7400 Series End Drive Conveyors

Installation, Maintenance and Parts Manual

Flat Belt Conveyor

Cleated Belt Conveyor

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

851-592 Rev. A

Table of Contents

Introduction 2
Warnings – General Safety 3
Product Description 4
Specifications 4
  Flat Belt 7400 Series Conveyor 4
  Cleated Belt 7400 Series Conveyor 4
  Conveyor Supports 5
Installation 6
  Required Tools 6
  Recommended Installation Sequence 6
  Conveyors up to 10 ft (3048 mm) 6
    Stand Installation 6
    Tail Assembly Installation 7
      Drive Tail 7
      Idler Tail 7
      Tip Up Tail 8
      Nose Bar Idler Tail 9
      Nose Bar Tip Up Tail 10
    Lifter Installation 11
    Wear Strip Installation 11
    Belt Installation 12
    Belt Return Installation 13
  Conveyors Longer than 10 ft (3048 mm) 14
Preventive Maintenance and Adjustment 16
  Required Tools 16
  Checklist 16
  Cleaning 16
    Routine Cleaning 16
      Standard Conveyors 16
      Conveyors with Tip Up Tails and Lifters 16
    Periodic Cleaning 17
  Lubrication 17
    Conveyor Bearings 17
  Wearstrips and Belt Returns 17
  Maintaining the Conveyor Belt 17
    Troubleshooting 17
  Conveyor Belt Replacement 18
    Conveyors with Guides 18
    Standard Belts 18
      Replacing a Section of Belt 18
      Replacing the Entire Belt 19
    Specialty Intralox 1100 Series Belts 19
      Replacing a Section of Belt 19
      Replacing the Entire Belt 19
    Specialty Intralox 1600 Series Belts 20
      Replacing a Section of Belt 20
      Replacing the Entire Belt 20
  Conveyor Belt Tensioning 21
  Sprocket and Puck Removal 21
    A - Drive Sprocket Removal 21
    B - Idler Puck Removal 23
  Reassembling Tail Assemblies 24
    Idler Tail and Tip Up Tail 24
    Drive Tail 24
  Bearing Replacement 26
Service Parts 28
  Drive End Components 28
  Tension End Components 30
  Tip Up Tension End 31
  Nose Bar Tension End 32
  Nose Bar Tip Up Tension End 33
  Conveyor Frame and Extension 34
  3" (76 mm) High Sides 35
  Cleated 1" (25 mm) Guides 36
  Cleated 3" (76 mm) Guides 37
  Flat Belt Returns 38
  Cleated Belt Returns 38
  Flat Belt 39
  Cleated Belt 39
  Ordering a Replacement Chain 39
  Belt Removal Tool 39
  Configuring Conveyor Part Number 40
Return Policy 42

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 7400 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 .

Intralox is a registered trademark of Laitram L.L.C. in the United States and / or other countries.

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	Return
5	Support Stands
6	Motor Controller
7	Drive End
8	Tension End

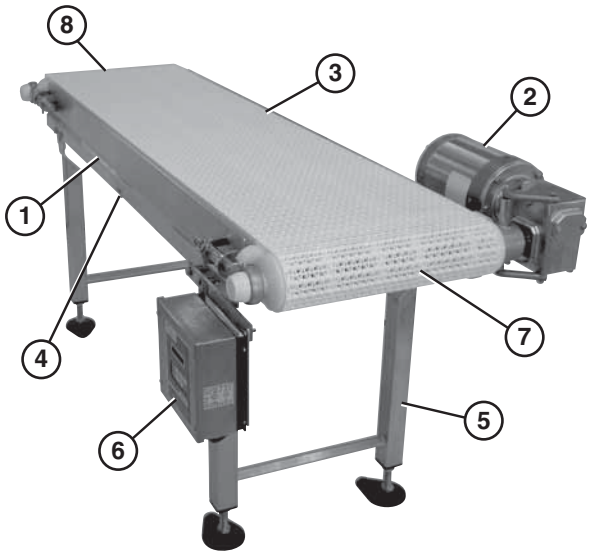
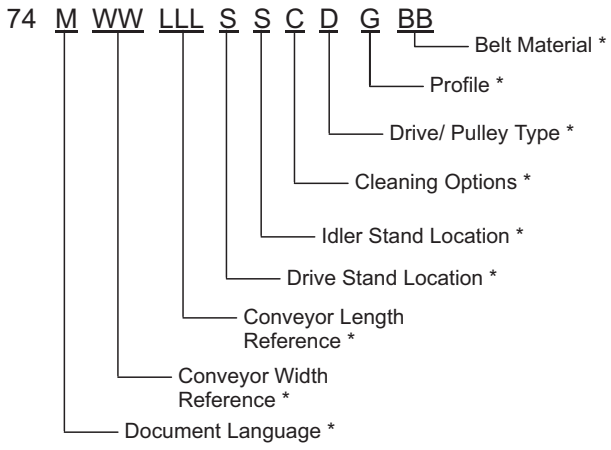


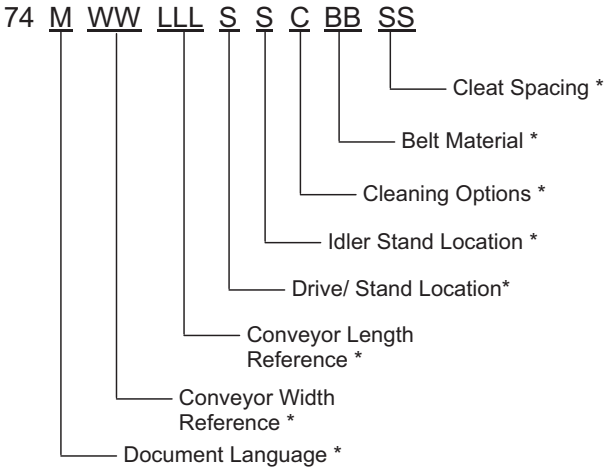
Figure 1

Specifications

Flat Belt 7400 Series Conveyor



Cleated Belt 7400 Series Conveyor



* Refer to “Ordering and Specifications” Catalog for details.

Conveyor Supports

Maximum Distances:

1 = 3 ft (914 mm)

2 = 8 ft (2438 mm)**

3 = 3 ft (914 mm)

**** For conveyors longer than 10 ft (3.05 m), install support at frame joint.**

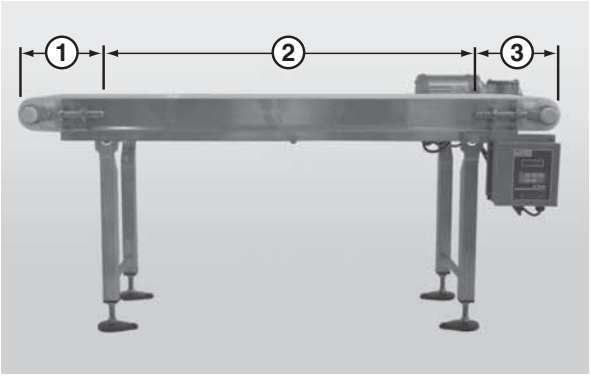


Figure 2

Specifications

Conveyor Width Reference (WW)	06 – 60 in 02 increments
Conveyor Belt Width	6" (152 mm) – 60" (1524 mm) in 2" (51 mm) increments
Maximum Conveyor Load	20 lb / ft^2 (97 kg / m^2) with a maximum of 1000 lb / ft^2 (4882 kg / m^2)
Belt Travel	12" (305 mm) per revolution of pulley
Maximum Belt Speed	233 ft / minute (71 m / minute)
Belt Take-up	2" (51 mm)

Conveyor Length Reference (LLL)	036 – 999 in 001 increments
Conveyor Length	36" (914 mm) – 999" (25.4 mm) 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*

CAUTION

Dorner recommends cleaning all the "food zones" prior to placing conveyor into service. Ensure adequate access is provided for cleaning and servicing equipment so that the required level of hygiene can be maintained.

CAUTION

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

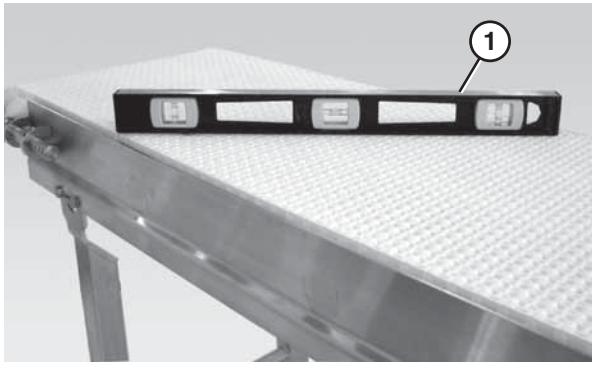


Figure 3

Required Tools

- 17 mm wrench (for hexagonal head fasteners)
- 4 mm hex wrench (for bearing shaft assembly fasteners)
- Level
- Torque wrench

Recommended Installation Sequence

1. Attach the stands to the conveyor. Refer to "Stand Installation" on page 6.
2. Attach the tail assemblies to the frame. Refer to "Tail Assembly Installation" on page 7.
3. Attach the lifters, if applicable. Refer to "Lifter Installation" on page 11.
4. Install the gearmotor, if applicable. Refer to the "7400 Series Drive Package Installation, Maintenance and Parts Manual."
5. Attach the wear strips. Refer to "Wear Strip Installation" on page 11.
6. Install the belt. Refer to "Belt Installation" on page 12.
7. Attach the belt returns. Refer to "Belt Return Installation" on page 13.
8. Attach any guides / accessories. Refer to the "Service Parts" section starting on page 28.

Conveyors up to 10 ft (3048 mm)

Stand Installation

Typical Stand Components **(Figure 4)**

1	Conveyor frame
2	Stand
3	M10 - 1.5 x 12 mm hex head cap screws (x4)

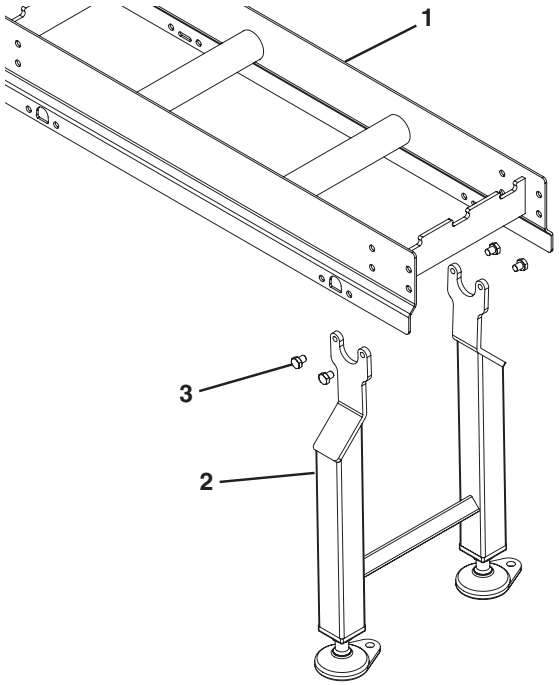


Figure 4

1. Position the stands on a flat, level surface.
2. Attach the stands to the frame **(Figure 5)**.

Figure 5

Tail Assembly Installation

Drive Tail

Typical Drive Tail Components **(Figure 6)**

1	Drive tail assembly
2	Pull pin (x2)
3	Conveyor frame

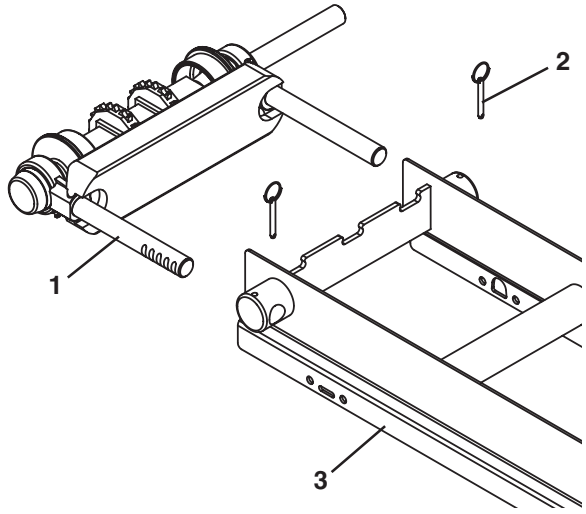


Figure 6

1. Slide the bearing shafts **(Figure 7, item 1)** into the take up blocks **(Figure 7, item 2)**.

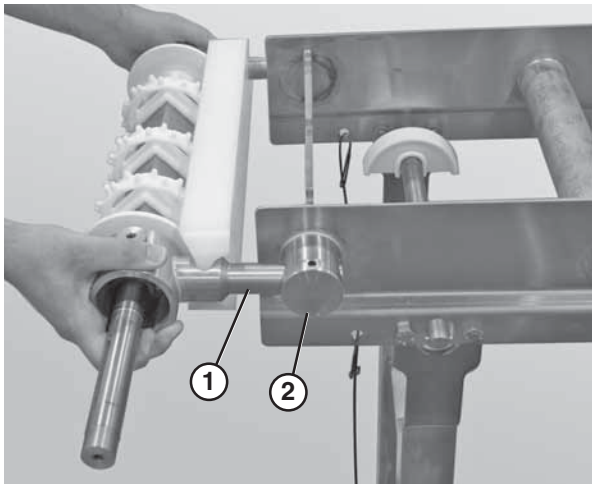


Figure 7

2. Install the drive package, if applicable. Refer to the "7400 Series Drive Package Installation, Maintenance and Parts Manual."
3. Insert the pull pins **(Figure 8, item 1)**.

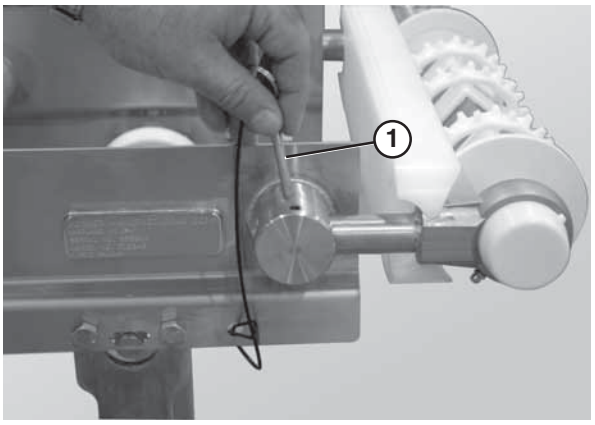


Figure 8

Idler Tail

Typical Idler Tail Conponents **(Figure 9)**

1	Idler tail assembly
2	Pull pin (x2)
3	Conveyor frame

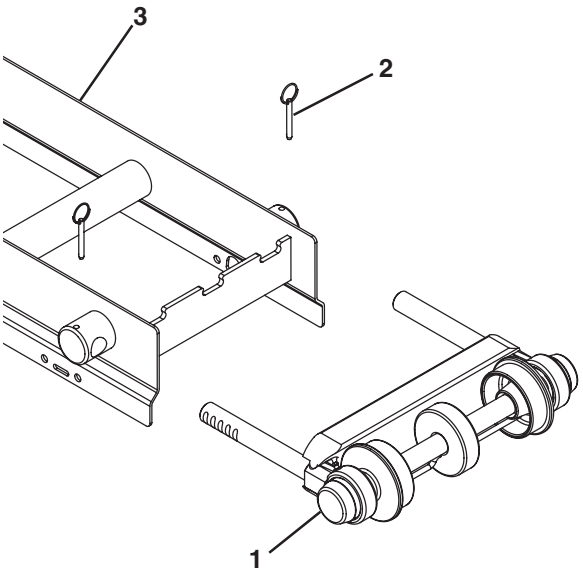


Figure 9

1. Slide the bearing shafts **(Figure 10, item 1)** into the take up blocks **(Figure 10, item 2)**.

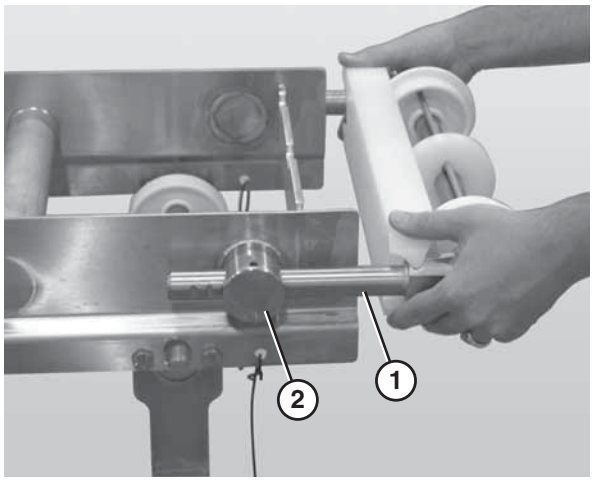


Figure 10

NOTE
Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

Tip Up Tail

Typical Tip Up Tail Components **(Figure 11)**

1	Tip up tail assembly
2	Pull pin (x2)
3	Tip up shaft
4	Key stops (x2)
5	M10 - 1.5 mm acorn nut (x2)

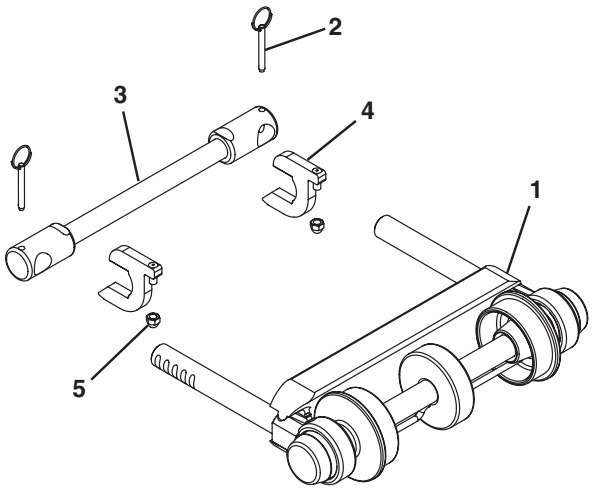


Figure 11

1. Slide the tip up shaft **(Figure 12, item 1)** through the designated slots in the frame.

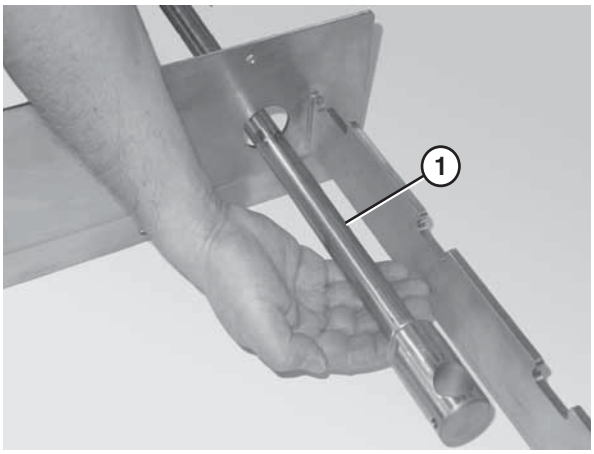


Figure 12

2. Attach the key stops **(Figure 13, item 1)** to the tip up shaft **(Figure 13, item 2)**. The rounded end of the key stop should be facing the tail.

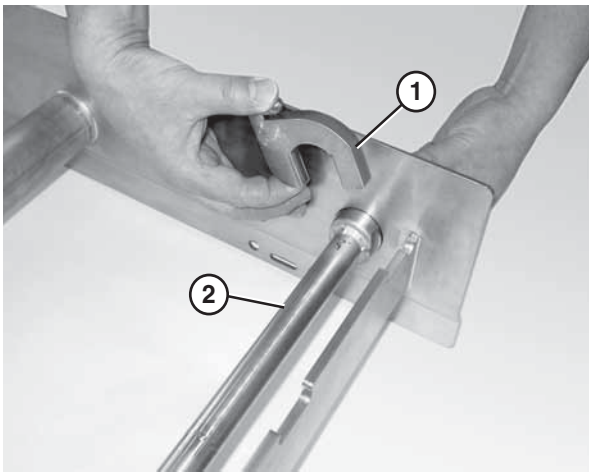


Figure 13

3. Slide the bearing shafts **(Figure 14, item 1)** into the holes in the tip up shaft **(Figure 14, item 2)**.

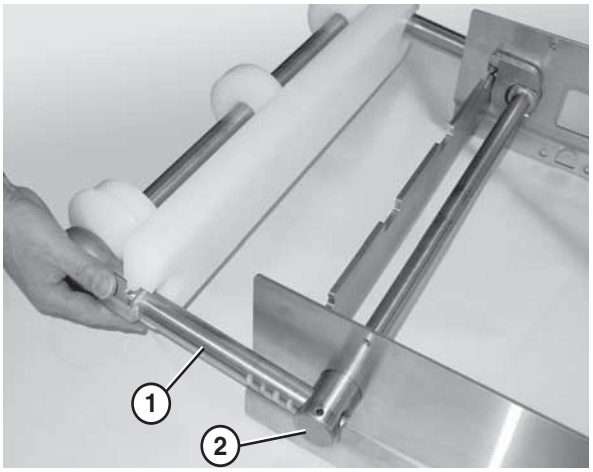


Figure 14

NOTE

Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

NOTE

*Adjust the acorn nuts **(Figure 11, item 5)** on the key stops **(Figure 11, item 4)** to raise or lower the tip up tail assembly.*

Nose Bar Idler Tail

Typical Nose Bar Idler Tail Components **(Figure 15)**

1	Nose bar idler tail assembly
2	Pull pin (x2)
3	Conveyor frame

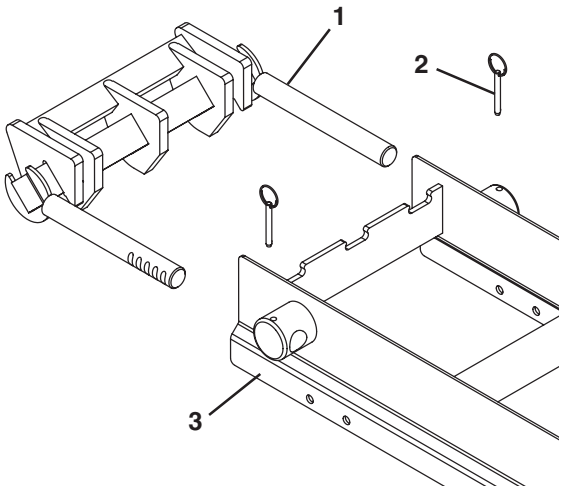


Figure 15

1. Slide the nose bar idler shaft hands **(Figure 16, item 1)** into the take up blocks **(Figure 16, item 2)**.
2. Attach the nose bar transfer post **(Figure 16, item 3)** to the nose bar idler shaft hands.

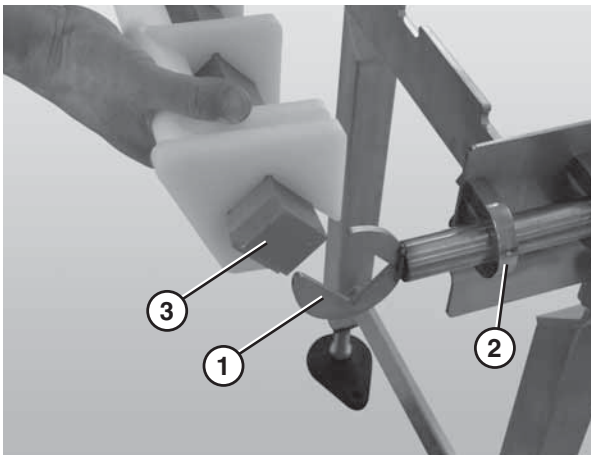


Figure 16

3. Ensure that the nose bar pucks **(Figure 17, item 1)** are in line with the conveyor frame **(Figure 17, item 2)**.

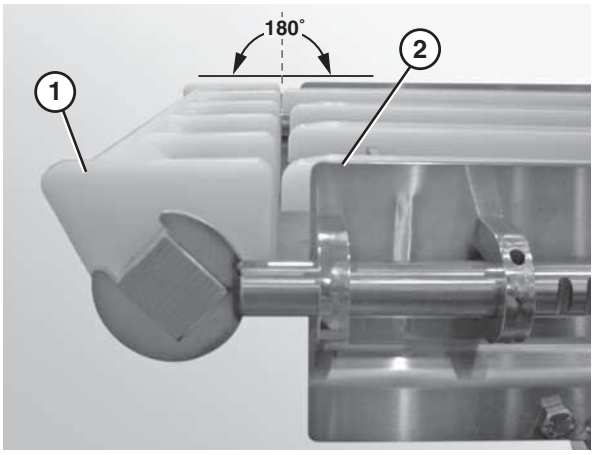


Figure 17

NOTE

Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

Installation

Nose Bar Tip Up Tail

Typical Nose Bar Tip Up Tail Components **(Figure 18)**

1	Tip up tail assembly
2	Pull pin (x2)
3	Tip up shaft
4	Key stops (x2)
5	M10 - 1.5 mm acorn nut (x2)

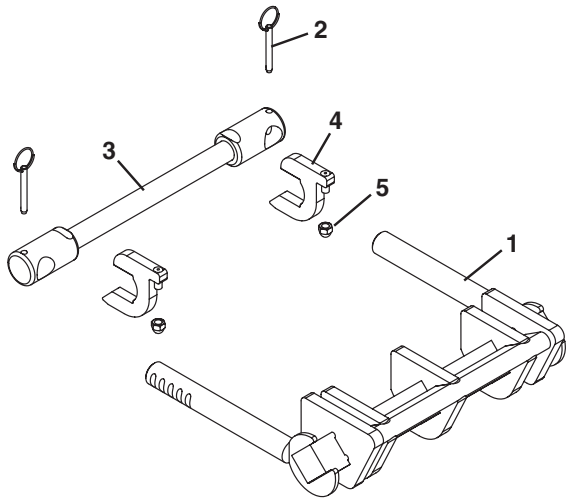


Figure 18

1. Slide the tip up shaft **(Figure 19, item 1)** through the designated slots in the frame.

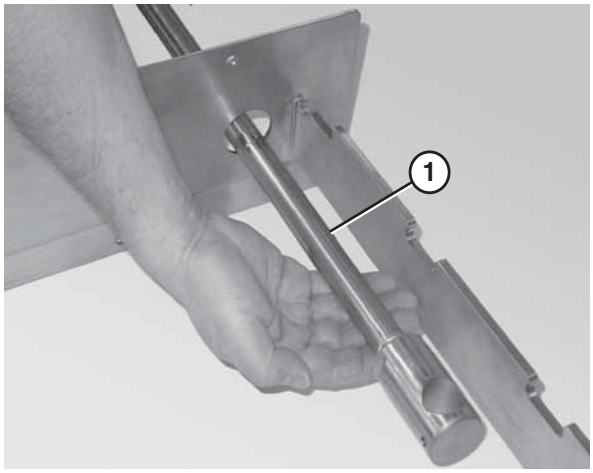


Figure 19

2. Attach the key stops **(Figure 20, item 1)** to the tip up shaft **(Figure 20, item 2)**. The rounded end of the key stop should face the tail.

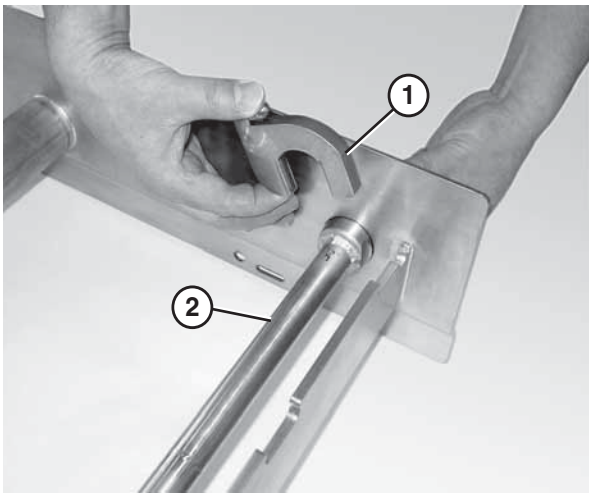


Figure 20

3. Attach the nose bar idler shaft hands **(Figure 21, item 1)** to the tip up shaft **(Figure 21, item 2)**.

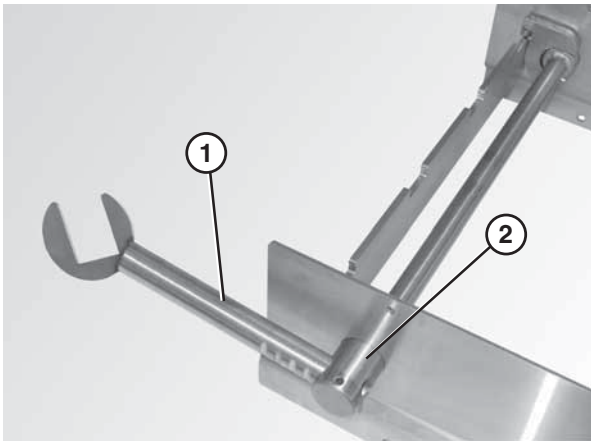


Figure 21

4. Attach the nose bar transfer post **(Figure 22, item 1)** to the nose bar idler shaft hands **(Figure 22, item 2)**.

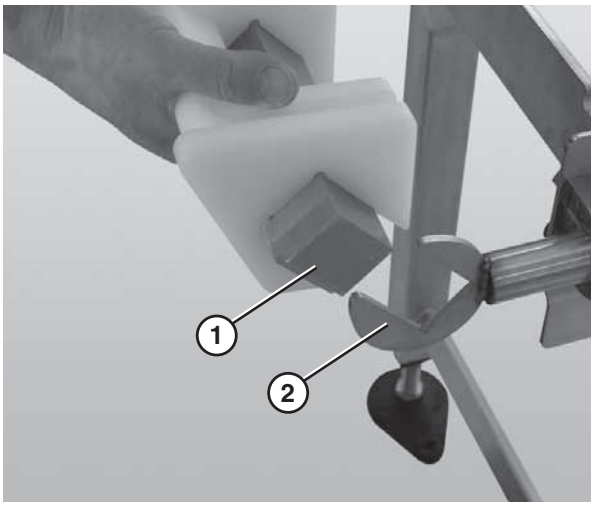


Figure 22

5. Ensure that the nose bar pucks **(Figure 23, item 1)** are in line with the conveyor frame **(Figure 23, item 2)**.

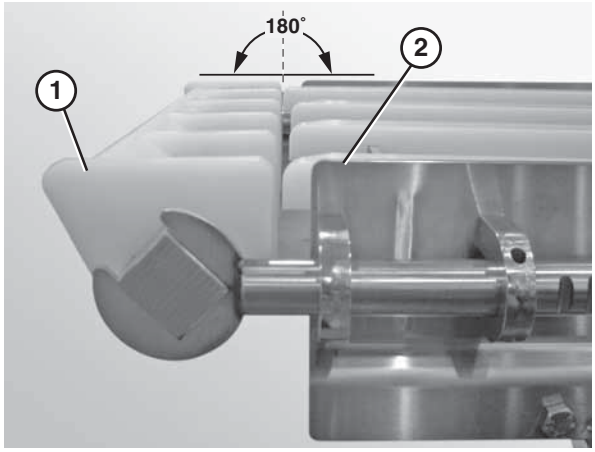


Figure 23

NOTE

Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

NOTE

*Adjust the acorn nuts **(Figure 18, item 5)** on the key stops **(Figure 18, item 4)** to raise or lower the tip up tail assembly.*

Lifter Installation

Typical Lifter Components **(Figure 24)**

1	Belt lift pivot bar
2	Lifter bars
3	Belt lift handle
4	M8 - 1.25 x 16 mm hex head cap screw

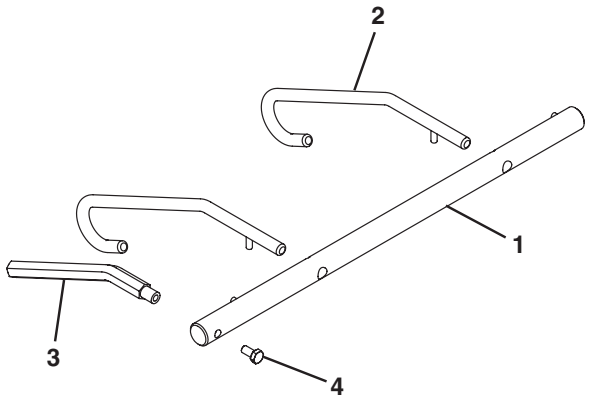


Figure 24

1. Slide the belt lift pivot bar **(Figure 25, item 1)** through the designated holes in the frame.

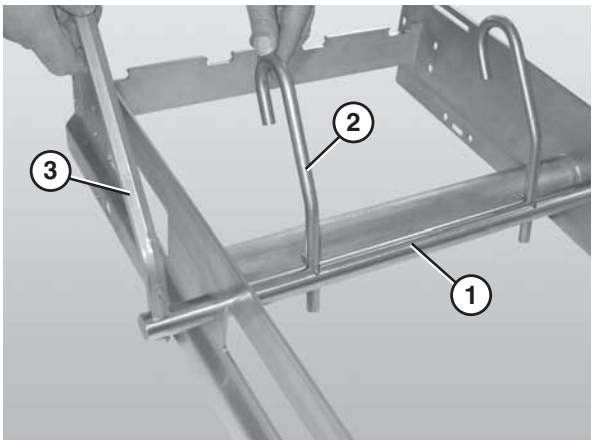


Figure 25

2. Attach the lifter bars **(Figure 25, item 2)** to the belt lift pivot bar **(Figure 25, item 1)**. Make sure the hooked ends of the lifter bars are facing down when resting against the frame.
3. Attach the lifter handle **(Figure 25, item 3)** to the belt lift pivot rod.

Wear Strip Installation

Typical Wear Strip Components **(Figure 26)**

1	Wear strip

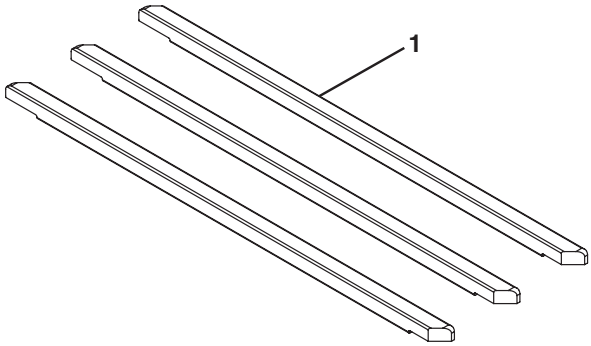


Figure 26

1. Position the wear strips **(Figure 27, item 1)** on the frame.

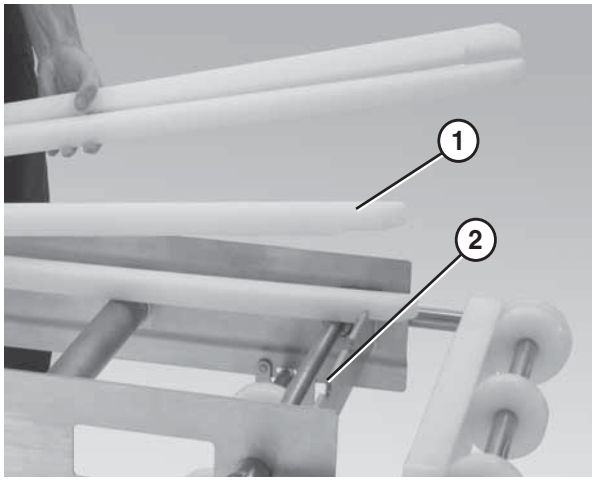


Figure 27

2. Make sure the wear strips are situated securely in the frame slots **(Figure 27, item 2)**.

Belt Installation

Typical Belt Components **(Figure 28)**

1	Chain belt
2	Belt rod

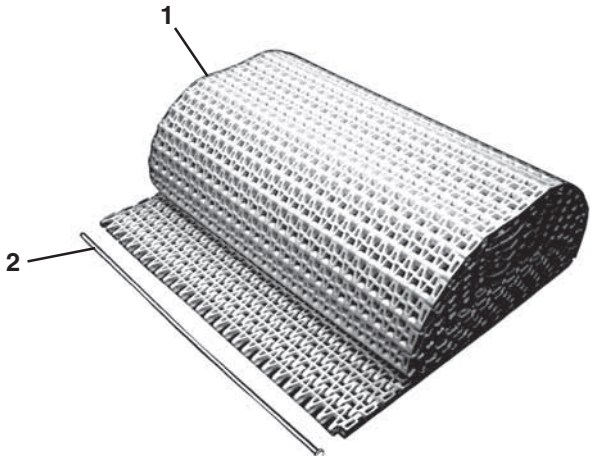


Figure 28

1. Position the belt on the conveyor frame **(Figure 29)**.

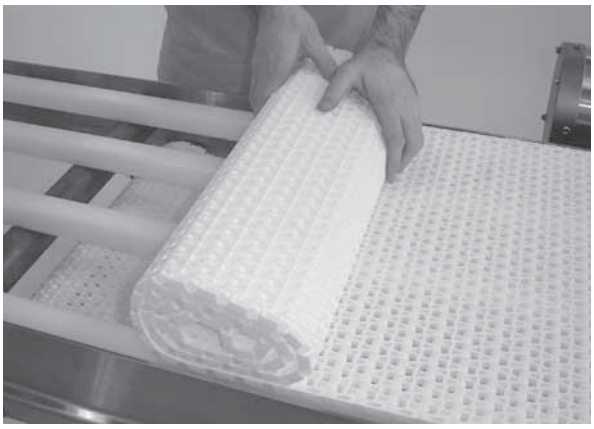


Figure 29

2. Evenly space the sprockets **(Figure 30, item 1)** along the drive spindle **(Figure 30, item 2)**.

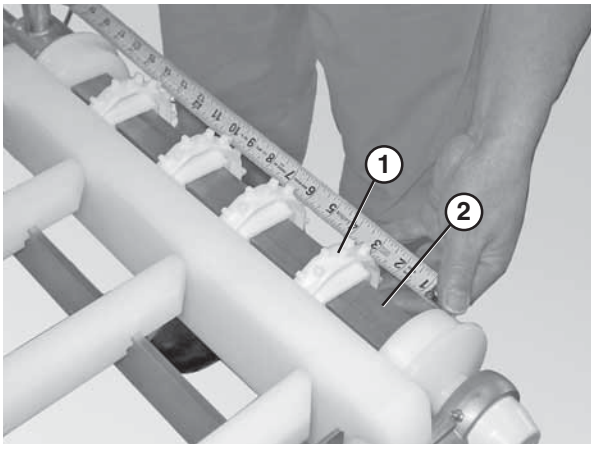


Figure 30

3. Wrap the belt around the conveyor, making sure the sprocket teeth **(Figure 30, item 1)** have engaged the belt.
4. Bring the ends of the belt together **(Figure 31)**.

Figure 31

5. Insert the belt rod **(Figure 32, item 1)**.

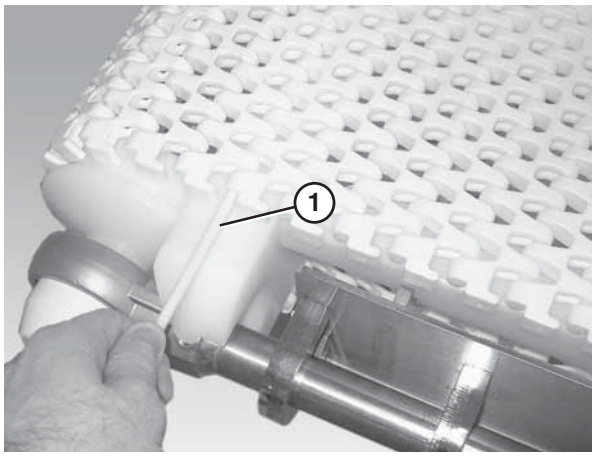


Figure 32

6. Push the belt rod in as far as possible.
7. Lightly tap the head of the rod with a hammer until it snaps into position.
8. Extend the tension end to remove excess slack in the belt **(Figure 33)**.

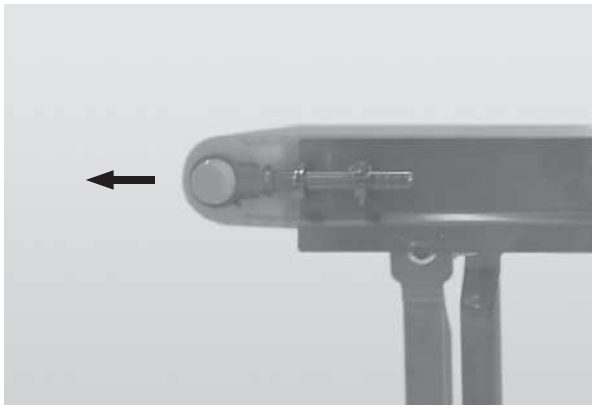


Figure 33

9. Insert the pull pins **(Figure 34, item 1)** on the tension end of the conveyor.

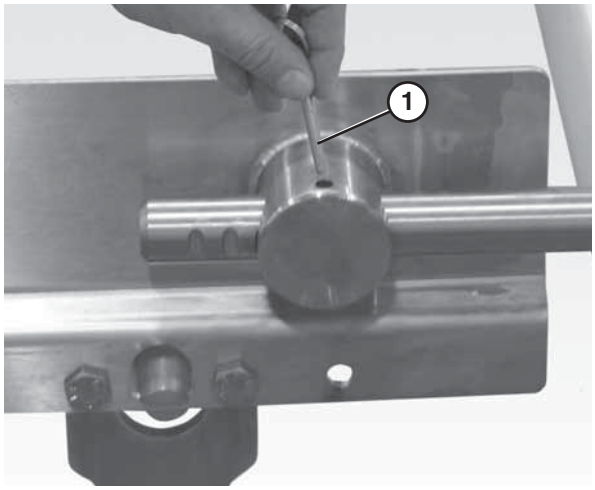


Figure 34

10. If no more travel is available, remove one or more belt links to take up the tension. Refer to "Standard Belts: Replacing a Section of Belt" on page 18.

Belt Return Installation

Typical Belt Return Components **(Figure 35)**

1	Return shaft
2	Chain return shoe

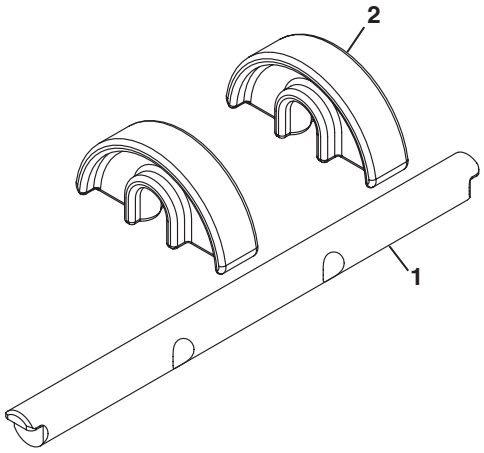


Figure 35

1. Attach the chain return shoes **(Figure 36, item 1)** to the return shaft **(Figure 36, item 2)**.

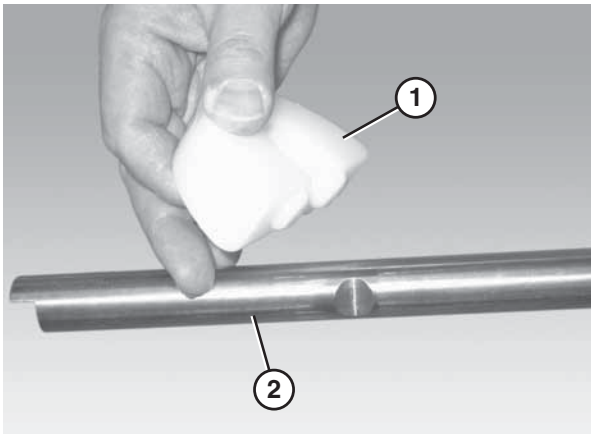


Figure 36

2. Slide the return shaft **(Figure 37, item 1)** up and through the large slot **(Figure 37, item 2)** in the frame (picture shown without the belt or wear strips).

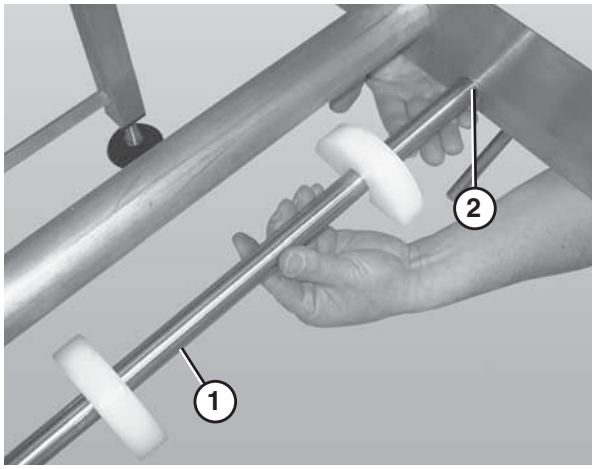


Figure 37

3. Push up on the return shaft **(Figure 37, item 1)** and slide the notched end of the shaft through the small slot on the opposite side of the frame.
4. Check belt sag by measuring from the top of the return **(Figure 38)**. Belt sag should not exceed 4" (102 mm). Follow steps 7 – 9 in the "Belt Installation" section on page 12 to remove slack from the belt.

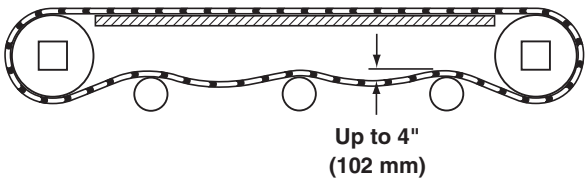


Figure 38

CAUTION

Belt sag should not exceed 4" (102 mm) from the top of the returns.

Conveyors Longer than 10 ft (3048 mm)

Typical Connection Components **(Figure 39)**

1	M10 x 1.5 mm hex head cap screws (x4)
2	Connector hex rods (x2)
3	Conveyor frames

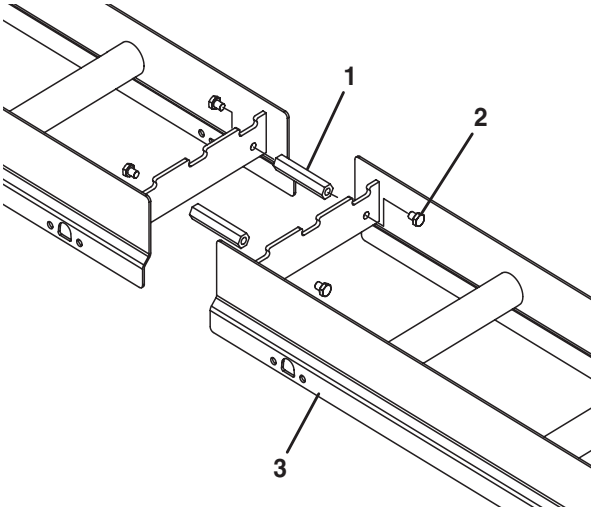


Figure 39

1. Locate the section number sequence etched on each section of frame **(Figure 40, item 1)**

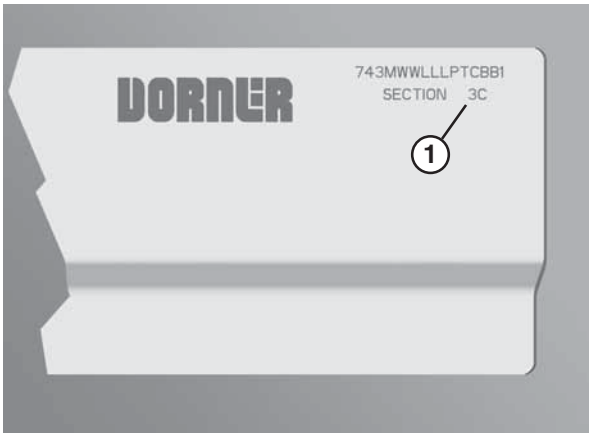


Figure 40

2. Position the frame sections in the correct order.
3. Connect the frame sections by bolting the hex post connectors **(Figure 41, item 1)** the sections of frame.

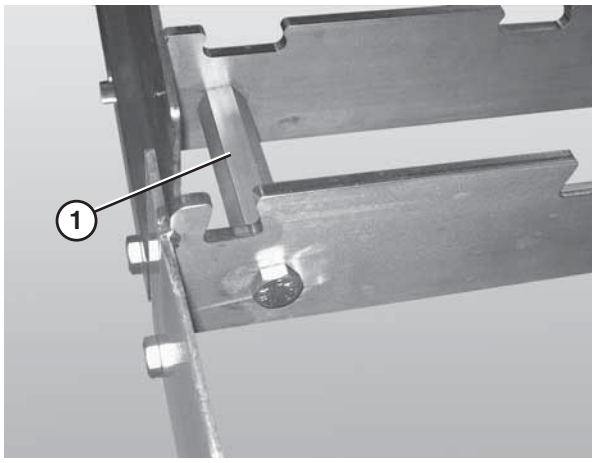


Figure 41

4. Follow the installation process described in “Conveyors up to 10 ft (3048 mm)” starting on page 6.

Required Tools

- 17 mm wrench (or adjustable wrench)
- 4 mm hex wrench (for bearing shaft assembly fasteners)
- 3 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 28 for recommendations.
- Replace any worn or damaged parts.

Cleaning

Routine Cleaning

⚠ WARNING

SEVERE HAZARD!

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

Dorner recommends cleaning the inside and the outside of the conveyor on a daily basis. Refer to the following steps to access the inside of the conveyor.

Standard Conveyors

1. Remove the guides, if applicable, by removing the pull pins **(Figure 47, item 1)** that connect the guide **(Figure 47, item 2)** to the frame.

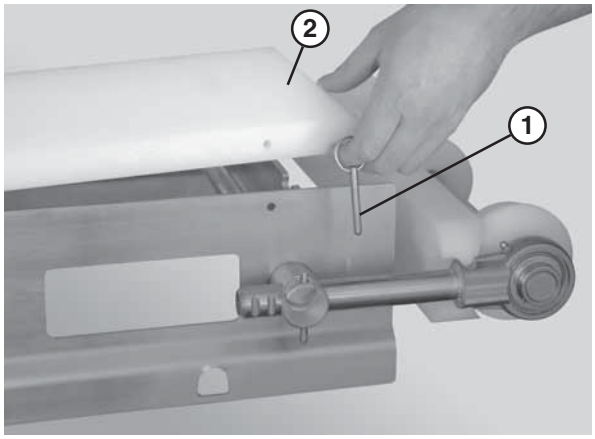


Figure 42

2. Remove the pull pin **(Figure 43, item 1)** on the tension end of the conveyor to release belt tension.

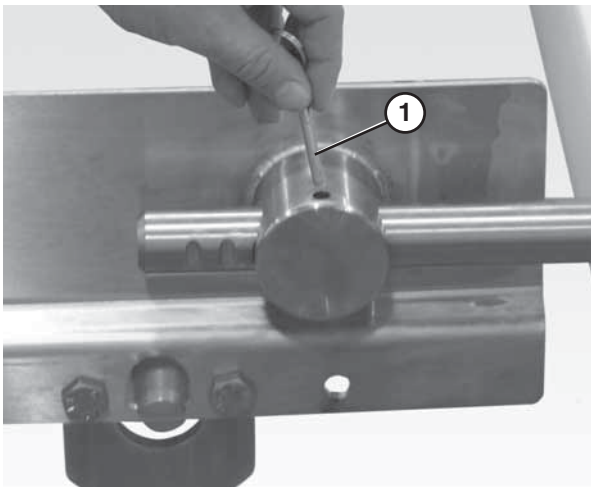


Figure 43

3. Lift up on the belt **(Figure 44)**.

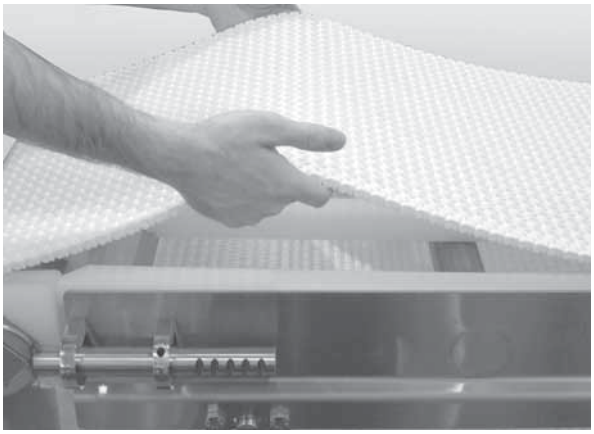


Figure 44

Conveyors with Tip Up Tails and Lifters

1. Remove the guides, if applicable, by removing the pull pins **(Figure 47, item 1)** that connect the guide **(Figure 47, item 2)** to the frame.
2. Use the lifter handle **(Figure 45, item 1)** to raise the lifters **(Figure 45, item 2)** and raise the tip up tail **(Figure 45, item 3)**.

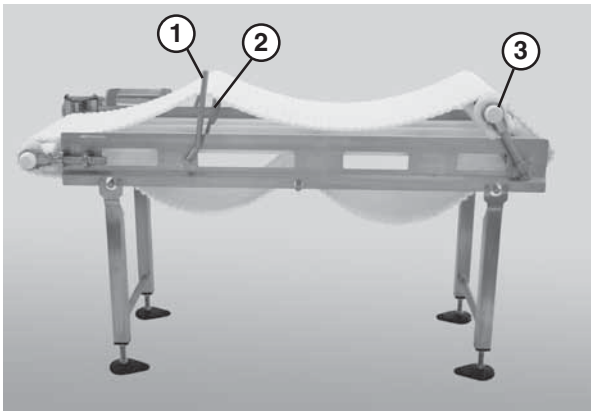


Figure 45

CAUTION

DO NOT submerge or soak bearing assemblies. This will reduce the life of the bearing.

Periodic Cleaning

Dorner recommends complete dissasembly of the conveyor periodically for thorough cleaning.

For conveyor disassembly and reassembly instructions:

- Refer to "Conveyor Belt Replacement" on page 18.
- Refer to "Sprocket and Puck Removal" on page 21.
- Refer to "Reassembling Tail Assemblies" on page 24.

Lubrication

Conveyor Bearings

Conveyor bearing lubrication is required. Dorner recommends using an H-1 food grade grease.

NOTE

Although bearings are sealed, re-greasing is recommended to increase bearing life. An H-1 food grade grease is recommended. The frequency of bearing re-greasing is dependent upon the application in which the conveyor is being used. Frequency of re-greasing will increase with the frequency of conveyor washing.

1. Add grease to the bearing using the zerk fitting **(Figure 46, item 1)** on the exterior of the bearing shaft assembly.

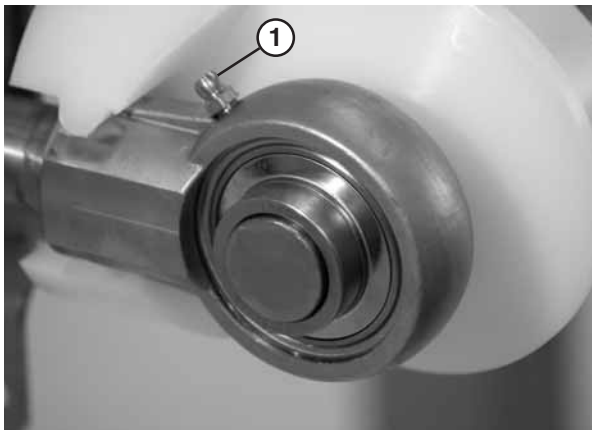


Figure 46

2. Replace the bearings if they become worn.

Wearstrips and Belt Returns

Replace the wearstrips and belt returns if they become worn.

For wearstrip and belt return installation instructions:

- Refer to "Wear Strip Installation" on page 11.
- Refer to "Belt Return Installation" on page 13.

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 sprockets or impacted dirt on drive pulley

Damage to belt links or rods indicate:

- Excessive load on belt
- Dirt impacted on sprockets
- Excessive or improper side loading
- Improperly positioned accessories

Conveyor Belt Replacement

⚠ WARNING

SEVERE HAZARD!

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

Conveyors with Guides

1. Remove the pull pins **(Figure 47, item 1)** that connect the guide **(Figure 47, item 2)** to the frame.

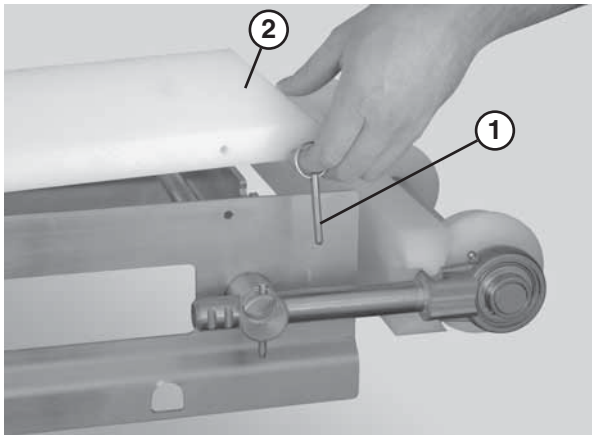


Figure 47

2. Remove the guide **(Figure 48, item 1)**.

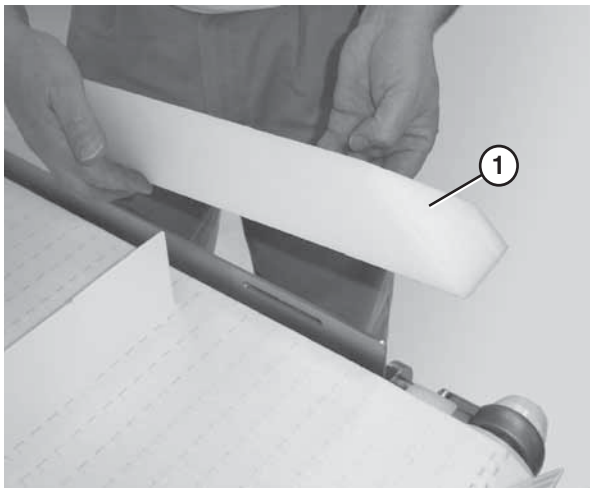


Figure 48

3. Follow the belt replacement procedures described in “Standard Belts” on page 18, “Specialty Intralox 1100 Series Belts” on page 19, or “Specialty Intralox 1600 Series Belts” on page 20.

Standard Belts

Replacing a Section of Belt

1. Remove the pull pins **(Figure 49, item 1)** on the tension end of the conveyor to release tension on the belt.

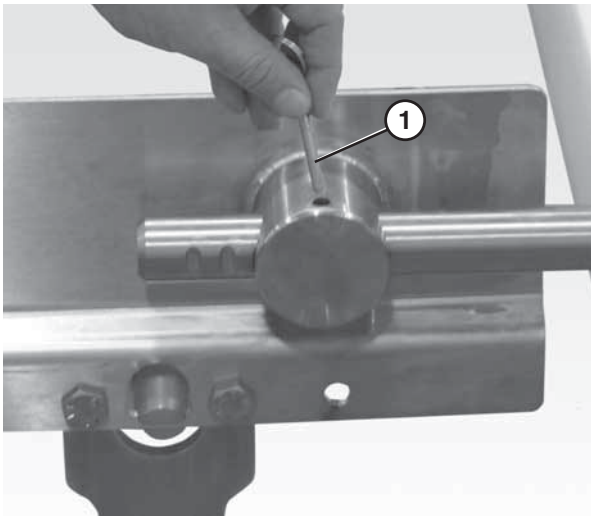


Figure 49

CAUTION

Secure the retaining head side of the belt prior to removing a belt rod in order to prevent damaging the belt.

2. Secure the retaining head side of the belt. Use the belt removal tool **(Figure 50, item 1)** for 1" pitch belts. For all other belts, position the section of belt so that it is braced by the flanged puck **(Figure 50, item 2)**.

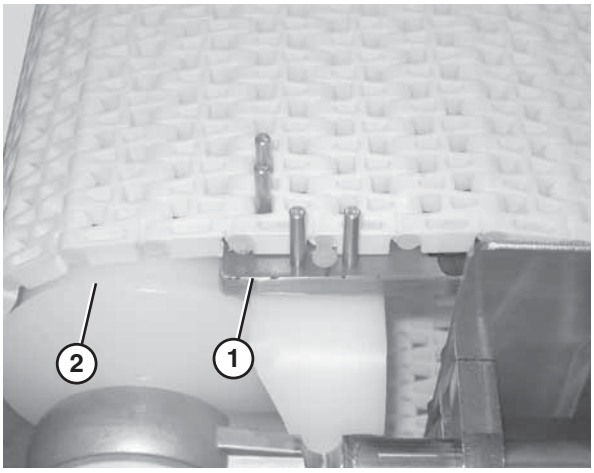


Figure 50

3. Use a punch and hammer to push the belt rod out by striking the rod end opposite the retaining head **(Figure 51)**.

Figure 51

4. Remove the belt rods on both sides of the section of belt being replaced.
5. Replace the old section with a new section of belt.

CAUTION

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

Replacing the Entire Belt

1. Remove the belt returns by pushing up on the return shaft **(Figure 52, item 1)** and sliding it through the large hole **(Figure 52, item 2)** in the frame.

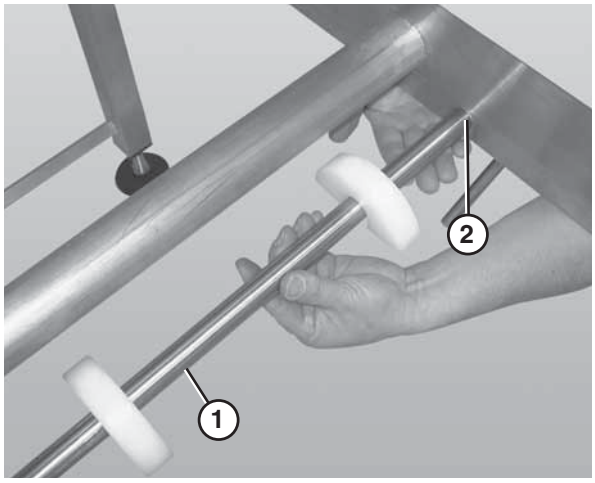


Figure 52

2. Lower the opposite end of the return shaft **(Figure 52, item 1)** and slide it out of the frame.
3. Follow steps 1 – 3 in "Standard Belts: Replacing a Section of Belt" on page 18.
4. Remove the belt.
5. Replace the damaged or worn belt. Refer to “Belt Installation” on page 12 and “Belt Return Installation” on page 13.

Specialty Intralox 1100 Series Belts

Replacing a Section of Belt

1. Place the edge of a flat head screwdriver between the the two belt links and turn clockwise **(Figure 56)**.

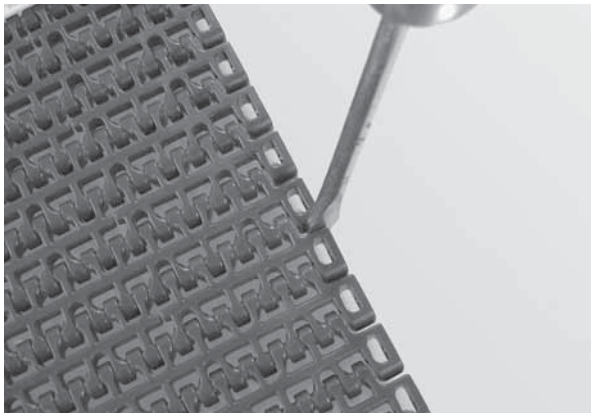


Figure 53

2. Use a second belt rod of the same size to push on the opposite end of the belt rod. **(Figure 54)**.

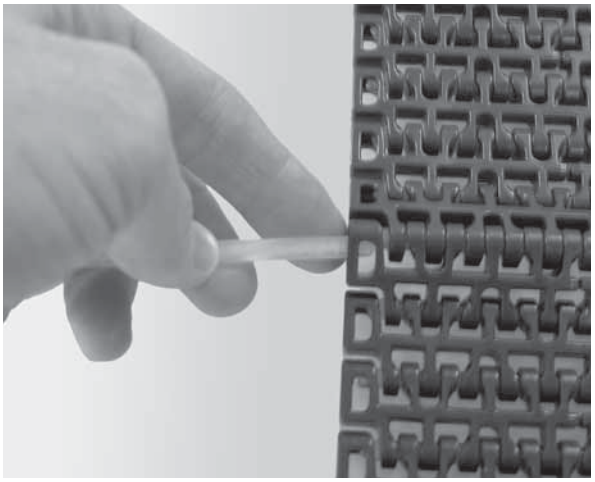


Figure 54

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

CAUTION

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

Replacing the Entire Belt

1. Remove the belt returns by pushing up on the return shaft **(Figure 55, item 1)** and sliding it through the large hole **(Figure 55, item 2)** in the frame.

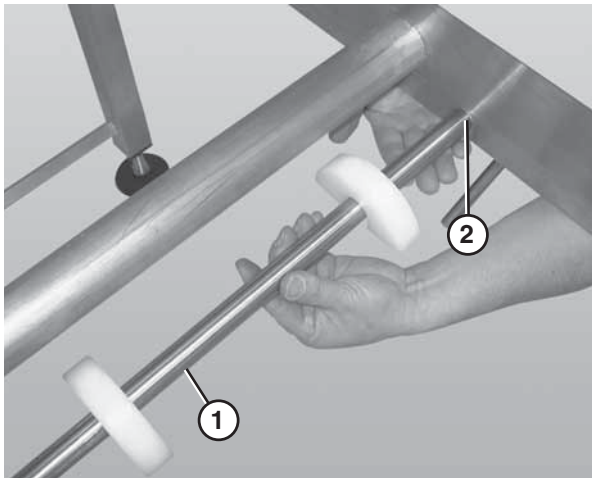


Figure 55

2. Lower the oposite end of the return shaft **(Figure 55, item 1)** and slide it out of the frame.
3. Follow steps 1 – 2 in "Specialty Intralox 1100 Series Belts: Replacing a Section of Belt" on page 19.
4. Remove the belt.
5. Replace the damaged or worn belt. Refer to “Belt Installation” on page 12 and “Belt Return Installation” page 13.

Specialty Intralox 1600 Series Belts

Replacing a Section of Belt

1. Lift up on the belt to gain access to the underside
2. Use a flat head screwdriver to raise the end of the belt rod above the retention lip

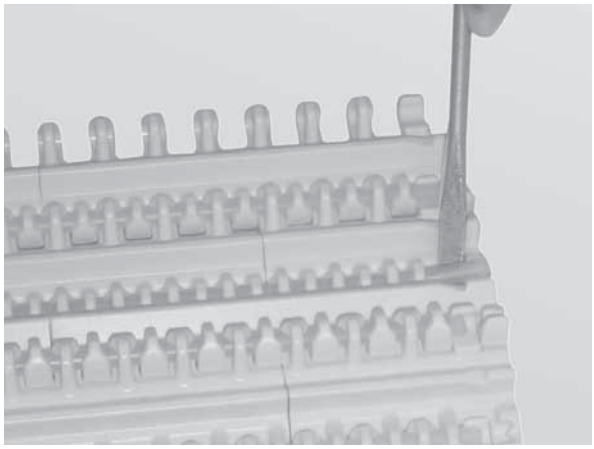


Figure 56

3. Remove the bet rod by gripping the end with a set of pliers and pulling **(Figure 57)**.

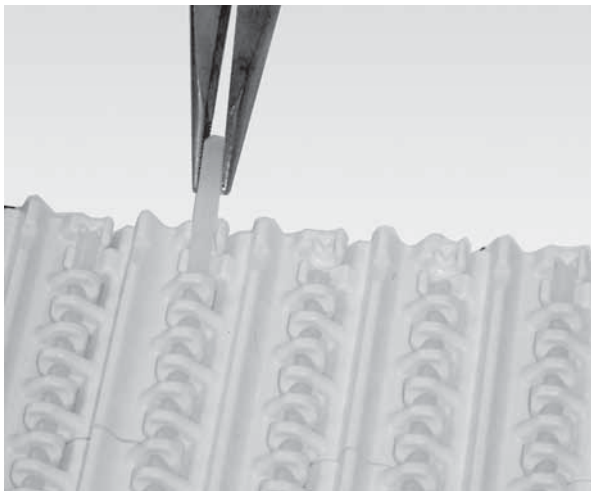


Figure 57

4. Remove the belt rods on both sides of the section of belt being replaced.
5. Replace the old section with a new section of belt.

CAUTION

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

Replacing the Entire Belt

1. Remove the belt returns by pushing up on the return shaft **(Figure 58, item 1)** and sliding it through the large hole **(Figure 58, item 2)** in the frame.

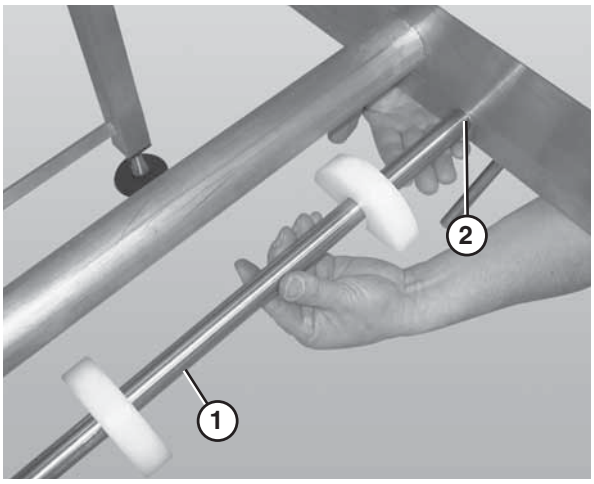


Figure 58

2. Lower the opposite end of the return shaft **(Figure 58, item 1)** and slide it out of the frame.
3. Follow steps 1 – 2 in "Specialty Intralox 1600 Series Belts: Replacing a Section of Belt" on page page 20.
4. Remove the belt.
5. Replace the damaged or worn belt. Refer to “Belt Installation” on page 12 and “Belt Return Installation” page 13.

Conveyor Belt Tensioning

WARNING

SEVERE HAZARD!

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

CAUTION

Belt sag should not exceed 4" (102 mm) from the top of the returns.

1. Remove both pull pins **(Figure 59, item 1)** on the tension end of the conveyor.

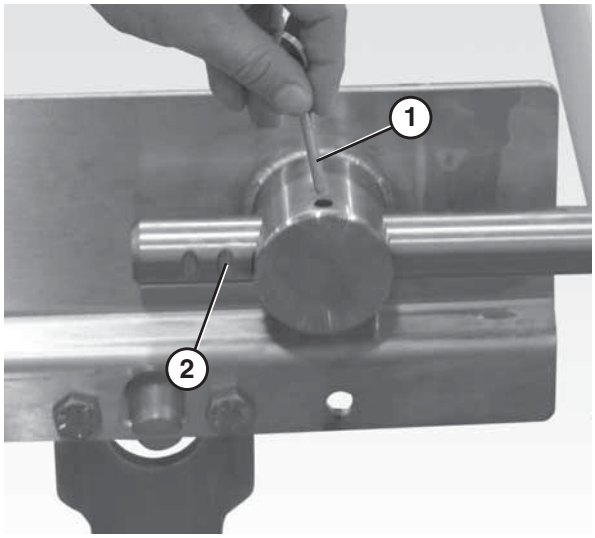


Figure 59

2. Extend the idler tail to the next groove **(Figure 59, item 2)** on the bearing shaft.
3. Continue extending the tension end until the belt is sufficiently tight **(Figure 60)**.

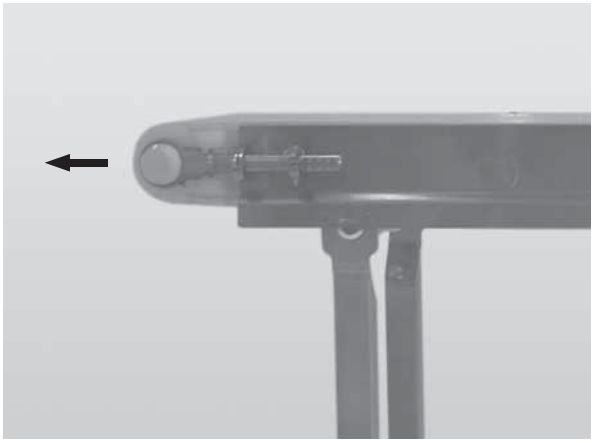


Figure 60

4. Reinsert the pull pins.
5. If no more travel is available, remove one or more belt links to take up the tension. Refer to "Replacing a Section of Belt" on page 18.

Sprocket and Puck Removal

WARNING

SEVERE HAZARD!

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

1. Remove the conveyor belt to access the sprockets / pucks. Refer to "Conveyor Belt Replacement" on page 18.
2. Remove the desired sprocket / puck by following these instructions:

- A - Drive Sprocket Removal
- B - Idler Puck Removal

A - Drive Sprocket Removal

WARNING

PUNCTURE HAZARD!

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

1. Loosen the button head screws **(Figure 61, item 1)** that connect the gearmotor to the drive spindle.

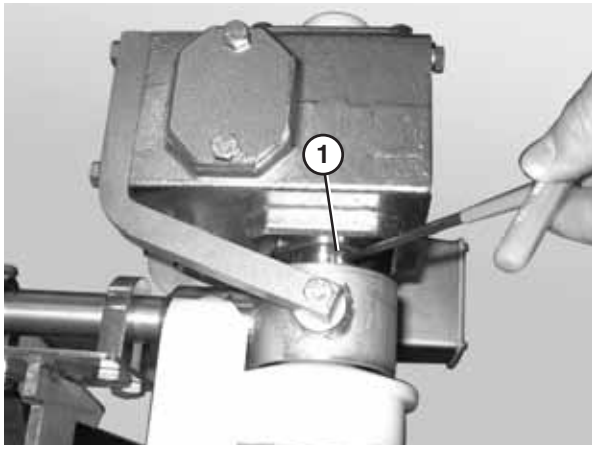


Figure 61

2. Remove the bolts that connect the motor to the drive assembly **(Figure 62)**.
3. Remove the motor **(Figure 62, item 1)** from the drive assembly **(Figure 62, item 2)**.

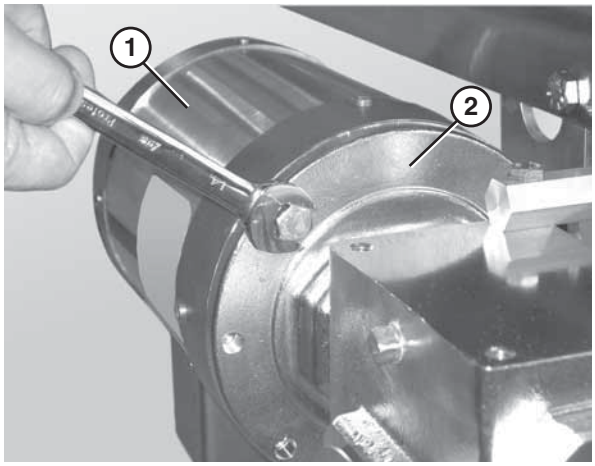


Figure 62

4. Unbolt the drive assembly and slide it off the bearing spindle **(Figure 63)**.

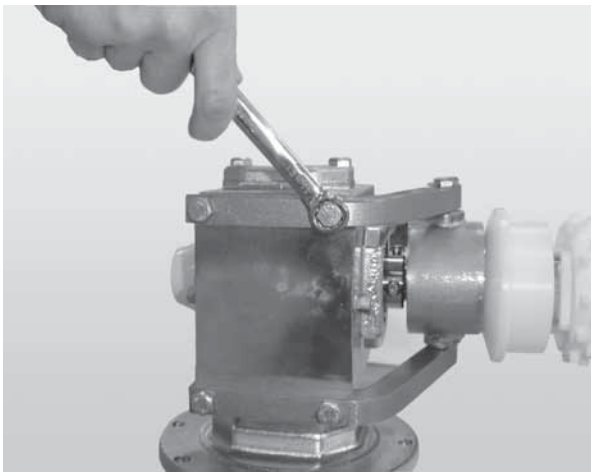


Figure 63

5. Remove the pull pin **(Figure 64, item 1)**.

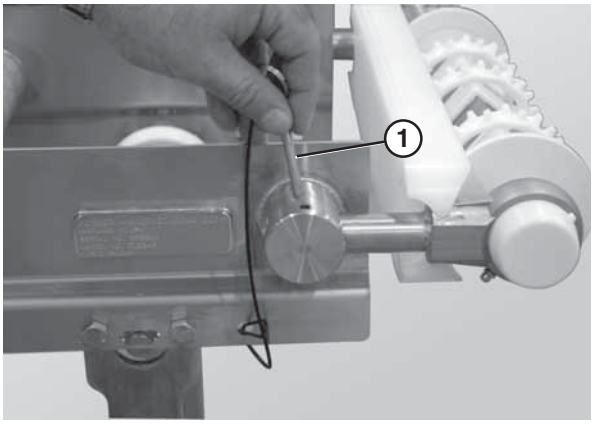


Figure 64

6. Slide the drive tail assembly out of the take up blocks **(Figure 65)**.

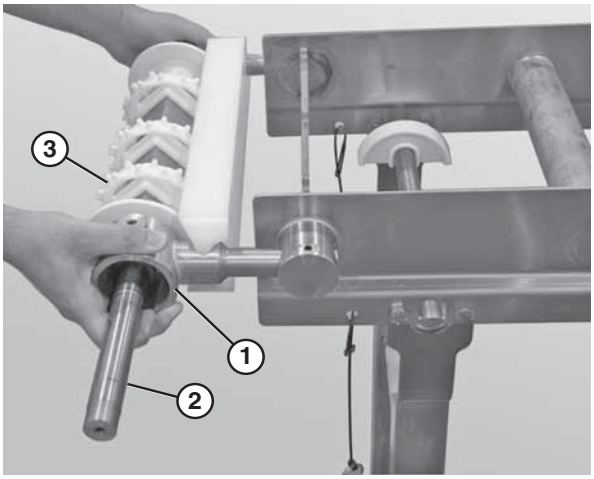


Figure 65

7. Slide the motor support bracket **(Figure 65, item 1)** off the drive spindle **(Figure 65, item 2)**.
8. Remove the sprockets **(Figure 65, item 3)**.

B - Idler Puck Removal

1. Remove the pull pins **(Figure 64, item 1).**
2. Slide the idler tail assembly **(Figure 66, item 1)** out of the take up blocks **(Figure 66, item 2)**.

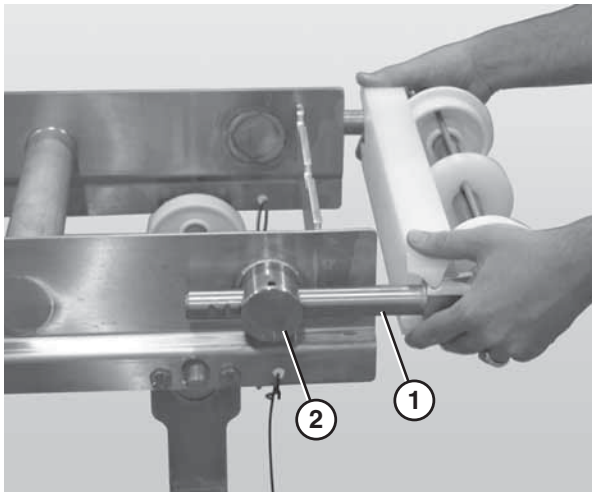


Figure 66

3. Remove the bearing cover **(Figure 67, item 1)**.

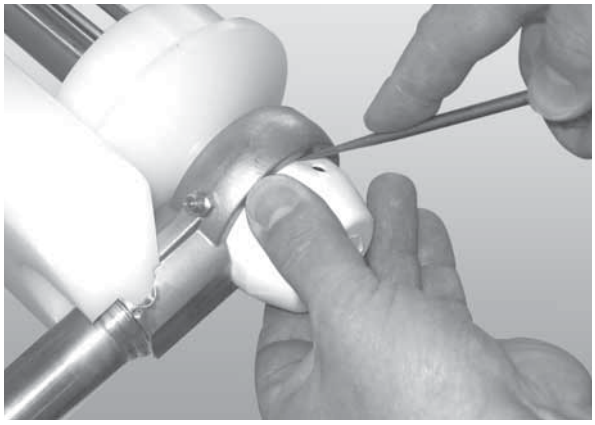


Figure 67

4. Use a hex wrench **(Figure 68, item 1)** to loosen the bearing shaft assembly fasteners **(Figure 68, item 2)**.

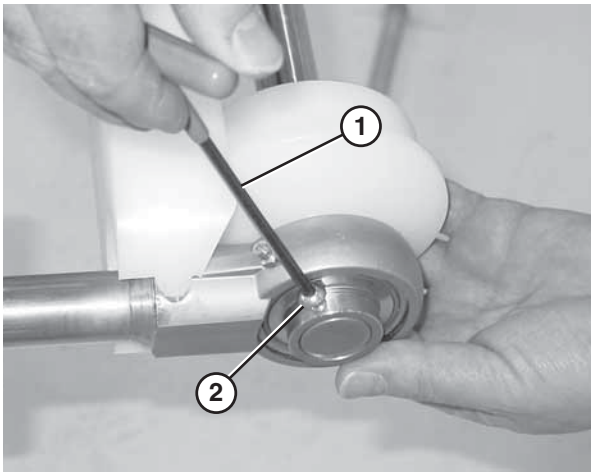


Figure 68

5. Slide the bearing shaft assembly **(Figure 69, item 1)** off the idler shaft **(Figure 69, item 2)**.

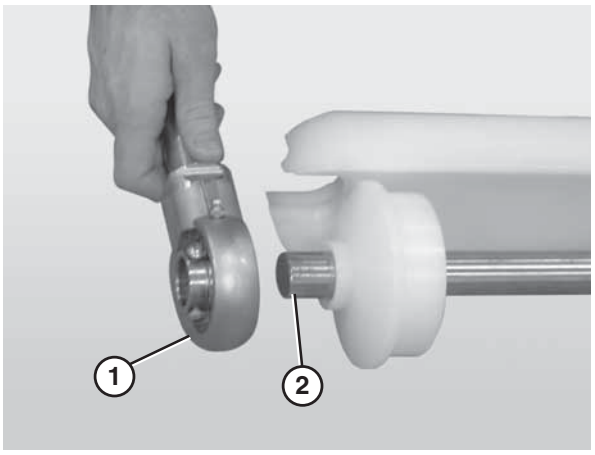


Figure 69

6. Remove the guard bar **(Figure 70, item 1)**.

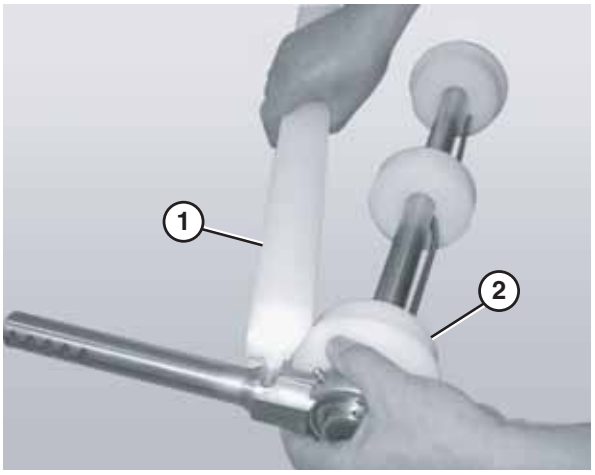


Figure 70

7. Remove the pucks **(Figure 70, item 2)**.

Reassembling Tail Assemblies

Refer to the "Service Parts" section starting on page 28 for complete diagrams and lists of all tail assembly components.

Idler Tail and Tip Up Tail

1. Place the idler puck **(Figure 71, item 1)** at the center of the bent retaining bar **(Figure 71, item 2)**.
2. Slide the idler puck onto the idler shaft **(Figure 71, item 3)**. Make sure to center the idler puck.

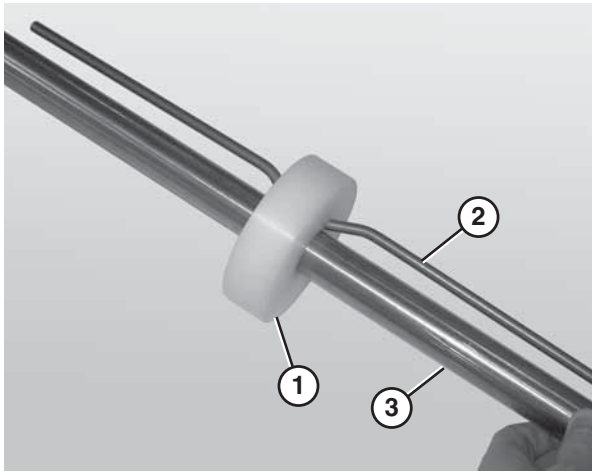


Figure 71

3. Attach the flanged pucks **(Figure 72, item 2)** and bearing shaft assemblies to the idler shaft.
4. Attach the guard bar **(Figure 72, item 1)**.

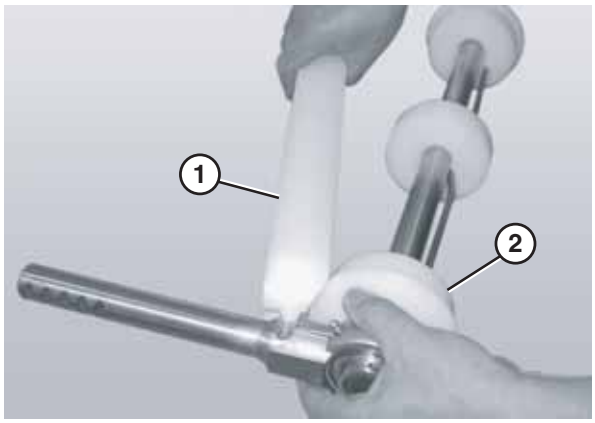


Figure 72

5. Use a hex wrench **(Figure 73, item 1)** to tighten the bearing shaft fasteners **(Figure 73, item 2)**.

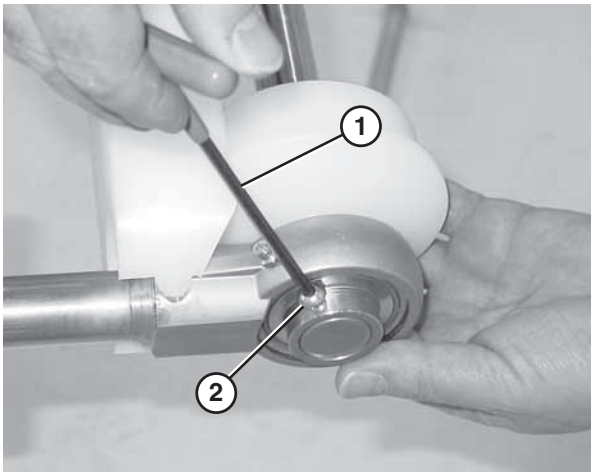


Figure 73

6. Attach the bearing covers.

Drive Tail

1. Attach a flanged puck and bearing shaft assembly to the shorter end of the drive spindle.
2. Slide the sprockets **(Figure 74, item 1)** onto the drive spindle **(Figure 74, item 2)**. Make sure that all of the alignment marks **(Figure 74, item 3)** on the inside of the sprockets line up.

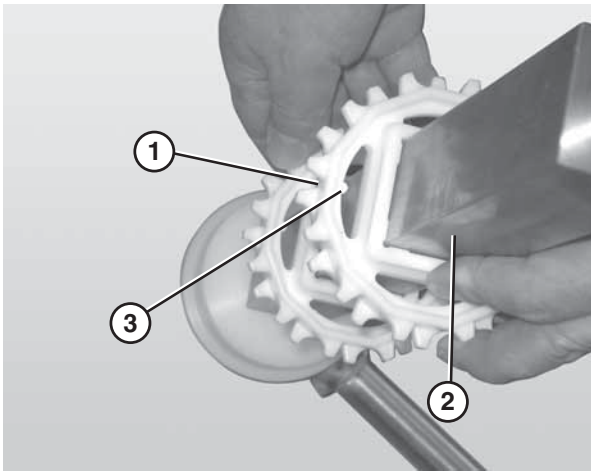


Figure 74

3. Slide the second flanged puck **(Figure 75, item 1)** and the retaining ring **(Figure 75, item 2)** onto the drive spindle.

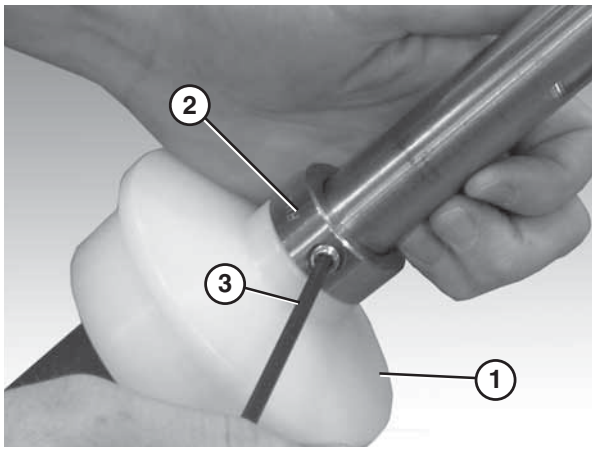


Figure 75

4. Tighten the retainer ring fastener **(Figure 75, item 3)** using a hex wrench.
5. Slide the second bearing shaft assembly, or the motor mount bracket **(Figure 76, item 1)**, onto the longer end of the drive spindle **(Figure 76, item 2)**.

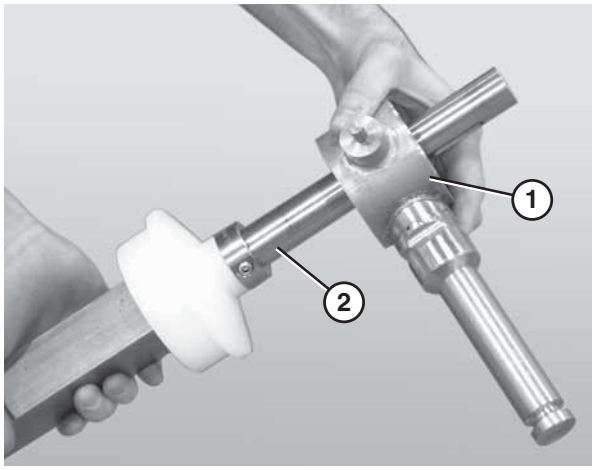


Figure 76

6. Attach the guard bar **(Figure 77, item 1)** to the bearing / motor mount bracket shafts **(Figure 77, item 2)**.

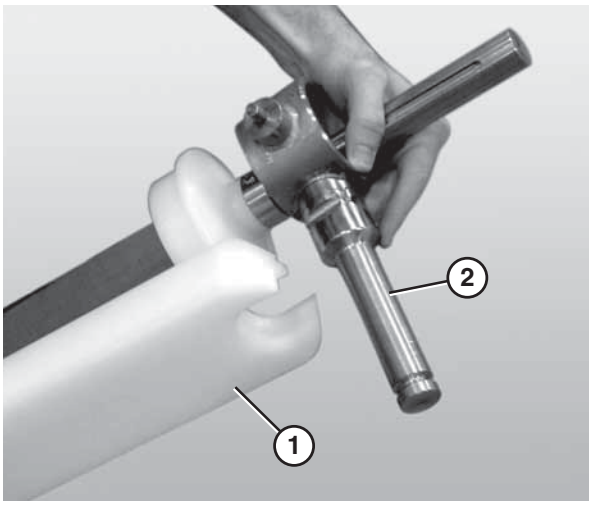


Figure 77

7. Use a hex wrench **(Figure 78, item 1)** to tighten the bearing shaft fasteners **(Figure 78, item 2)**.

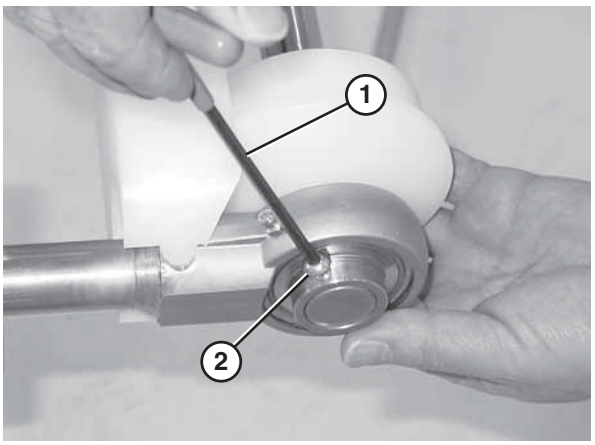


Figure 78

8. Attach the bearing covers.

Bearing Replacement

1. Secure the bearing shaft in the take up blocks.
2. Insert the rod end of a second bearing shaft through the bearing **(Figure 79)**.

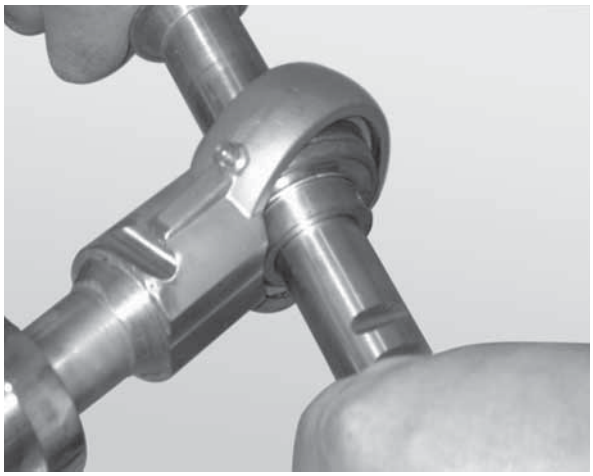


Figure 79

3. Apply lateral pressure to the rod until the bearing comes loose.
4. Remove the worn or damaged bearing **(Figure 80)**.

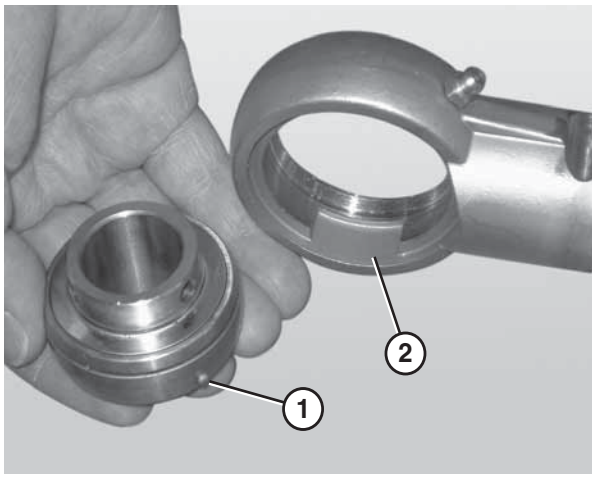


Figure 80

5. Replace the bearing.

NOTE
*When inserting the new bearing, make sure the anti-rotation notch **(Figure 80, item 1)** on the bearing lines up with the groove inside the housing **(Figure 80, item 2)**.*

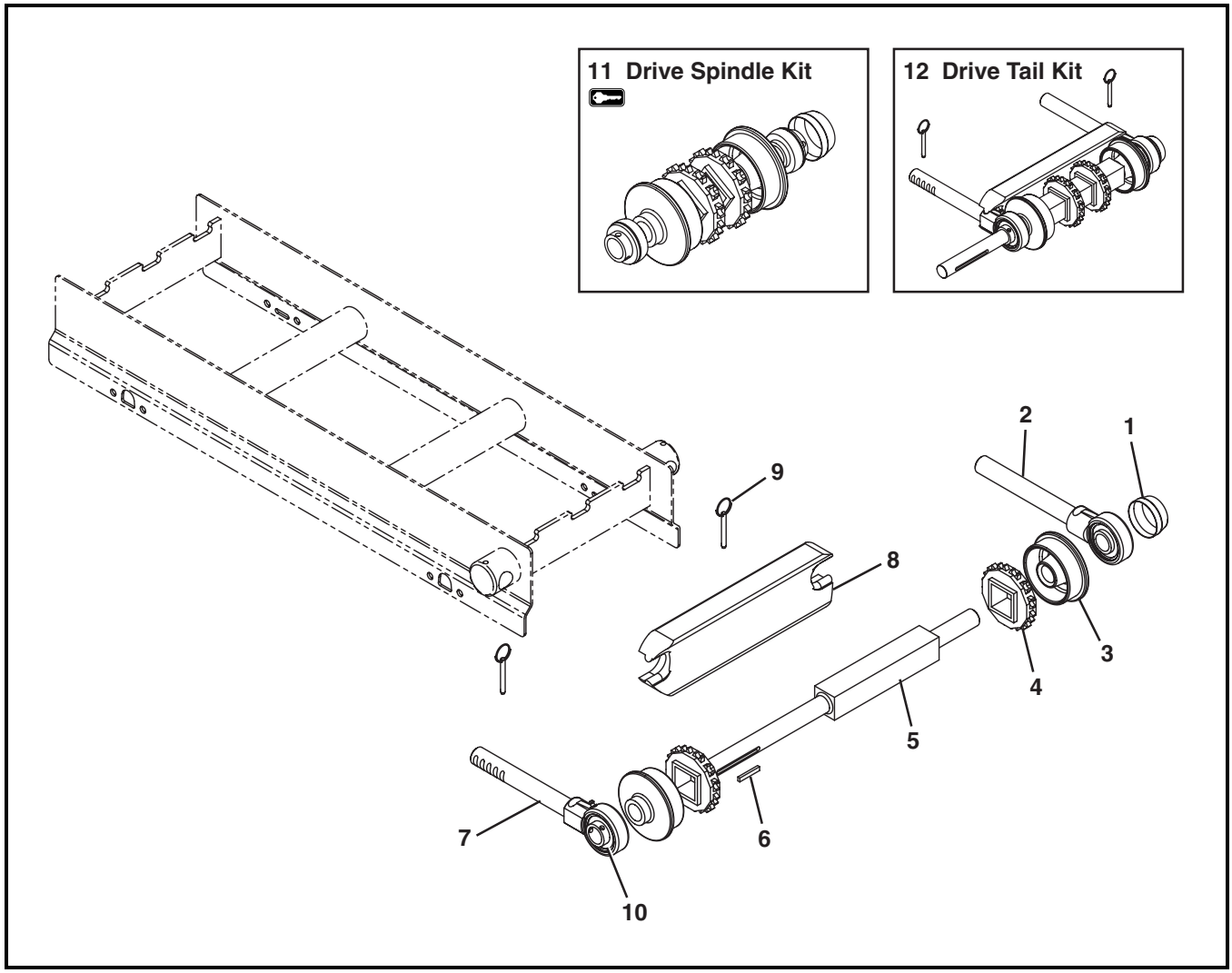
Notes

Service Parts

NOTE

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

Drive End Components



Item	Part Number	Description
1	807-1454	Bearing Cover
2	500078	Shaft Assembly with Bearing
3	5053WW	Flanged Puck, Drive Tail for Standard Belt
	5071WW	Flanged Puck, Drive Tail for Specialty Intralox Belt

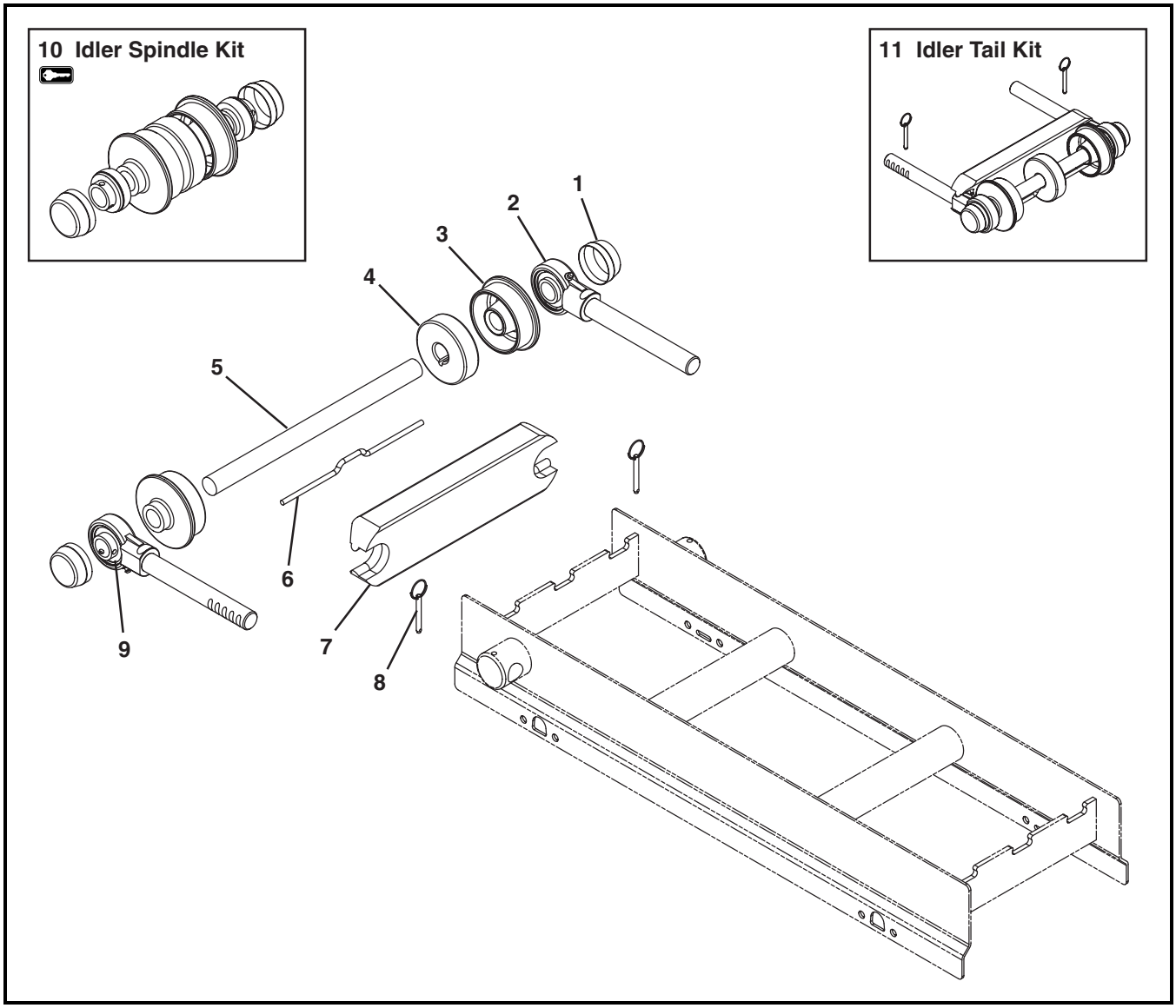
Item	Part Number	Description
4	807-1443	Sprocket for Standard .50" Pitch Belt
	807-1444	Sprocket for Standard 1.00" Pitch Belt
	807-1446	Sprocket for Specialty Intralox .60" Pitch Belt
	807-1445	Sprocket for Specialty Intralox 1.00" Pitch Belt
5	5015WW	Drive Spindle for Standard Belt
	5070WW	Drive Spindle for Specialty Intralox Belt
6	912-111SS	Square Key .25x2.50"
7 *	500078	Shaft Assembly with Bearing

Item	Part Number	Description
8	5009WW	Guard Bar
9	807-1424	Pull Pin
10	802-162	Bearing
11	74D12-WW	Drive Spindle Kit for Standard .50" Pitch Belt (Includes Items 1, 3, 4 and 10)
	74D25-WW	Drive Spindle Kit for Standard 1.00" Pitch Belt (Includes Items 1, 3, 4 and 10)
	74D11-WW	Drive Spindle Kit for Specialty Intralox .60" Pitch Belt (Includes Items 1, 3, 4 and 10)
	74D16-WW	Drive Spindle Kit for Specialty Intralox 1.00" Pitch Belt (Includes Items 1, 3, 4 and 10)
12	74DDT12-WW	Drive Tail Kit for Standard .50" Pitch Belt (Includes Items 1 through 7and 9)
	74DDT25-WW	Drive Tail Kit for Standard 1.00" Pitch Belt (Includes Items 1 through 7 and 9)
	74DDT11-WW	Drive Tail Kit for Specialty Intralox .60" Pitch Belt (Includes Items 1 through 7 and 9)
	74DDT16-WW	Drive Tail Kit for Specialty Intralox 1.00" Pitch Belt (Includes Items 1 through 7 and 9)
WW = Conveyor width ref: 06 - 60 in 02 increments		
* When the conveyor is ordered with a Dorner gearmotor mounting package the shaft assembly is replaced with a gearmotor mounting bracket.		

Sprocket Quantity (Item 4)	
Width	Sprocket Quantity
6" (152mm)	2
8" (203mm)	2
10" (254mm)	3
12" (305mm)	3
14" (356mm)	4
16" (406mm)	4
18" (457mm)	5
20" (508mm)	5
22" (559mm)	6
24" (610mm)	6
26" (660mm)	7
28" (711mm)	7
30" (762mm)	8
32" (813mm)	8
34" (864mm)	9
36" (914mm)	9
38" (965mm)	10
40" (1016mm)	10
42" (1067mm)	11
44" (1118mm)	11
46" (1168mm)	12
48" (1219mm)	12
50" (1270mm)	13
52" (1321mm)	13
54" (1372mm)	14
56" (1422mm)	14
58" (1473mm)	15
60" (1524mm)	15

Service Parts

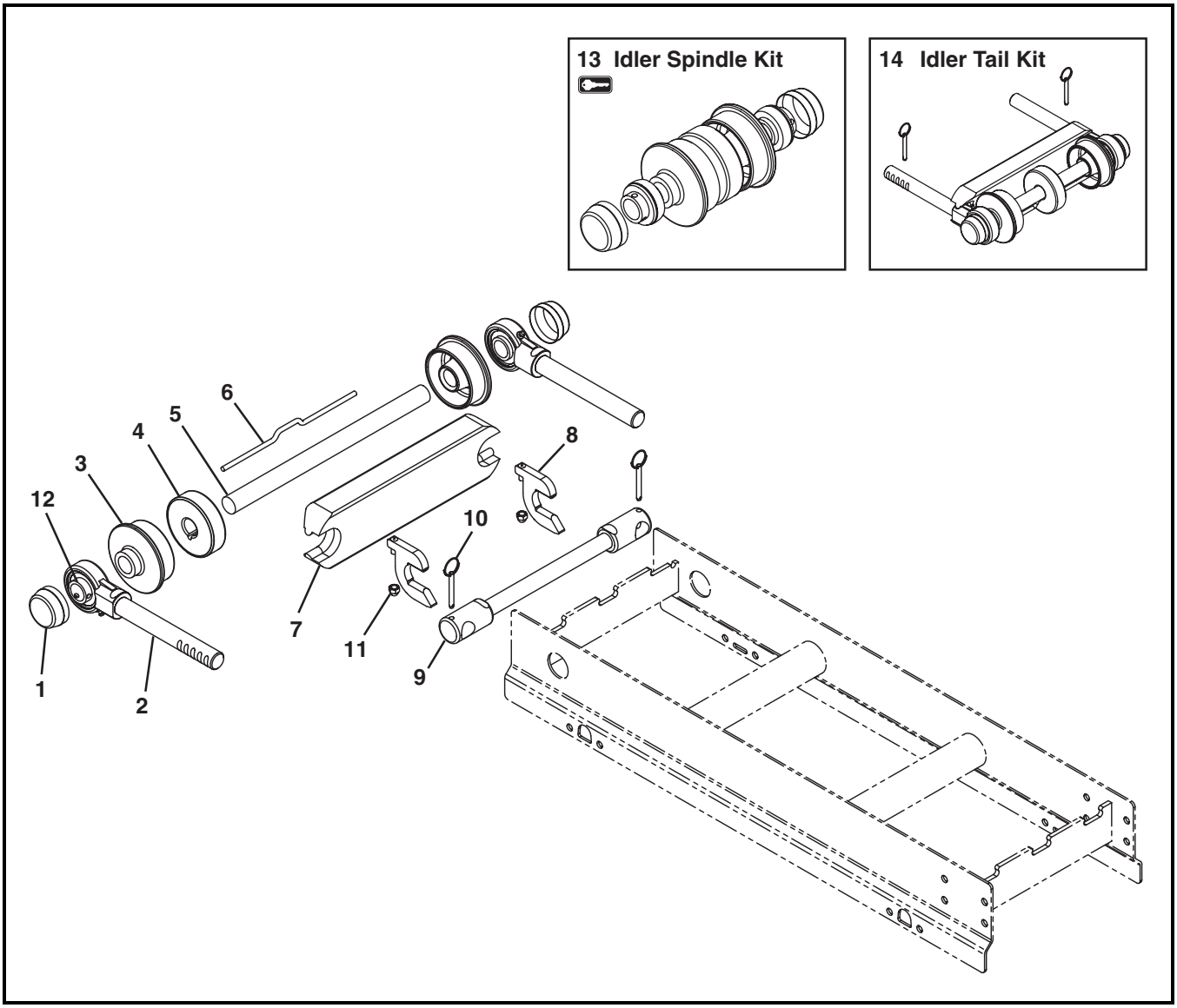
Tension End Components



Item	Part Number	Description
1	807-1454	Bearing Cover
2	500079	Shaft Assembly with Bearing
3	5017WW	Flanged Puck, Idler Tail for Standard Belt
	5072WW	Flanged Puck, Idler Tail for Specialty Intralox Belt
4	500175	Idler Puck (for 8" - 60" wide conveyors only)
5	5007WW	Idler Shaft
6	5008WW	Bent Retaining Bar for Standard Belt (for 8" - 60" wide conveyors only)
	5073WW	Bent Retaining Bar for Specialty Intralox Belt (for 8" - 60" wide conveyors only)

Item	Part Number	Description
7	5009WW	Guard Bar
8	807-1469	Pull Pin
9	802-162	Bearing
10	74I-WW	Idler Spindle Kit for Standard Belt (Includes Items 1, 3, 4 and 9)
	74IS-WW	Idler Spindle Kit for Specialty Intralox Belt (Includes Items 1, 3, 4 and 9)
11	74IT-WW	Idler Tail Kit for Standard Belt (Includes Items 1 through 8)
	74ITS-WW	Idler Tail Kit for Specialty Intralox Belt (Includes Items 1 through 8)
WW = Conveyor width ref: 06 - 60 in 02 increments		

Tip Up Tension End

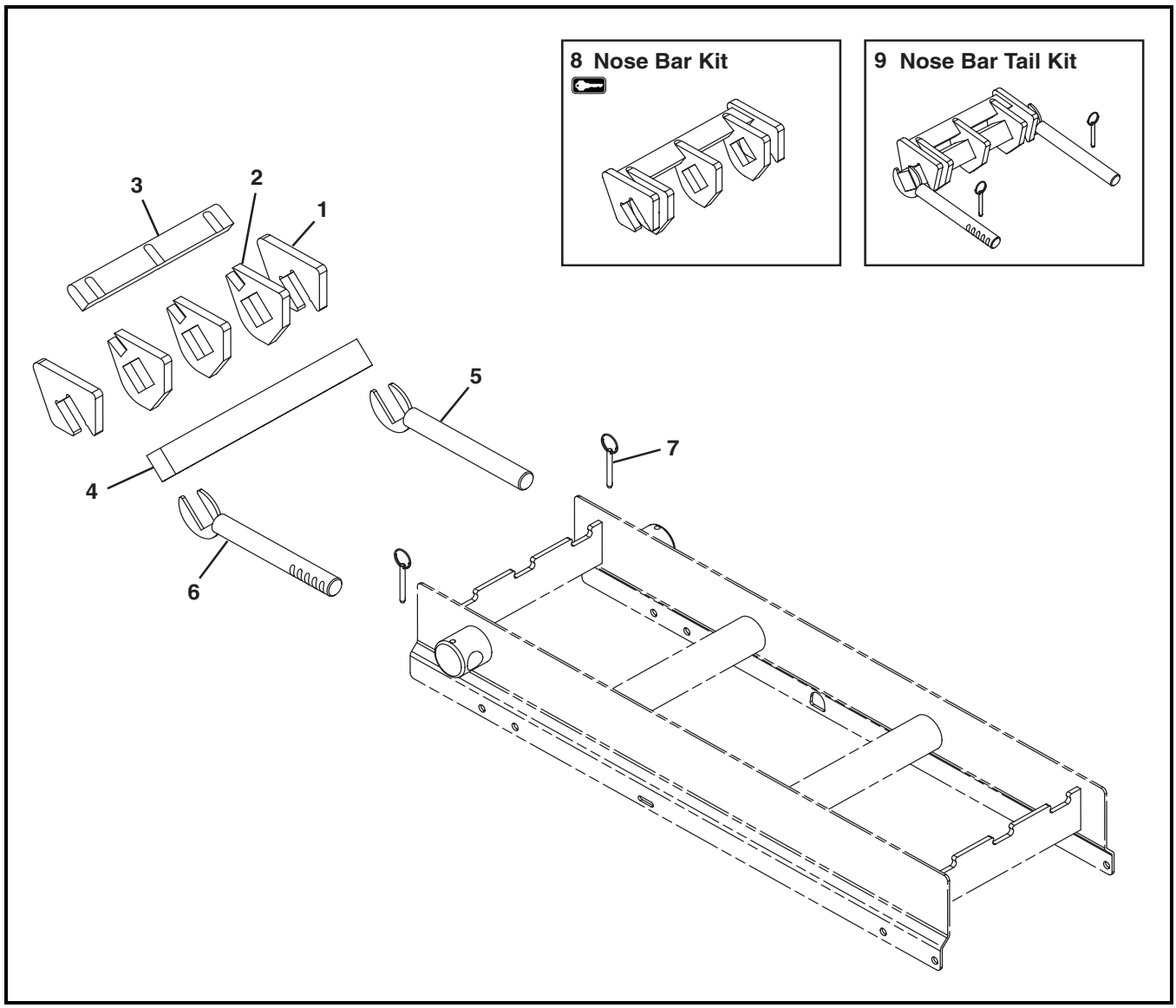


Item	Part Number	Description
1	807-1454	Bearing Cover
2	500079	Shaft Assembly with Bearing
3	5017WW	Flanged Puck, Idler Tail for Standard Belt
	5072WW	Flanged Puck, Idler Tail for Specialty Intralox Belt
4	500175	Idler Puck (for 8" - 60" wide conveyors only)
5	5007WW	Idler Shaft
6	5008WW	Bent Retaining Bar for Standard Belt (for 8" - 60" wide conveyors only)
	5073WW	Bent Retaining Bar for Specialty Intralox Belt (for 8" - 60" wide conveyors only)
7	5009WW	Guard Bar

Item	Part Number	Description
8	500184	Key Stop
9	5005WW	Tip Up Shaft Assembly
10	807-1469	Pull Pin
11	991008MSS	M10-1.50 Acorn Nut
12	802-162	Bearing
13	74I-WW	Idler Spindle Kit for Standard Belt (Includes Items 1, 3, 4 and 12)
	74IS-WW	Idler Spindle Kit for Specialty Intralox Belt (Includes Items 1, 3, 4 and 12)
14	74IT-WW	Idler Tail Kit for Standard Belt (Includes Items 1 through 7 and 10)
	74ITS-WW	Idler Tail Kit for Specialty Intralox Belt (Includes Items 1 through 7 and 10)
WW = Conveyor width ref: 06 - 60 in 02 increments		

Service Parts

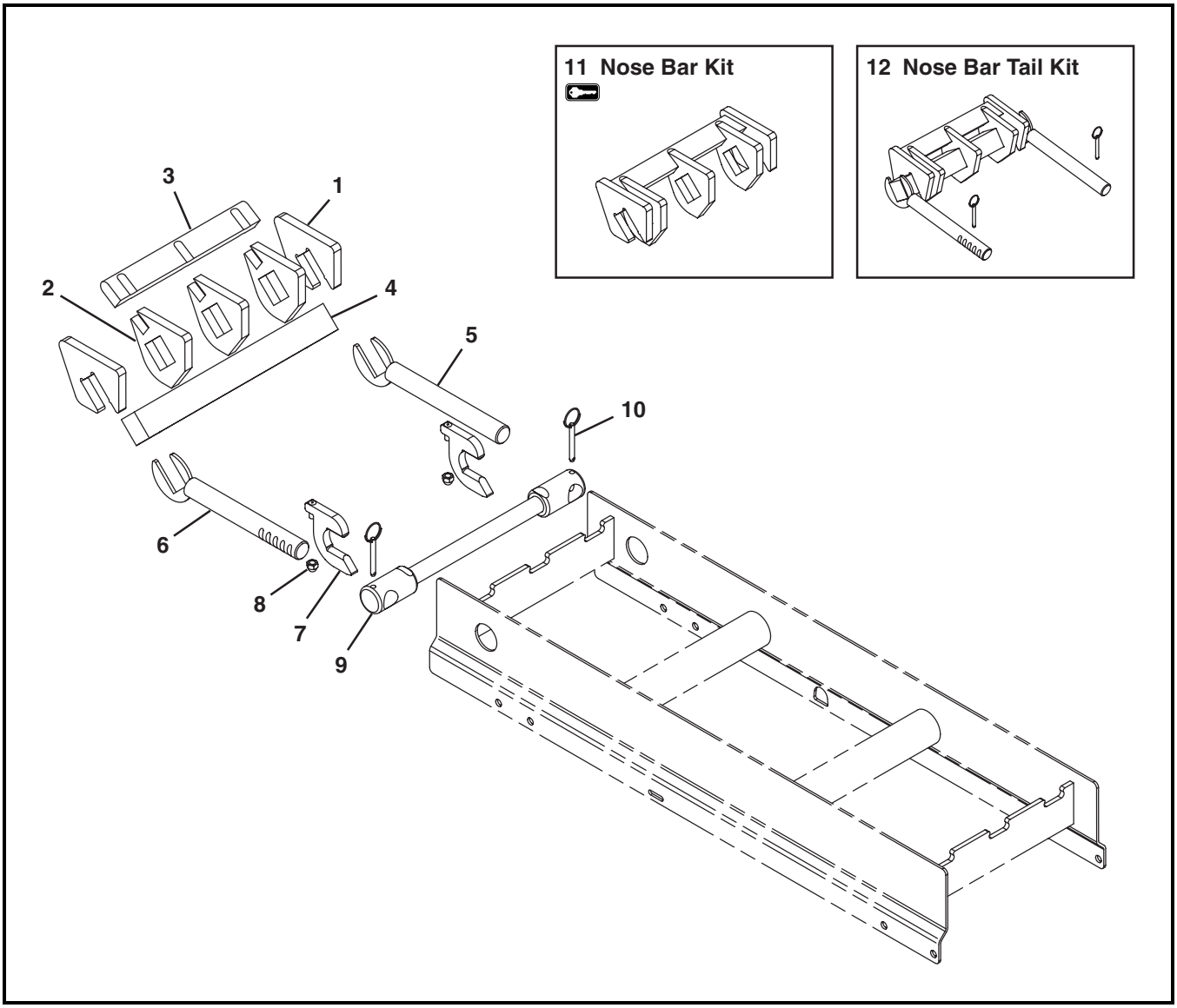
Nose Bar Tension End



Item	Part Number	Description
1	500490	Nose Bar Tracking Puck
2	500278	Nose Bar Puck
3	5056WW	.5" Pitch Nose Bar Wear Strip
	5058WW	1" Pitch Nose Bar Wear Strip
4	5037WW	Nose Bar Transfer Post for Standard Belt
	5076WW	Nose Bar Transfer Post for Specialty Intralox Belt
5	500487	Nose Bar Idler Shaft Left Hand
6	500488	Nose Bar Idler Shaft Right Hand
7	807-1469	Pull Pin
8	74NB5-WW	.5" Nose Bar Kit (Includes Items 1 through 3)
	74NB1-WW	1" Nose Bar Kit (Includes Items 1 through 3)

Item	Part Number	Description
9	74NBT5-WW	.5" Nose Bar Tail Kit for Standard Belt (Includes Items 1 through 6)
	74NBT1-WW	1" Nose Bar Tail Kit For Standard Belt (Includes Items 1 through 6)
	74NBT5S-WW	.5" Nose Bar Tail Kit for Specialty Intralox Belt (Includes Items 1 through 6)
	74NBT1S-WW	1" Nose Bar Tail Kit For Specialty Intralox Belt (Includes Items 1 through 6)
WW = Conveyor width ref: 06 - 60 in 02 increments		

Nose Bar Tip Up Tension End

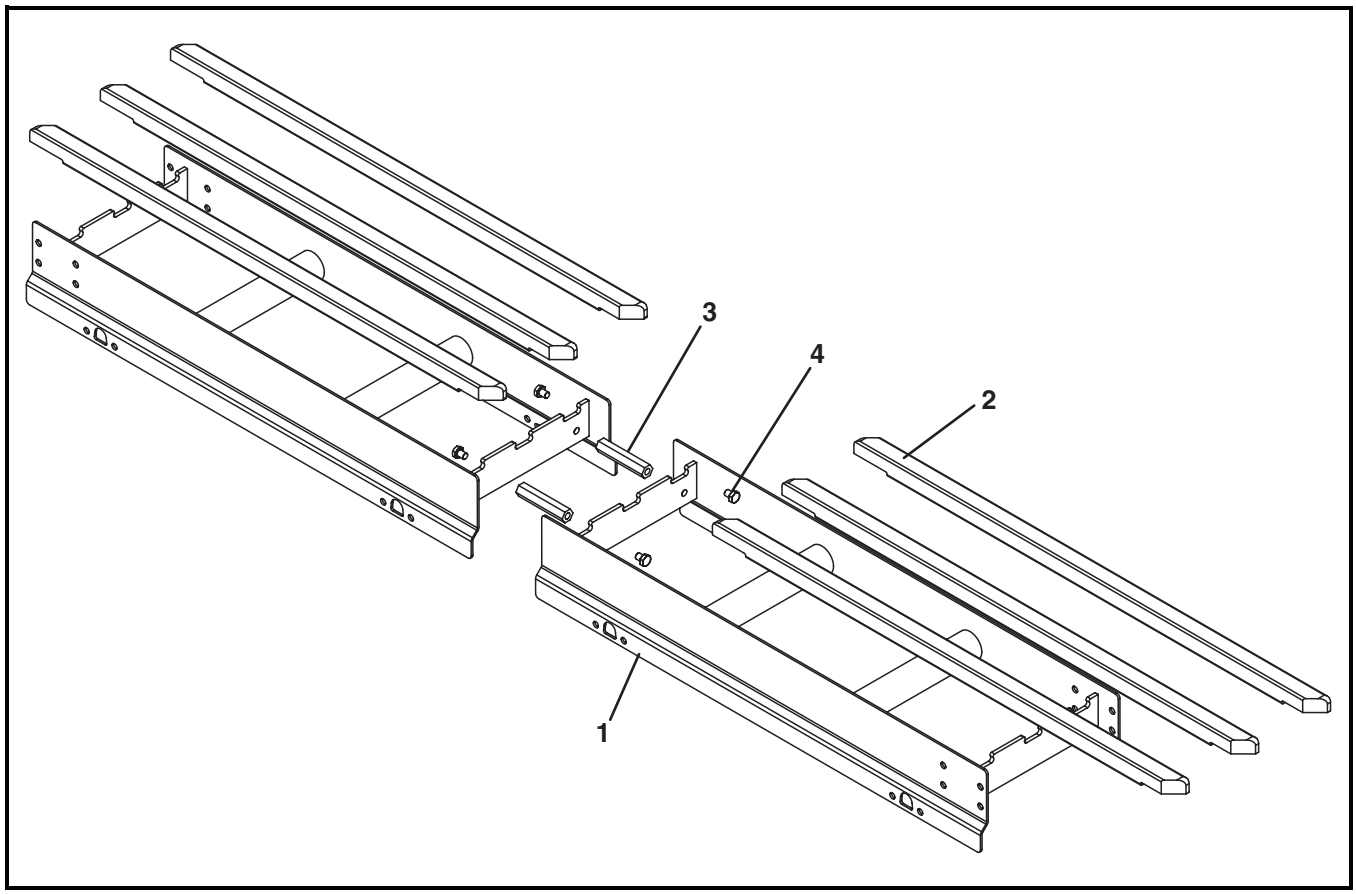


Item	Part Number	Description
1	500490	Nose Bar Tracking Puck
2	500278	Nose Bar Puck
3	5056WW	.5" Pitch Nose Bar Wear Strip
	5058WW	1" Pitch Nose Bar Wear Strip
4	5037WW	Nose Bar Transfer Post for Standard Belt
	5076WW	Nose Bar Transfer Post for Specialty Intralox Belt
5	500487	Nose Bar Idler Shaft Left Hand
6	500488	Nose Bar Idler Shaft Right Hand
7	500184	Key Stop
8	991008MSS	M10-1.50 Acorn Nut
9	5005WW	Tip Up Shaft Assembly

Item	Part Number	Description
10	807-1469	Pull Pin
11	74NB5-WW	.5" Nose Bar Kit (Includes Items 1 through 3)
	74NB1-WW	1" Nose Bar Kit (Includes Items 1 through 3)
12	74NBT5-WW	.5" Nose Bar Tail Kit for Standard Belt (Includes Items 1 through 6)
	74NBT1-WW	1" Nose Bar Tail Kit For Standard Belt (Includes Items 1 through 6)
	74NBT5S-WW	.5" Nose Bar Tail Kit for Specialty Intralox Belt (Includes Items 1 through 6)
	74NBT1S-WW	1" Nose Bar Tail Kit For Specialty Intralox Belt (Includes Items 1 through 6)
WW = Conveyor width ref: 06 - 60 in 02 increments		

Service Parts

Conveyor Frame and Extension

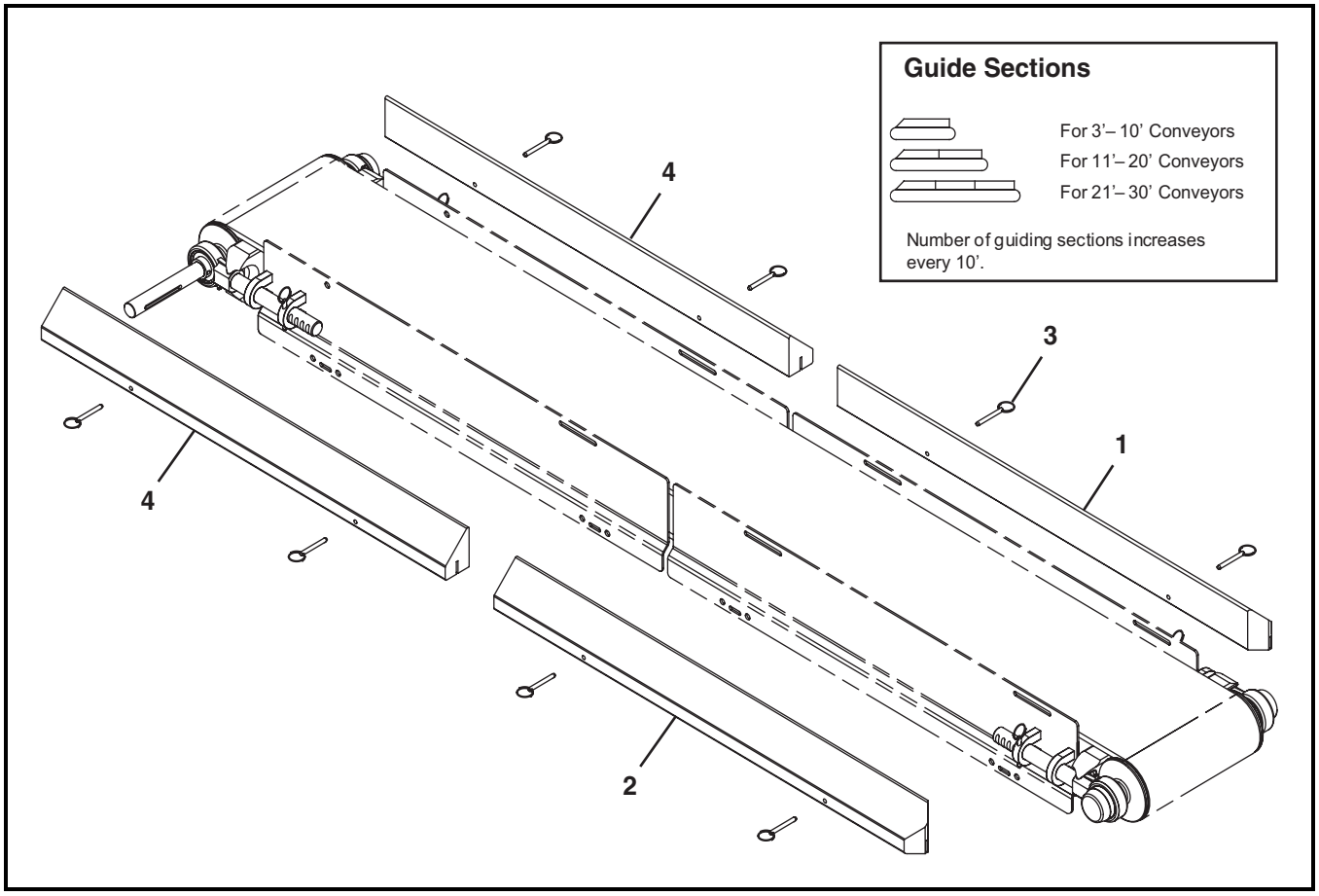


Item	Part Number	Description
1	------	Consult Factory for Frame Part Number
2	501800-LLL	Straight Wear Strip
3	50193	Hex Post Connector
4	961016MSS	Hex Head Cap Screw M10-1.5x16mm
LLL = Conveyor length ref: 036 - 999 in 001 increments		

Wear Strip Quantity (Item 2)									
		Conveyor Length (LLL)							
		036-132	133-252	253-372	373-492	493-612	613-732	733-852	853-999
Conveyor Width (WW)	06	2	4	6	8	10	12	14	16
	08	2	4	6	8	10	12	14	16
	10	3	6	9	12	15	18	21	24
	12	3	6	9	12	15	18	21	24
	14	3	6	9	12	15	18	21	24
	16	4	8	12	16	20	24	28	32
	18	4	8	12	16	20	24	28	32
	20	5	10	15	20	25	30	35	40
	22	5	10	15	20	25	30	35	40
	24	5	10	15	20	25	30	35	40

Wear Strip Quantity (Item 2)									
		Conveyor Length (LLL)							
		036-132	133-252	253-372	373-492	493-612	613-732	733-852	853-999
Conveyor Width (WW)	26	6	12	18	24	30	36	42	48
	28	6	12	18	24	30	36	42	48
	30	6	12	18	24	30	36	42	48
	32	7	14	21	28	35	42	49	56
	34	7	14	21	28	35	42	49	56
	36	8	16	24	32	40	48	56	64
	38	8	16	24	32	40	48	56	64
	40	8	16	24	32	40	48	56	64
	42	9	18	27	36	45	54	63	72
	44	9	18	27	36	45	54	63	72
	46	9	18	27	36	45	54	63	72
	48	10	20	30	40	50	60	70	80
	50	10	20	30	40	50	60	70	80
	52	11	22	33	44	55	66	77	88
	54	11	22	33	44	55	66	77	88
	56	11	22	33	44	55	66	77	88
	58	12	24	36	48	60	72	84	96
	60	12	24	36	48	60	72	84	96

3" (76 mm) High Sides

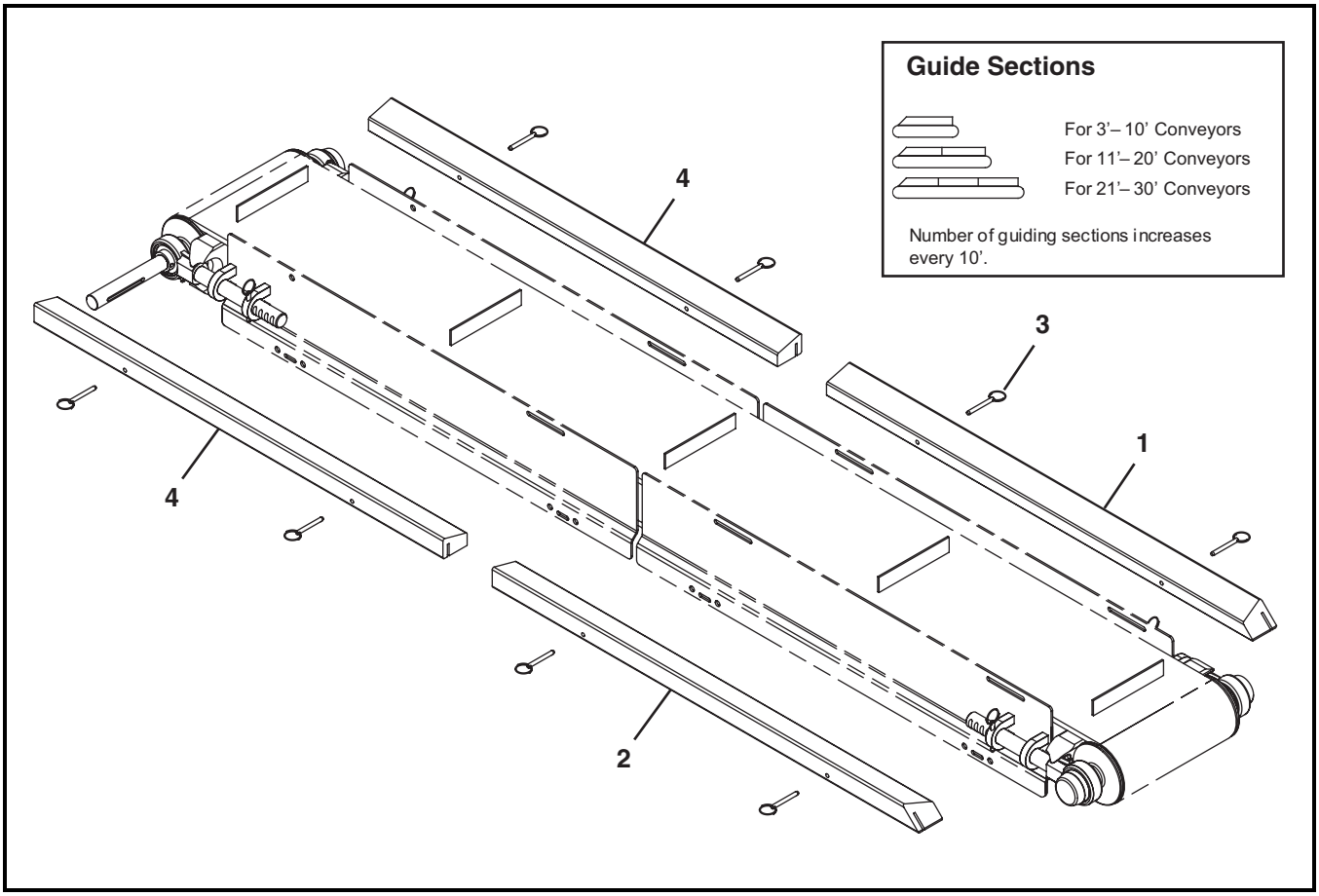


Item	Part Number	Description
1	503501-LLLLL	Right Hand High Side Guide
2	503601-LLLLL	Left Hand High Side Guide
3	807-1469	Pull Pin

Item	Part Number	Description
4	503401-LLLLL	Square End High Side Guide
LLLLL = Guide Length in inches with 2 decimal places.		
Example: Guide Length = 95.25" LLLLL = 09525		

Service Parts

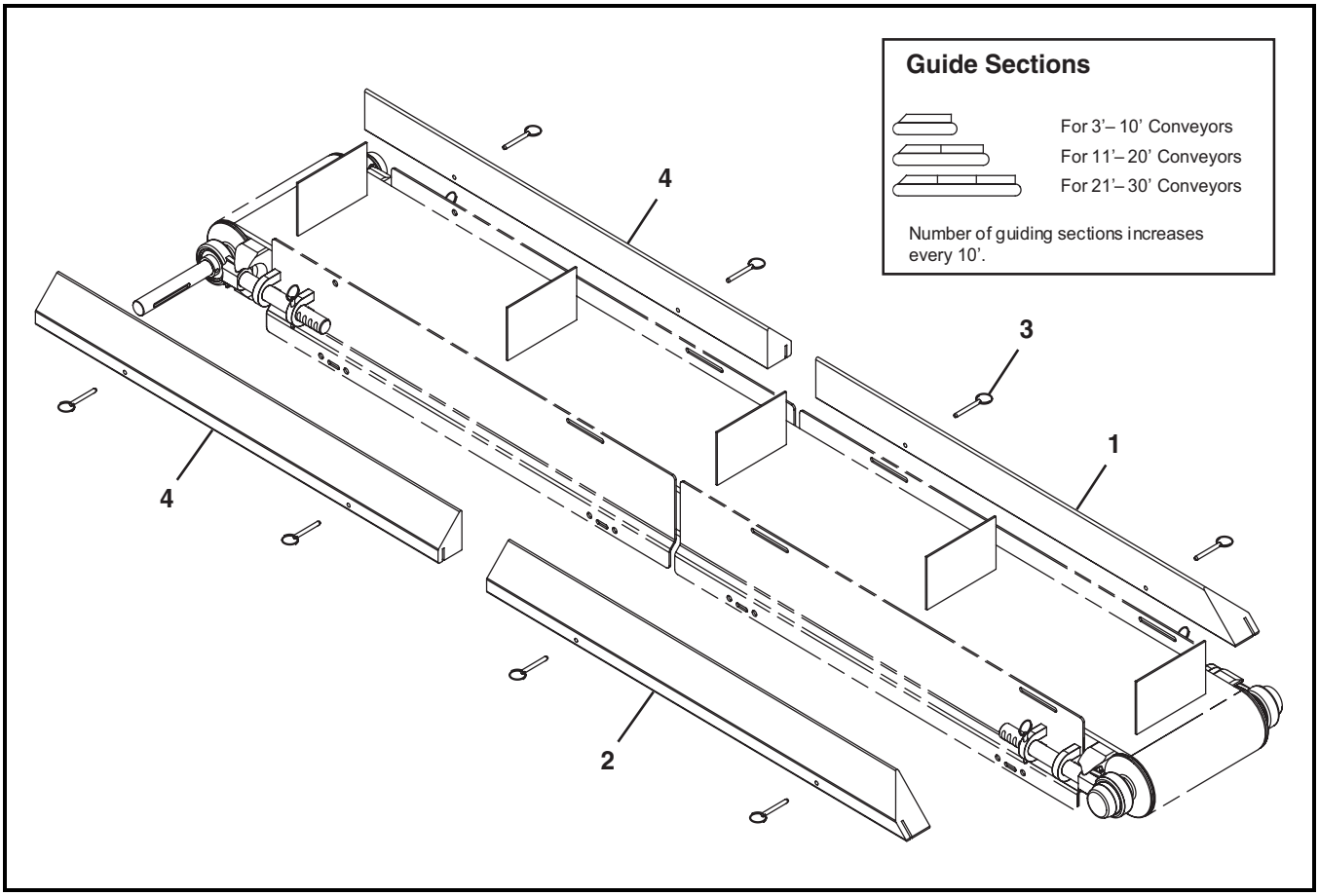
Cleated 1" (25 mm) Guides



Item	Part Number	Description
1	502401-LLLLL	1" Cleated Right Hand Guide (6" - 16" wide conveyors)
	502402-LLLLL	1" Cleated Right Hand Guide (18" - 24" wide conveyors)
2	502501-LLLLL	1" Cleated Left Hand Guide (6" - 16" wide conveyors)
	502502-LLLLL	1" Cleated Left Hand Guide (18" - 24" wide conveyors)

Item	Part Number	Description
3	807-1469	Pull Pin
4	502301-LLLLL	1" Cleated Guide Square End (6" - 16" wide conveyors)
	502302-LLLLL	1" Cleated Guide Square End (18" - 24" wide conveyors)
LLLLL = Guide Length in inches with 2 decimal places.		
Example: Guide Length = 95.25" LLLLL = 09525		

Cleated 3" (76 mm) Guides

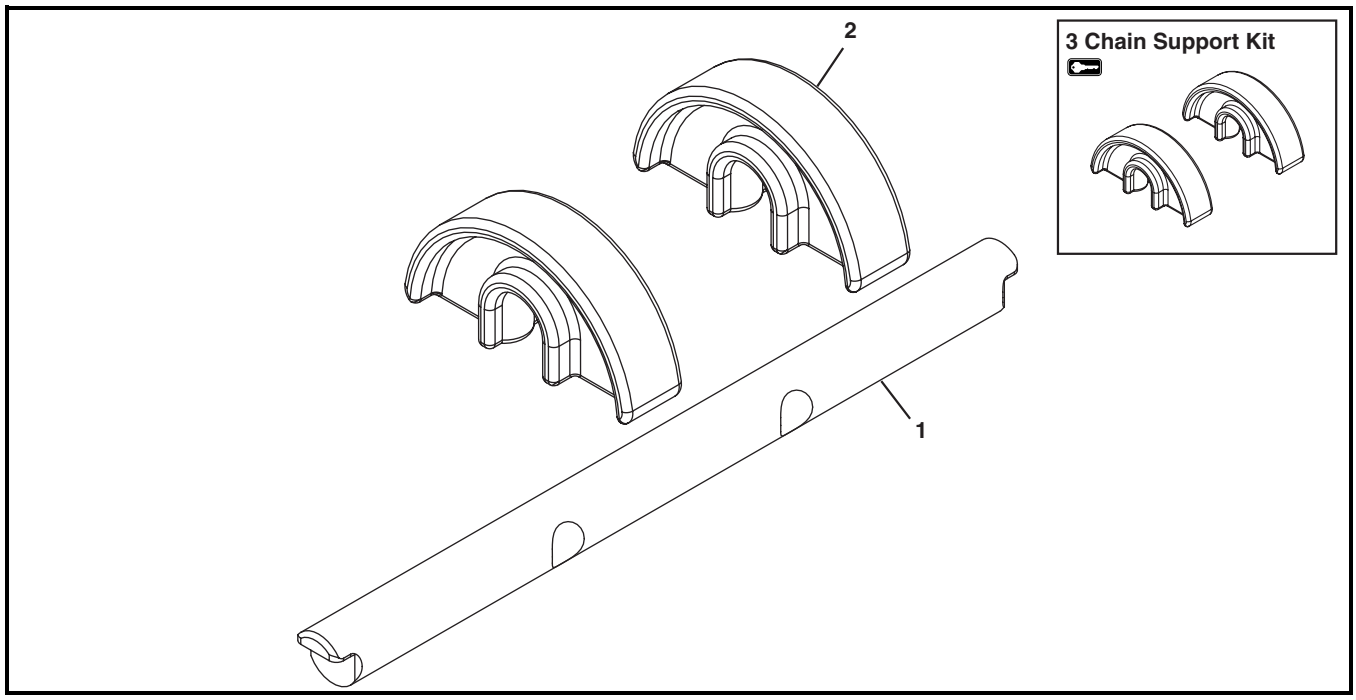


Item	Part Number	Description
1	502701-LLLLL	3" Cleated Right Hand Guide (6" - 16" wide conveyors)
	502702-LLLLL	3" Cleated Right Hand Guide (18" - 24" wide conveyors)
2	502801-LLLLL	3" Cleated Left Hand Guide (6" - 16" wide conveyors)
	502802-LLLLL	3" Cleated Left Hand Guide (18" - 24" wide conveyors)

Item	Part Number	Description
3	807-1469	Pull Pin
4	502601-LLLLL	3" Cleated Guide Square End (6" - 16" wide conveyors)
	502602-LLLLL	3" Cleated Guide Square End (18" - 24" wide conveyors)
LLLLL = Guide Length in inches with 2 decimal places.		
Example: Guide Length = 95.25" LLLLL = 09525		

Service Parts

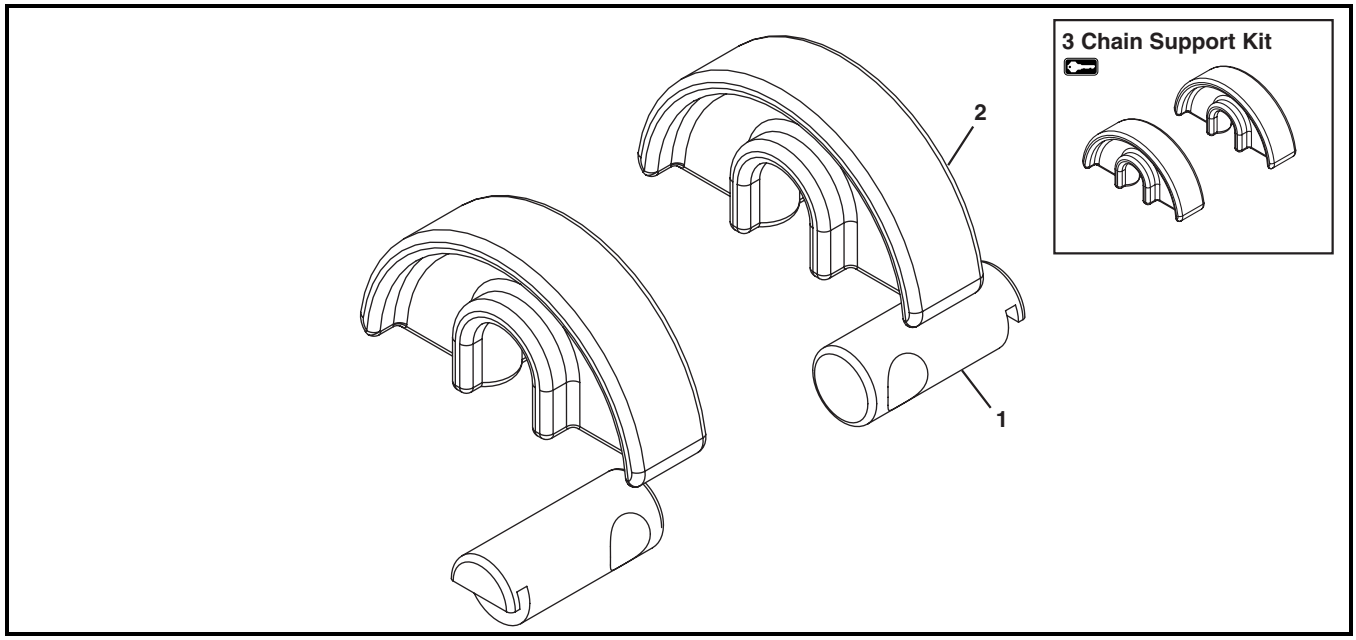
Flat Belt Returns



Item	Part Number	Description
1	5032WW	Return Shaft
2	500075	Chain Return Shoe

Item	Part Number	Description
3	74R-WW	Chain Support Kit (Includes Item 2)
WW = Conveyor width ref: 06 - 60 in 02 increments		

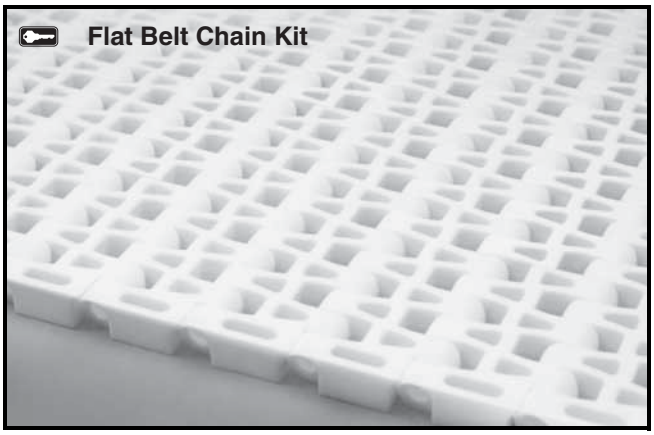
Cleated Belt Returns



Item	Part Number	Description
1	500196	Cleated Return Shaft
2	500075	Chain Return Shoe

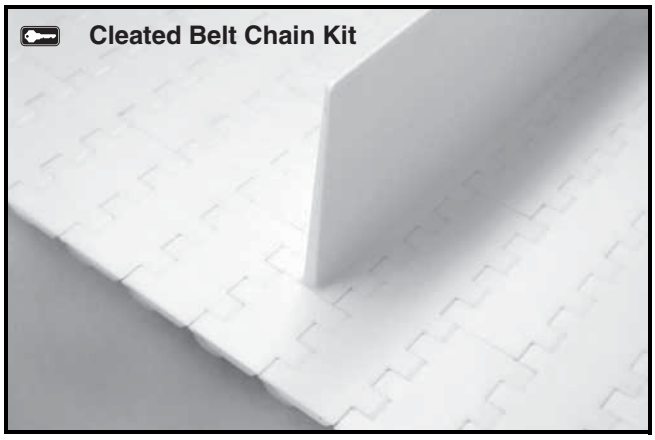
Item	Part Number	Description
3	74CR	Chain Support Kit (Includes Item 2)

Flat Belt



Item	Part Number	Description
1	74BB-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: 06 - 60 in 02 increments		

Cleated Belt



Item	Part Number	Description
1	74BB-WW-SS	Cleated Belt Chain Repair Kit (Includes 1 cleat centered on a cleat spacing length of chain and assembly pins)
BB = Chain Reference Number		
WW = Conveyor width ref: 06 - 60 in 02 increments		
SS = Cleat Spacing		

Ordering a Replacement Chain

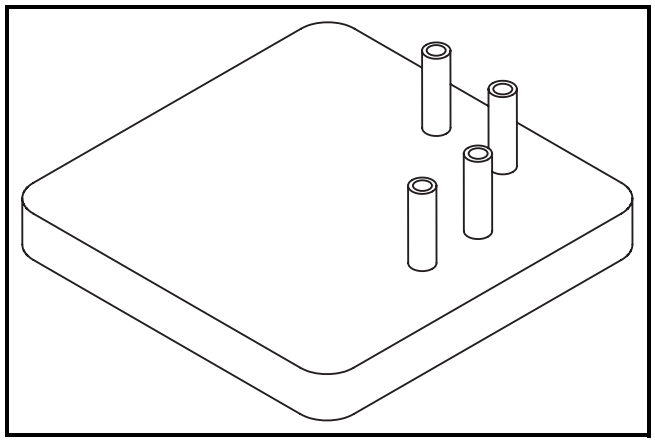
Determine the length of chain required for the conveyor and round up to the nearest foot length. Order the proper number of chain repair kits (1' long each) for your conveyor. Dorner will ship chain kits that are of a reasonable length fully assembled.

Example:

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

Order: Qty (43) of 74BB-WW

Belt Removal Tool



Item	Part Number	Description
1	500582	Tool Rod Removal for 1" Pitch Flush Grid Belt
	500494	Tool Rod Removal for 1/2" Pitch Flush Grid Belt

Configuring Conveyor Part Number

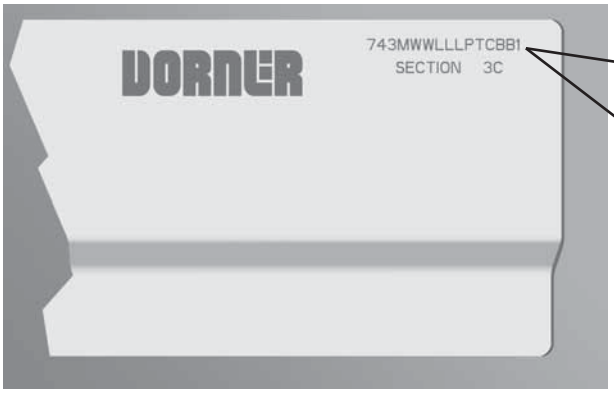


Figure 81

Flat Belt Conveyor

Refer to the model number on the conveyor frame **(Figure 81)**. From the model number, determine conveyor width (WW), length (LLL), drive stand location (S), idler stand location (S), cleaning options (C), drive/pulley type (D), profile (G) and belt material (BB).

Example:
74M12072CC111MA

7400 Series end drive, flat belt conveyor, 12" (305mm) wide x 72" (1829mm) long, stands located 18" (457mm) from each end, frame cutout cleaning option, side drive with standard pulleys on each end, low side profiles, and MA belt material.

Cleated Belt Conveyor

Refer to the model number on the conveyor frame **(Figure 81)**. From the model number, determine conveyor width (WW), length (LLL), drive stand location (S), idler stand location (S), cleaning options (C), cleated belt material (BB) and cleat spacing (SS).

Example:
74M12072CC1NA10

7400 Series end drive, cleated belt conveyor, 12" (305mm) wide x 72" (1829mm) long, stands located 18" (457mm) from each end, frame cutout cleaning option, NA cleated belt material, side drive with standard pulleys on each end, and 10 link spacing for cleats.

Notes

Return Policy

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

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

A representative will discuss action to be taken on the returned items and provide a Returned Goods Authorization number for reference.

There will be a return charge on all new undamaged items returned for credit where Dorner was not at fault. Dorner is not responsible for return freight on such items.

Conveyors and conveyor accessories

Standard catalog conveyors	30%
MPB Series, cleated and specialty belt conveyors	50%
7400 & 7600 Series conveyors	non-returnable items
Engineered special products	case by case
Drives and accessories	30%
Sanitary stand supports	non-returnable items

Parts

Standard stock parts	30%
MPB, 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 Technical Sales, Catalog Sales and Service Teams 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 Drive, PO Box 20
Hartland, WI 53029-0020 USA
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

851-592 Rev. A Printed in U.S.A.