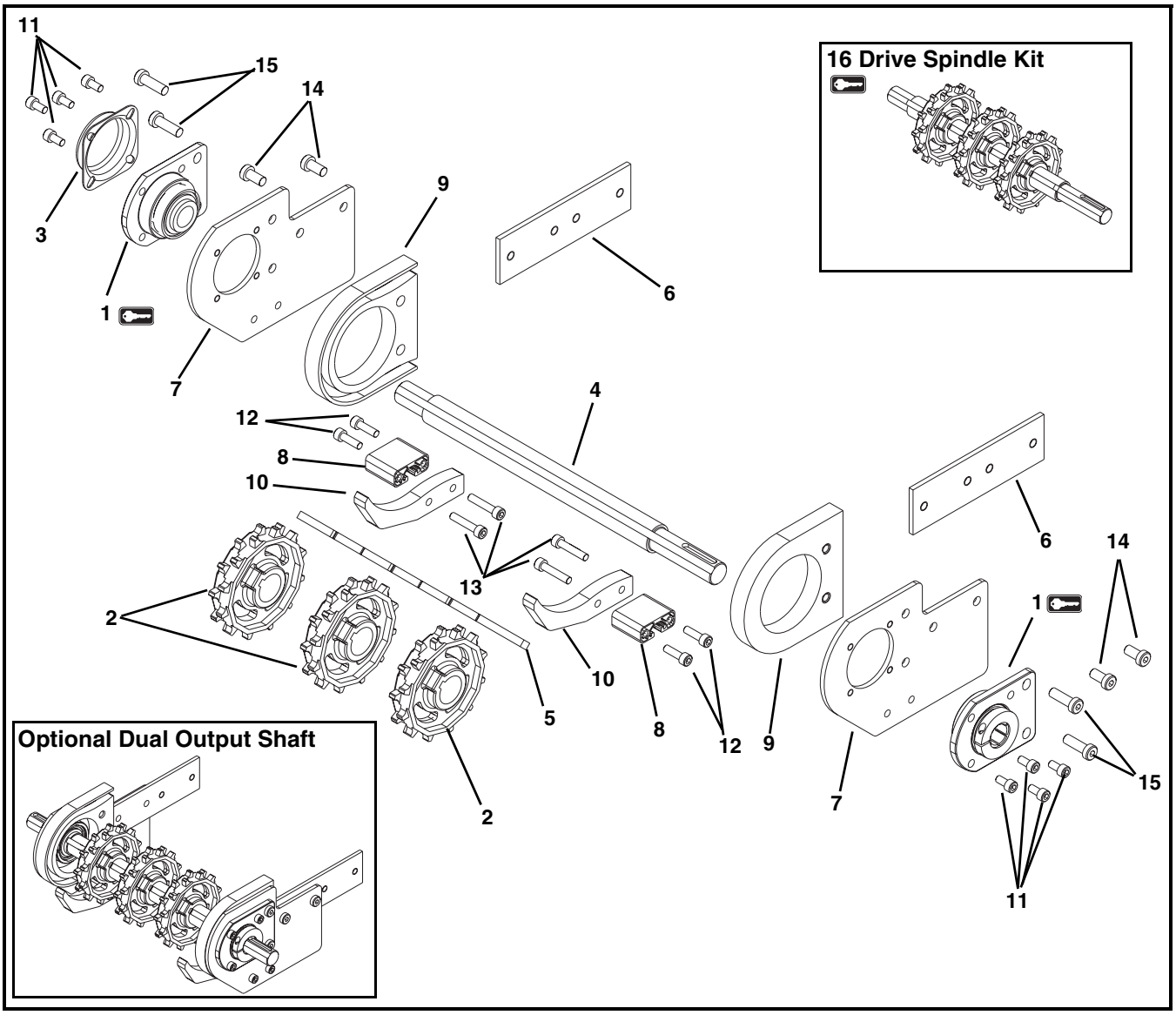
Figure 75

Service Parts

NOTE

For replacement parts other than those shown in this section, contact an authorized Dorner Service Center or the factory. Key Service Parts and Kits are identified by the Performance Parts Kits logo . Dorner recommends keeping these parts on hand.

Drive End Components

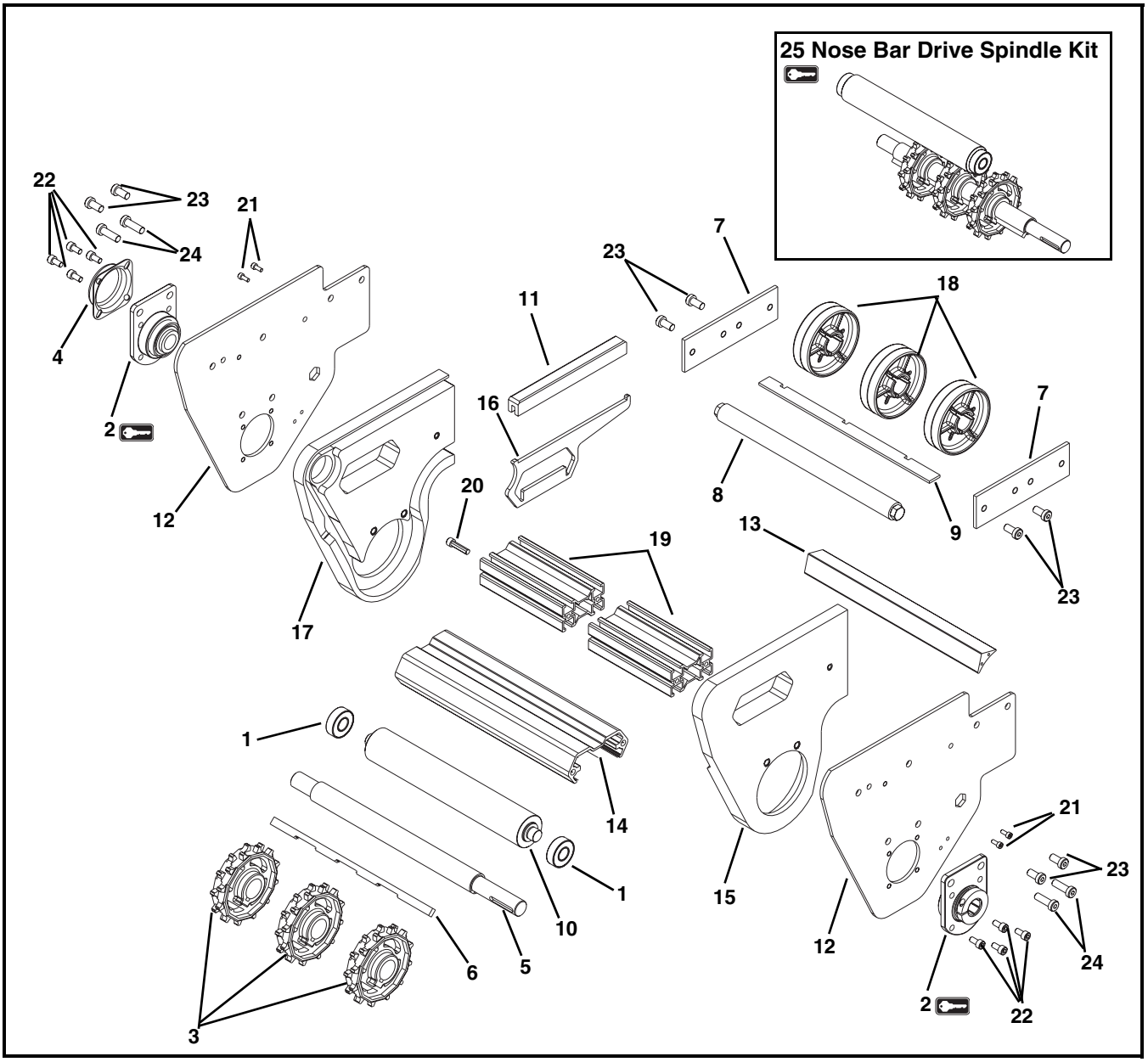


Item	Part Number	Description
1	52BKD	Bearing Kit (Qty. 2)
2	807-1754	Sprocket
3	300139	Shaft Cover
4	352179-WW	Drive Spindle
	352361-WW	Double Output Shaft Drive Spindle
5	352181-WW	Sprocket Alignment Key
6	352184	Clamp Plate
7	352192	Cover Plate
8	352301-00131	Limiter Spacer for 8" - 24" wide conveyors
	352301-00800	Limiter Spacer for 26" - 36" wide conveyors

Item	Part Number	Description
9	352351	Terminal Assembly
10	352352	Drive Shoe
11	920612M	Socket Head Screw M6-1.00 x 12 mm
12	920620M	Socket Head Screw M6-1.00 x 20 mm
13	920630M	Socket Head Screw M6-1.00 x 30 mm
14	920893M	Low Head Cap Screw, M8-1.25 x 16 mm
15	920895M	Low Head Cap Screw, M8-1.25 x 25 mm
16	53CDT-WW	Drive Spindle Kit (Includes items 2, 4 and 5)

WW = Conveyor width reference: 08 – 36 in 02 increments

Nose Bar Drive End Components

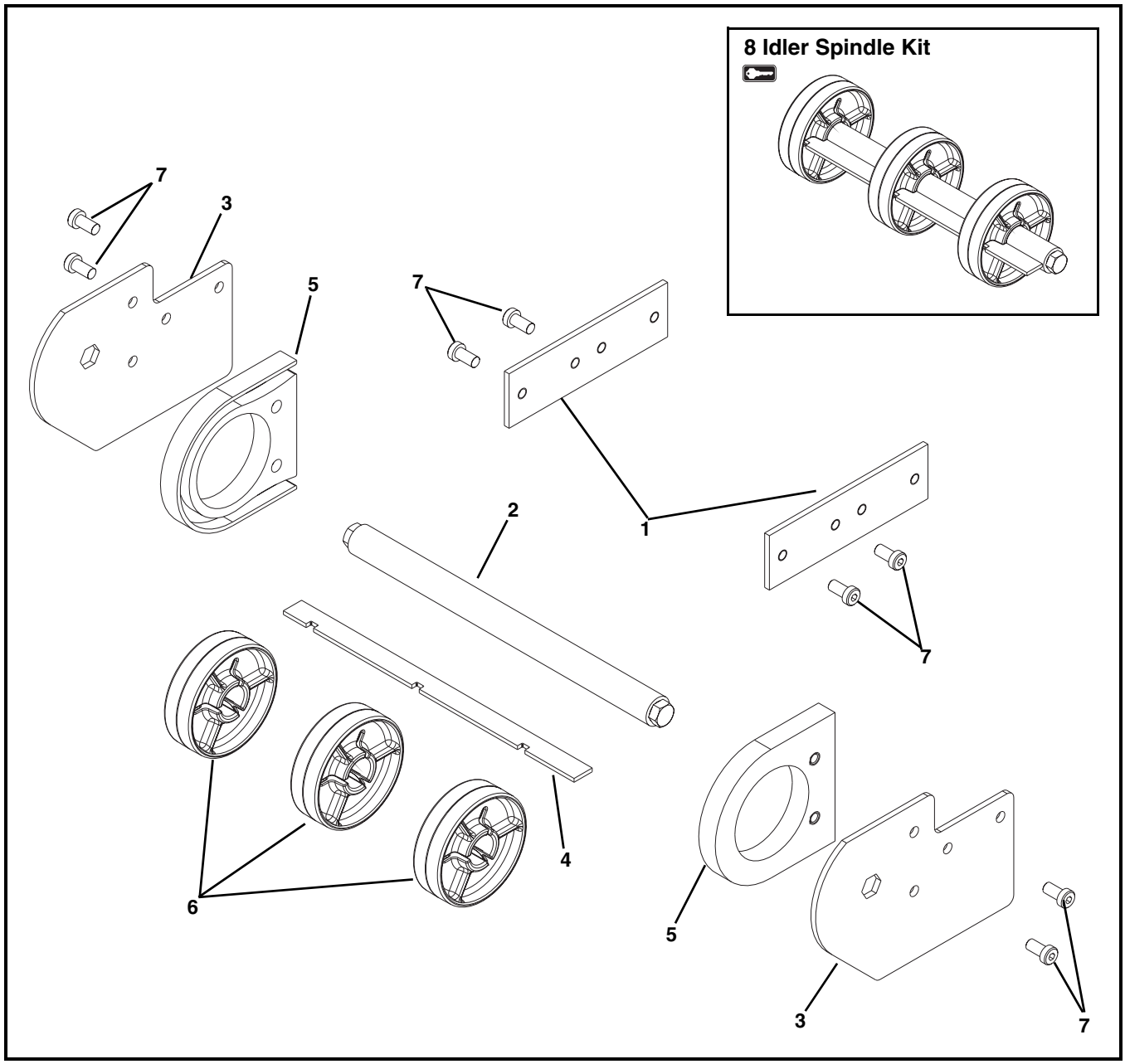


Item	Part Number	Description
1	802-124	Bearing
2	52BKD	Bearing Kit (Qty. 2)
3	807-1754	Sprocket
4	300139	Shaft Cover
5	352179-WW	Drive Spindle
6	352181-WW	Sprocket Key
7	352184	Clamp Plate
8	352190-WW	Shaft Assembly
9	352196-WW	Alignment Bar
10	352252-WW	Spindle
11	352282	Wear Strip
12	352283	Tail Plate
13	352286-WW	Pinch Guard
14	352291-WW	Crossmember
15	352292	Terminal Assembly Right Hand

Item	Part Number	Description
16	352296	Support Plate
17	352299	Terminal Assembly Left Hand
18	506296	Idler Puck
19	710211-LLLLL	Extrusion
20	708180P	Socket Head Screw M6-1.00 x 25 mm
21	920410M	Socket Head Screw M4-.70 x 10 mm
22	920612M	Socket Head Screw M6-1.00 x 12 mm
23	920893M	Low Head Cap Screw, M8-1.25 x 16 mm
24	920895M	Low Head Cap Screw, M8-1.25 x 25 mm
25	53CNBDT-WW	Nose Bar Drive Spindle Kit (Includes items 1, 3, 5, 6 and 10)
WW = Conveyor width reference: 08 – 36 in 02 increments		
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

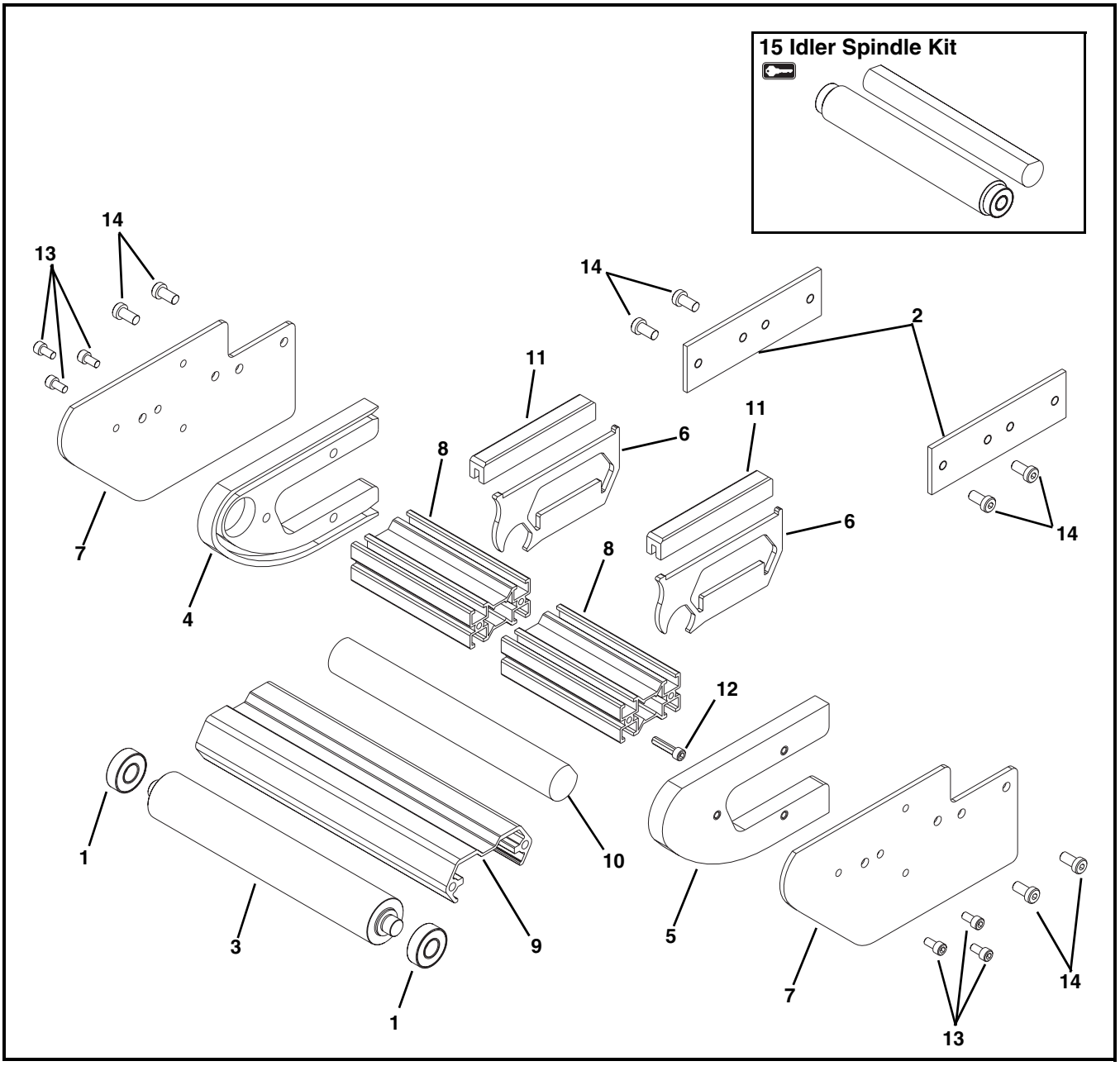
Service Parts

Idler End Components



Item	Part Number	Description
1	352184	Clamp Plate
2	352190-WW	Shaft Assembly
3	352193	Cover Plate
4	352196-WW	Alignment Bar
5	352351	Terminal Assembly
6	506296	Idler Puck
7	920893M	Low Head Cap Screw, M8-1.25 x 16 mm
8	53CET-WW	Idler Spindle Kit (Includes items 2, 4, and 6)
WW = Conveyor width reference: 08 – 36 in 02 increments		

Nose Bar Idler End Components

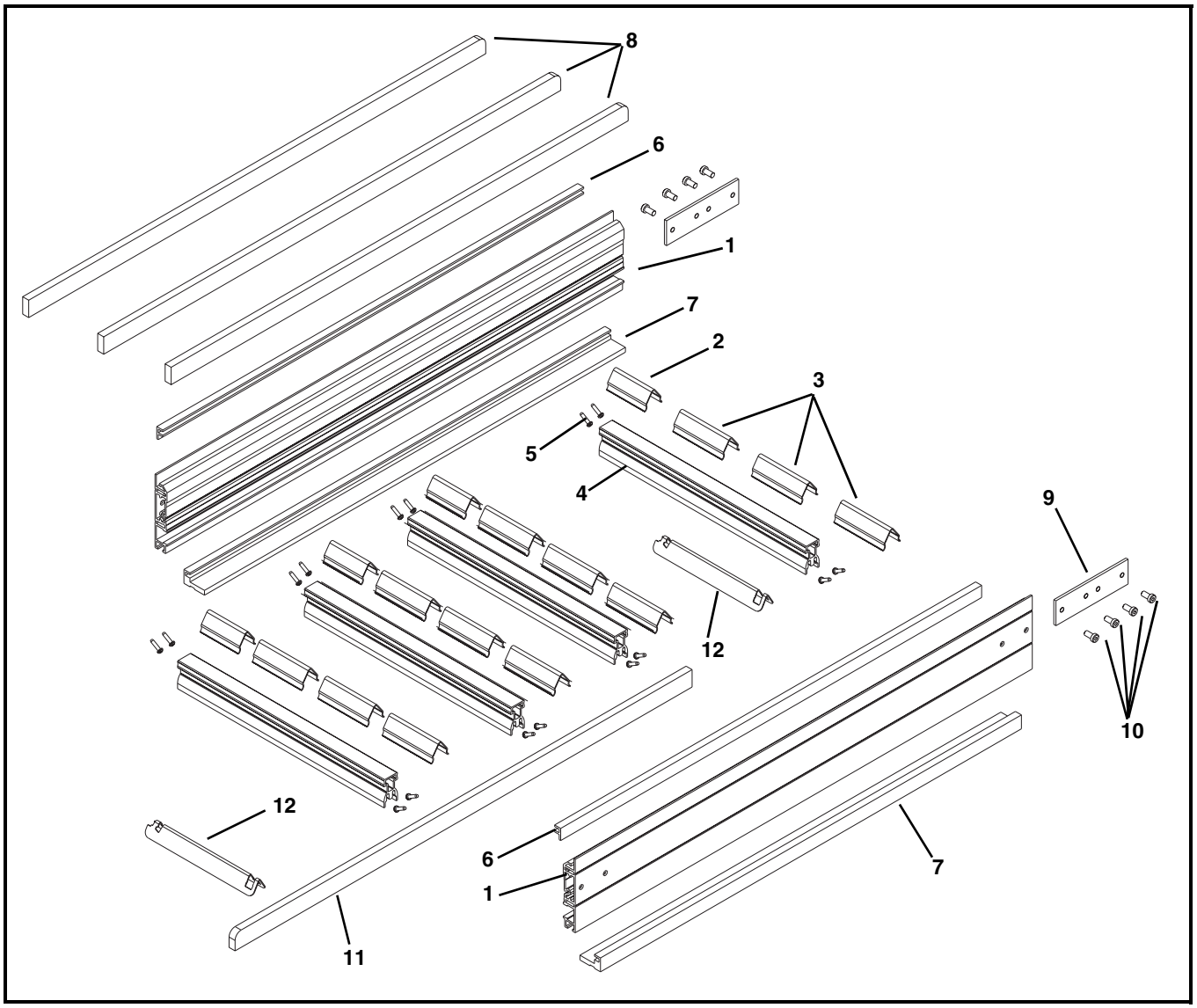


Item	Part Number	Description
1	802-124	Bearing
2	352184	Clamp Plate
3	352252-WW	Spindle
4	352259	Terminal Assembly Left Hand
5	352260	Terminal Assembly Right Hand
6	352287	Support Plate
7	352288	Tail Plate
8	352290-WW	Extrusion
9	352291-WW	Crossmember
10	352353-WW	Belt Support Rod
11	532289	Wear Strip

Item	Part Number	Description
12	708180P	Socket Head Screw, M6-1.00 x 25 mm
13	920612M	Socket Head Screw, M6-1.00 x 12 mm
14	920893M	Low Head Cap Screw, M8-1.25 x 16 mm
15	53CNBET-WW	Nose Bar Idler Spindle Kit (Includes items 1, 3, and 10)
WW = Conveyor width reference: 08 – 36 in 02 increments		

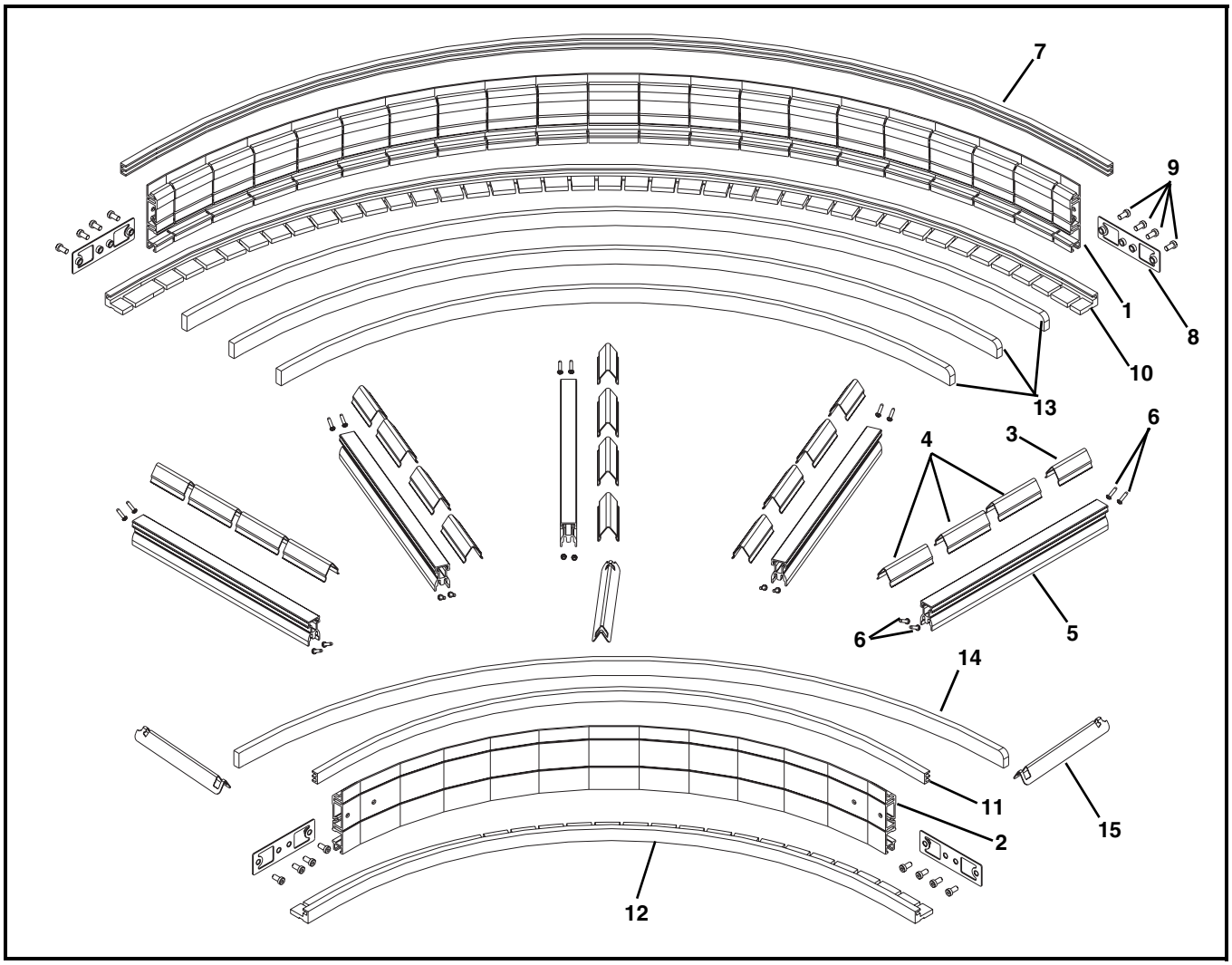
Service Parts

Frame Assembly



Item	Part Number	Description
1	352171-LLLLL	Side Rail
2	352172-WW	First Spacer
3	3521720-00	Spacer
	352172-06A	Spacer for 6" wide conveyor only
4	352170-WWC	Center Rail
5	352108	Pan Screw, M5-.80 x 20 mm
6	352163-LLLLL	Edge Strip
7	352177-LLLLL	Edge Return Wear Strip
8	352167-LLLLL	Wear Strip
9	352184	Clamp Plate
10	920893M	Low Head Cap Screw, M8-1.25 x 16 mm
11	532162-LLLLL	Return Strip
12	352168	Return Support Bracket
WW = Conveyor width reference: 08 – 36 in 02 increments		
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

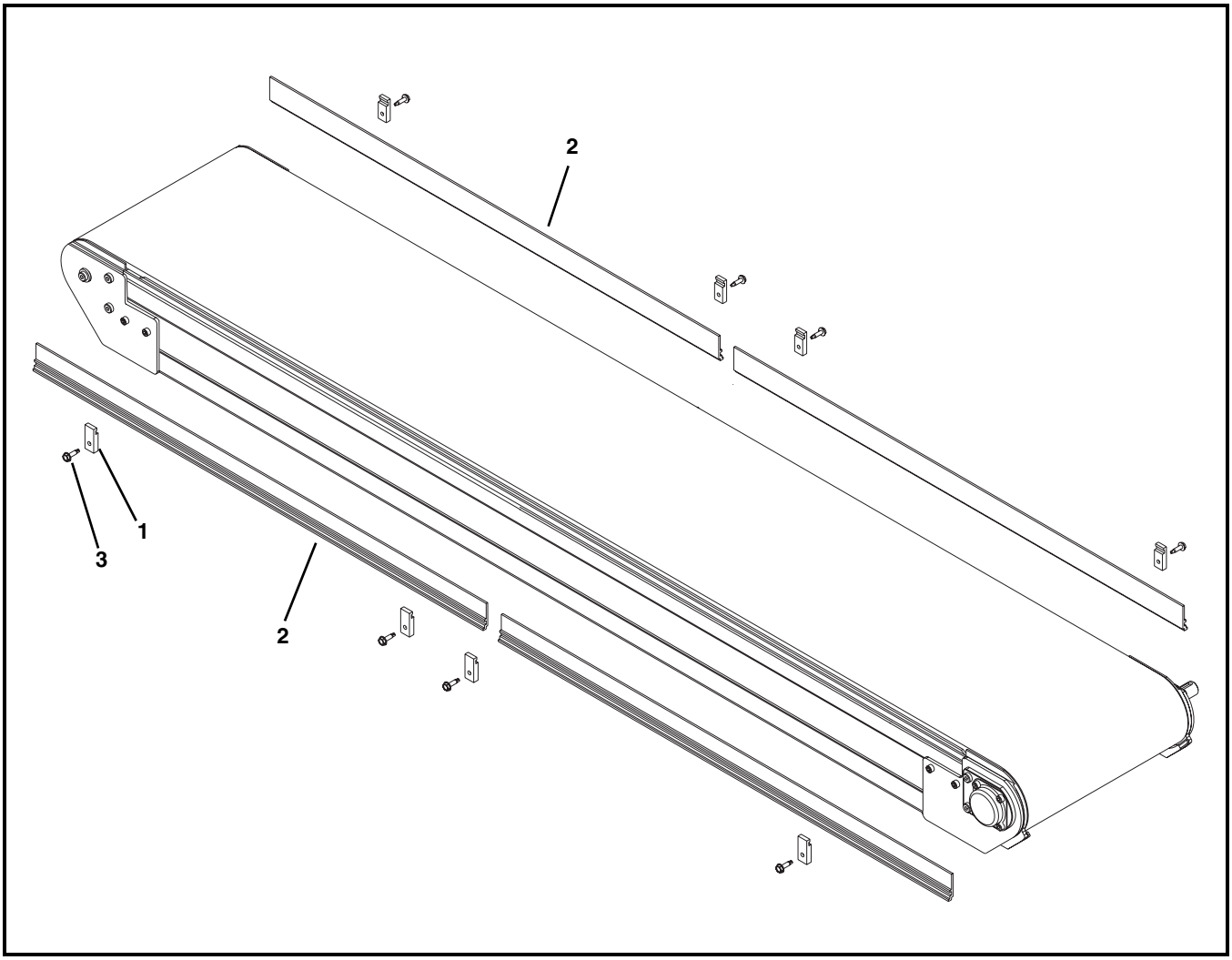
Curve Conveyor Frame and Wear Strips



Item	Part Number	Description
1	352198-WW-AAA	Side Rail Outer Curve
2	352197-WW-AAA	Side Rail Inner Curve
3	352172-WWC	First Spacer
4	3521720-00	Spacer
5	352170-WW	Center Rail
6	352108	Pan Screw, M5-.80 x 20 mm
7	352355-WW-AAA	Top Outer Wear Strip
8	352185	Nut Plate
9	920893M	Low Head Cap Screw, M8-1.25 x 16 mm
10	352357-WW-AAA	Bottom Outer Wear Strip
11	352354-WW-AAA	Top Inner Wear Strip
12	352356-WW-AAA	Bottom Inner Wear Strip
13	352358-WW-AAA	Wear Strip
14	352359-WW-AAA	Return Wear Strip
15	352168	Return Bracket
WW = Conveyor width reference: 08 – 36 in 02 increments		
AAA = Degree of Curve		

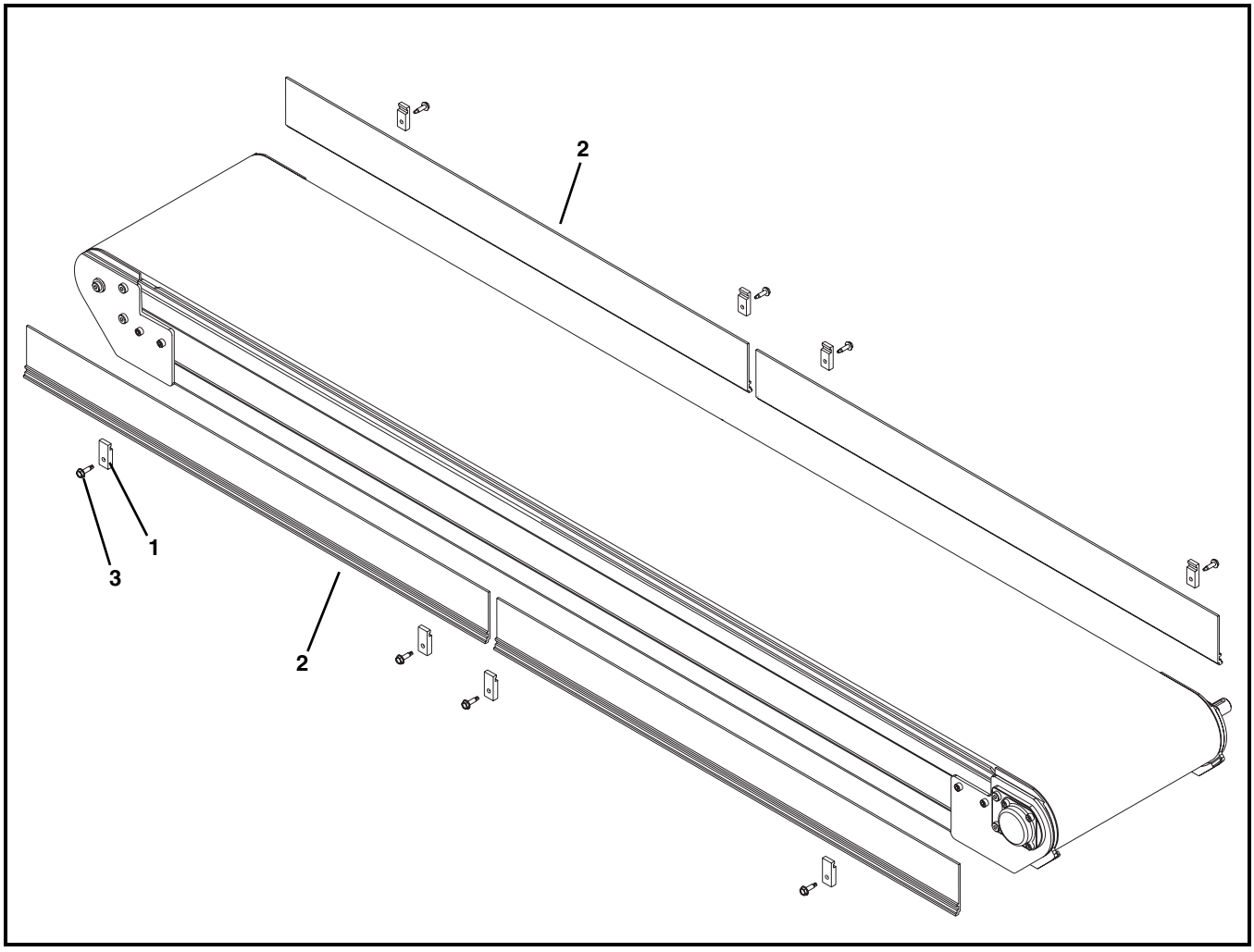
Service Parts

1.5” (38 mm) High Sides



Item	Part Number	Description
1	352182	Guide Retaining Clip
2	380500-LLLLL	1" Guides
3	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1”
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

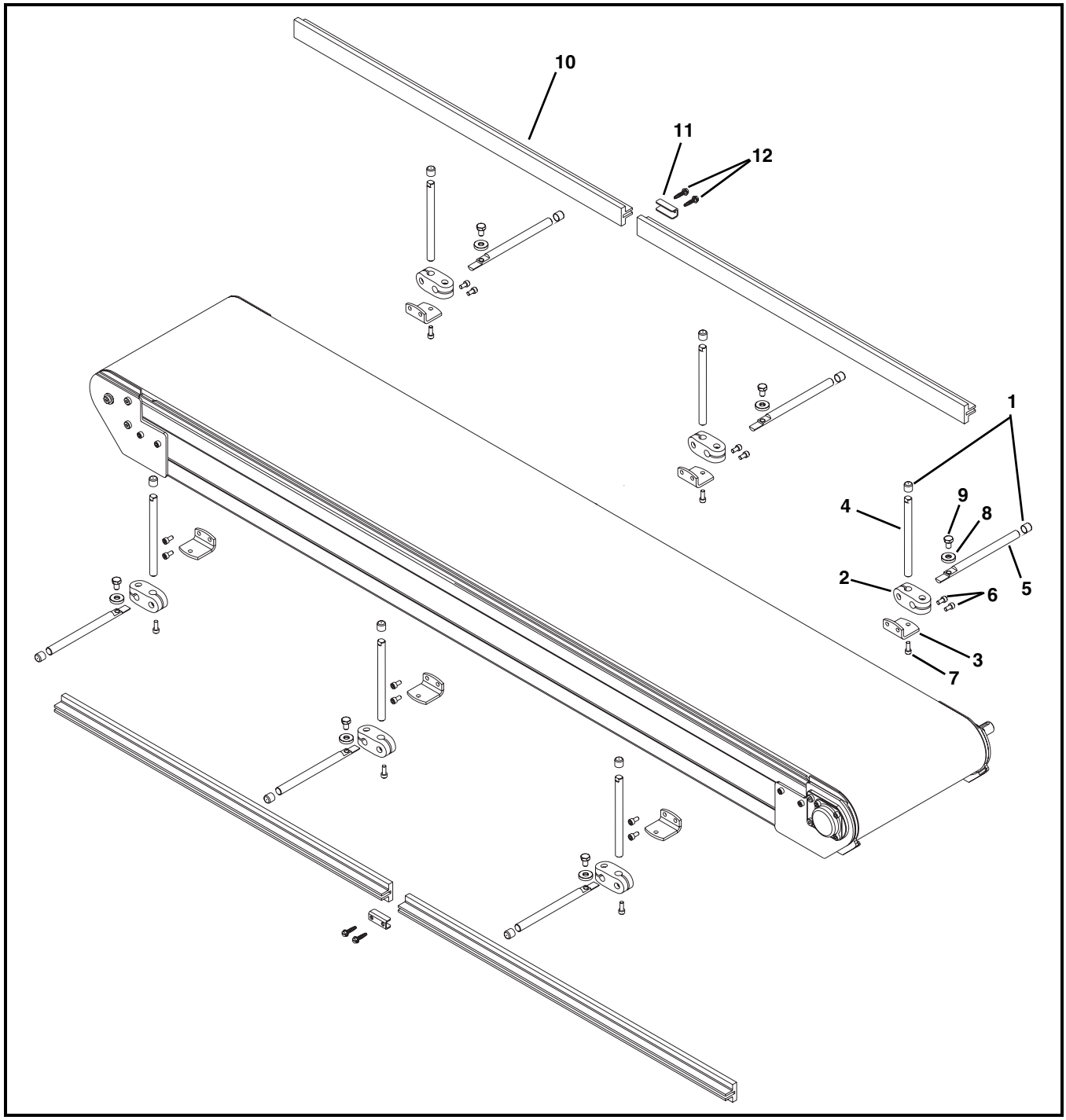
3” (76 mm) High Sides



Item	Part Number	Description
1	352182	Guide Retaining Clip
2	380400-LLLLL	3" Guides
3	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1”
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

Service Parts

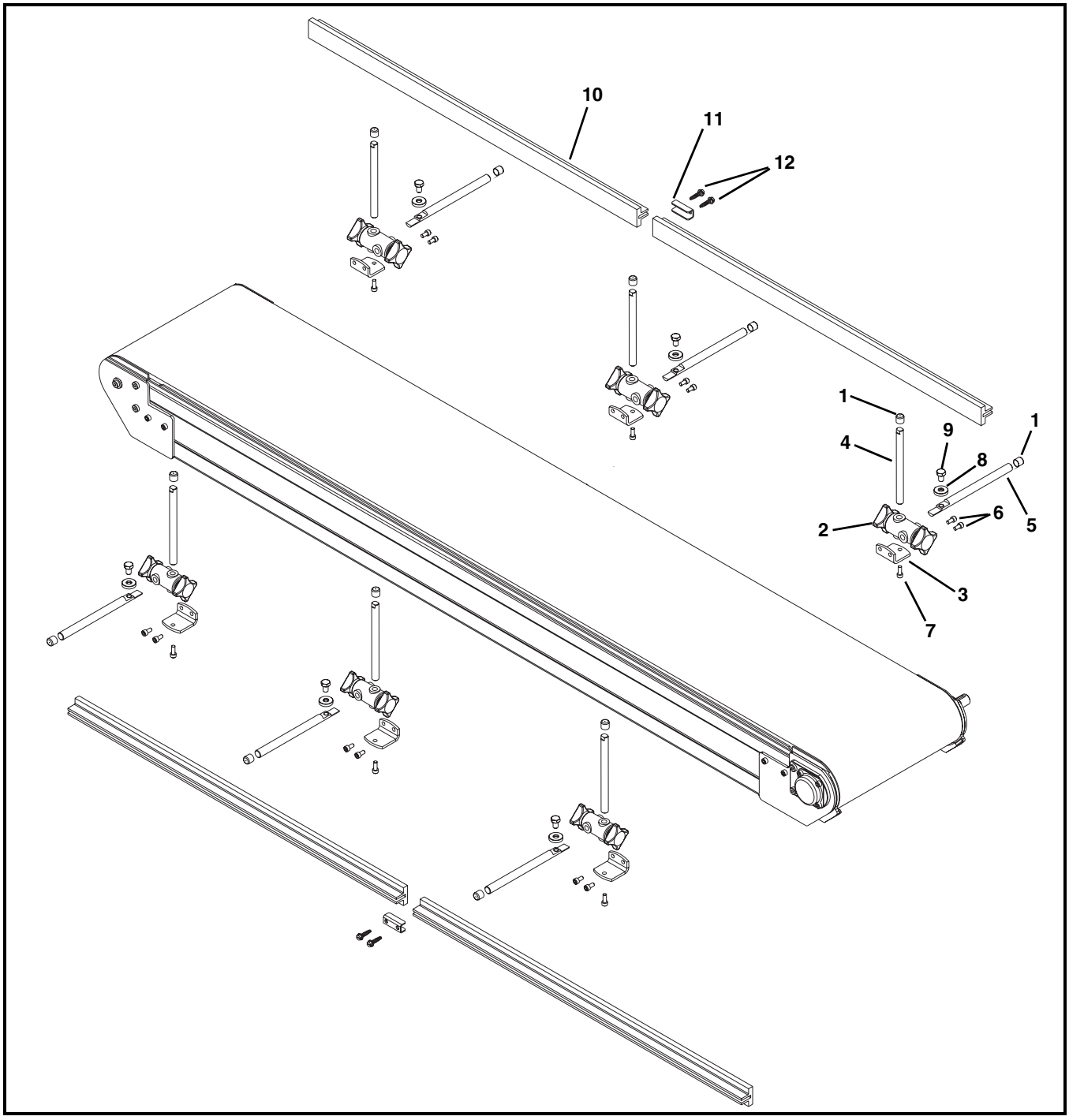
Fully Adjustable Guiding



Item	Part Number	Description
1	807-948	Shaft Cap
2	807-652	Cross Block
3	202004	Mounting Bracket
4	202027M	Vertical Mounting Guide Shaft
5	532178	Horizontal Mounting Guide Shaft
6	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1”
7	920612M	Socket Head Screw, M6-1.00 x 12 mm

Item	Part Number	Description
8	532179	Washer
9	960812MSS	Hex Head Cap Screw M8-1.25 x 12mm
10	352363-LLLLL	Guide Rail
11	532195	Guide Connecting Clip
12	807-1840	Hex Head Washer Screw
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

Tool-Less Fully Adjustable Guiding

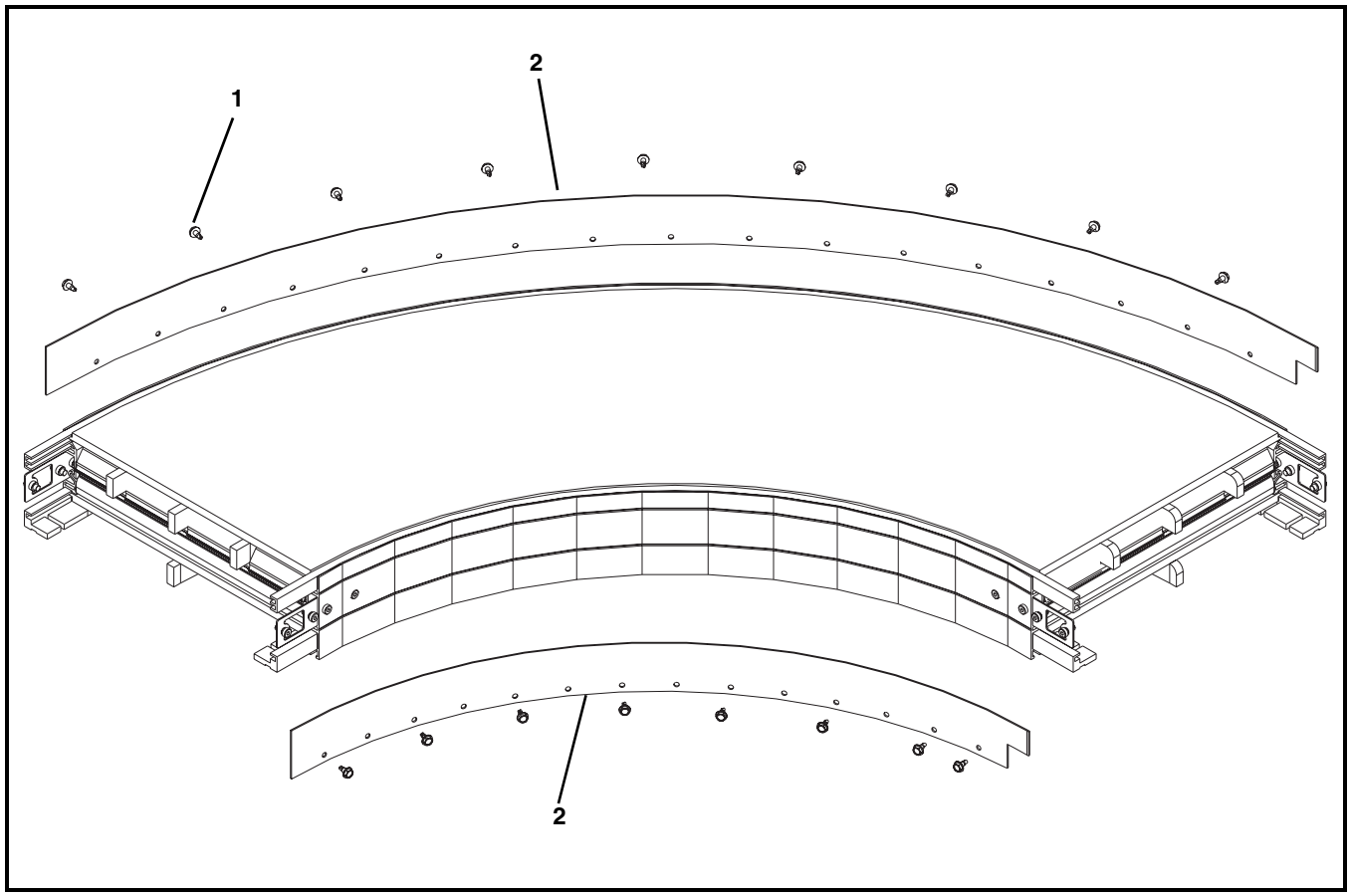


Item	Part Number	Description
1	807-948	Shaft Cap
2	807-1470	Cross Block
3	202004	Mounting Bracket
4	202027M	Vertical Mounting Guide Shaft
5	532178	Horizontal Mounting Guide Shaft
6	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1”
7	920612M	Socket Head Screw, M6-1.00 x 12 mm

Item	Part Number	Description
8	532179	Washer
9	960812MSS	Hex Head Cap Screw M8-1.25 x 12mm
10	352363-LLLLL	Guide Rail
11	532195	Guide Connecting Clip
12	807-1840	Hex Head Washer Screw
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

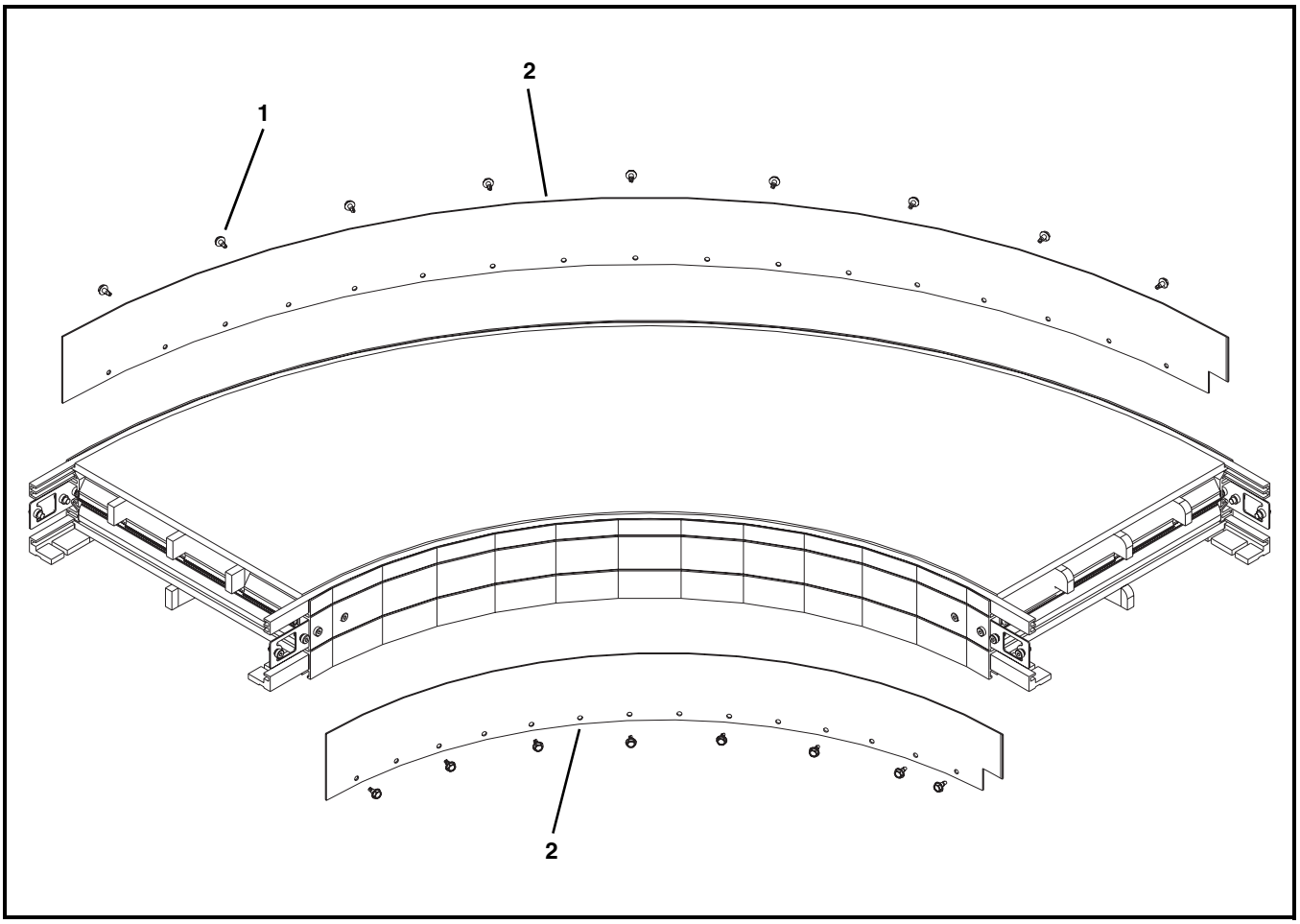
Service Parts

1.5” (38 mm) High Sides for Curve Module



Item	Part Number	Description
1	807-1943	Self-Drilling Hex Head Screw, 1/4-20 x 5/8"
2	352294-LLLLL	1.5" High Side Curve Guiding
LLLLL = Length in inches with 2 decimal places.		
Length Example: Guiding Length = 95.25" LLLLL = 09525		

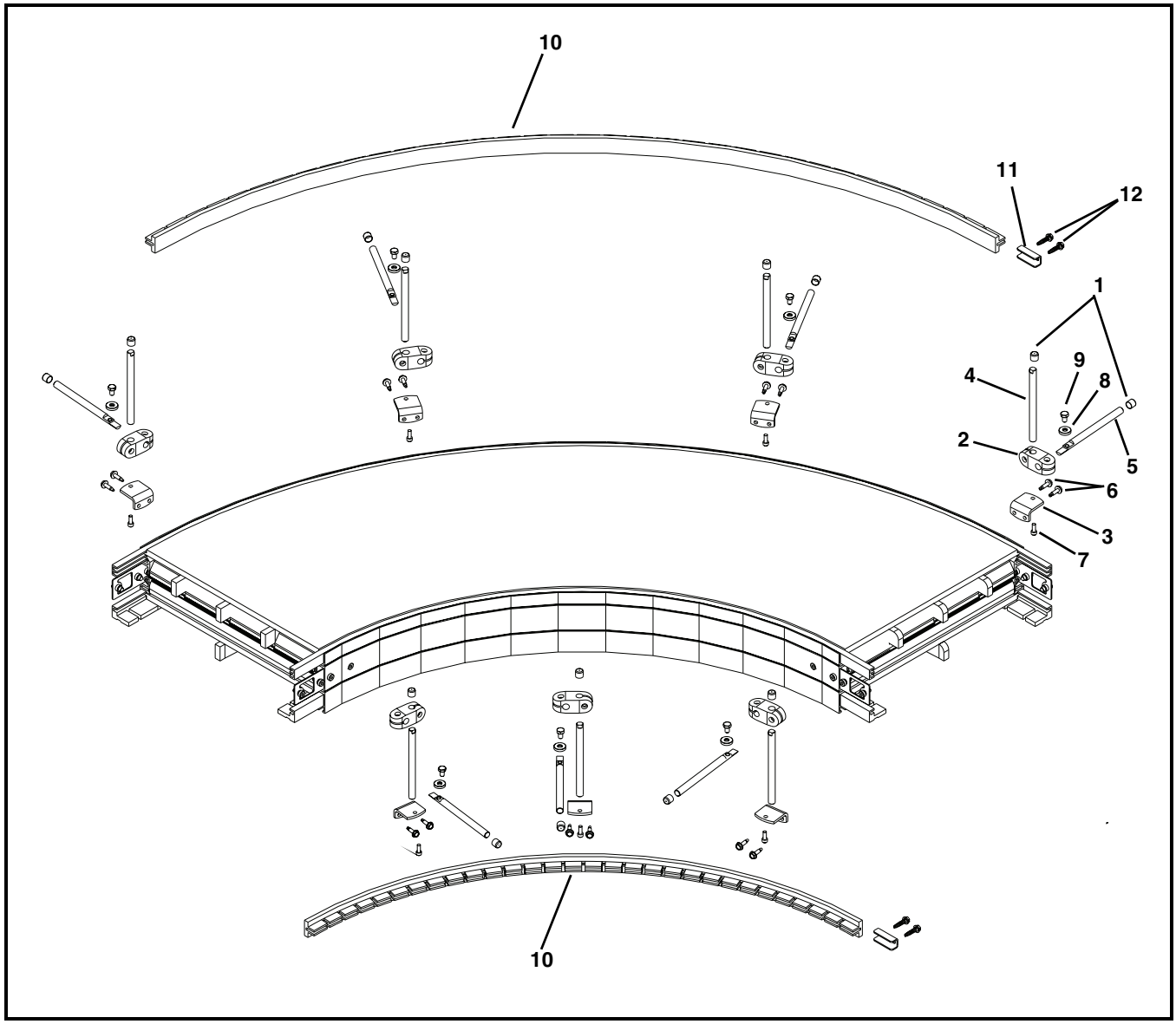
3” (76 mm) High Sides for Curve Module



Item	Part Number	Description
1	807-1943	Self-Drilling Hex Head Screw, 1/4-20 x 5/8"
2	352293-LLLLL	3" High Side Curve Guiding
LLLLL = Length in inches with 2 decimal places.		
Length Example: Guiding Length = 95.25" LLLLL = 09525		

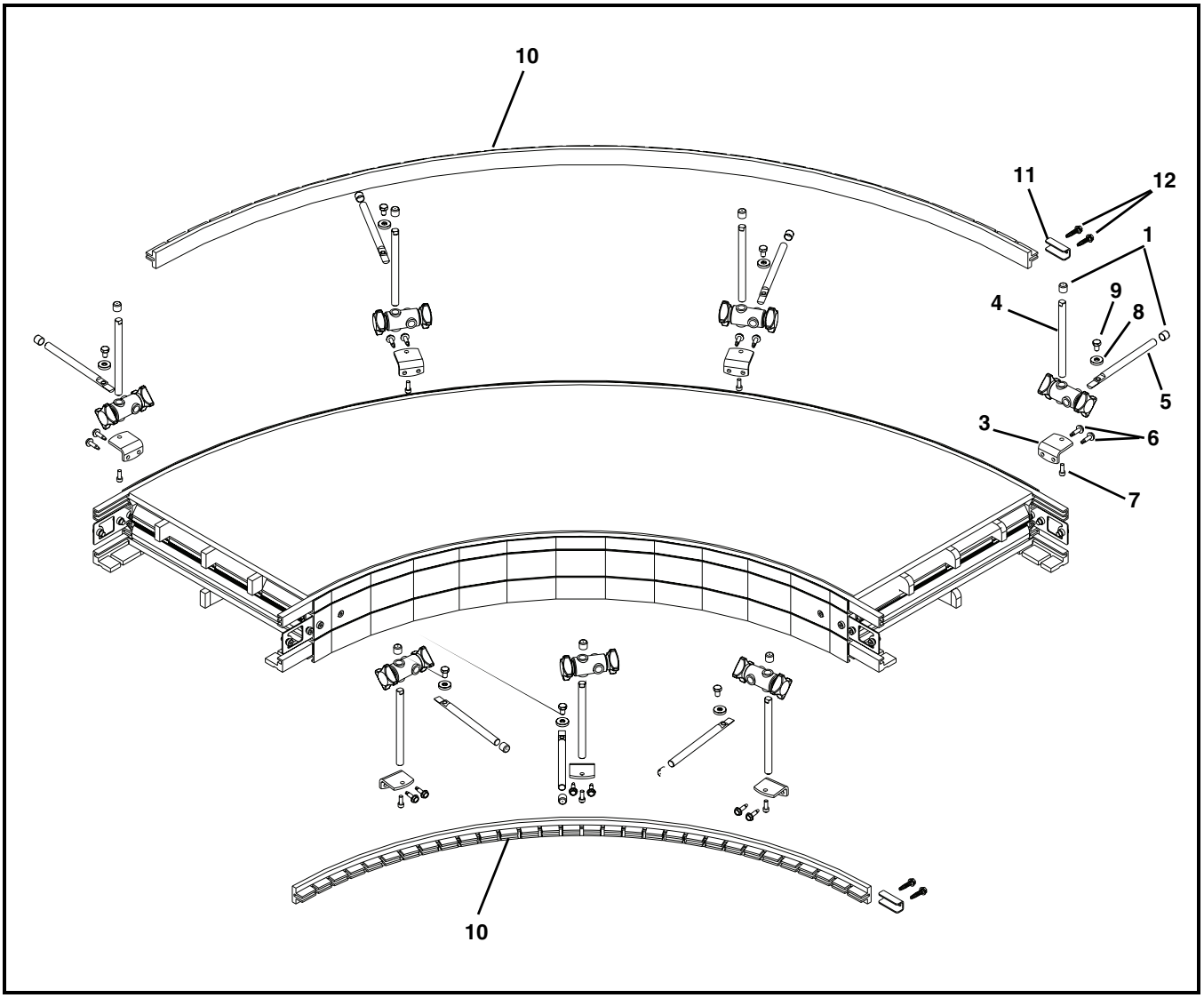
Service Parts

Fully Adjustable Guiding for Curve Module



Item	Part Number	Description
1	807-948	Shaft Cap
2	807-652	Cross Block
3	202004	Mounting Bracket
4	202027M	Vertical Mounting Guide Shaft
5	532178	Horizontal Mounting Guide Shaft
6	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1”
7	920612M	Socket Head Screw, M6-1.00 x 12 mm
8	532179	Washer
9	960812MSS	Hex Head Cap Screw M8-1.25 x 12mm
10	352364-LLLLL	Guide Rail
11	532195	Guide Connecting Clip
12	807-1840	Hex Head Washer Screw
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

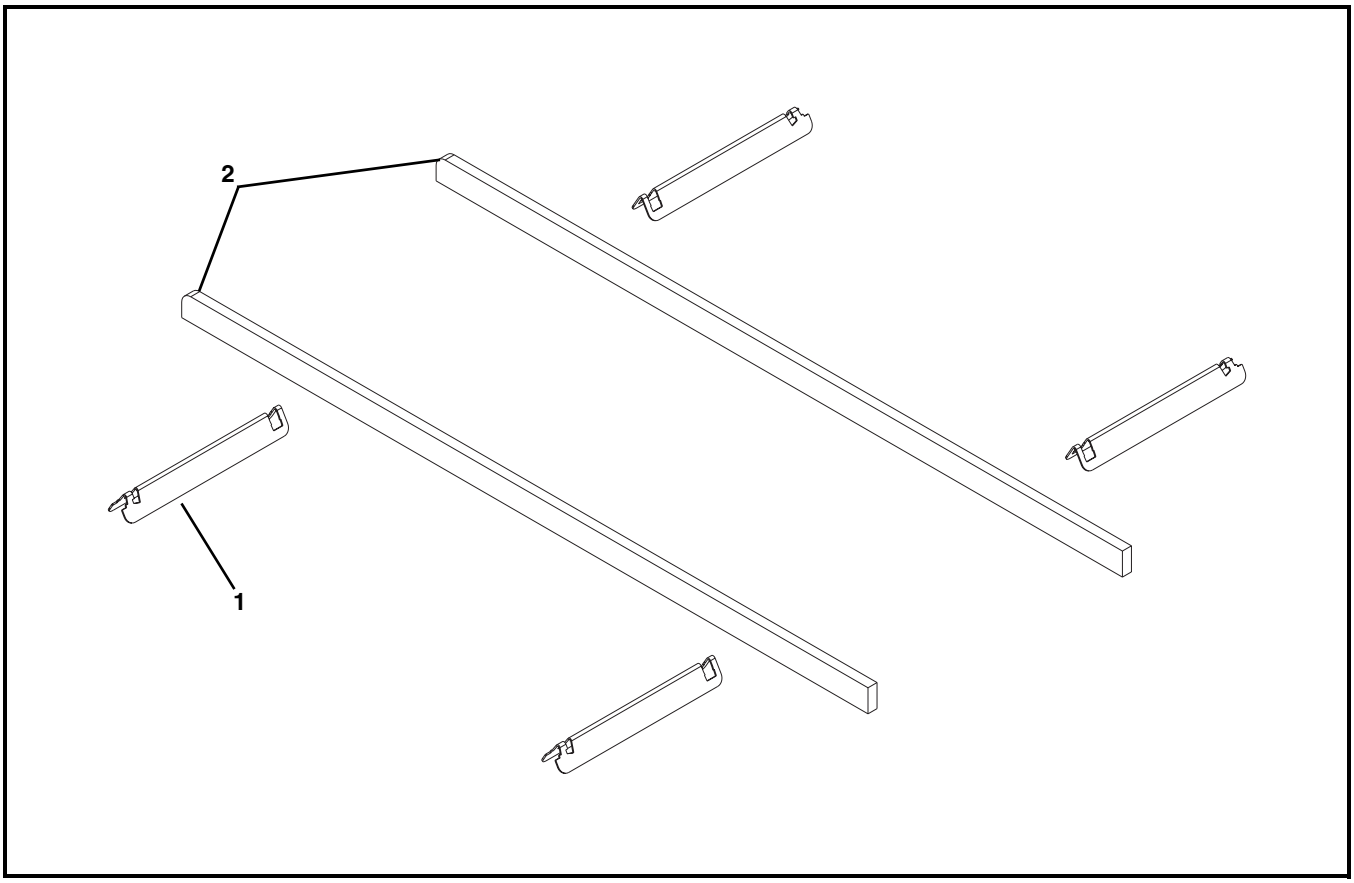
Tool-Less Fully Adjustable Guiding for Curve Module



Item	Part Number	Description
1	807-948	Shaft Cap
2	807-1470	Cross Block
3	202004	Mounting Bracket
4	202027M	Vertical Mounting Guide Shaft
5	532178	Horizontal Mounting Guide Shaft
6	807-1937	Self-Drilling Hex Head Screw, 1/4-20 x 1”
7	920612M	Socket Head Screw, M6-1.00 x 12 mm
8	532179	Washer
9	960812MSS	Hex Head Cap Screw M8-1.25 x 12mm
10	352364-LLLLL	Guide Rail
11	532195	Guide Connecting Clip
12	807-1840	Hex Head Washer Screw
LLLLL = Length in inches with 2 decimal places.		
Length Example: Length = 95.25" LLLLL = 09525		

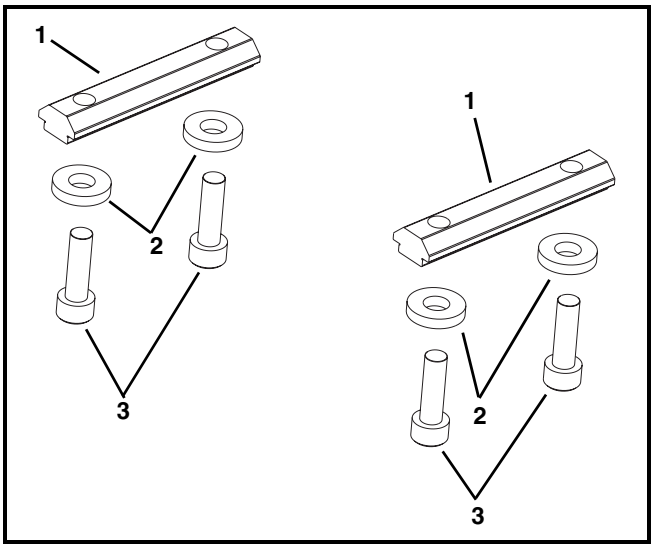
Service Parts

Flat Belt Returns



Item	Part Number	Description
1	352168	Return Support Bracket
2	532162-LLLLL	Return Strip
LLLLL = Length in inches with 2 decimal places.		
Length Example: Guiding Length = 95.25" LLLLL = 09525		

Stand Mount Kit



Item	Part Number	Description
1	300150M	Drop-In Tee Bar
2	605279P	Washer
3	920620M	Socket Head Screw, M6-1.00 x 20 mm

Ordering a Replacement Chain

Determine the length of chain required for the conveyor and round up to the nearest foot length. Order the proper number of chain repair kits (1' long each) for your conveyor. Dorner will ship chain kits that are of a reasonable length fully assembled

Example:

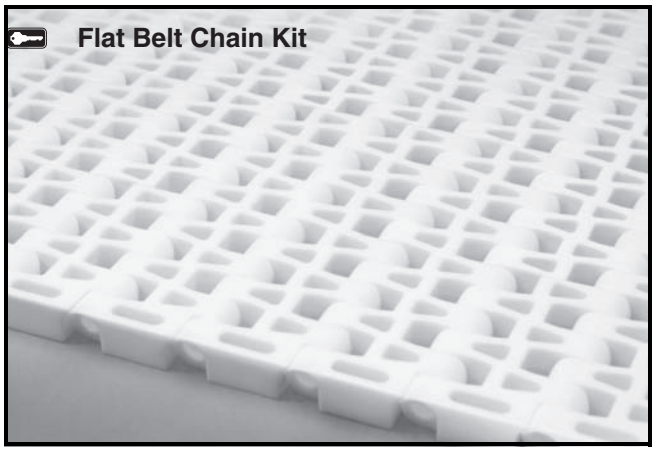
Overall chain length = 42' 5" (rounded up = 43')

Order: Qty (43) of 52BB-WW

BB = Chain reference number

WW = Conveyor width ref: 08-32 in 02 increments

Flat Belt Chain Repair Kit



Item	Part Number	Description
1	52BB-WW	Flat Belt Chain Repair Kit (Includes 1 ft (305 mm) of flat belt chain and assembly pins)
BB = Chain Reference number		
WW = Conveyor width ref: 08 - 32 in 02 increments		

Return Policy

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

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

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

Conveyors and conveyor accessories

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

Parts

Standard stock parts	30%
Plastic chain, cleated and specialty belts	non-returnable items

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

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

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

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

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