AquaPruf®
Belted Conveyors

Installation, Maintenance and Parts Manual

For other service manuals visit our website at:
www.dornerconveyors.com/manuals-literature

Record Conveyor Serial Number Here

851-943 Rev. A

Table of Contents

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

Dorner has convenient, pre-configured kits of Critical 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. Recommended Critical Service Parts and Kits are marked in the Service Parts section of this manual with the Key Service Parts symbol .

Warnings – General Safety

⚠ WARNING

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

⚠ DANGER

SEVERE HAZARD!

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

⚠ WARNING

SEVERE HAZARD!

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

⚠ WARNING

BURN HAZARD!

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

⚠ WARNING

PUNCTURE HAZARD!

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

⚠ DANGER

EXPLOSION HAZARD!

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

⚠ WARNING

CRUSH HAZARD!

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

⚠ WARNING

CRUSH HAZARD!

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

⚠ WARNING

SEVERE HAZARD!

- **Dorner cannot control the physical installation and application of conveyors. Taking protective measures is the responsibility of the user.**
- **When conveyors are used in conjunction with other equipment or as part of a multiple conveyor system, CHECK FOR POTENTIAL PINCH POINTS and other mechanical hazards before system start-up.**
- **Failure to comply could result in serious injury.**

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

1	Conveyor
2	Gearmotor
3	Controller
4	Belt (Flat Belt Shown)
5	Support Stands
6	End Drive
7	Idler End
8	Guides

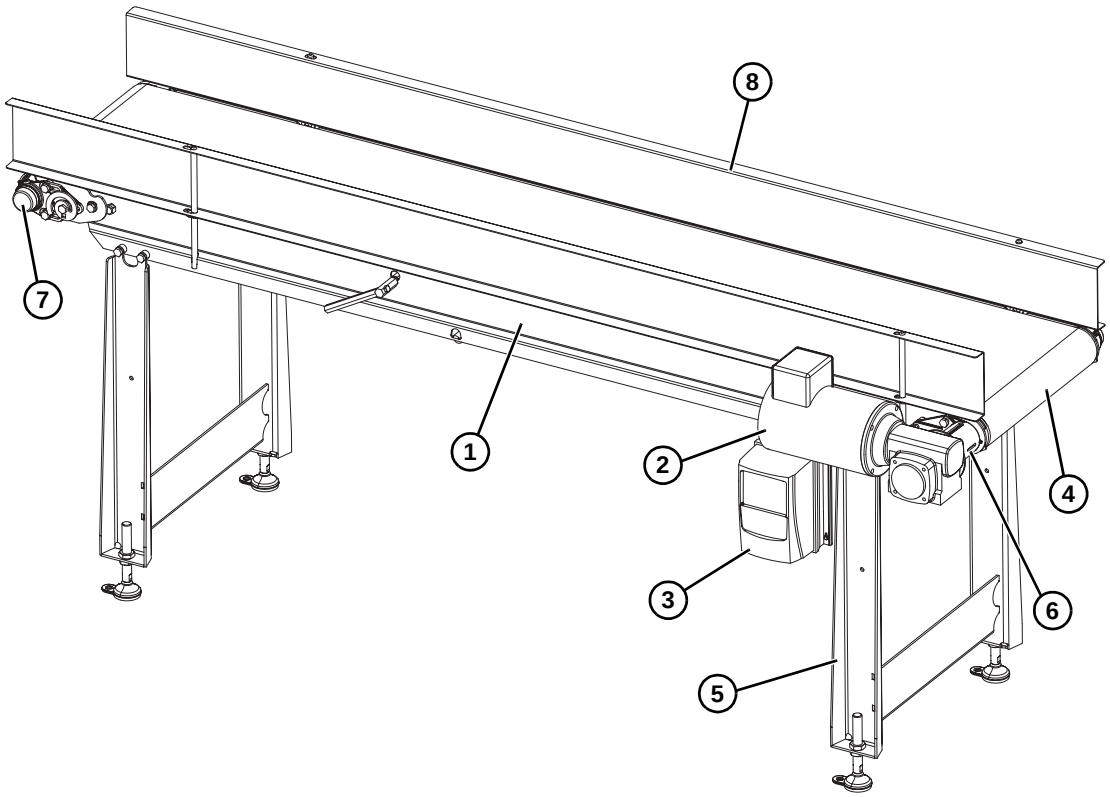
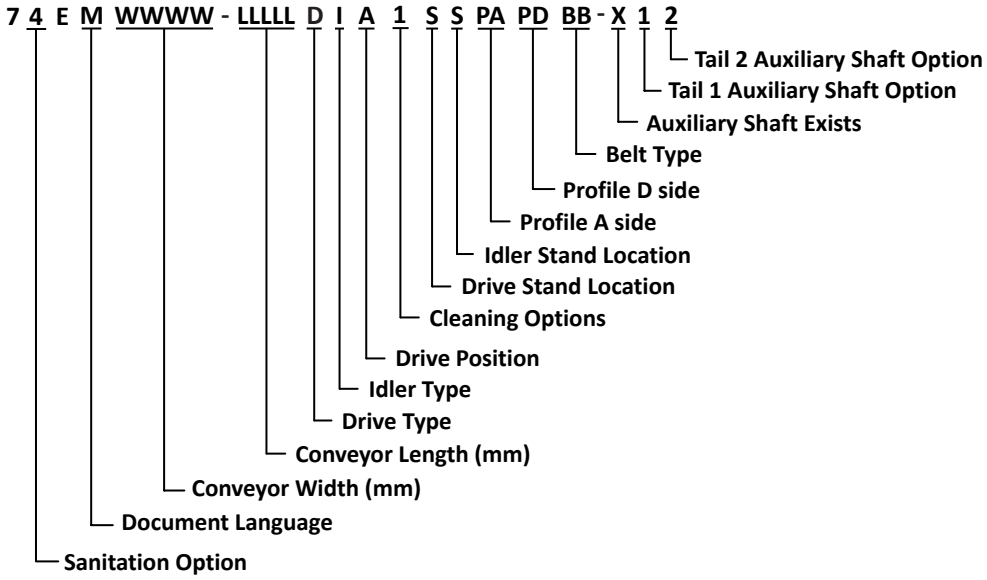


Figure 1

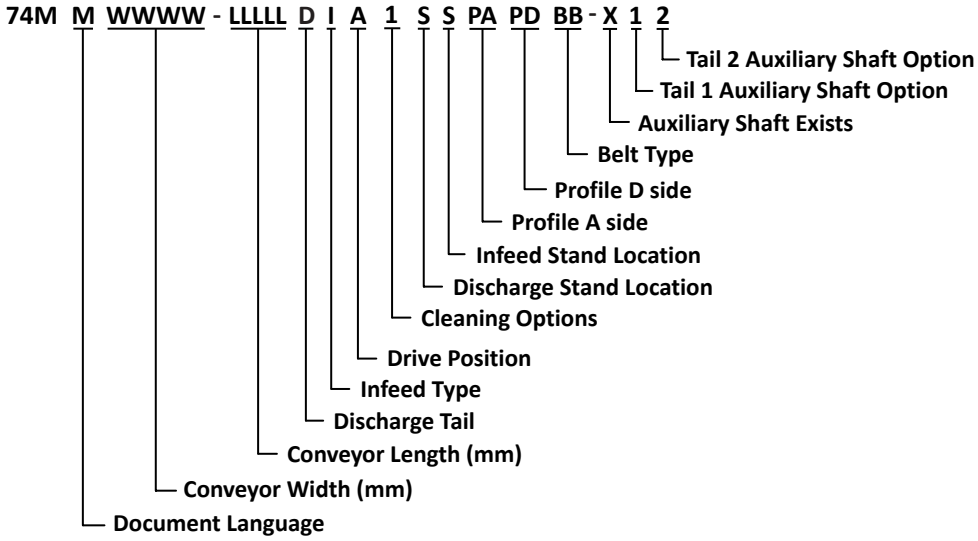
Specifications

AquaPruf Belted Conveyors

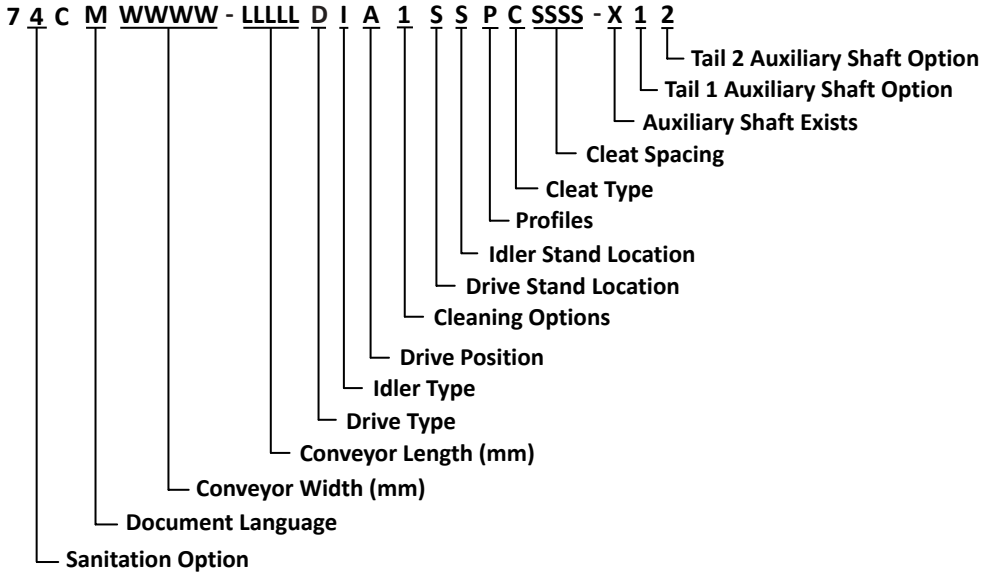
Flat Belt End Drive Conveyors



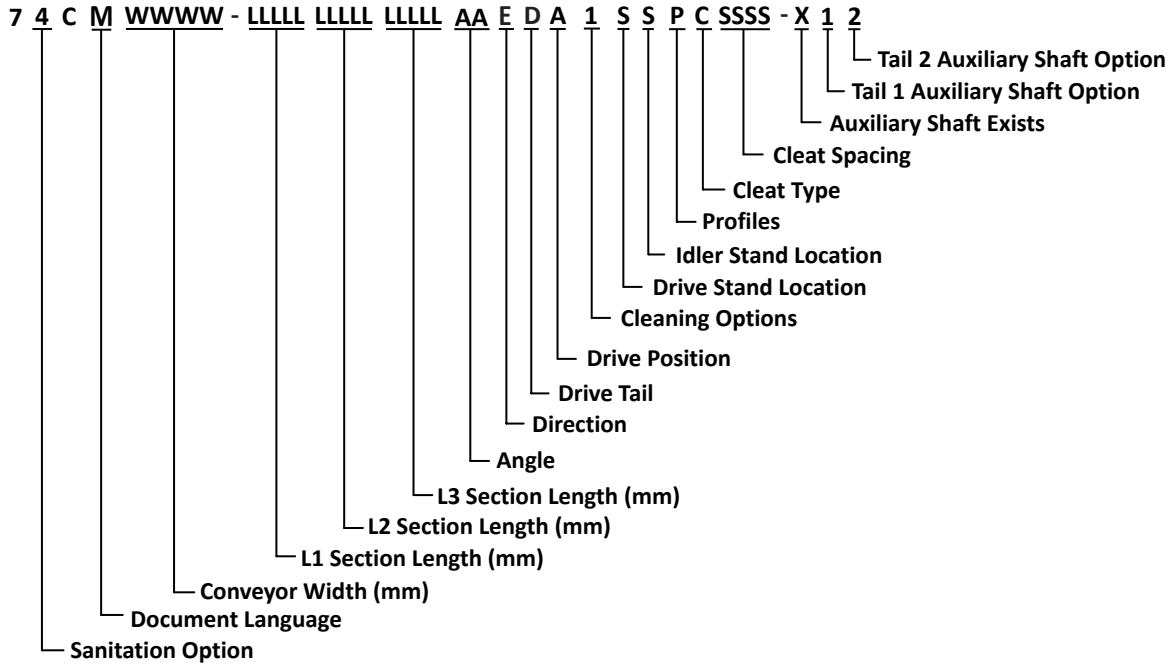
Flat Belt Center Drive



Cleated Belt End Drive



Cleated Belt LPZ



Specifications

Conveyor Supports

Maximum Distances:

1 = Support Stand on Drive End = 610 mm (24")

2 = Between Support Stands = 2997 mm (118")**

3 = Support Stand on Idler End = 762 mm (30")

** For conveyors longer than 3048 mm (10 ft), install stand mount kit at frame joint.

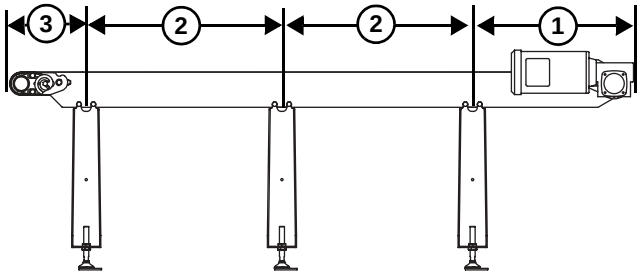


Figure 2

Specifications

Conveyor Width Reference (WWWW)	0152, 0203, 0254, 0305, 0356, 0406, 0457, 0508, 0559, 0610, 0660, 0711, 0762, 0813, 0864, 0914, 0965, 1016, 1067, 1118, 1168, 1219
Conveyor Belt Width	152 mm (6"), 203 mm (8"), 254 mm (10"), 305 mm (12"), 356 mm (14"), 406 mm (16"), 457 mm (18"), 508 mm (20"), 559 mm (22"), 610 mm (24"), 660 mm (26"), 711 mm (28"), 762 mm (30"), 813 mm (32"), 864 mm (34"), 914 mm (36"), 965 (38"), 1016 (40"), 1067 (42"), 1118 (44"), 1168 (46"), 1219 (48")
Maximum Conveyor Load (See NOTE Below)	98 kg/ m^2 (20 lbs. / ft^2) with a maximum of 227 kg (500 lbs.)
Belt Travel	280 mm (11") per revolution of pulley
Maximum Belt Speed	91 m/minute (300 ft/minute)
Conveyor Length Reference (LLLLL)	00915 - 12190 in 00005 increments
Conveyor Length	915 mm (36") - 12190 mm (480") in 5 mm (.20") increments

LPZ Section Width	203 mm (8"), 254 mm (10"), 305 mm (12"), 356 mm (14"), 406 mm (16"), 457 mm (18"), 508 mm (20"), 559 mm (22"), 610 mm (24")
LPZ Section Length	610 mm (24") – 6100 mm (240") in 5 mm (.20") increments
Total LPZ Conveyor Length	L1 + L2 + L3 = Maximum 12190 mm (480") Long Conveyor

NOTE

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*

Torque Specifications

	Flat Head		Socket Head		Button/Low Head		Set Screw	
	Size	**Torque**	**Size**	**Torque**	**Size**	**Torque**	**Size**	**Torque**
M4 x 0.7	2.5 mm	3.4 Nm (30 in lbs)	3 mm	5.9 Nm (52 in lbs)	2.5 mm	2.9 Nm (26 in lbs)	2 mm	2.1 Nm (19 in lbs)
M5 x 0.8	3 mm	6.9 Nm (61 in lbs)	4 mm	12.0 Nm (106 in lbs)	3 mm	5.9 Nm (52 in lbs)	2.5 mm	4.7 Nm (42 in lbs)
M6 x 1.0	4 mm	12.0 Nm (106 in lbs)	5 mm	20.3 Nm (180 in lbs)	4 mm	10.0 Nm (89 in lbs)	3 mm	7.7 Nm (68 in lbs)
M8 x 1.25	5 mm	28.0 Nm (248 in lbs)	6 mm	48.8 Nm (432 in lbs)	5 mm	24.0 Nm (212 in lbs)	4 mm	17.8 Nm (158 in lbs)
M10 x 1.5	6 mm	56.0 Nm (496 in lbs)	8 mm	97.5 Nm (863 in lbs)	6 mm	48.0 Nm (425 in lbs)	5 mm	35.0 Nm (310 in lbs)

⚠ CAUTION

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

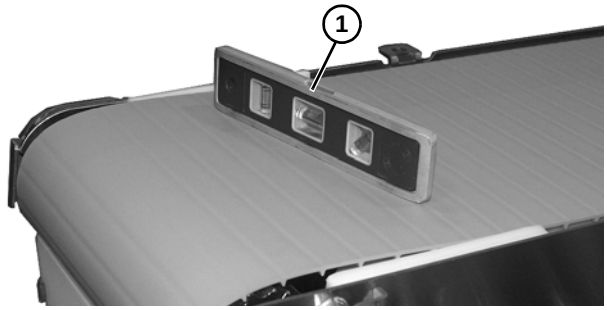


Figure 3

Required Tools

- Level
- Torque wrench
- 5/32" hex wrench
- 6 mm hex wrench
- 8 mm hex wrench
- 10 mm wrench
- 13 mm wrench
- 14 mm wrench
- 17 mm wrench
- 19 mm wrench

Recommended Installation Sequence

1. Assemble the conveyor (if required). Refer to “Conveyors Longer than 3048 mm (10 ft)” on page 9.
2. Attach the stands. Refer to “Stand Installation” on page 12.
3. Install the belt. Refer to “Belt Installation” on page 12.
4. Install belt returns. Refer to “Belt Returns” on page 16.
5. Install the gearmotor. Refer to “Drive Package Installation” on page 23.

NOTE

For 3-A compliance, a conveyor cover or shield must be installed over the conveyor that is easily cleaned, self-draining, and located to prevent liquid or other contaminants from draining or dropping into the container or product, or onto the conveyor belt. Multiple covers can be used if necessary, with overlapping edges. Cover(s) should be fabricated from stainless steel or FDA certified plastic material, and the bottom of the cover(s) must be smooth, with no crevices or exposed threads.

Conveyors Longer than 3048 mm (10 ft)

Connecting Components

Typical connecting components **(Figure 4)**.

1	Connector (x2)
2	Hex Head Cap Screw (x4)
3	Conveyor Frame Sections

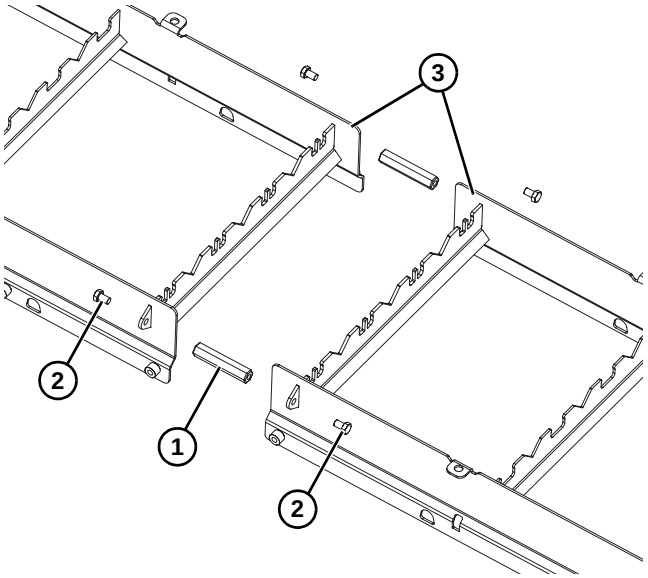


Figure 4

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

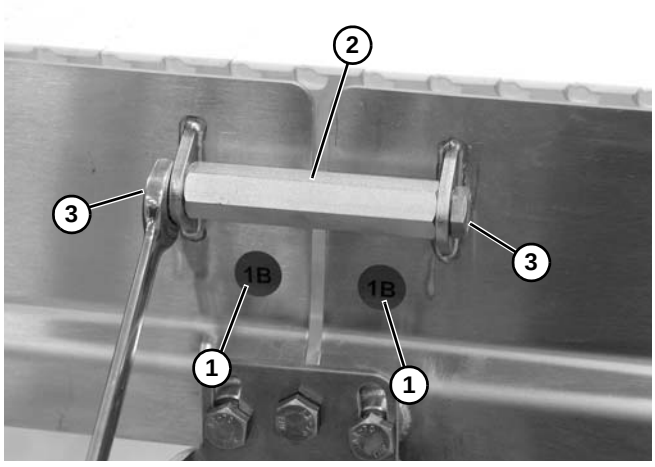


Figure 5

2. Join both conveyor frame sections and install connector **(Figure 5, item 2)** with two screws **(Figure 5, item 3)** on both sides. Tighten to 28-32 Nm (20-24 ft-lbs).

Installation

Z-Frame Conveyors

NOTE
Be sure all frame sections are properly supported during Z-Frame assembly.

Upper Knuckles

Typical upper knuckle components **(Figure 6)**.

1	Connector (x4)
2	Hex Head Cap Screw (x8)
3	Upper Knuckle Assembly

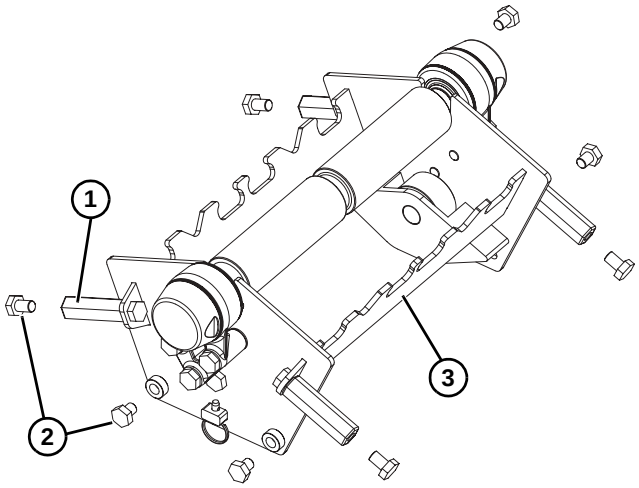


Figure 6

1. Attach upper knuckle **(Figure 7, item 1)** to frame using two screws **(Figure 7, item 2)** and a connector **(Figure 7, item 3)** on each side of the upper knuckle assembly.

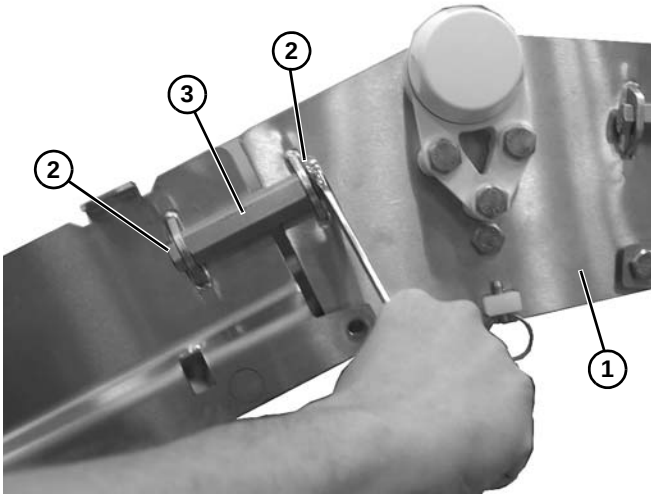


Figure 7

2. Install spacer **(Figure 8, item 1)** between frame **(Figure 8, item 2)** and upper knuckle plate **(Figure 8, item 3)**. Secure with screw **(Figure 8, item 4)**.

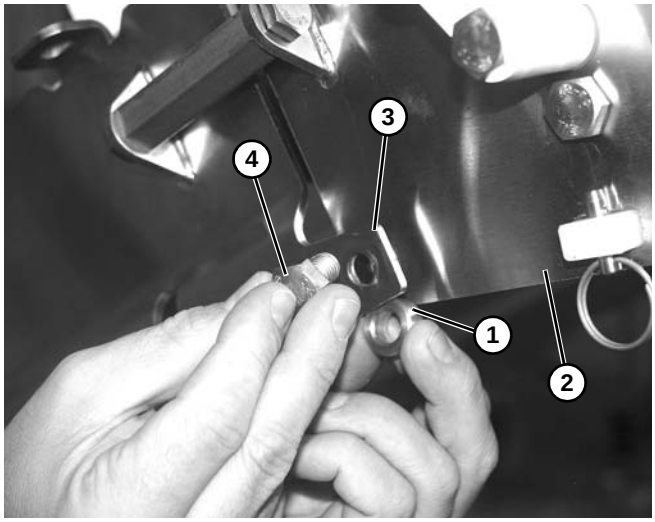


Figure 8

3. Tighten all screws **(Figure 9, item 1)** to 28-32 Nm (20-24 ft-lbs).

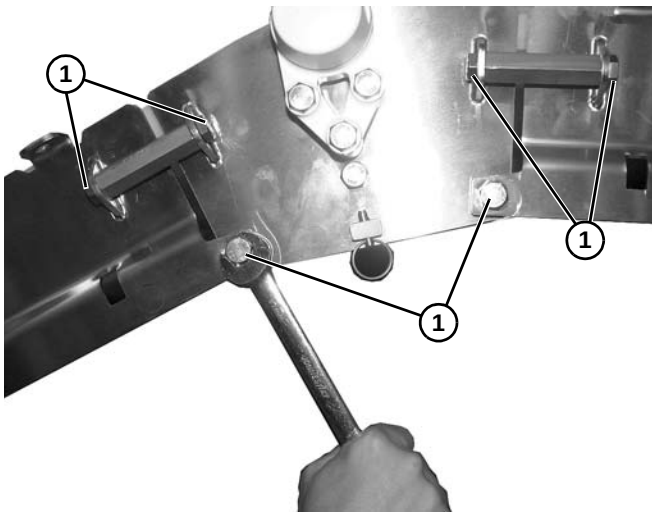


Figure 9

Lower Knuckles

Typical lower knuckle components **(Figure 10)**.

1	Connector (x4)
2	Hex Head Cap Screw (x8)
3	Lower Knuckle Assembly

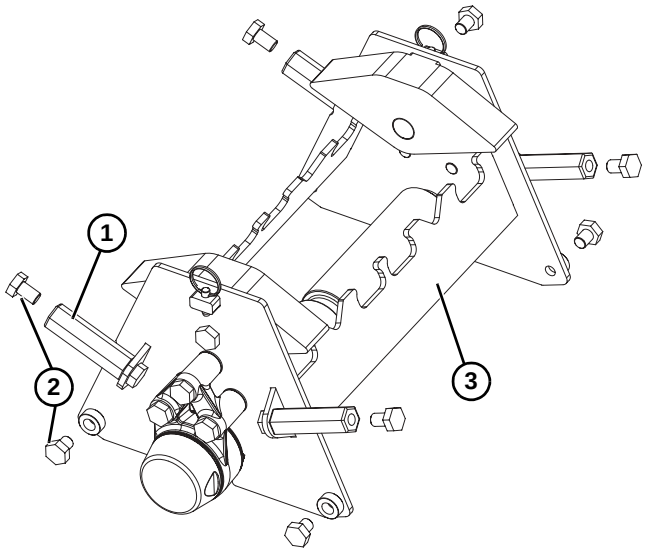


Figure 10

1. Attach lower knuckle **(Figure 11, item 1)** to frame using two screws **(Figure 11, item 2)** and a connector **(Figure 11, item 3)** on each side of the upper knuckle assembly.

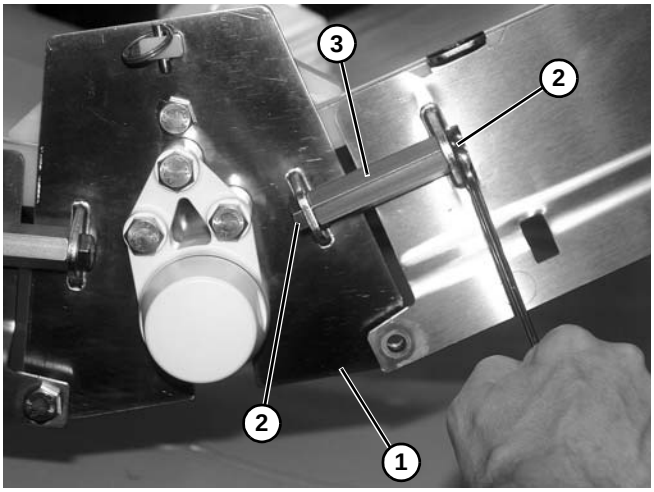


Figure 11

2. Install spacer **(Figure 12, item 1)** between frame **(Figure 12, item 2)** and lower knuckle plate **(Figure 12, item 3)**. Secure with screw **(Figure 12, item 4)**.

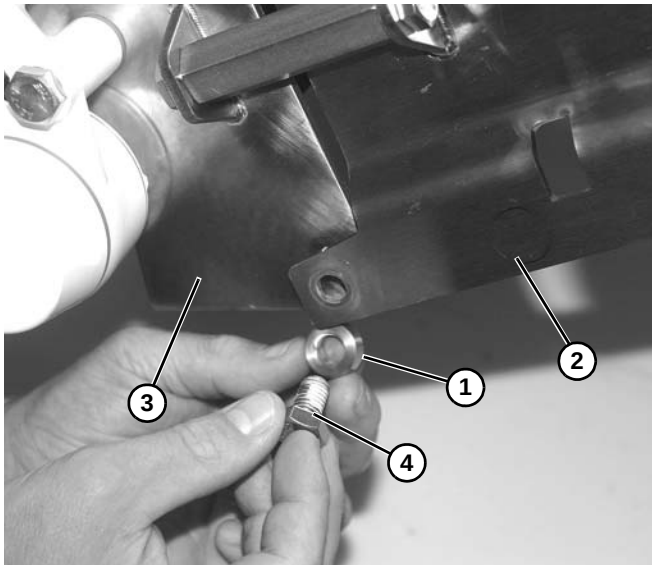


Figure 12

3. Tighten all screws **(Figure 13, item 1)** to 28-32 Nm (20-24 ft-lbs).

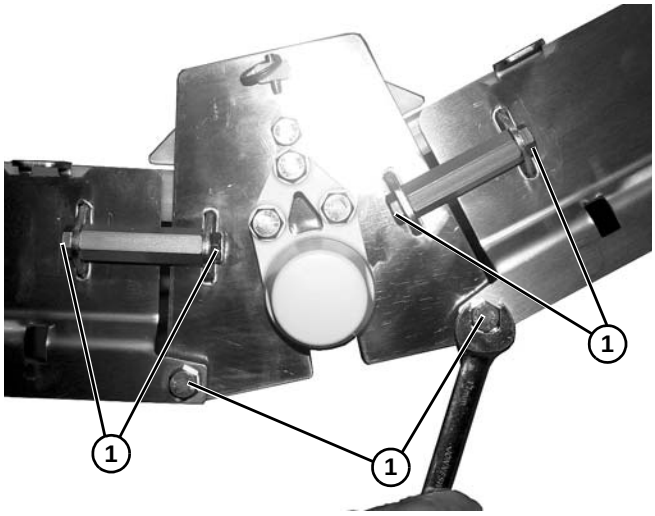


Figure 13

Installation

Stand Installation

NOTE

For detailed assembly instructions, please see support stand manual 851-948.

Typical stand components **(Figure 14)**.

1	Conveyor Frame
2	Stand
3	Screw (x4)

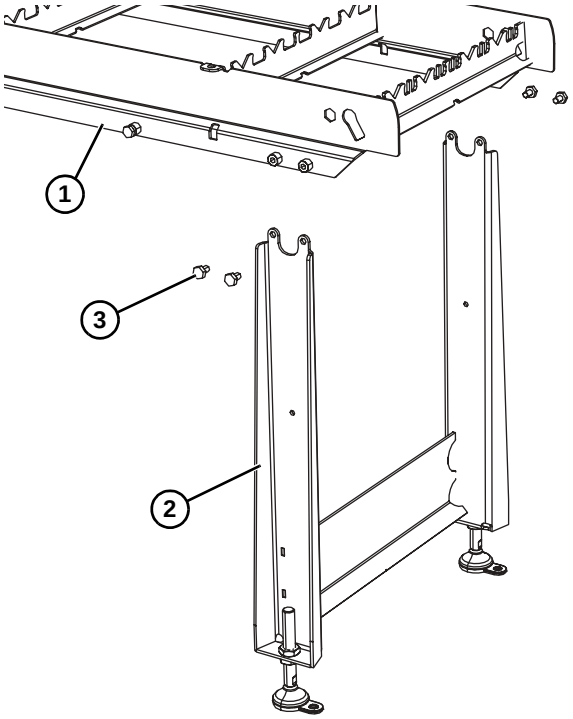


Figure 14

1. Position the stands on a flat, level surface.
2. Attach the stands **(Figure 15, item 1)** to the frame. Tighten screws to 28-32 Nm (20-24 ft-lbs).

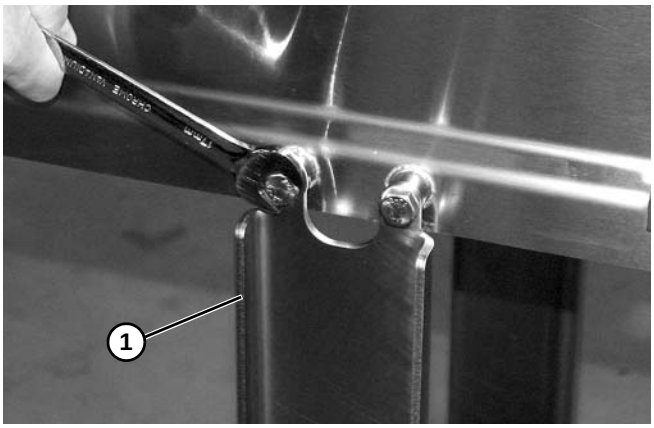


Figure 15

Belt Installation

End Drive Belt Installation

⚠ WARNING

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

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT.

1. Place temporary support stands **(Figure 16, item 1)** at both ends of the conveyor. Place an additional support stand under the drive motor, if equipped. See WARNING.

Figure 16

2. Rotate idler end **(Figure 16, item 2)** upward as shown.
3. Remove two screws **(Figure 16, item 3)** securing the stand brackets from one side of the conveyor.
4. Install the belt **(Figure 17, item 1)** onto the conveyor **(Figure 17, item 2)**.

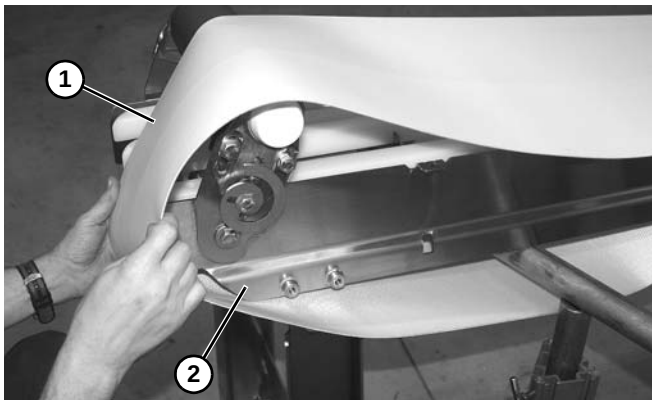


Figure 17

5. Repeat procedure for the opposite end of the conveyor to fully install the belt.
6. Reinstall stands to conveyor with fasteners.
7. Tension conveyor belt, if required. See “Conveyor Belt Tensioning” on page 19.
8. Track conveyor belt, if required. See “Conveyor Belt Tracking” on page 34.

Center Drive Belt Installation

⚠ WARNING

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

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT.

1. Place temporary support stands **(Figure 18, item 1)** at both ends of the conveyor. Place an additional support stand under the drive motor **(Figure 19, item 1)**, if equipped. See WARNING.

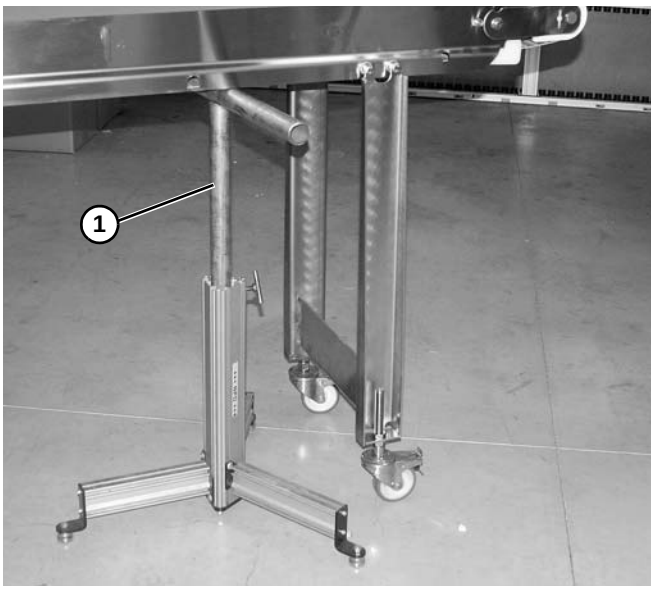


Figure 18

Figure 19

2. Remove two screws **(Figure 20, item 1)** securing the stand brackets from one side of the conveyor.

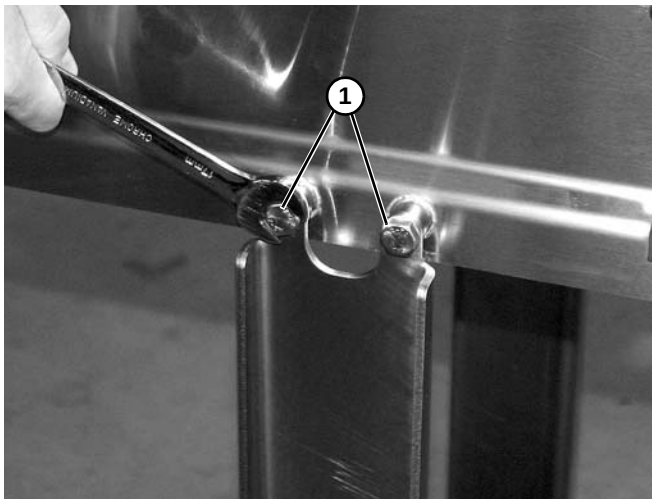


Figure 20

3. Rotate idler end **(Figure 21, item 1)** upward as shown.

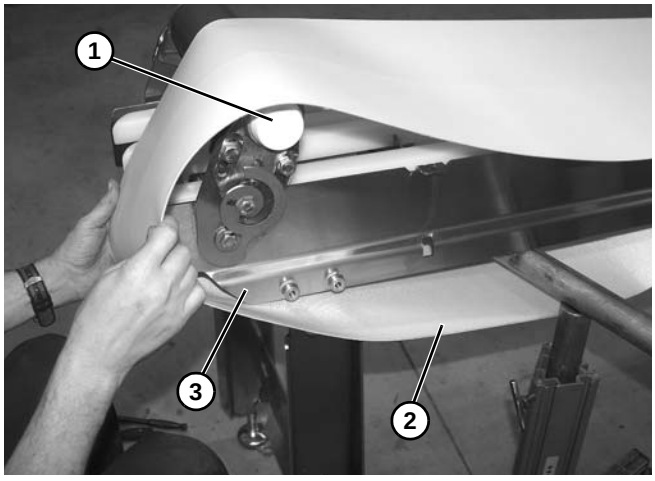


Figure 21

4. Position the belt **(Figure 21, item 2)** onto the conveyor **(Figure 21, item 3)**.

⚠ CAUTION

Spindles are heavy. Use caution when removing or installing spindles.

5. Install belt **(Figure 22, item 1)** and **(Figure 23, item 1)** round two idler spindles **(Figure 22, item 2)** and **(Figure 23, item 2)** on center drive assembly.

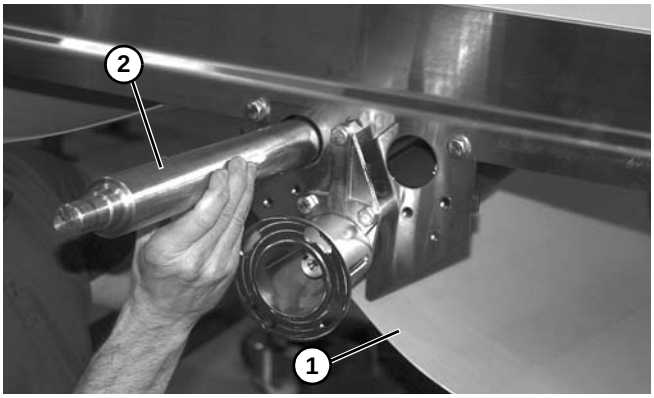


Figure 22

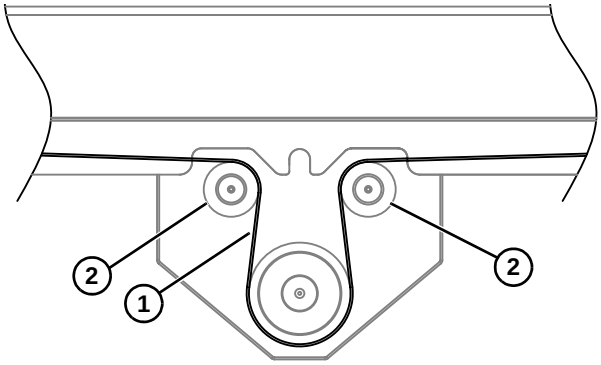


Figure 23

6. Repeat installing belt onto the opposite idler end **(Figure 24, item 1)** as shown.

Figure 24

7. Reinstall stands to conveyor with fasteners.
8. Tension conveyor belt, if required. See “Conveyor Belt Tensioning” on page 34.
9. Track conveyor belt, if required. See “Center Drive Module Tracking” on page 35.

LPZ Belt Installation

⚠ WARNING

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

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT.

1. Place temporary support stands **(Figure 25, item 1)** at both ends of the conveyor. Place an additional support stand under the drive motor **(Figure 26, item 1)**, if equipped. See WARNING.

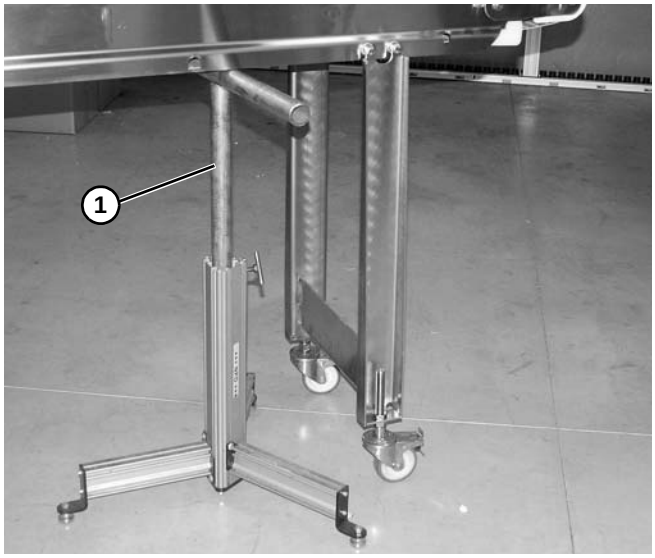


Figure 25

Figure 26

2. Remove two screws **(Figure 27, item 1)** securing the stand brackets from one side of the conveyor.

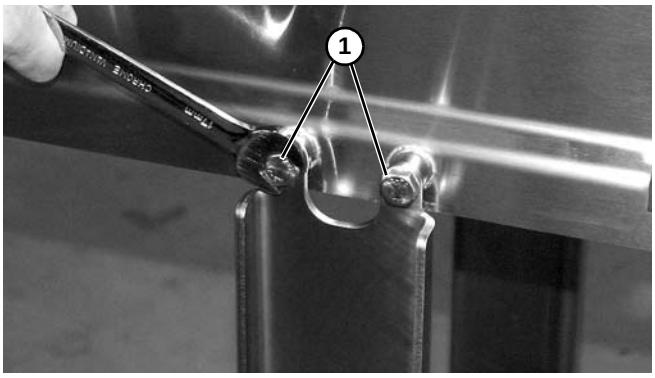


Figure 27

3. Rotate idler end **(Figure 28, item 1)** upward as shown.

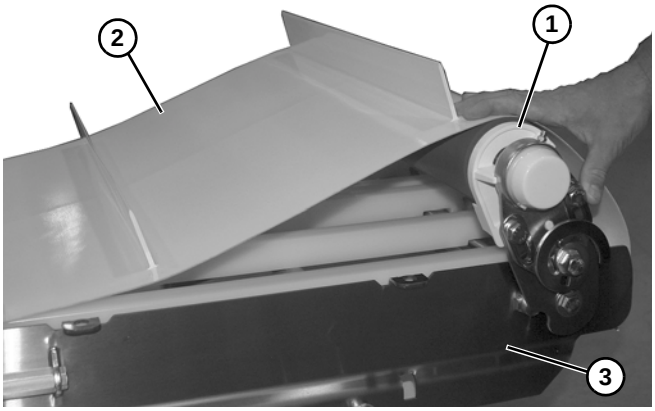


Figure 28

4. Position the belt **(Figure 28, item 2)** onto the conveyor **(Figure 28, item 3)**.
5. Remove pull pin **(Figure 29, item 1)** and roller guard **(Figure 29, item 2)** on each side of conveyor on lower knuckle plate.

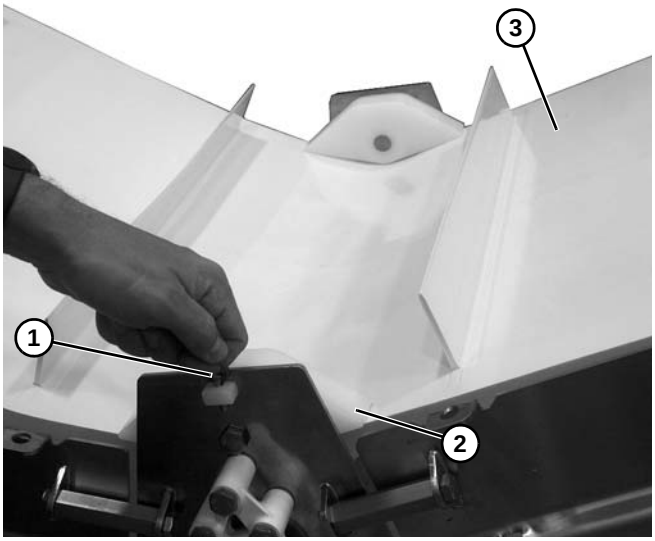


Figure 29

6. Install belt **(Figure 29, item 3)** and reinstall each roller guard with pin.
7. Remove pull pin **(Figure 30, item 1)** securing roller guard **(Figure 30, item 2)** on each side of conveyor on upper knuckle plate.

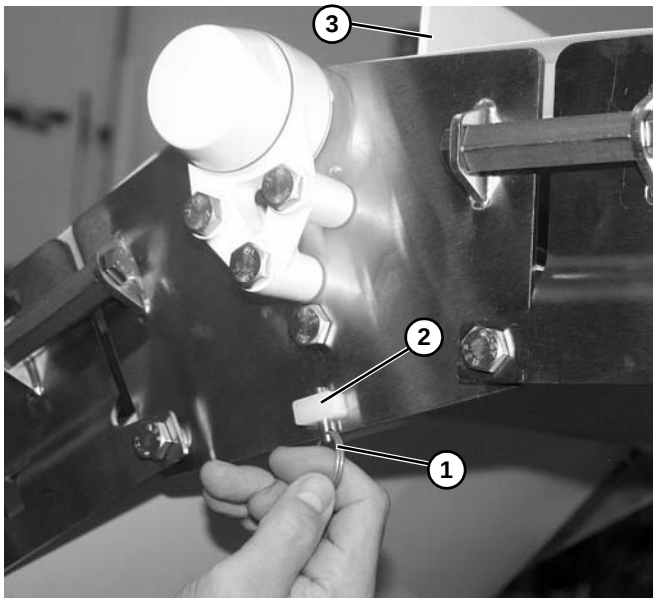


Figure 30

8. Install belt **(Figure 30, item 3)** and reinstall each roller guard with pin.
9. Repeat procedure for the opposite end of the conveyor to fully install the belt.
10. Reinstall stands to conveyor with fasteners.
11. Tension conveyor belt, if required. See “Conveyor Belt Tensioning” on page 34.
12. Track conveyor belt, if required. See “Conveyor Belt Tracking” on page 34.

Belt Returns

Flat Belt Returns 660 mm Wide and Wider

Typical flat return components **(Figure 31)**.

1	Shaft
2	Retaining Plate
3	Puck

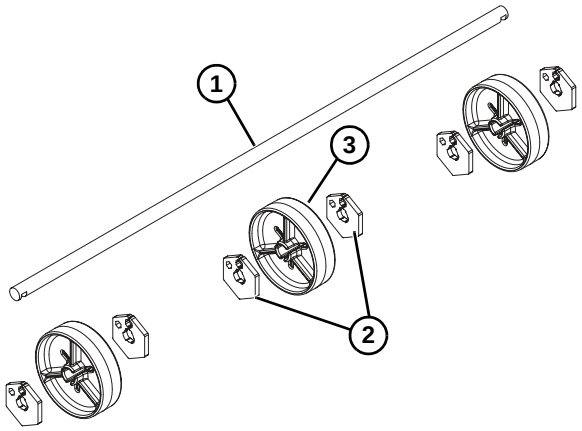


Figure 31

1. Install pucks with retainer plates on both sides.

   a. Insert an 8 mm **(Figure 32, item 1)** and 6 mm **(Figure 32, item 2)** hex wrench into the retainer plate.

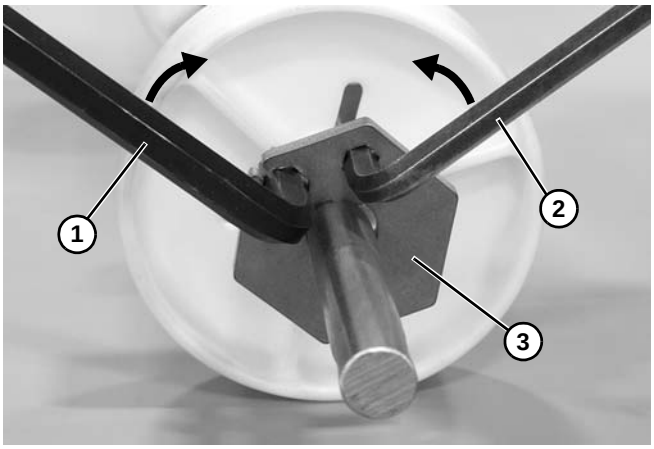


Figure 32

   b. Move wrenches toward each other to open the retainer plate **(Figure 32, item 3)** and install onto the shaft. Position retainer plate where needed.

   c. To lock the retainer plate **(Figure 33, item 1)** in place, move the wrenches **(Figure 33, item 2)** away from each other.

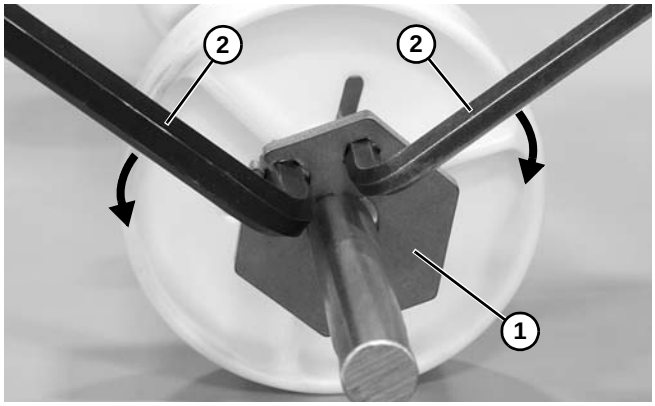


Figure 33

2. Repeat step 1 as needed.

NOTE

*When assembling pucks **(Figure 34, item 1)** with retainer plates **(Figure 34, item 2)**, make certain that there is a minimum of 38 mm (1.5") of clearance **(Figure 34, item 3)** on each end.*

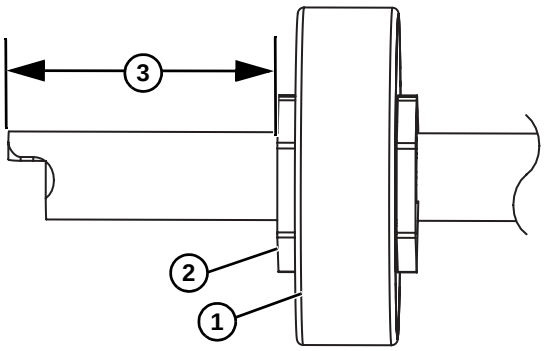


Figure 34

3. Install belt return assembly **(Figure 35, item 1)** onto the slotted holes **(Figure 35, item 2)** on each side of conveyor frame.

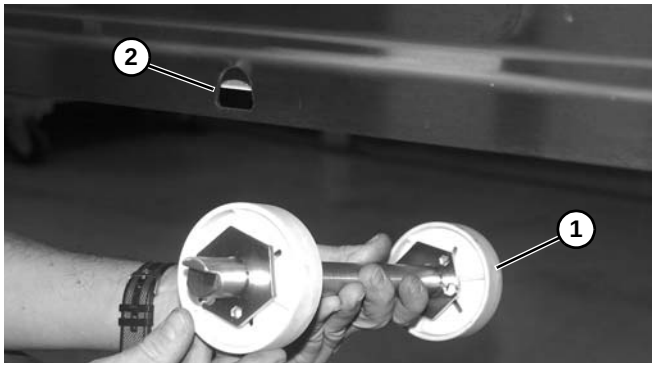


Figure 35

Cleated Belt and Flat Belt Returns Under 660 mm Wide

Typical cleated return components **(Figure 36)**.

1	Spacer
2	Puck
3	Stub Shaft
4	O-Ring

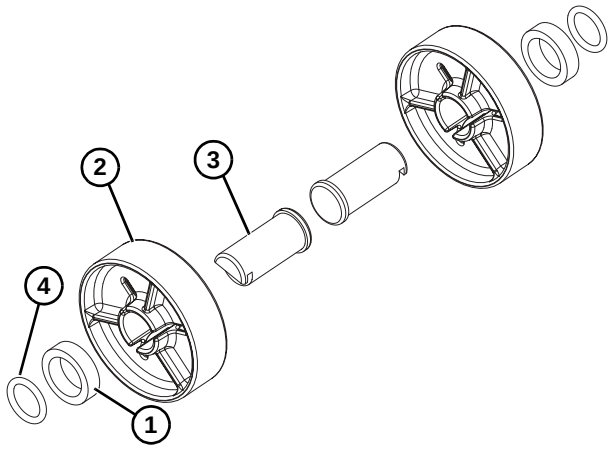


Figure 36

1. Insert the notched end of the return shaft **(Figure 37, item 1)** through the small hole **(Figure 37, item 2)** in the inside of the conveyor frame.

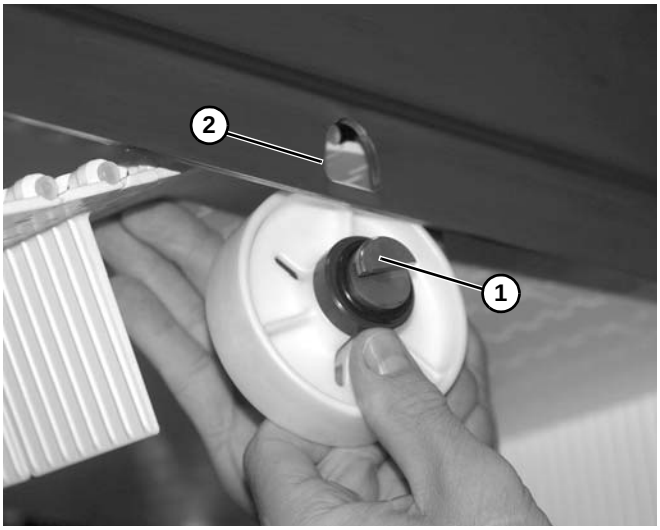


Figure 37

2. Repeat the procedure for all other belt returns.

Scraper Installation

Typical Scraper Components **(Figure 38)**

1	Scraper Adjust Plate
2	Scraper Shaft
3	Scraper Bar Holder
4	UHMW Scraper
5	Scraper Mount Plate
6	Handle
7	Hex Head Cap Screws (x4)
8	Pin

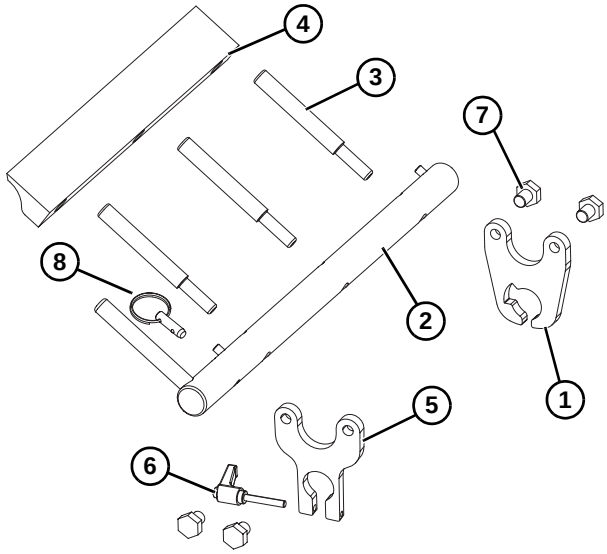


Figure 38

1. Install scraper mount plate **(Figure 39, item 1)** with two screws **(Figure 39, item 2)**. Repeat on opposite side for scraper adjust plate.

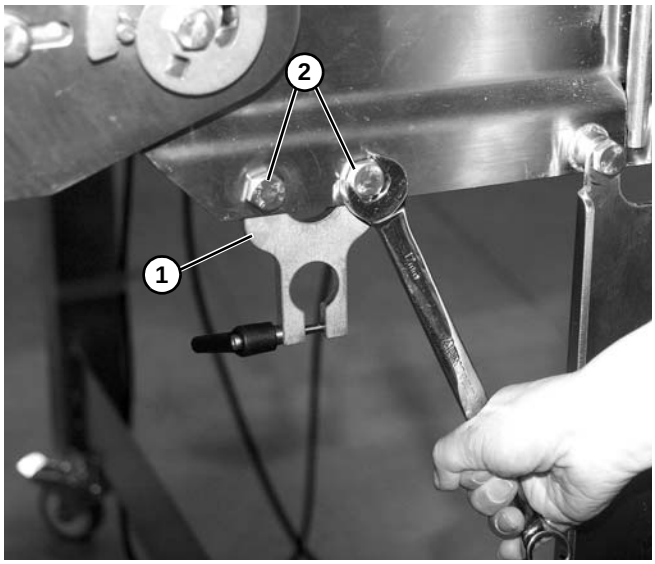


Figure 39

2. Install scraper shaft with handle **(Figure 40, item 1)** facing downward so pins **(Figure 40, item 2)** go through slotted area of both scraper adjust plate and scraper mount plate **(Figure 40, item 3)**.

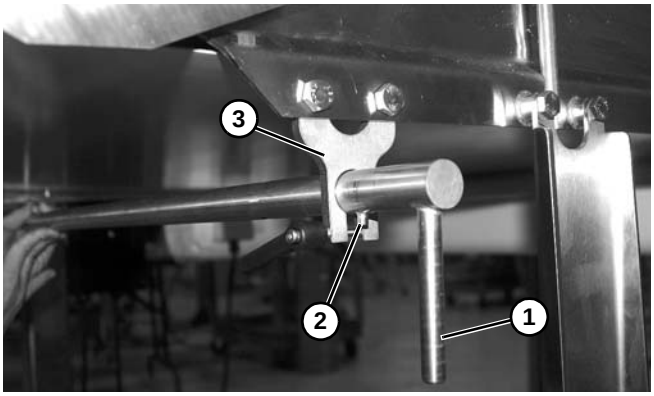


Figure 40

3. Install pull pin **(Figure 41, item 1)** onto scraper shaft **(Figure 41, item 2)**.

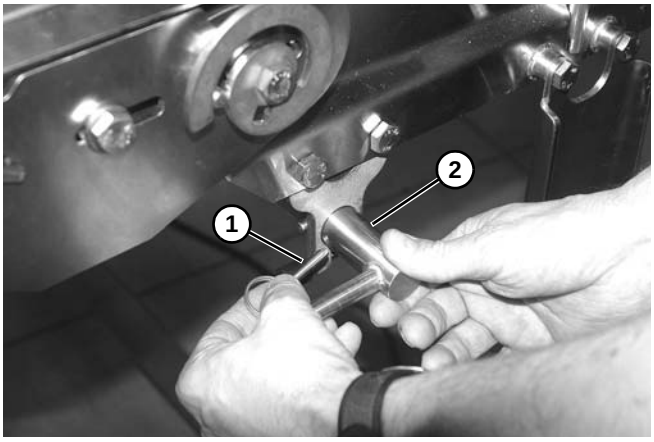


Figure 41

4. Attach the scraper bar holders **(Figure 42, item 1)** to the scraper shaft **(Figure 42, item 2)**.

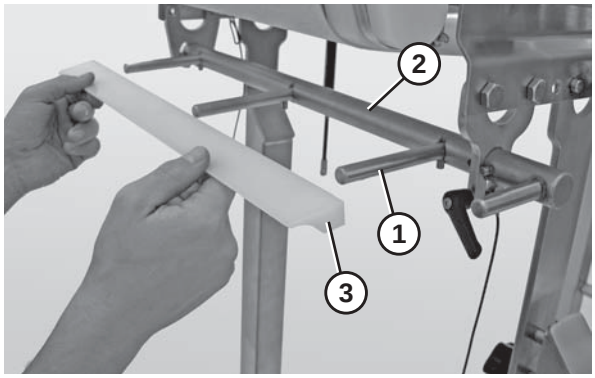


Figure 42

5. Attach the UWHM scraper **(Figure 42, item 3)** to the scraper bar holders **(Figure 42, item 1)**.

NOTE

*When installing scraper, make certain that flat portion of scraper **(Figure 43, item 1)** is facing toward belt as shown.*

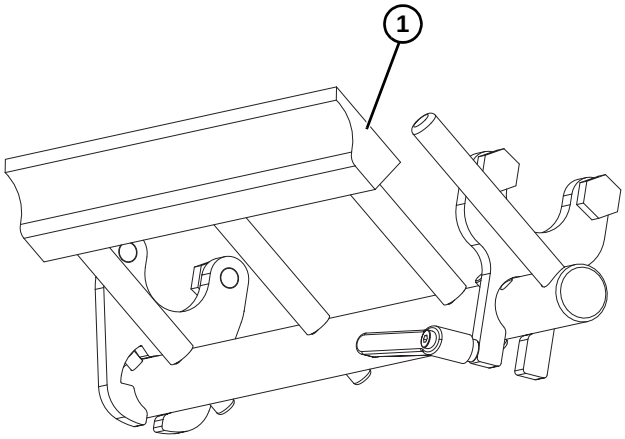


Figure 43

6. Loosen clamp handle **(Figure 44, item 1)** and rotate scraper shaft handle **(Figure 44, item 2)** to raise scraper assembly **(Figure 44, item 3)** to the desired position.

Figure 44

NOTE

When raising scraper, make note that the pin ***(Figure 45, item 1)*** *should remain in slot* ***(Figure 45, item 2)*** *in scraper adjust plate* ***(Figure 45, item 3)*** *as it is raised.*

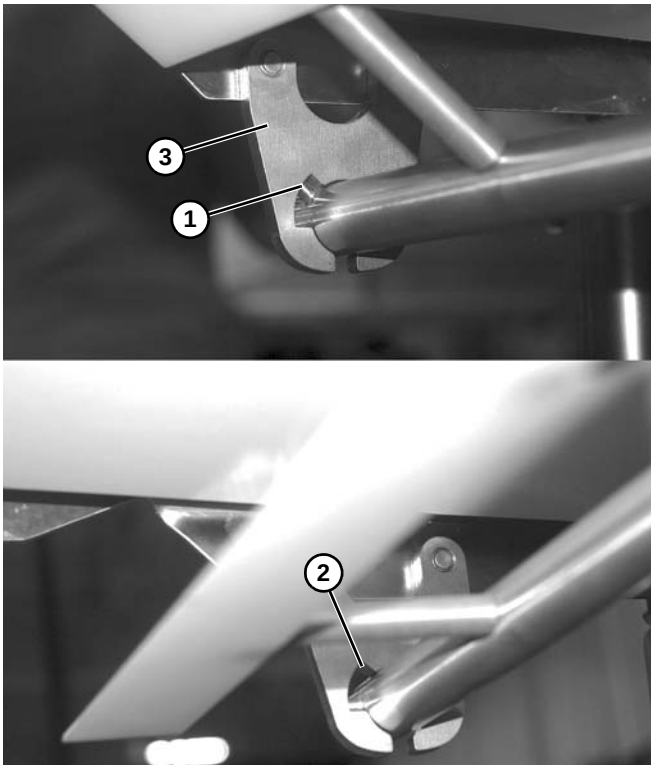


Figure 45

CAUTION

Apply minimal pressure between the scraper (Figure 46, item 1) and the belt (Figure 46, item 2).

Positioning the scraper so that it is digging into the belt will increase resistance, cause unnecessary strain on the motor and lead to premature belt failure.

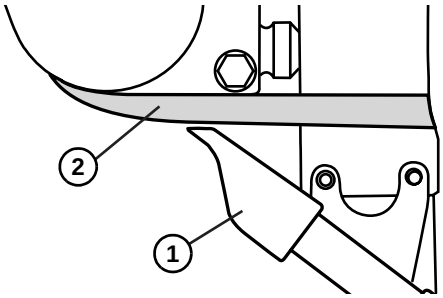


Figure 46

7. Secure the scraper by tightening the clamp handle **(Figure 44, item 1)**.

Tip Up Handle

Tip up handles are provided on conveyors 610 mm wide and wider.

The tip up handle can be assembled to either side of the conveyor in one of 4 positions: down, front, up and back **(Figure 47)**.

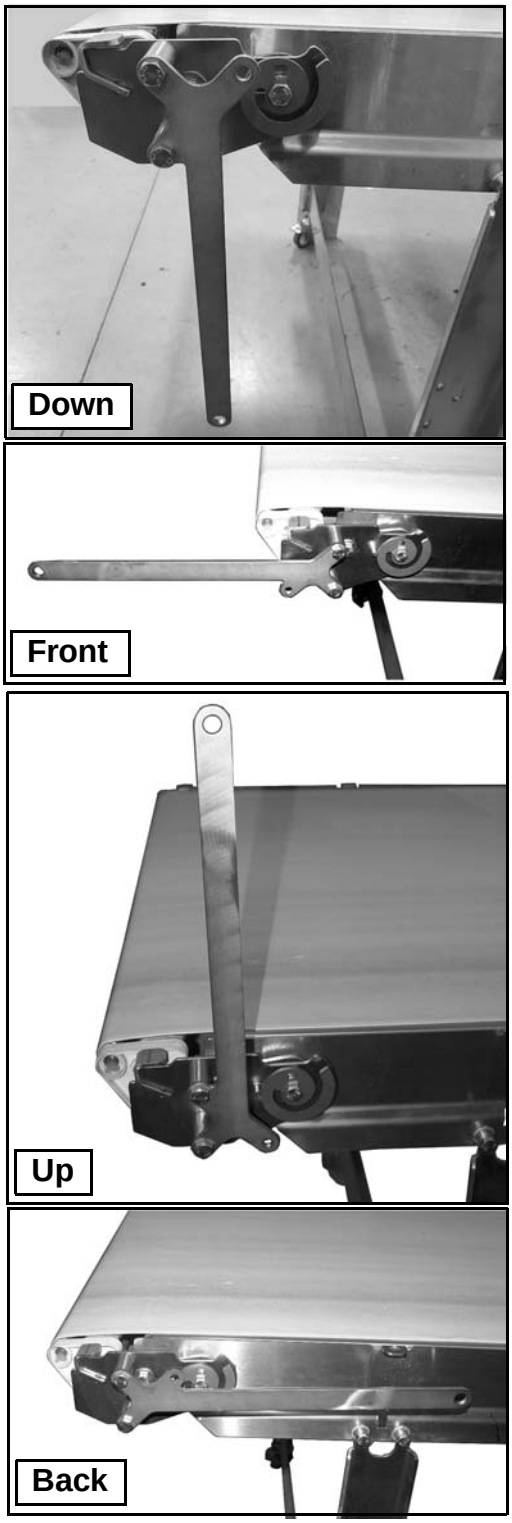


Figure 47

⚠ WARNING

CRUSH HAZARD!

- **When mounting tip up handle in back position, be aware of the clearance that is needed with stand (Figure 48, item 1) to allow full rotation of the handle.**

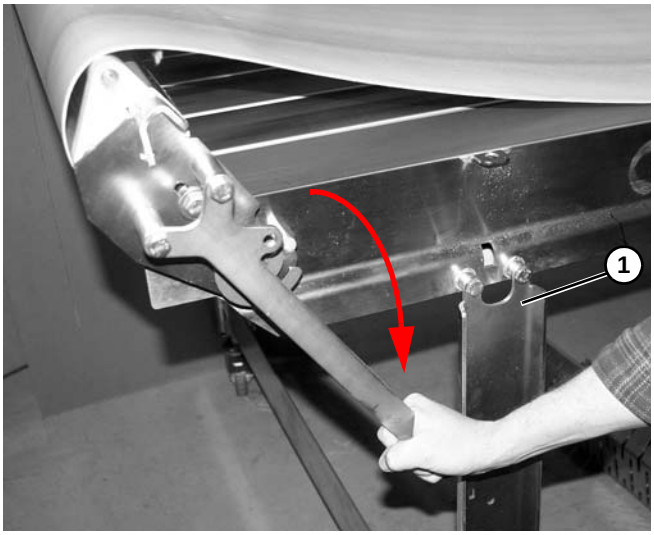


Figure 48

NOTE

*To avoid personal injury, a safety flag **(Figure 49, item 1)** is recommended to be secured into hole **(Figure 49, item 2)** in handle, as needed.*

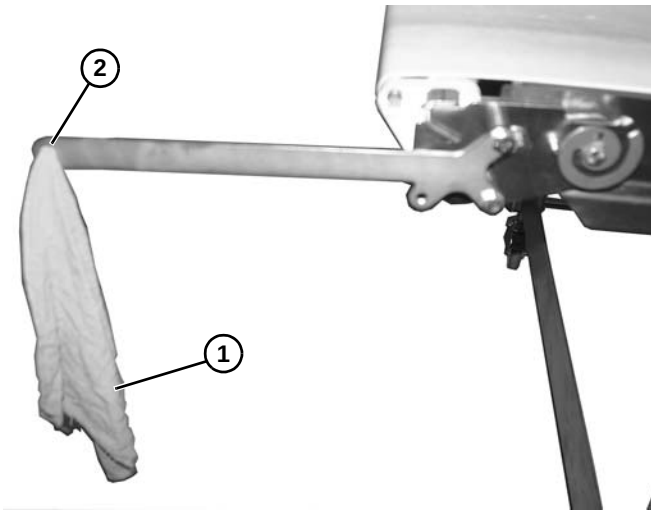


Figure 49

Idler Tail

Typical Tip Up Handle Components **(Figure 50)**

1	Tip Up Handle
2	Spacer
3	Hex Head Cap Screws (x2)

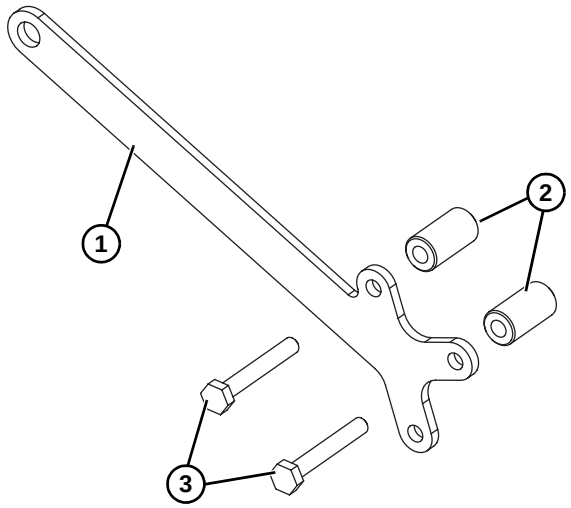


Figure 50

1. Remove two screws **(Figure 51, item 1)** from the tail plate.

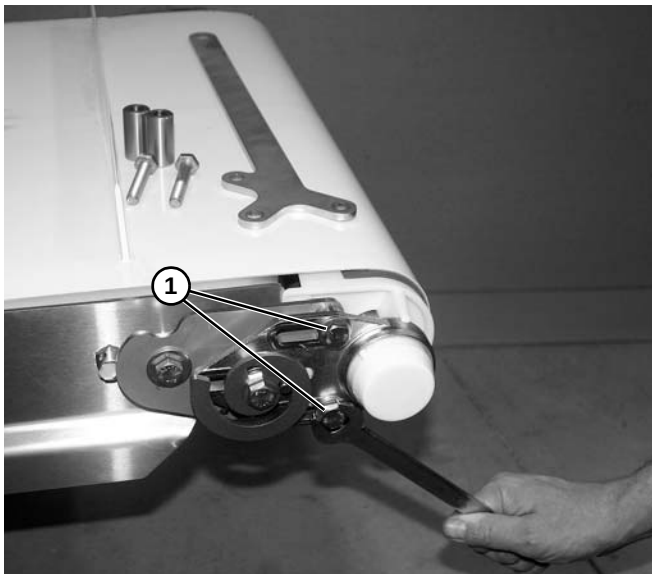


Figure 51

2. Position handle **(Figure 52, item 1)** in one of the four positions available. Attach handle with two spacers **(Figure 52, item 2)** and screws **(Figure 52, item 3)**.

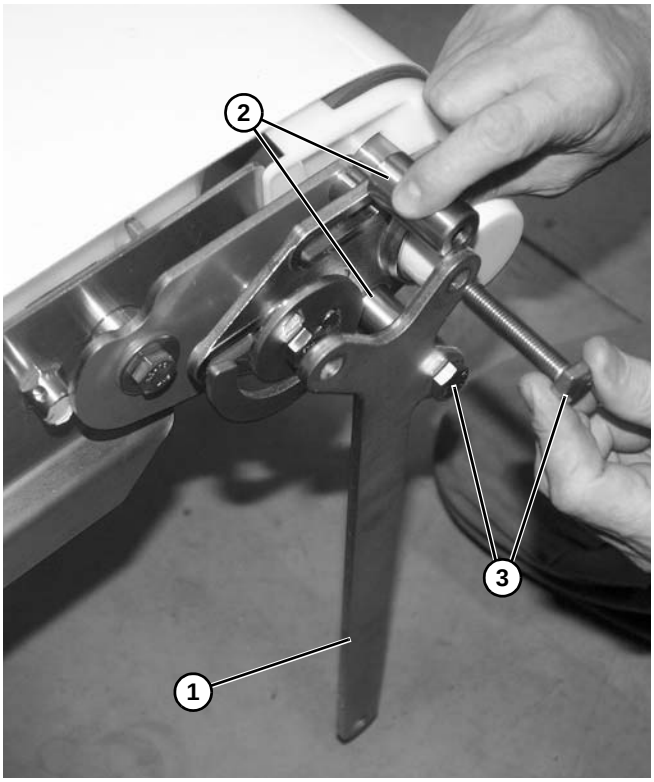


Figure 52

3. Tighten two screws **(Figure 53, item 1)**.

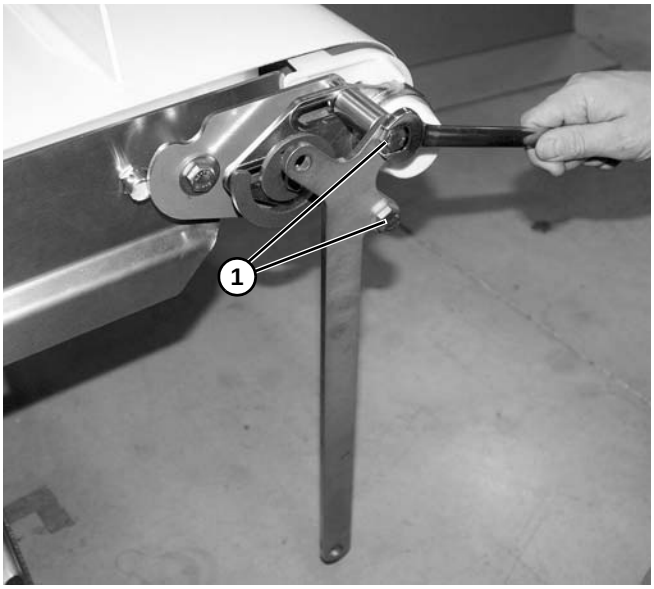


Figure 53

Nosebar Idler Tail

Typical Tip Up Handle Components **(Figure 54)**

1	Tip Up Handle
2	Spacer
3	Hex Head Cap Screws (x4)

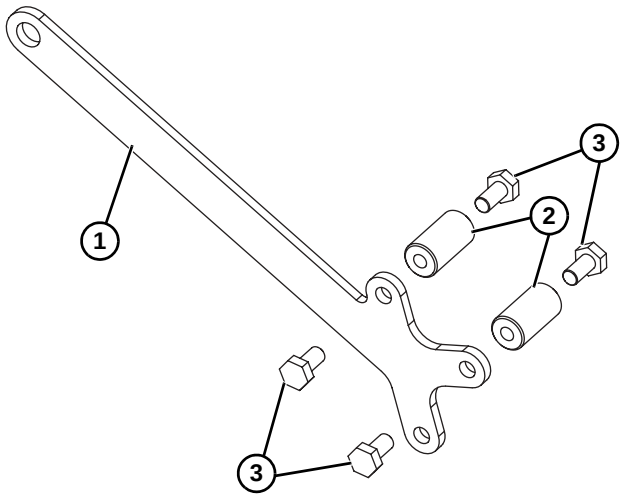


Figure 54

1. Install two screws **(Figure 55, item 1)** into tail plate.

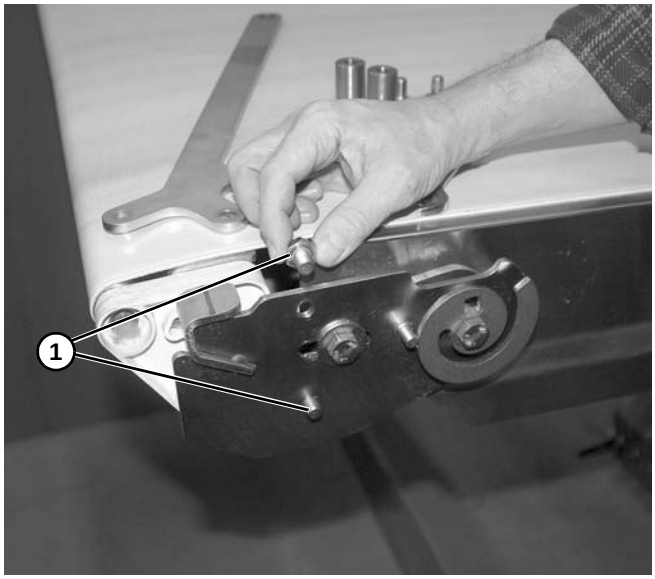


Figure 55

2. Install two spacers **(Figure 56, item 1)** onto screws **(Figure 56, item 2)**. Tighten screws onto spacers.

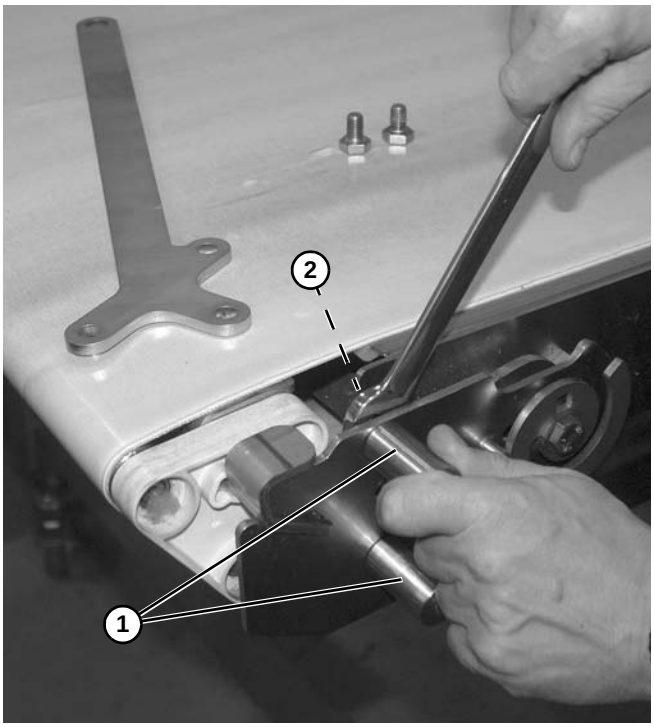


Figure 56

3. Position handle **(Figure 57, item 1)** in one of the four positions available. Attach handle with two screws **(Figure 57, item 2)**.

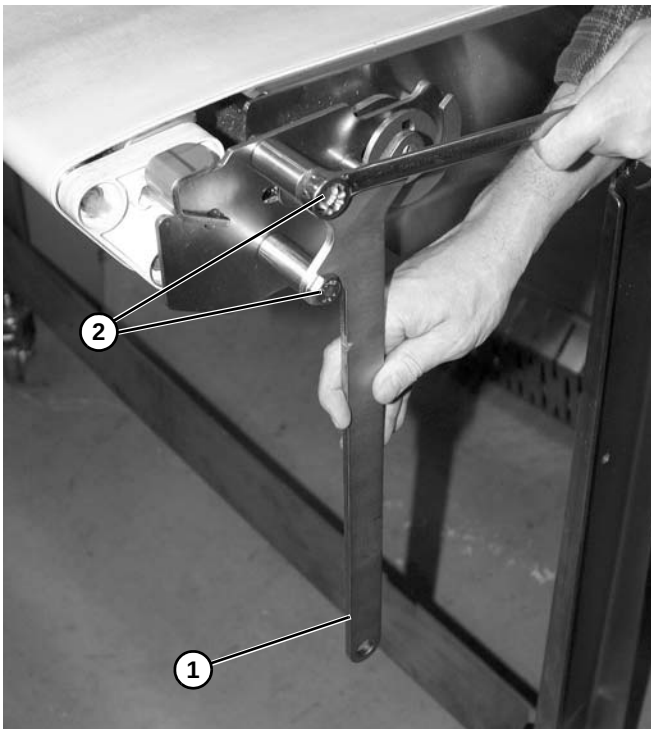


Figure 57

4. Tighten two screws **(Figure 57, item 2)**.

Guide Installation

Fixed Guides

1. Install guide post **(Figure 58, item 1)** through conveyor side frame tab **(Figure 58, item 2)**, making sure slotted portion **(Figure 58, item 3)** of post is fully seated into the bottom **(Figure 58, item 4)** of frame. Tap to lock in place.

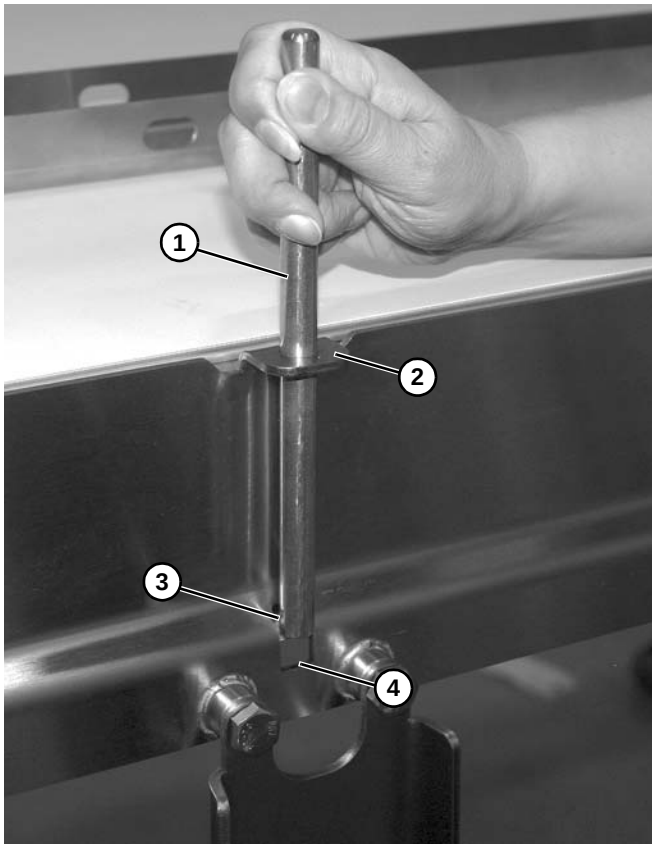


Figure 58

2. Repeat for remaining guide posts required for your conveyor size.
3. Install guide **(Figure 59, item 1)** onto the guide posts **(Figure 59, item 2)**.

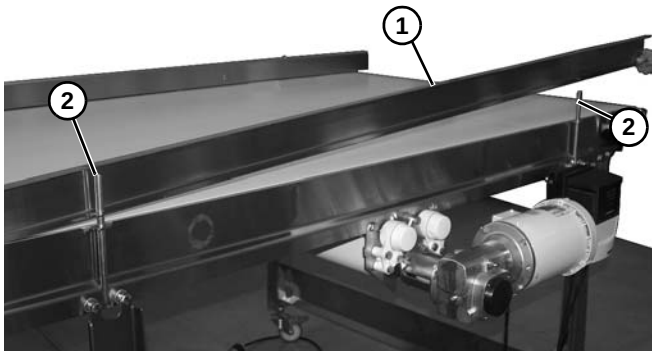


Figure 59

NOTE

*For UHMW guides, install guides with horizontal side **(Figure 60, item 1)** down.*

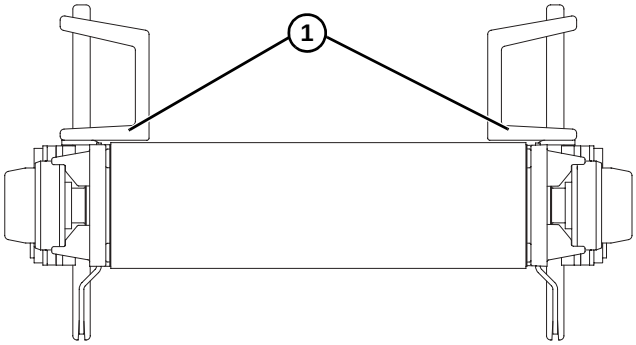


Figure 60

NOTE

*To remove guide posts, tap from underneath with a hammer to release from conveyor frame **(Figure 61)**.*

Figure 61

4. Repeat on the opposite side of conveyor.

Adjustable Guides

1. Install guide rail **(Figure 62, item 1)** onto brackets **(Figure 62, item 2)**. Tighten screw **(Figure 62, item 3)** to secure.

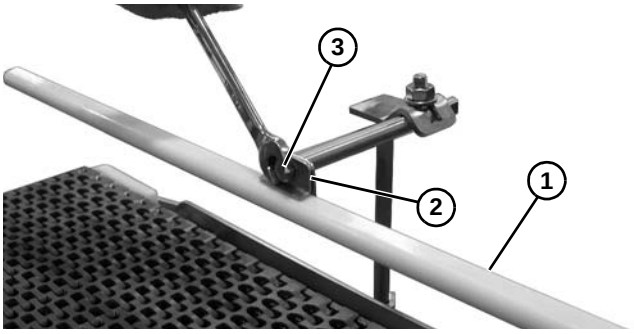


Figure 62

2. Loosen nut **(Figure 63, item 1)**, and adjust the guide post **(Figure 63, item 2)** height, as needed. Tighten nut.

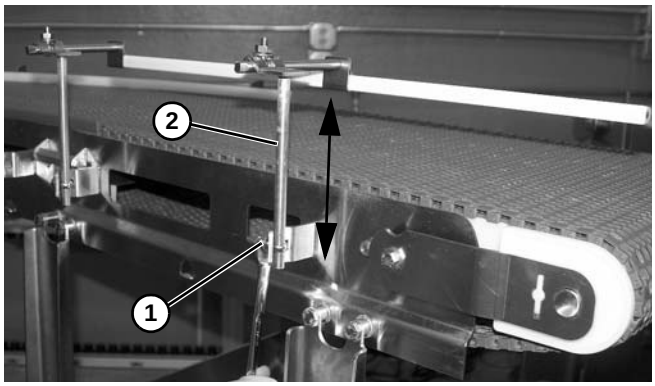


Figure 63

3. Loosen nut **(Figure 64, item 1)**, and adjust the horizontal guide post **(Figure 64, item 2)** and guide rail, as needed. Tighten nut.

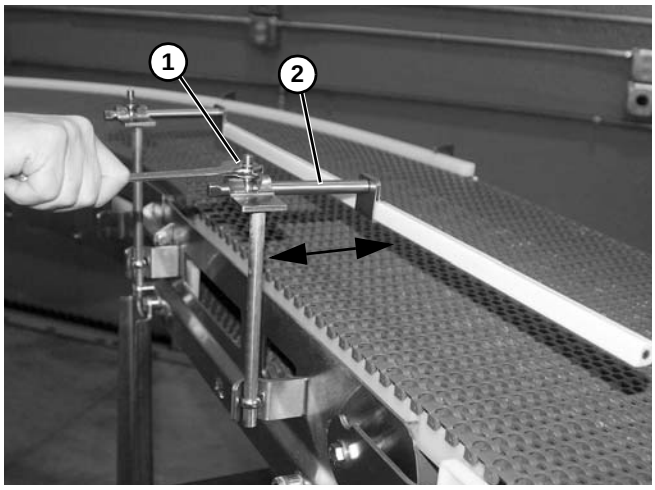


Figure 64

4. Repeat, as needed for remaining guiding brackets.

Drive Package Installation

NOTE

For detailed assembly instructions, please see drive packages manual 851-947.

Required Tools

- 1/8" hex wrench
- 2.5 mm hex wrench
- 4 mm hex wrench
- 5 mm hex wrench
- 6 mm hex wrench
- 8 mm hex wrench
- 10 mm wrench
- 13 mm wrench
- Breaker Bar

Checklist

- Keep critical service parts on hand. Refer to the "Service Parts" section starting on page 58 for recommendations.
- Replace any worn or damaged parts.

Cleaning

For detailed cleaning instructions, refer to the 851-950 AquaPruf Cleaning manual.

NOTE

Proper conveyor application, cleaning, and sanitation are the responsibility of the end user.

⚠ 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.

⚠ WARNING

SEVERE HAZARD!

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

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 65, item 1)** on the exterior of the bearing housing.

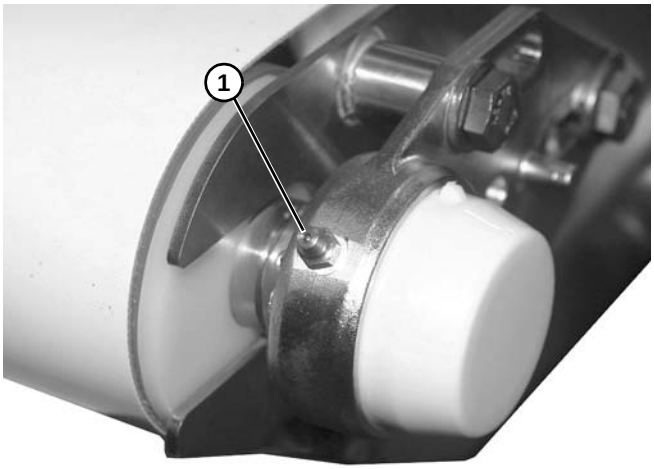


Figure 65

2. Replace the bearings if they become worn.

Maintaining the Conveyor Belt

Troubleshooting

Inspect conveyor belt for:

- Surface cuts or wear

Damage to the belt, surface cuts and/or wear indicates:

- Sharp or heavy parts impacting belt
- Jammed parts
- Accumulated dirt
- Foreign material inside the conveyor
- Improperly positioned accessories
- Excessive load on belt
- Dirt impacted on spindle
- Excessive or improper side loading
- Improper tracking

Skipping indicates:

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

Scraper Replacement

1. Loosen clamp handle **(Figure 66, item 1)** and rotate scraper shaft handle **(Figure 66, item 2)** to lower scraper assembly **(Figure 66, item 3)**.

Figure 66

NOTE

*When lowering scraper, make note that the pin **(Figure 67, item 1)** should remain in slot **(Figure 67, item 2)** in scraper adjust plate **(Figure 67, item 3)** as it is lowered.*

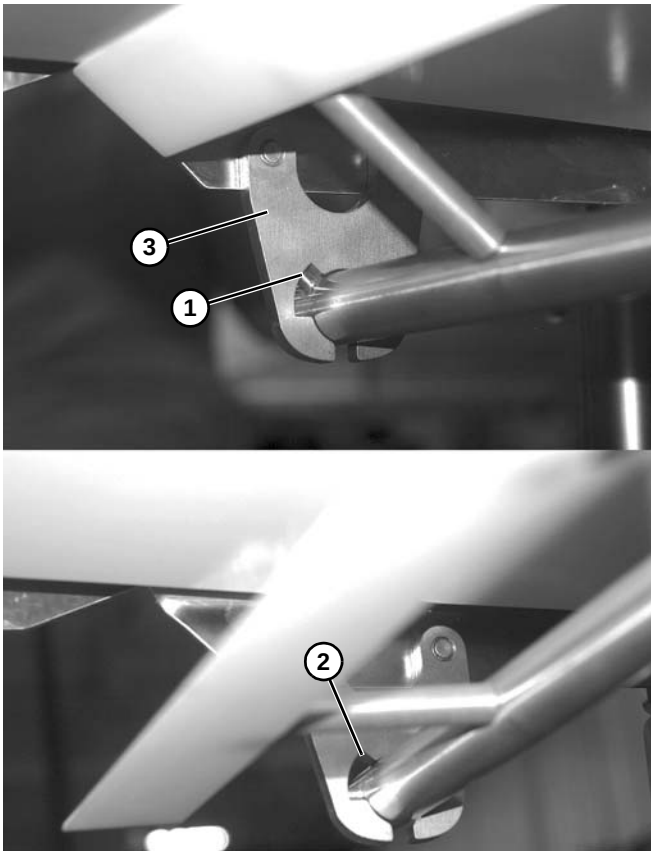


Figure 67

2. Remove scraper **(Figure 68, item 3)** and scraper bar holders **(Figure 68, item 1)** from scraper shaft **(Figure 68, item 2)**.

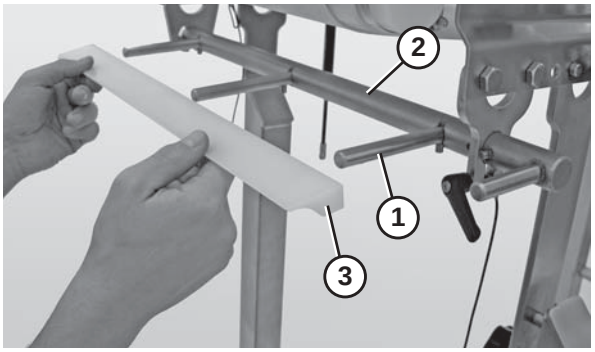


Figure 68

NOTE

*When installing scraper, make certain that flat portion of scraper **(Figure 69, item 1)** is facing toward belt as shown.*

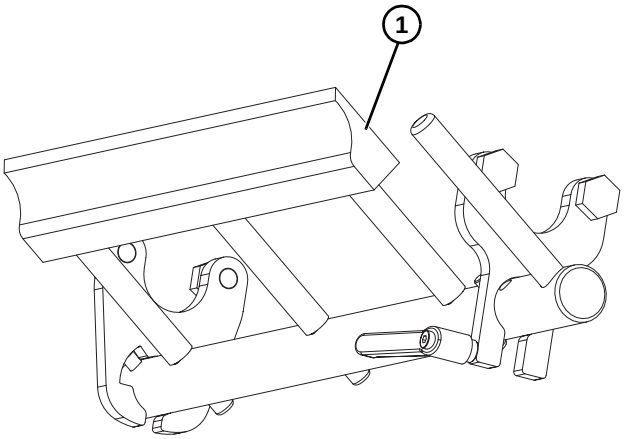


Figure 69

3. Remove pull pin **(Figure 70, item 1)** from scraper shaft **(Figure 70, item 2)**.

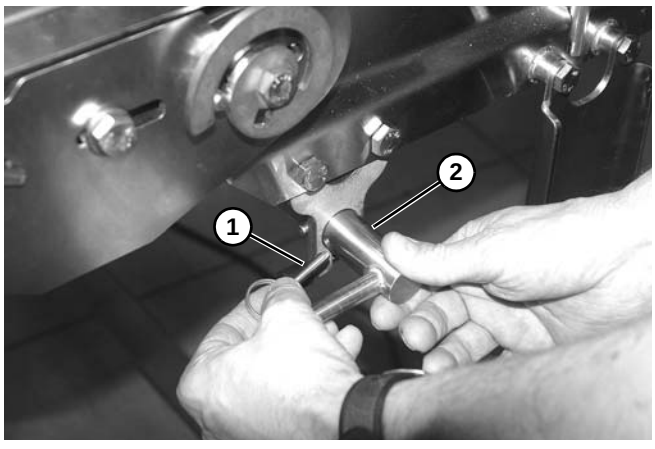


Figure 70

4. Rotate scraper shaft with handle **(Figure 71, item 1)** facing downward so pins **(Figure 71, item 2)** go through slotted area of scraper adjust plate and scraper mount plate **(Figure 71, item 3)**.

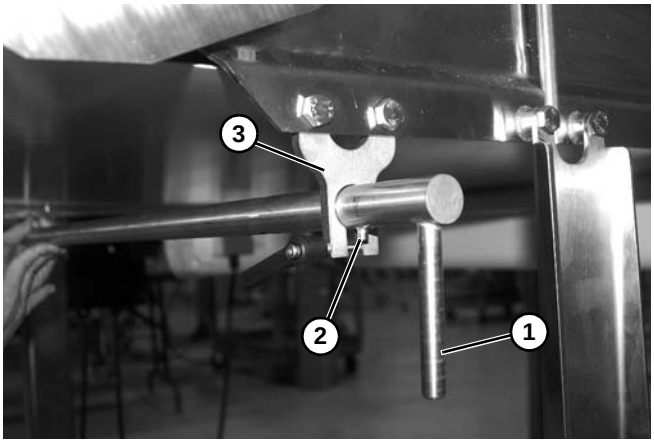


Figure 71

5. Remove scraper shaft **(Figure 72, item 1)** from both scraper adjust and mount plates **(Figure 72, item 2)**.

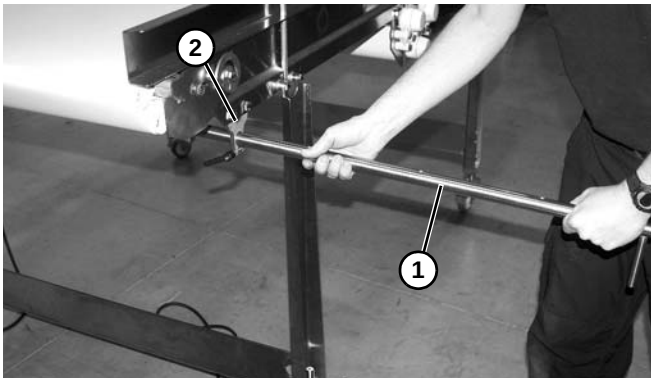


Figure 72

6. Remove two screws **(Figure 73, item 1)** and scraper mount plate **(Figure 73, item 1)**. Repeat for scraper adjust plate, if needed.

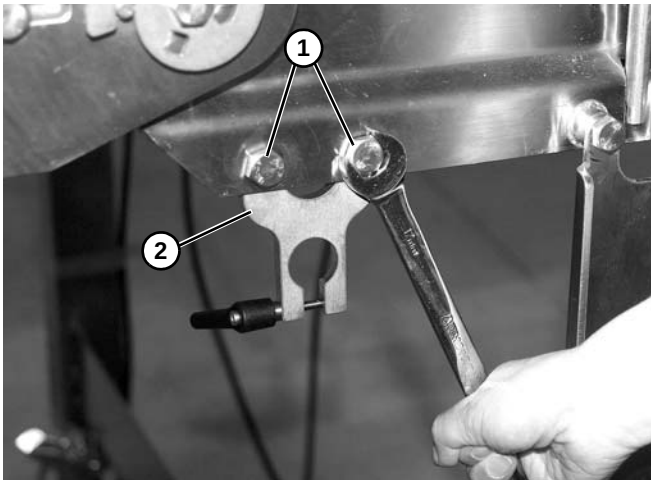


Figure 73

7. Replace components, as needed **(Figure 74)**.

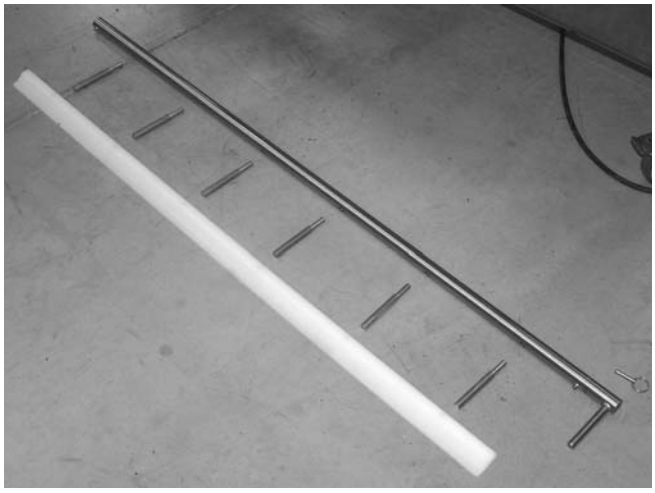


Figure 74

8. Install components reverse of removal.

End Drive Conveyor Belt Replacement

⚠ WARNING

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

1. Remove guides **(Figure 75, item 1)** when required.

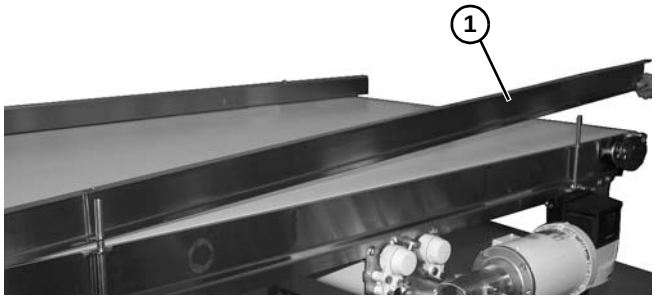


Figure 75

2. Remove tip up handle **(Figure 76, item 1)** when required.

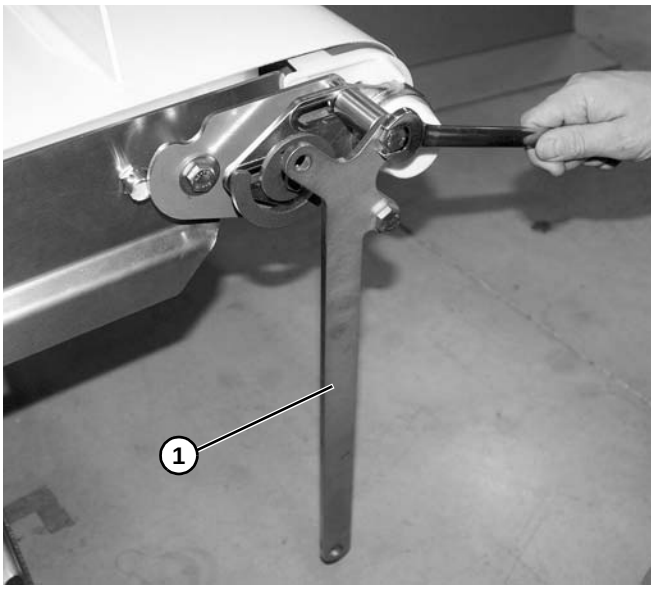


Figure 76

3. Remove belt returns **(Figure 77, item 1)** from slotted holes **(Figure 77, item 2)** on each side of conveyor frame at location you are separating belt.

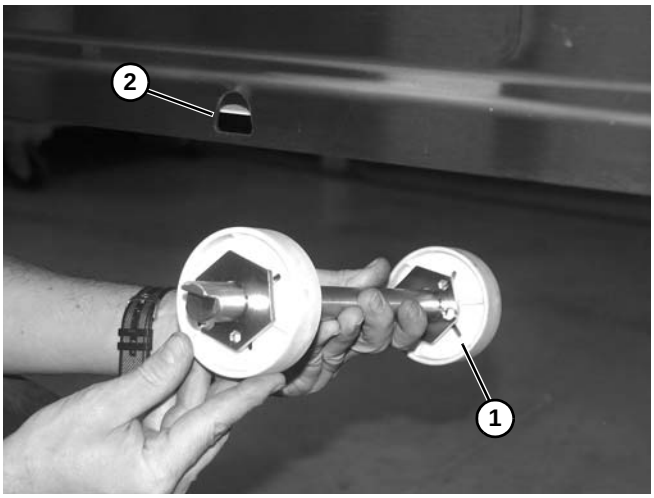


Figure 77

⚠ WARNING

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

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT.

4. Place temporary support stands **(Figure 78, item 1)** at both ends of the conveyor. Place an additional support stand under the drive motor, if equipped. See WARNING.

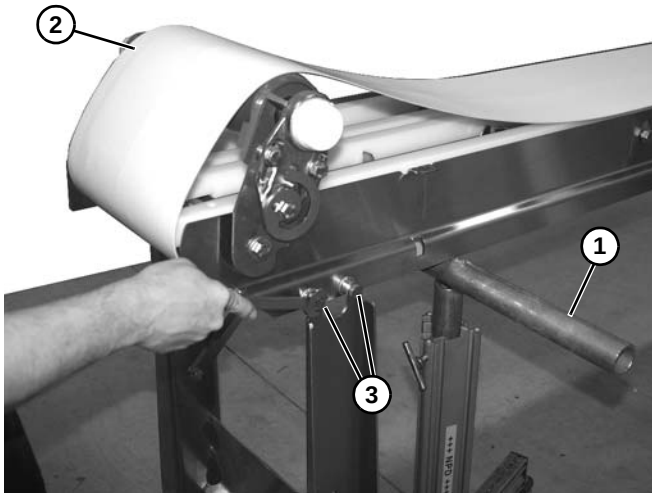


Figure 78

5. Rotate idler end **(Figure 78, item 2)** upward as shown.
6. Remove two screws **(Figure 78, item 3)** securing the stand brackets from one side of the conveyor.
7. Remove the belt **(Figure 79, item 1)** from the conveyor **(Figure 79, item 2)**.

Figure 79

8. Repeat procedure for the opposite end of the conveyor to fully remove the belt.
9. Replace the belt. Refer to “Belt Installation” on page 12.
10. Reinstall belt returns.
11. If equipped, reinstall guiding.
12. If equipped, reinstall tip up handle.
13. Tension and track drive and conveyor if required. See “Conveyor Belt Tensioning” on page 34 and “Conveyor Belt Tracking” on page 34”.

Center Drive Conveyor Belt Replacement

⚠ WARNING

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

Belt Removal

1. Remove guides **(Figure 80, item 1)** when required.

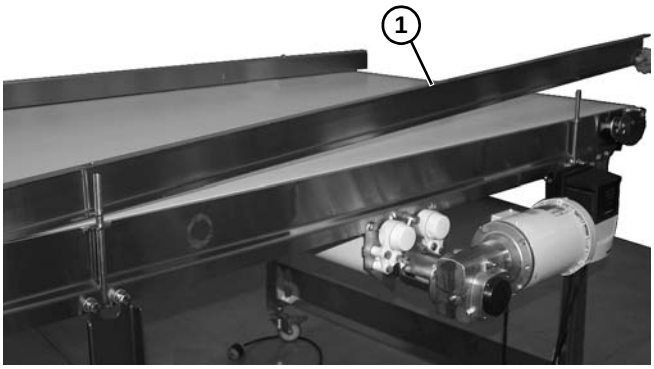


Figure 80

2. Remove tip up handle **(Figure 81, item 1)** when required.

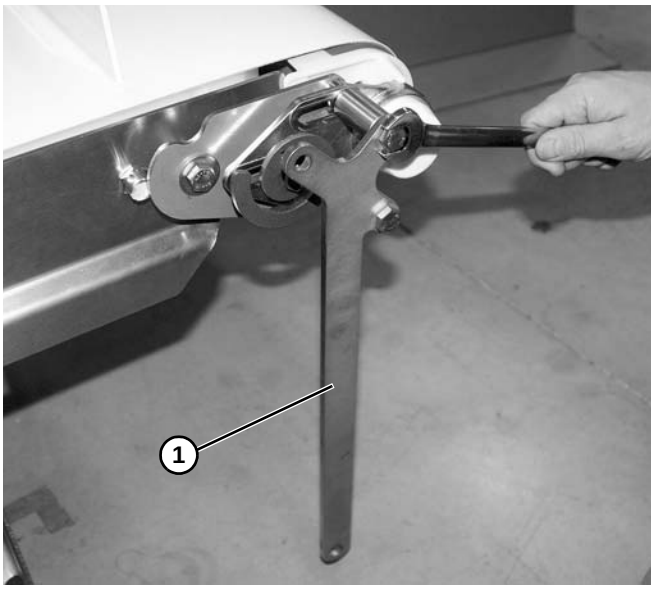


Figure 81

3. Remove belt returns **(Figure 82, item 1)** from slotted holes **(Figure 82, item 2)** on each side of conveyor frame.

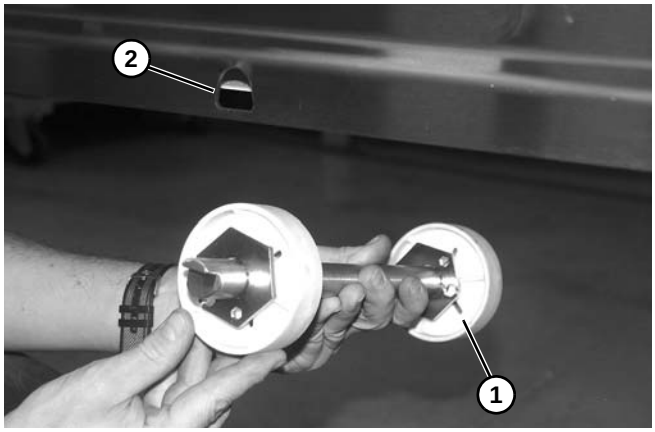


Figure 82

4. Remove four screws **(Figure 83, item 1)** holding motor **(Figure 83, item 2)** onto the gear reducer **(Figure 83, item 3)**.

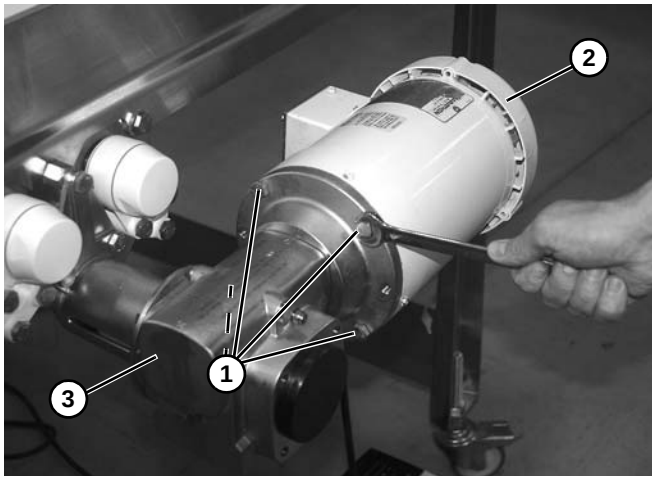


Figure 83

5. Remove motor **(Figure 84, item 1)** from the gear reducer **(Figure 84, item 2)**.

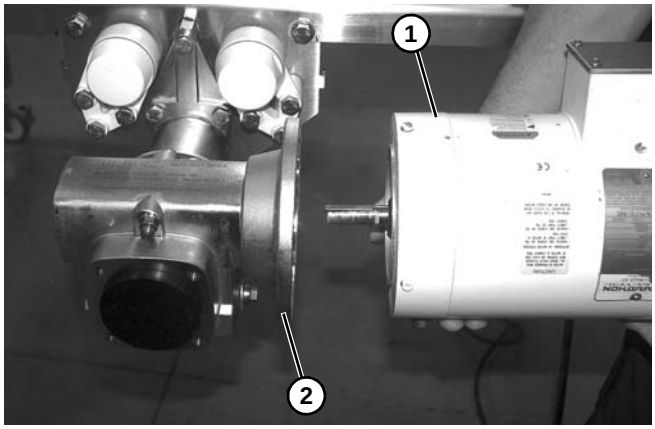


Figure 84

6. Loosen four screws **(Figure 85, item 1)** holding gear reducer **(Figure 85, item 2)** onto the motor mount **(Figure 85, item 3)**.

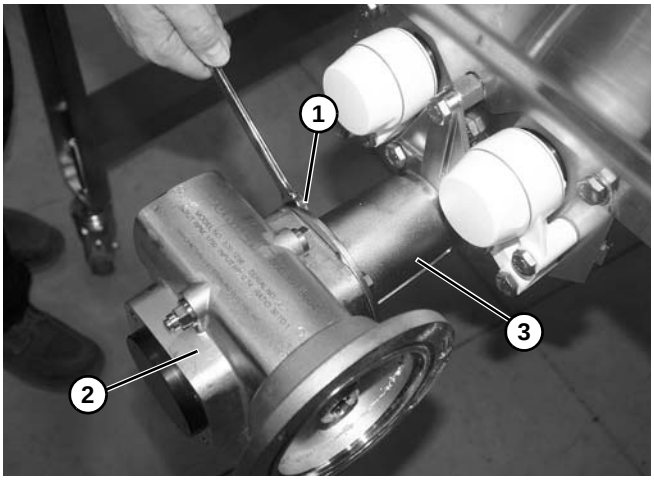


Figure 85

7. Rotate and remove gear reducer **(Figure 86, item 1)** from the motor mount **(Figure 86, item 2)**.

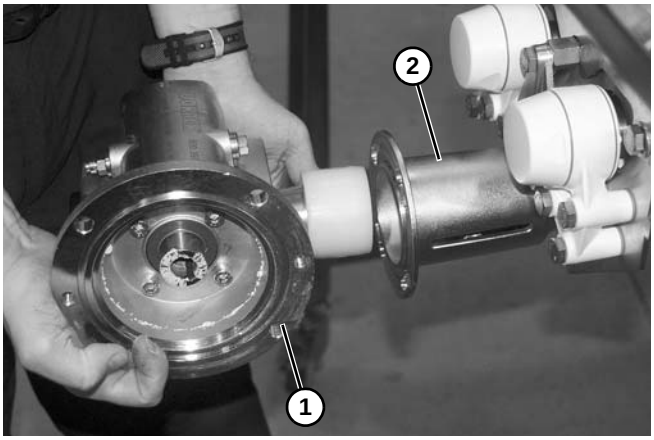


Figure 86

8. Use a flat blade screwdriver to remove slotted area on cover **(Figure 87, item 1)** from tab **(Figure 87, item 2)** on center drive side plate.

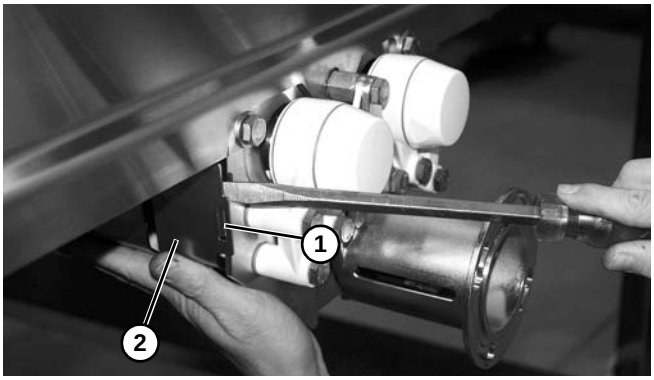


Figure 87

9. Repeat on opposite side and opposite end, and remove cover **(Figure 88, item 1)** from center drive side plates **(Figure 88, item 2)**.

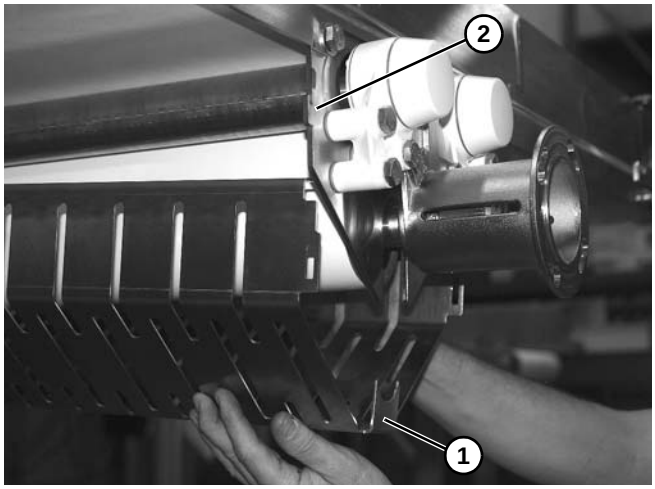


Figure 88

10. Tip up tail **(Figure 89, item 1)**.

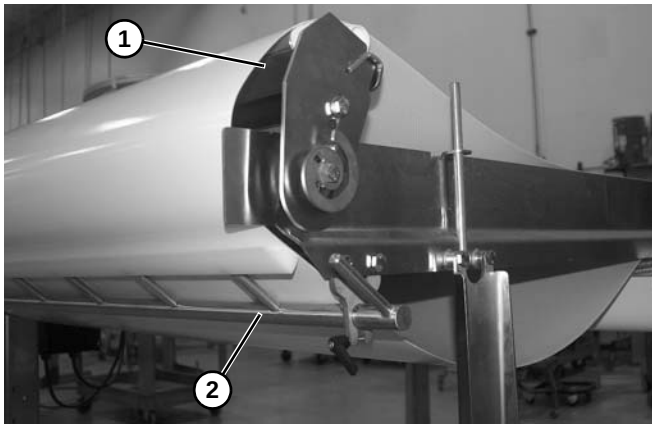


Figure 89

11. Remove scraper **(Figure 89, item 2)**. See "Scraper Replacement" on page 25".
12. Tip up opposite end tail **(Figure 90, item 1)**.

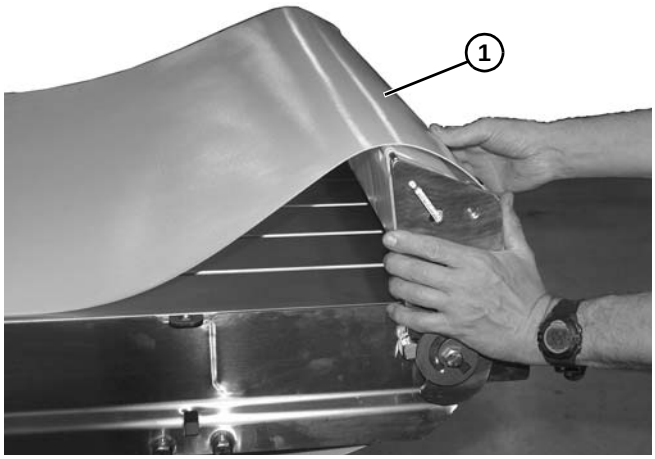


Figure 90

13. Remove three screws **(Figure 91, item 1)** on each roller bearing housing **(Figure 91, item 2)**.

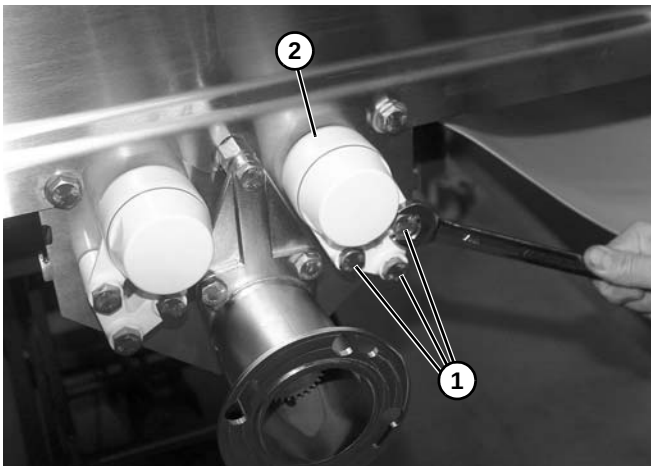


Figure 91

14. Remove bearing cap **(Figure 92, item 1)** on each roller bearing housing **(Figure 92, item 2)**.

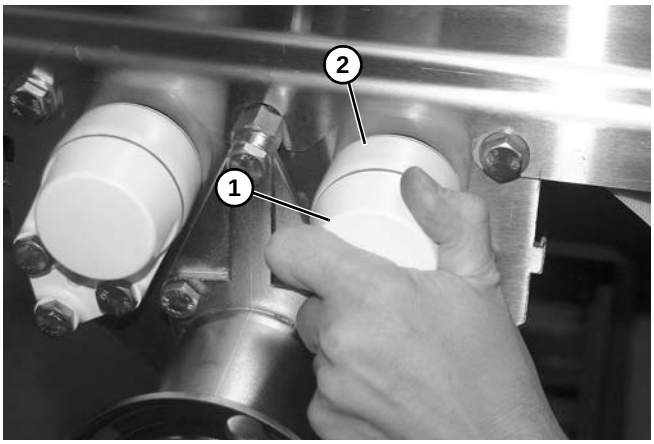


Figure 92

15. Loosen two set screws **(Figure 93, item 1)** securing bearing onto idler spindle **(Figure 93, item 2)**.

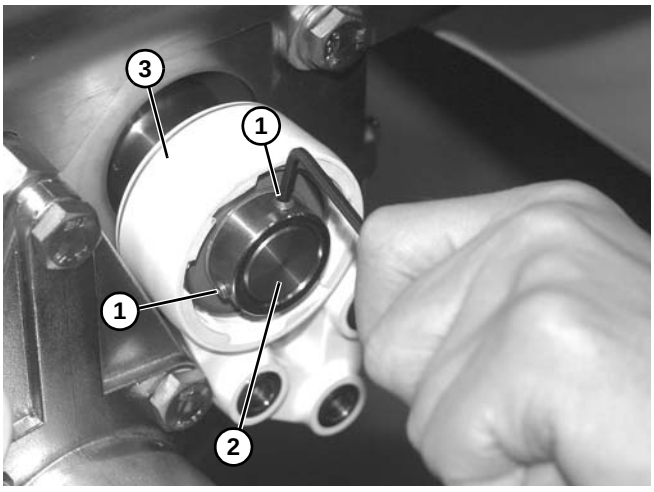


Figure 93

16. Remove roller bearing housing **(Figure 93, item 3)** from idler spindle **(Figure 93, item 2).** Repeat to remove second roller bearing housing.

⚠ CAUTION

Spindles are heavy. Use caution when removing or installing spindles.

17. Remove two idler spindles **(Figure 94, item 1)** from center drive plates **(Figure 94, item 2)**.

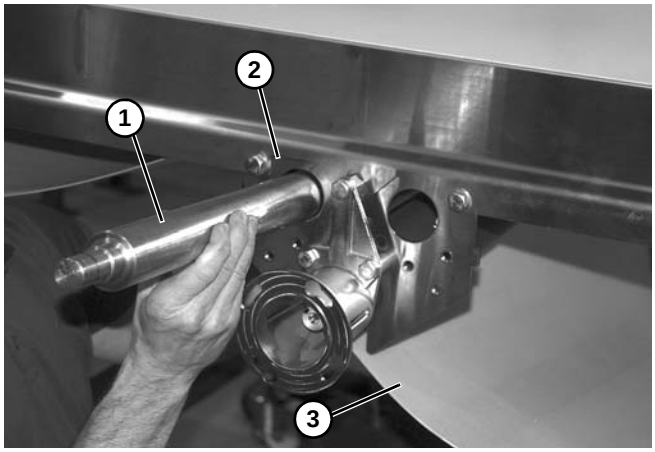


Figure 94

18. Remove belt **(Figure 94, item 3)** from center drive module.

⚠ WARNING

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

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT.

19. Place temporary support stands **(Figure 95, item 1)** at both ends of the conveyor. Place an additional support stand under the drive motor, if equipped. See WARNING.

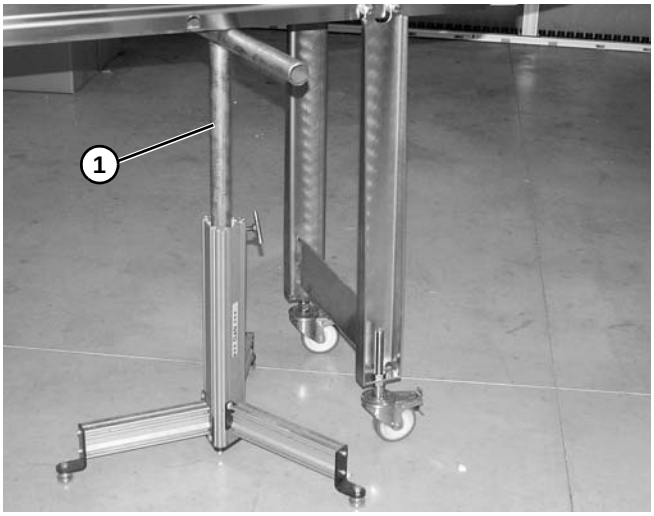


Figure 95

20. Remove two screws **(Figure 96, item 1)** securing the stand brackets from one side of the conveyor.

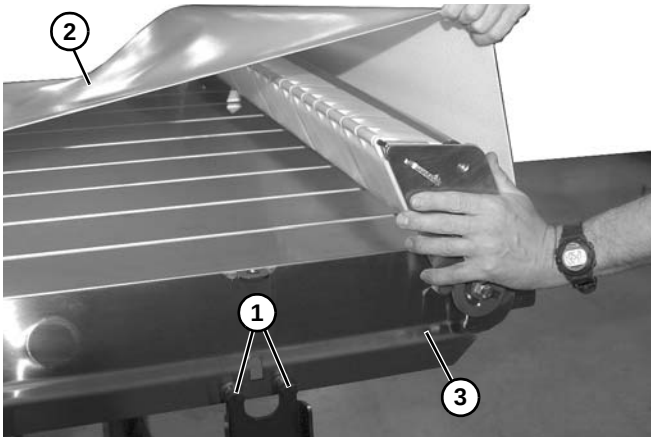


Figure 96

21. Remove the belt **(Figure 96, item 2)** from the conveyor **(Figure 96, item 3)**.
22. Repeat procedure for the opposite end of the conveyor to fully remove the belt.

Belt Installation

1. Ensure that temporary support stands are placed at both ends of the conveyor. See WARNING.
2. Orient belt so splice leading fingers **(Figure 97, item 1)** point in the direction of belt travel as identified by the conveyor directional label **(Figure 97, item 2)**.

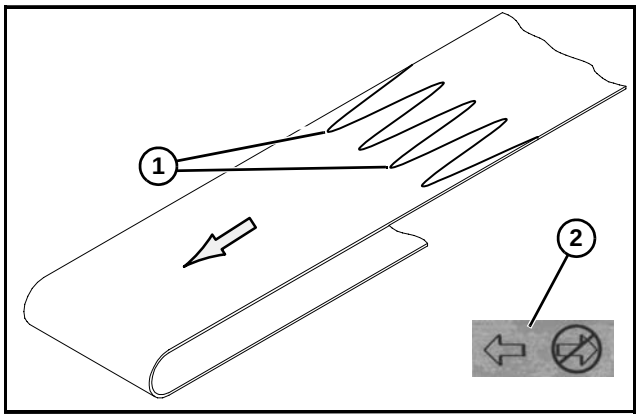


Figure 97

3. Install belt **(Figure 98, item 1)** on conveyor. Lift conveyor **(Figure 98, item 2)** slightly to avoid pinching belt on temporary support stands.

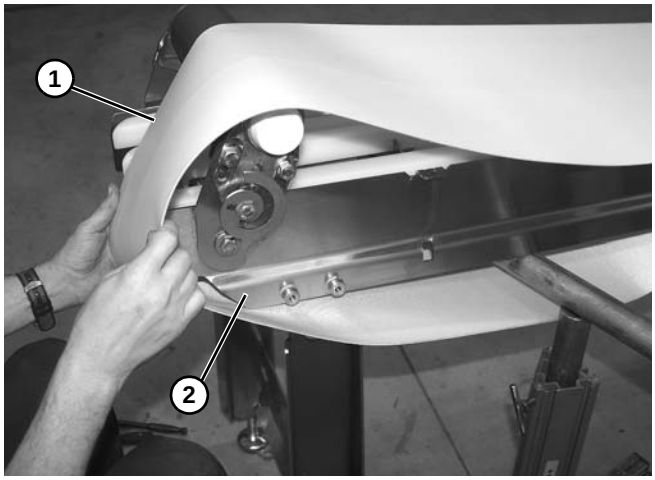


Figure 98

4. Reverse steps 1 thru 21 of the Center Drive “Belt Removal” on page 28”.
5. If equipped, reinstall guiding.
6. If equipped, reinstall tip up handle.
7. Tension and track drive and conveyor if required. See “Conveyor Belt Tensioning” on page 34 and “Center Drive Module Tracking” on page 35”.

Preventive Maintenance and Adjustment

LPZ Belt Replacement

⚠ WARNING

SEVERE HAZARD!

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

1. Remove guides **(Figure 99, item 1)** when required.

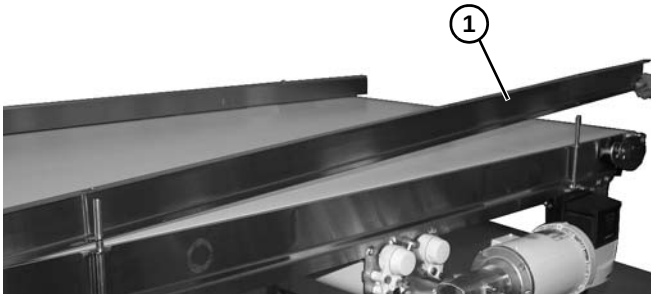


Figure 99

2. Remove belt returns **(Figure 100, item 1)** from slotted holes **(Figure 100, item 2)** on each side of conveyor frame at location you are separating belt.

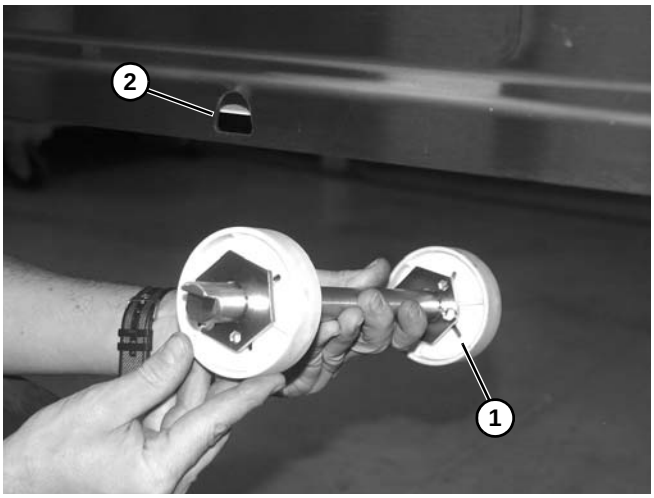


Figure 100

⚠ WARNING

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

PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT.

3. Place temporary support stands **(Figure 101, item 1)** at both ends of the conveyor. Place an additional support stand under the drive motor **(Figure 102, item 1)**, if equipped. See WARNING.

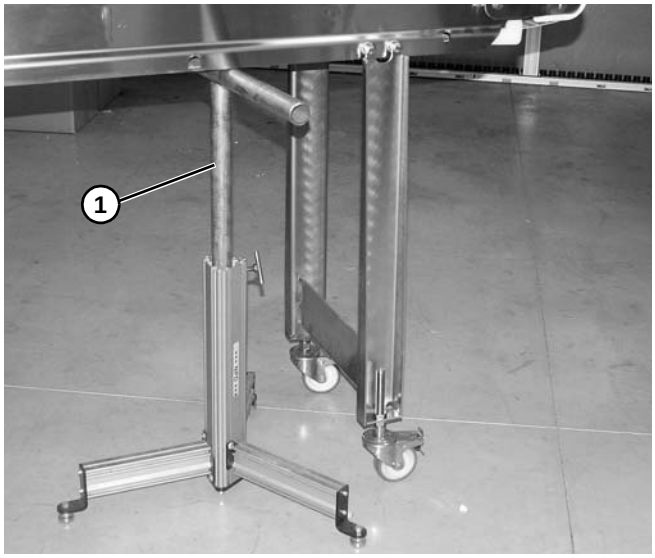


Figure 101

Figure 102

4. Remove pull pin **(Figure 103, item 1)** and roller guard **(Figure 103, item 2)** on each side of conveyor on lower knuckle plate.

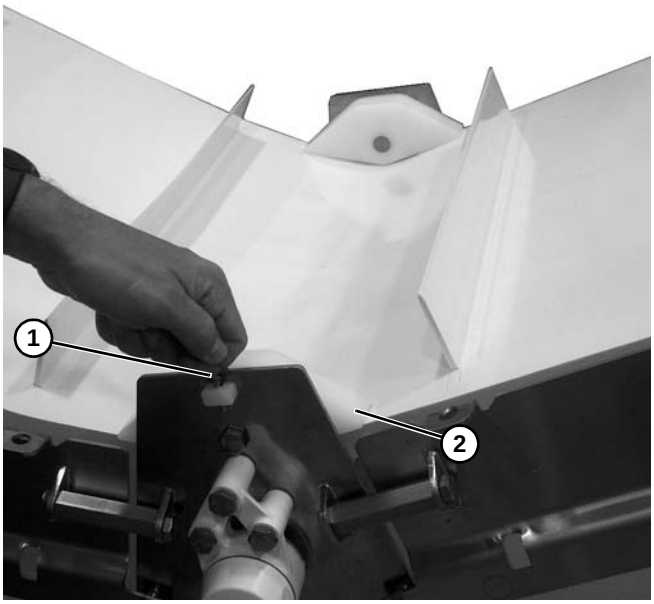


Figure 103

5. Remove pull pin **(Figure 104, item 1)** securing roller guard **(Figure 104, item 2)** on each side of conveyor on upper knuckle plate.

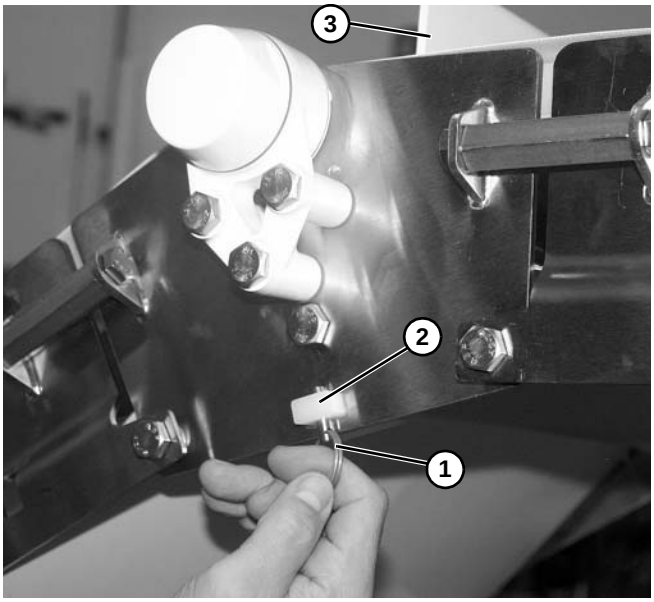


Figure 104

6. Remove two screws **(Figure 105, item 1)** securing the stand brackets from one side of the conveyor.

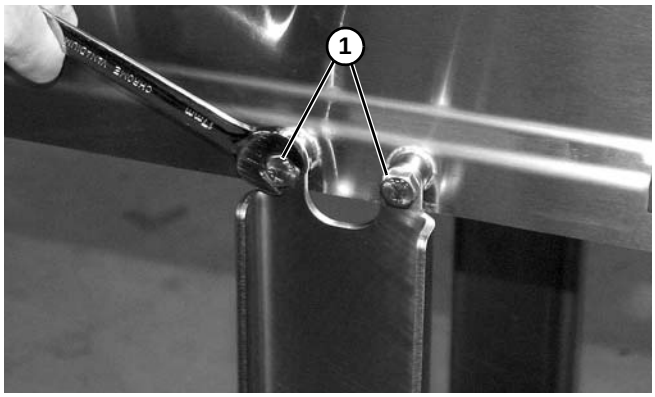


Figure 105

7. Rotate idler end **(Figure 106, item 1)** upward as shown.

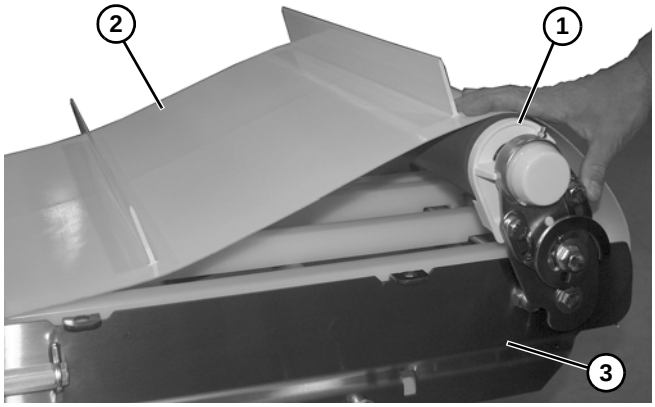


Figure 106

8. Remove the belt **(Figure 106, item 2)** from the conveyor **(Figure 106, item 3)**.
9. Repeat procedure for the opposite end of the conveyor to fully remove the belt.
10. Replace the belt. Refer to “Belt Installation” on page 12.
11. Reinstall belt returns.
12. If equipped, reinstall guiding.
13. Tension and track drive and conveyor if required. See “Conveyor Belt Tensioning” on page 34 and “Conveyor Belt Tracking” on page 34”.

Preventive Maintenance and Adjustment

Conveyor Belt Tensioning

⚠ WARNING

SEVERE HAZARD!

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

⚠ CAUTION

Over-tensioning of conveyor may stretch conveyor belt and reduce bearing life.

1. On idler end, loosen three screws **(Figure 107, item 1)** on each side of conveyor.

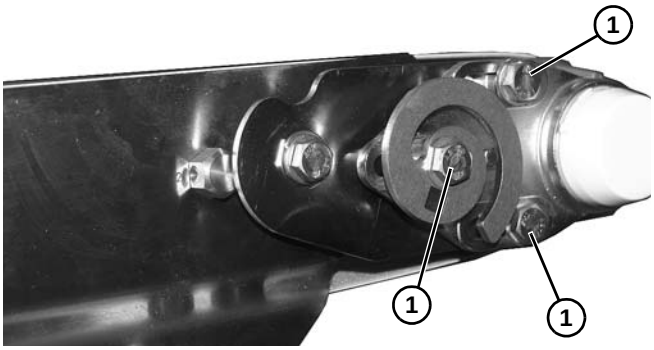


Figure 107

2. Rotate idler tail bracket **(Figure 108, item 1)** with a 3/8 inch breaker bar **(Figure 108, item 2)**. While applying tension, tighten three screws **(Figure 108, item 3)** on each side.

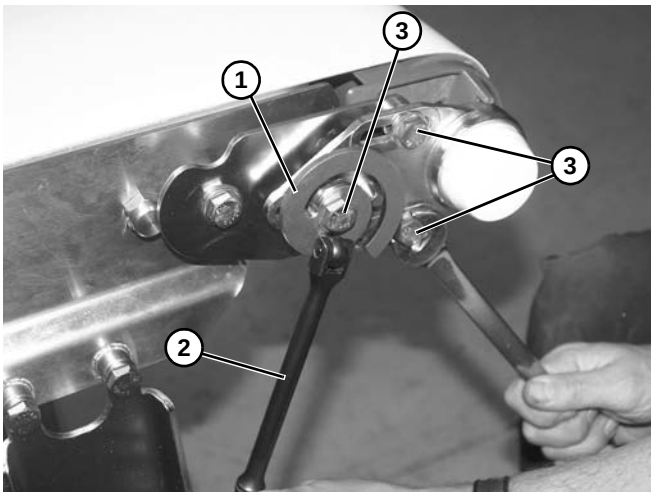


Figure 108

3. Verify proper tracking. If belt tracking is necessary, refer to "Conveyor Belt Tracking" on page 34.

Conveyor Belt Tracking

Tracking should be done on the exit end of the conveyor. Three different tracking procedures are listed below:

- Drive End with Standard Gearmotor
- Drive End with Motorized Pulley
- Idler End

Drive End with Standard Gearmotor

1. To adjust tracking, loosen three screws **(Figure 109, item 1)** on each side of conveyor.

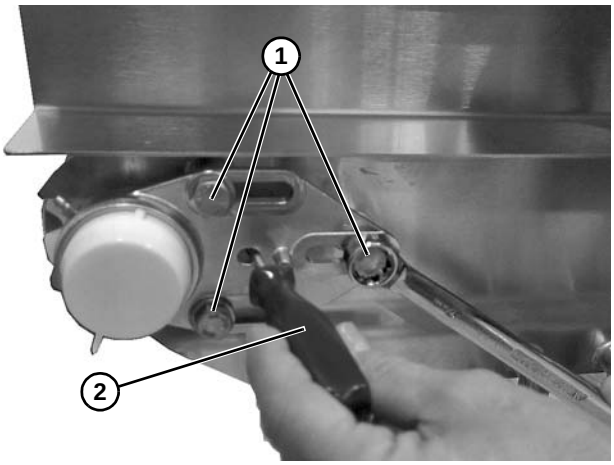


Figure 109

2. Tension each end with a bar **(Figure 109, item 2)**, as needed for tracking. While applying tension, tighten three screws **(Figure 109, item 1)**.

Drive End with Motorized Pulley

1. To adjust tracking, loosen three screws **(Figure 110, item 1)** on each side of conveyor.

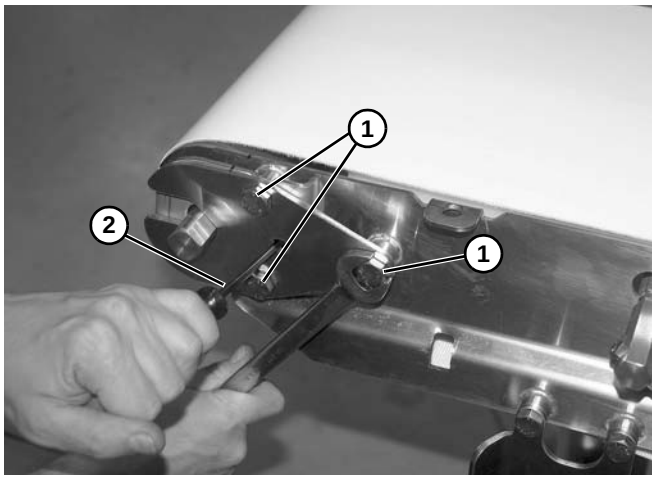


Figure 110

2. Tension each end with a bar **(Figure 110, item 2)**, as needed for tracking. While applying tension, tighten three screws **(Figure 110, item 1)**.

Idler End

1. On idler end, loosen three screws **(Figure 111, item 1)** on each side of conveyor.

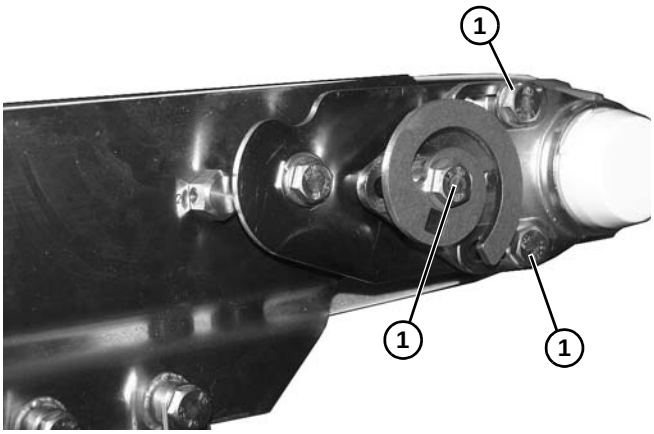


Figure 111

2. Rotate idler tail bracket **(Figure 112, item 1)** with a 3/8 inch breaker bar **(Figure 112, item 2)** to tighten or loosen idler. Align the idler tail bracket on pin **(Figure 112, item 3)** on each side of the conveyor as a starting point for tracking the belt. While applying tension, tighten three screws **(Figure 112, item 4)**.

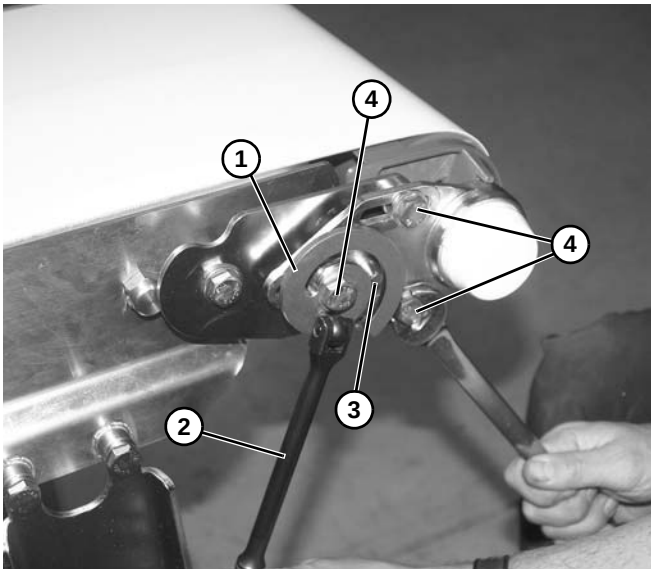


Figure 112

Center Drive Module Tracking

V-Guided Belts

V-guided belts do not require tracking adjustment.

Non V-Guided Belts

Non V-guided belt center drives are equipped with tracking cams. Adjust center drive tracking with the conveyor running.

1. Inspect belt as it exits the center drive:
   a. Belt tracking normally, no adjustment required.
   b. If the belt is not tracking normally, adjust the cam on the side where the belt is running tight.
2. If necessary, loosen the center drive fastening screws **(Figure 113, item 1)** on the side of the center drive that requires adjustment.

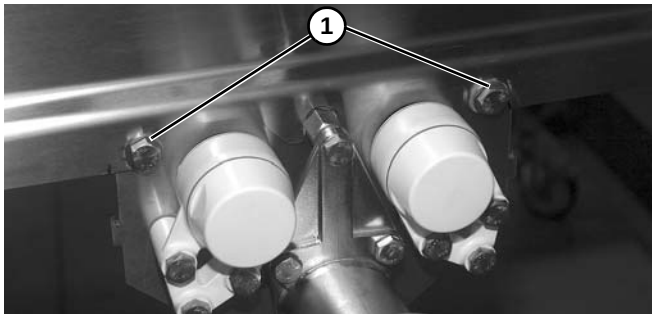


Figure 113

3. Rotate the tracking cam **(Figure 114, item 1)** left or right in small increments. After each adjustment, watch the belt as it exits the center drive **(Figure 114, item 2)**. Continue to rotate the tracking cam until the conveyor belt is tracking normally.

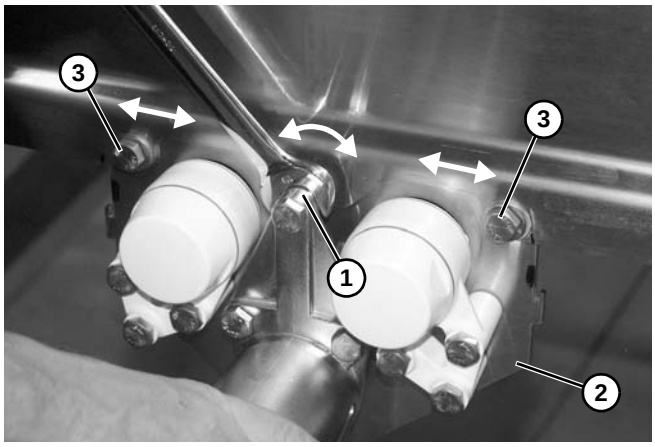


Figure 114

4. Tighten the center drive fastening screws **(Figure 114, item 3)** to 28-32 Nm (20-24 ft-lbs).

Tail Height Adjustment

⚠ WARNING

SEVERE HAZARD!

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

1. To adjust tail height: rotate idler tail

- Rotate idler end so that hex bar **(Figure 115, item 1)** fits into notched area **(Figure 115, item 2)**.
- Adjust dimpled side **(Figure 115, item 3)** of hex bar into one of four locations **(Figure 115, item 4)** (labeled 1-4 on conveyor).

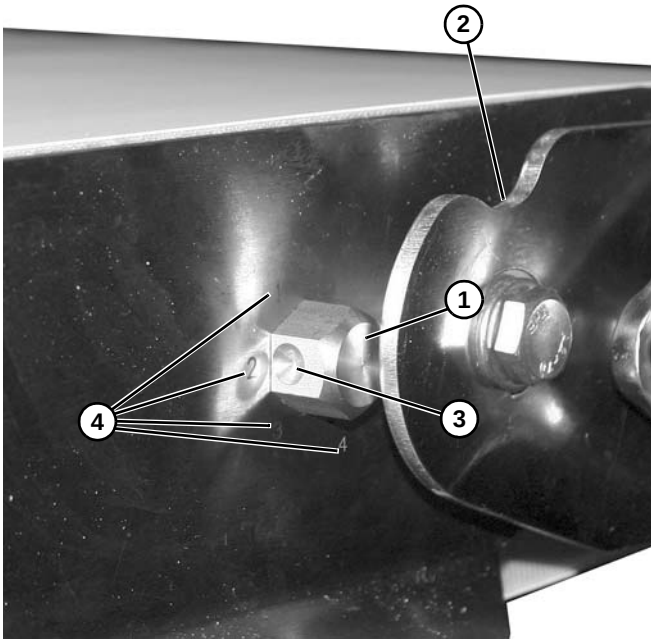


Figure 115

NOTE

Each rotation of hex bar is approximately 2.5 mm (0.10") of elevation change of tail.

*The elevation of change of tail is as follows **(Figure 115)**:*

- *Dimple at position labeled 4 = TAIL AT HIGHEST*
- *Dimple at position labeled 1 = TAIL AT LOWEST*

2. Rotate idler tail **(Figure 116, item 1)** up as shown. Pull out and rotate dimpled end of hex bar **(Figure 116, item 2)** into one of four locations **(Figure 116, item 3)** marked on the side of conveyor frame.

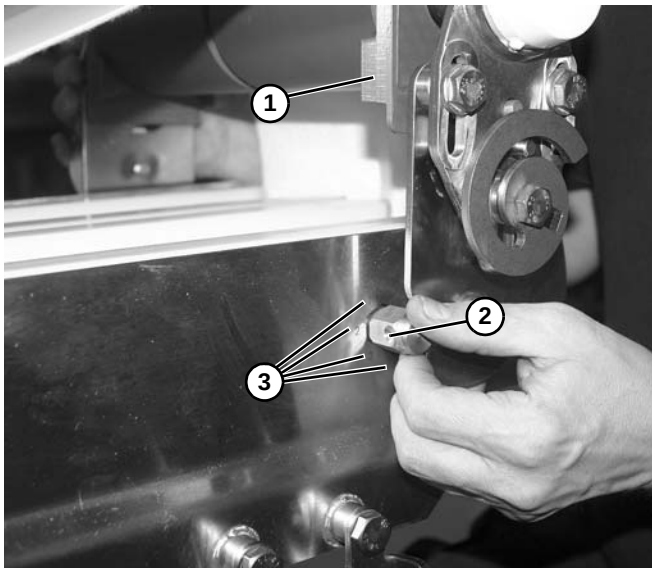


Figure 116

3. Lower idler end and verify proper adjustment.

Wear Strip Replacement

Replace the wear strips if they become worn.

Typical standard wear strips **(Figure 117)**.

1	Wear Strips

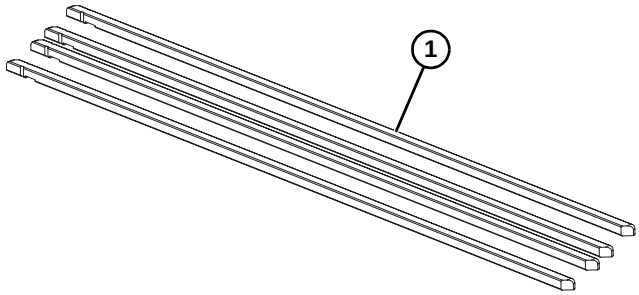


Figure 117

1. Remove conveyor belt. Refer to “End Drive Conveyor Belt Replacement” on page 26.

2. Remove worn wear strips **(Figure 118, item 1)** from the frame notches.

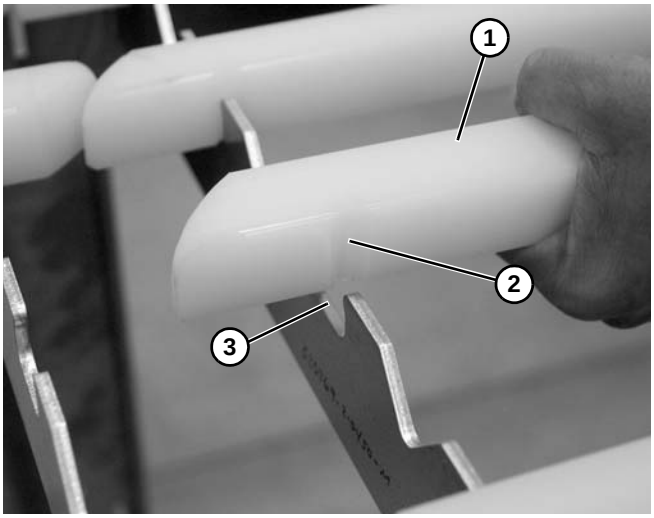


Figure 118

3. Attach new wear strips by installing with the rounded slot **(Figure 118, item 2)** in wearstrip into the slot **(Figure 118, item 3)** on the crossmember.

NOTE

*Verify that all wearstrips are installed with curved ends **(Figure 119, item 1)** in the direction of travel **(Figure 119)**.*

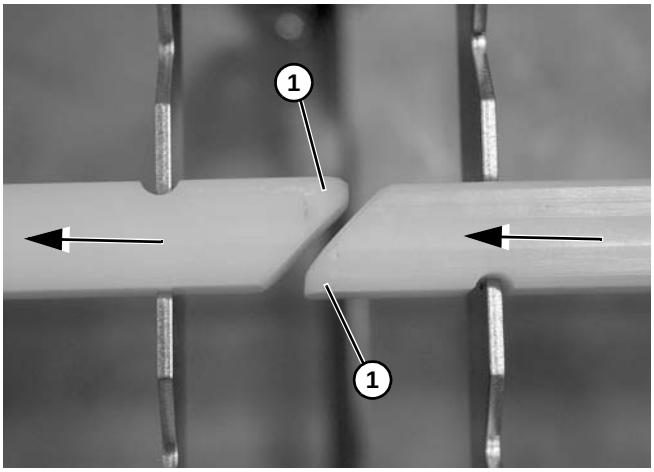


Figure 119

End Drive Spindle Replacement

WARNING

SEVERE HAZARD!

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

WARNING

PUNCTURE HAZARD!

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

1. Loosen the four screws **(Figure 120, item 1)**. Rotate and remove the gearmotor. (For further detailed instructions, refer to drive package manual 851-947.)

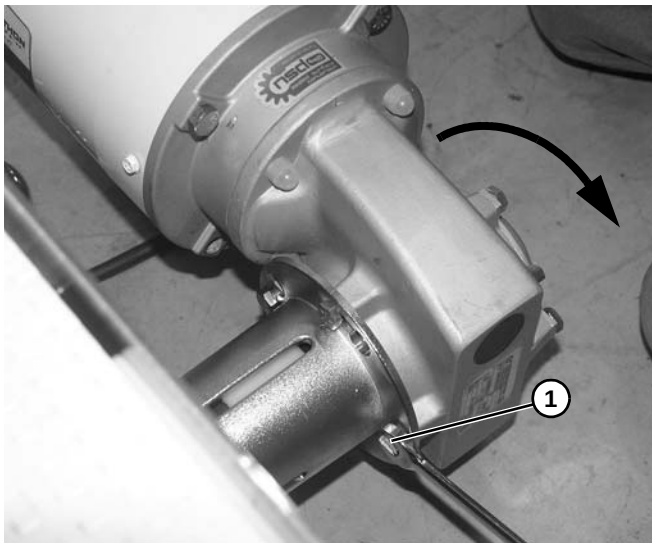


Figure 120

2. Rotate idler end **(Figure 121, item 1)** upward as shown.

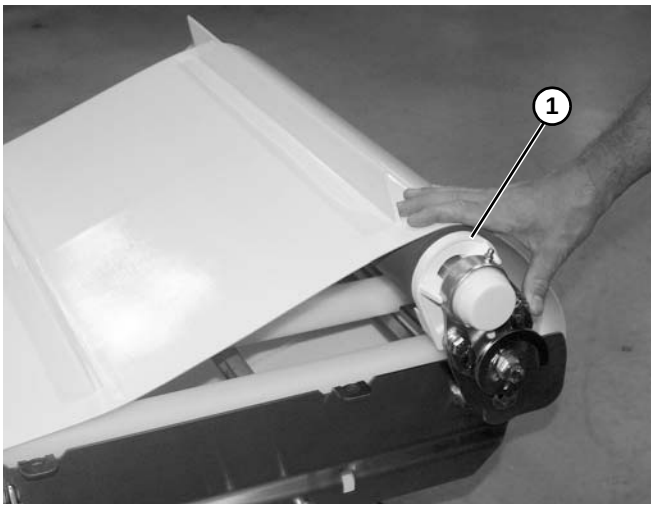


Figure 121

3. Remove bearing cover **(Figure 122, item 1)**.

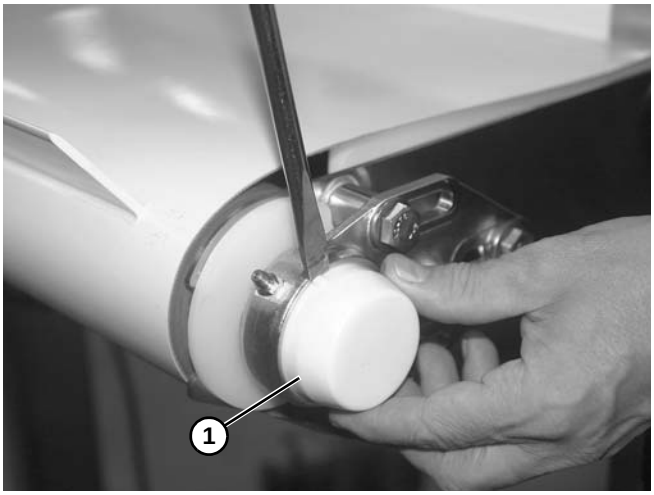


Figure 122

4. Loosen two set screws **(Figure 123, item 1)**.

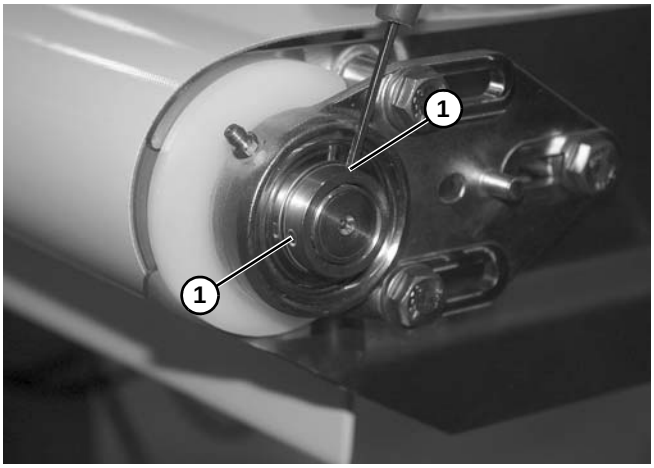


Figure 123

5. Remove the headplate screws **(Figure 124, item 1)**.

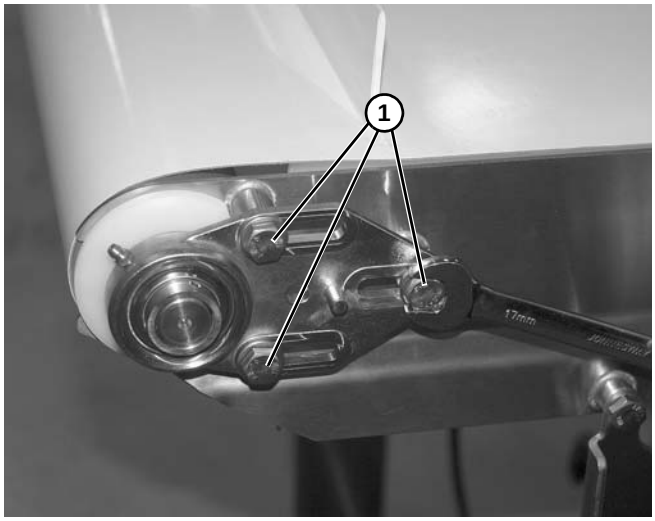


Figure 124

6. Remove the headplate **(Figure 125, item 1)**.

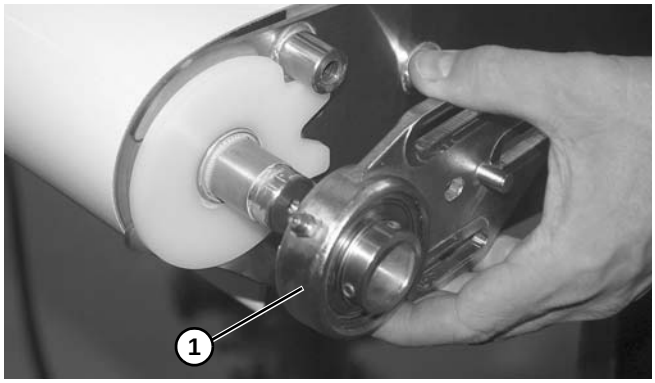


Figure 125

7. Pull spindle **(Figure 126, item 1)** from slotted end **(Figure 126, item 2)** of conveyor, and remove spindle guard **(Figure 126, item 3)** from end of drive spindle.

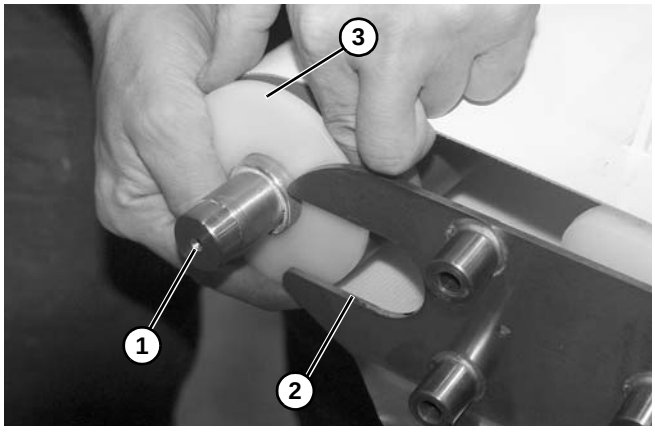


Figure 126

⚠ CAUTION

Spindles are heavy. Use caution when removing or installing spindles.

8. Lift up on belt and remove drive tail spindle **(Figure 127, item 1)**.

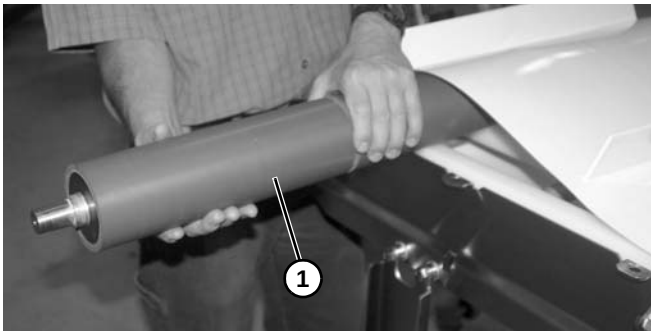


Figure 127

9. Replace components, as needed.
10. Install parts in reverse order of removal.

Motorized Pulley Replacement

⚠ WARNING

SEVERE HAZARD!

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

1. Remove conveyor belt. Refer to “End Drive Conveyor Belt Replacement” on page 26.
2. Lift each spindle guard **(Figure 128, item 1)** on each side, as shown, on drive end **(Figure 128, item 2)**.

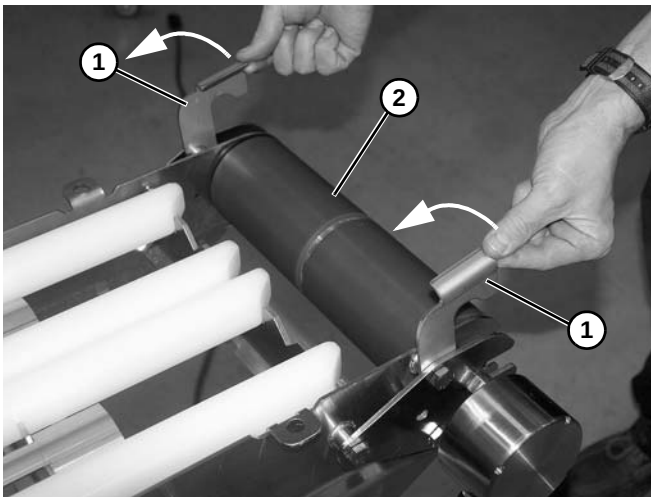


Figure 128

NOTE

*Note the square end **(Figure 129, item 1)** of drive spindle oriented in spindle guard **(Figure 129, item 2)** as you are removing the motorized pulley drive assembly from conveyor.*

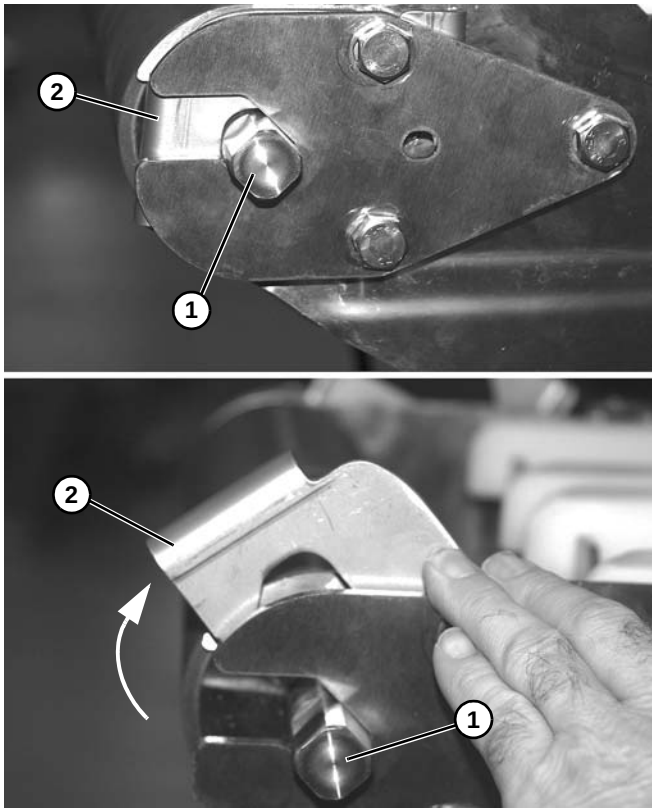


Figure 129

3. Rotate and remove the motorized pulley assembly **(Figure 130, item 1)** off the drive tail blocks **(Figure 130, item 2)**.

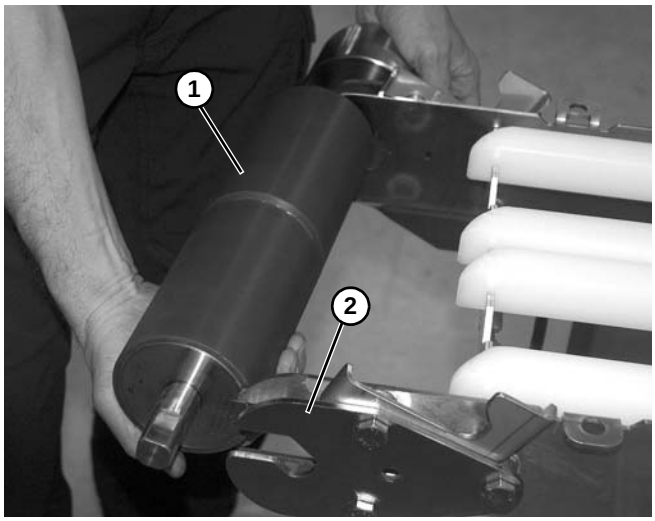


Figure 130

4. Replace entire drive assembly.
5. Install parts in reverse order of removal.

Idler Spindle Replacement

⚠ WARNING

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

1. Remove conveyor belt. Refer to "End Drive Conveyor Belt Replacement" on page 26.
2. Remove headplate screw **(Figure 131, item 1)**. Repeat on opposite side of the conveyor.

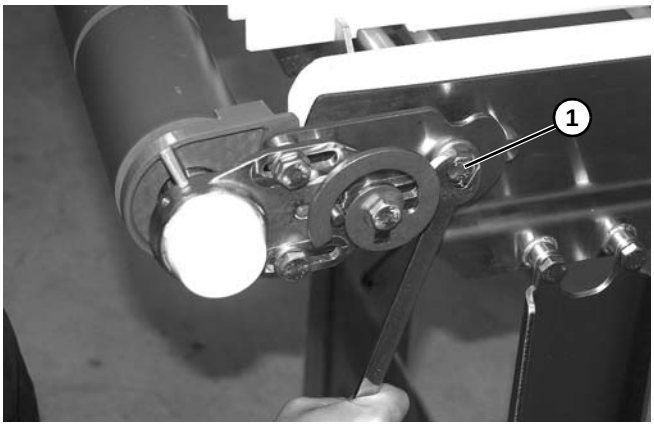


Figure 131

3. Slide each slotted idler spindle plate **(Figure 132, item 1)** off of notched shaft **(Figure 132, item 2)** on idler end.

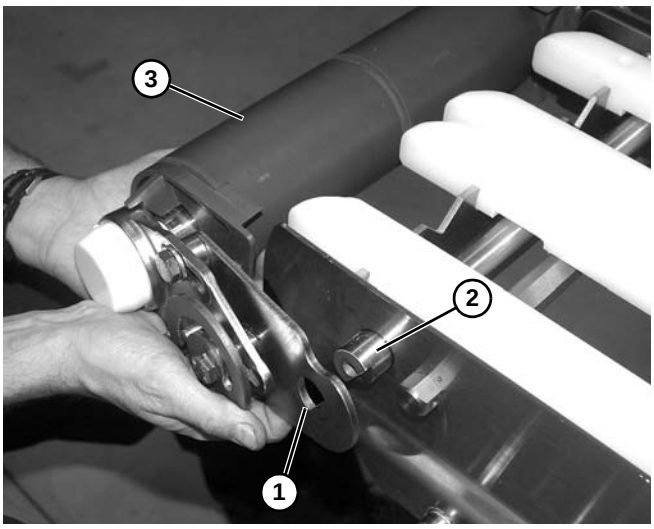


Figure 132

⚠ CAUTION

Spindles are heavy. Use caution when removing or installing spindles.

4. Remove the idler spindle assembly **(Figure 132, item 3)** from both end of notched shaft.
5. Remove the bearing cover **(Figure 133, item 1)**. Repeat on opposite side.

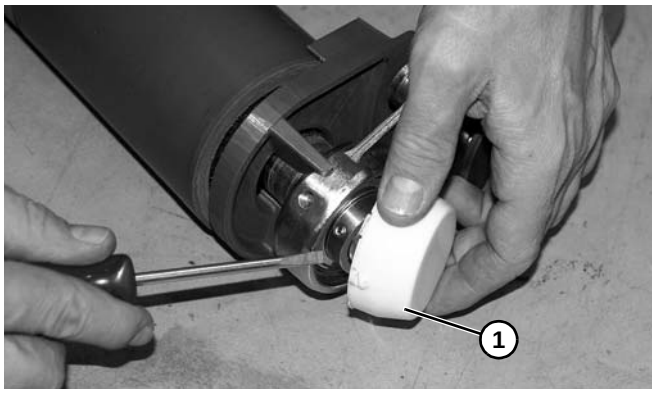


Figure 133

6. Loosen two set screws **(Figure 134, item 1)** on both sides.

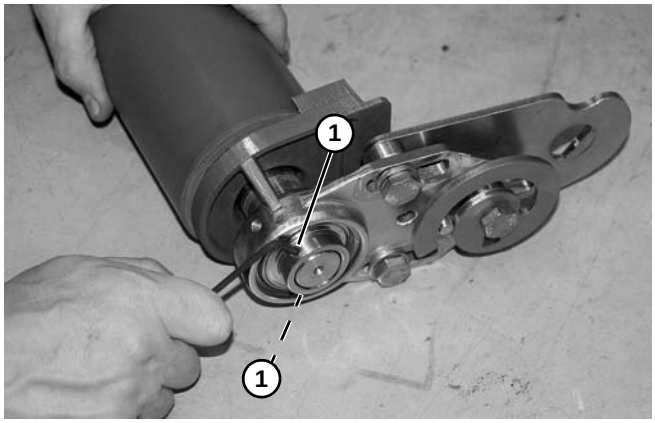


Figure 134

7. Slide the headplate with bearing **(Figure 135, item 1)** off the shaft **(Figure 135, item 2)**.

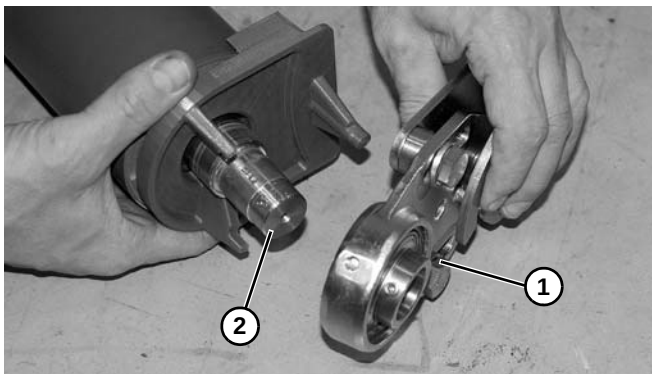


Figure 135

8. Slide the side plate **(Figure 136, item 1)** off the idler roller **(Figure 136, item 2)**.

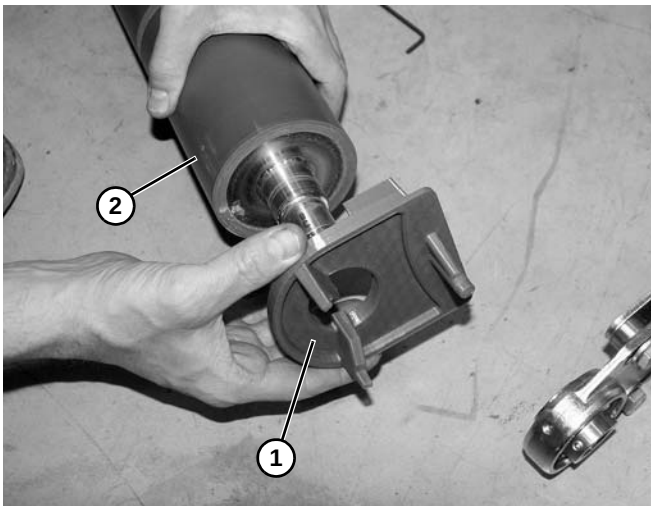


Figure 136

NOTE

*When installing headplate back into side plate, make certain that headplate is fully seated into notches **(Figure 137, item 1)** as shown.*

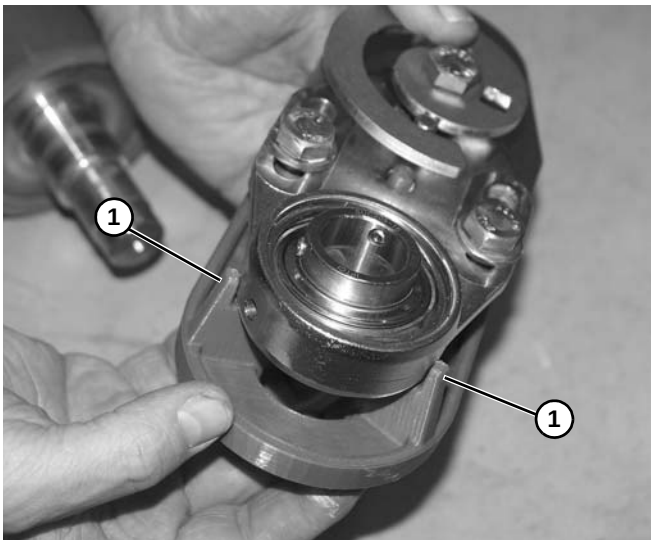


Figure 137

9. Repeat for opposite side headplate **(Figure 138, item 1)**.

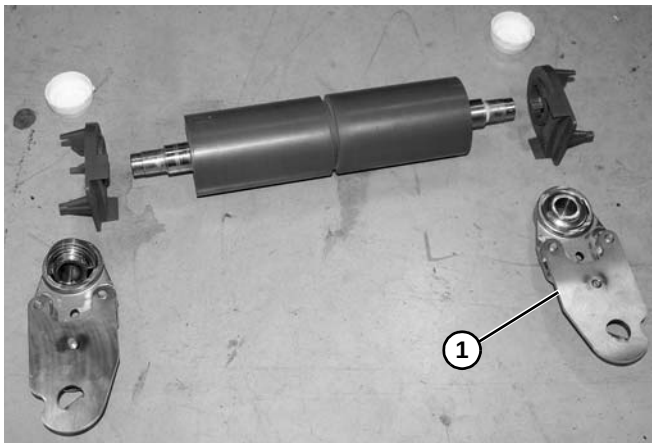


Figure 138

10. If necessary, refer to "Bearing Replacement" on page 50 for replacing bearing in each headplate.
11. Install parts in reverse order of removal.

Nose Bar Spindle Replacement

⚠ WARNING

SEVERE HAZARD!

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

13 mm Nose Bar

1. Remove conveyor belt. Refer to "End Drive Conveyor Belt Replacement" on page 26.
2. Loosen headplate screw **(Figure 139, item 1)**. on each side.

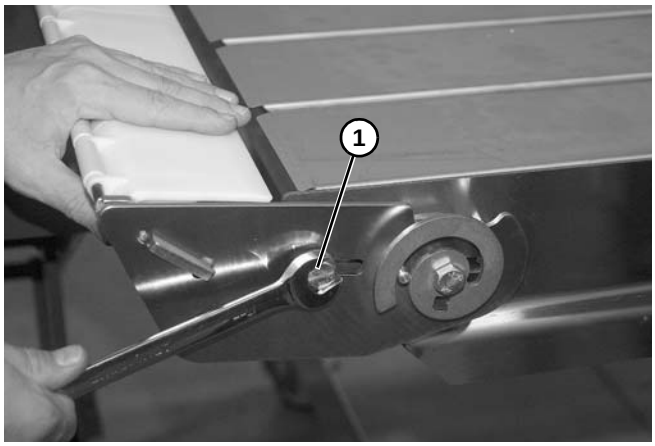


Figure 139

3. Loosen headplate adjustment screw **(Figure 140, item 1)** on each side.

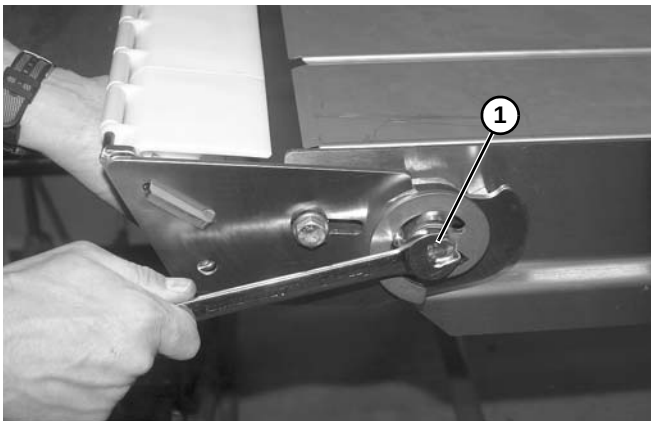


Figure 140

⚠ CAUTION

Spindles are heavy. Use caution when removing or installing spindles.

4. Slide and remove the nose bar idler **(Figure 141, item 1)** off each pivot tail bracket **(Figure 141, item 2)**.

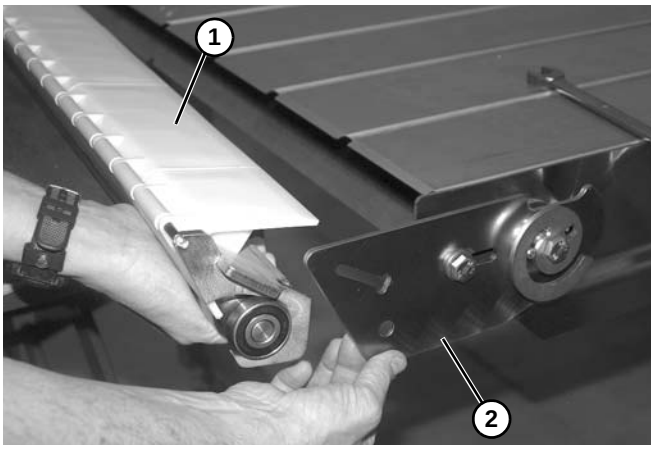


Figure 141

5. Pry off and remove wear plate **(Figure 142, item 1)**. from mounting bracket **(Figure 143, item 1)**.

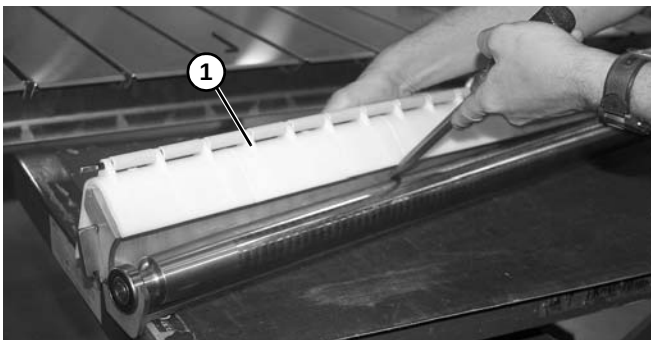


Figure 142

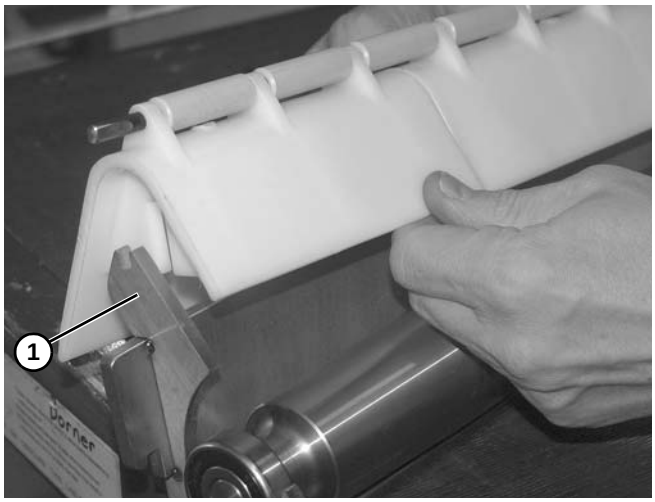


Figure 143

6. Slide off remaining wear plates **(Figure 144, item 1)** off of mounting bracket.

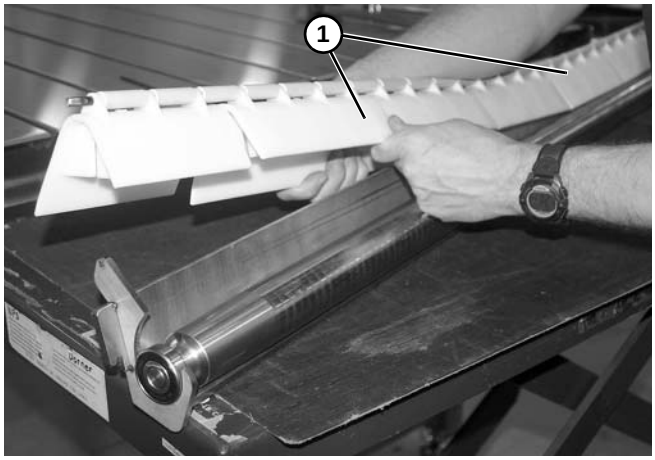


Figure 144

7. Remove idler spindle **(Figure 145, item 1)** from mounting bracket.

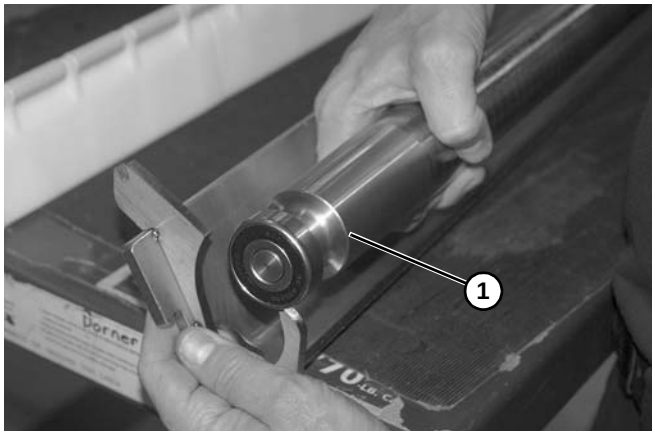


Figure 145

8. Slide off spacers **(Figure 146, item 1)** and each wear plate **(Figure 146, item 2)** off of rod **(Figure 146, item 3)**.

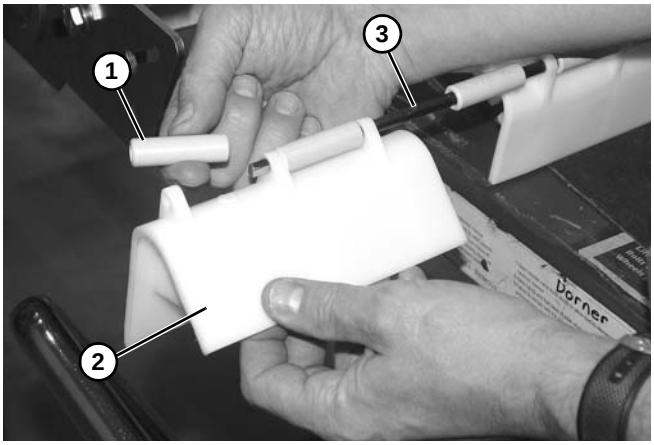


Figure 146

9. Repeat for remaining wear plates, as needed.
10. Install parts in reverse order of removal.
11. For tip up tail only:

    a. Check level of idler tail by placing a level **(Figure 147, item 1)** on top of bed rail and support bracket.

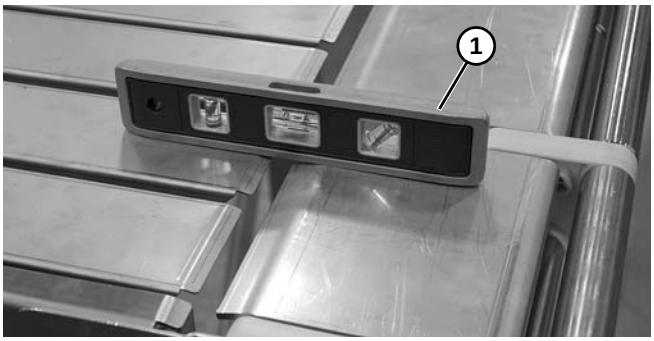


Figure 147

    b. If needed, tighten or loosen screw **(Figure 148, item 1)** on each side to move idler tail up or down to level with conveyor bed rail.

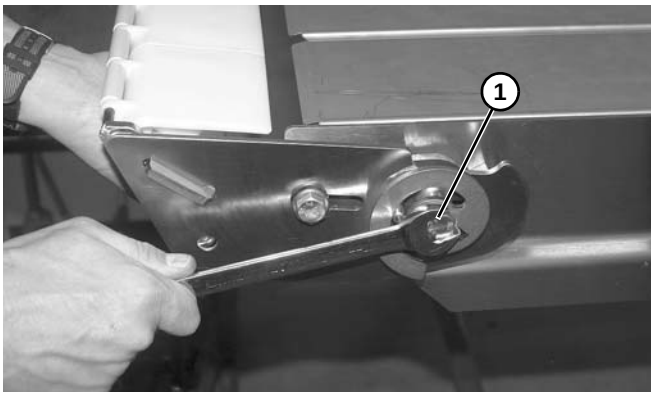


Figure 148

32 mm Nose Bar

1. Remove conveyor belt. Refer to "End Drive Conveyor Belt Replacement" on page 26.
2. Remove screw **(Figure 149, item 1)** on each side of the conveyor.

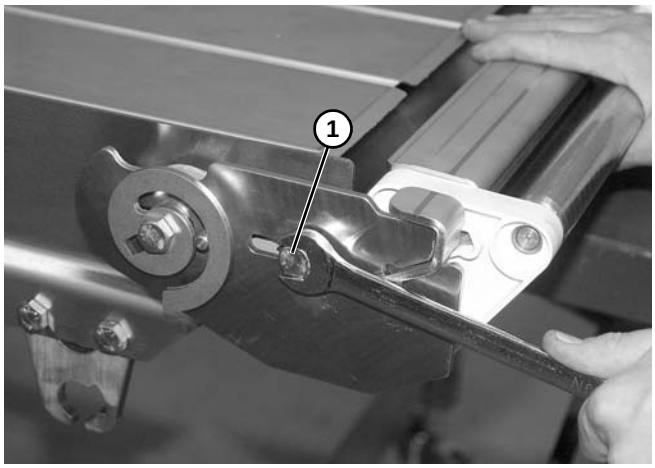


Figure 149

⚠ CAUTION

Spindles are heavy. Use caution when removing or installing spindles.

3. Slide the nose bar idler **(Figure 150, item 1)** off the pivot tail blocks **(Figure 150, item 2)**.

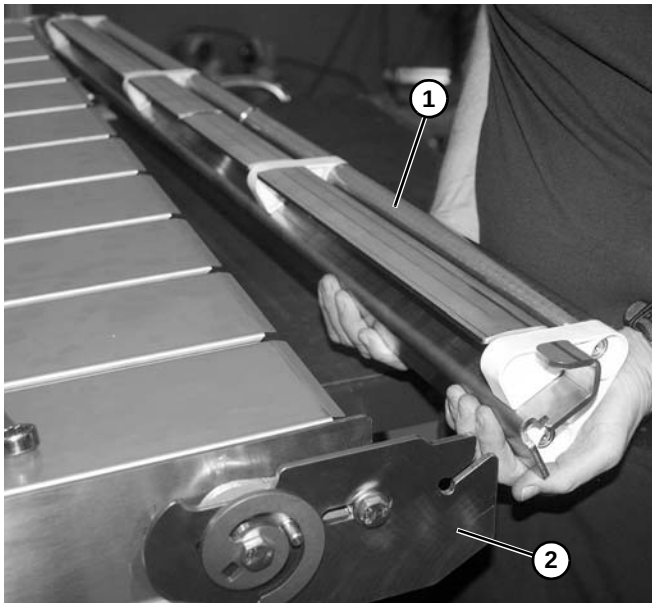


Figure 150

4. Pull the pivot tail blocks **(Figure 151, item 1)** off the mounting bracket **(Figure 151, item 2)**, releasing slot **(Figure 151, item 3)** of pivot tail blocks from tab **(Figure 151, item 4)** on mounting bracket.

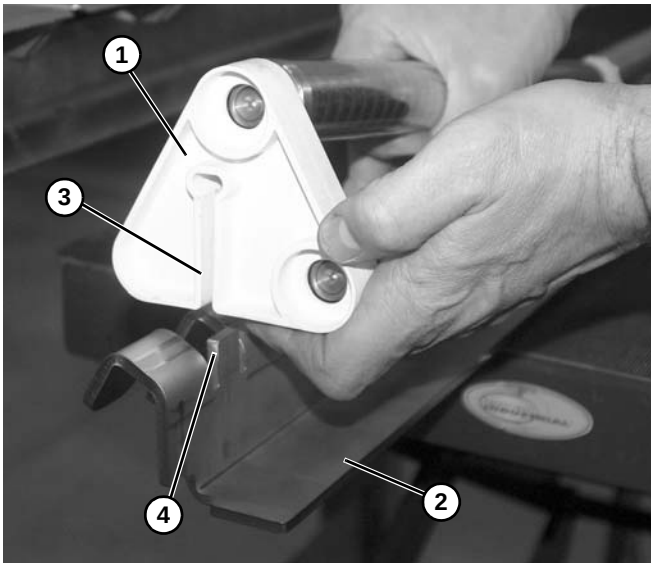


Figure 151

5. Remove pivot tail block plate **(Figure 152, item 1)** off of both roller bearings **(Figure 152, item 2)**.

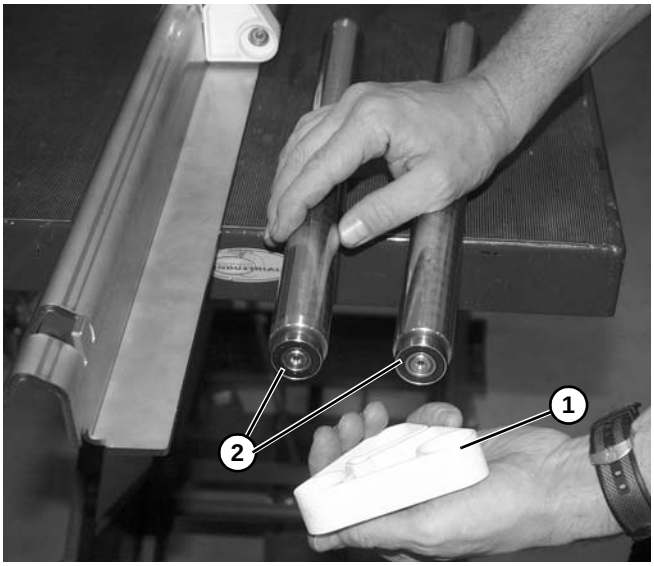


Figure 152

6. Repeat, as needed, to remove pivot tail blocks **(Figure 153, item 1)** off of the mounting brackets **(Figure 153, item 2)** for the remaining spindles **(Figure 154, item 1)**.

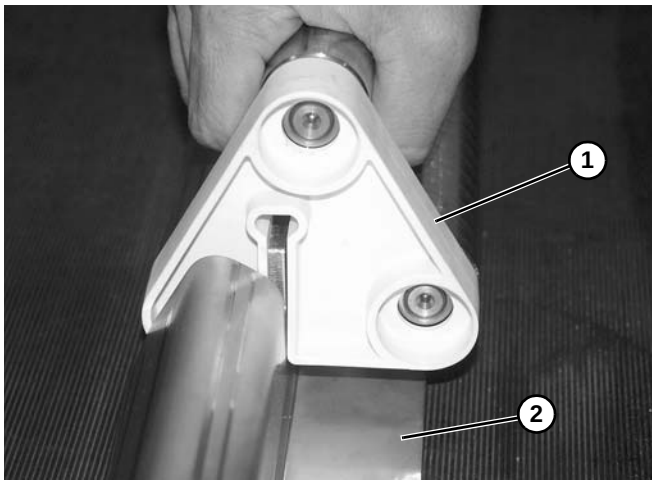


Figure 153

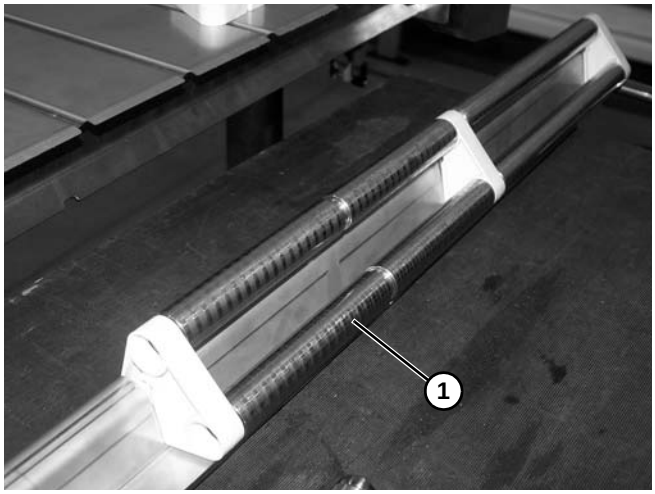


Figure 154

7. Install parts in reverse order of removal.
8. For tip up tail only:
   a. Check level of idler tail by placing a level **(Figure 155, item 1)** on top of bed rail and support bracket.

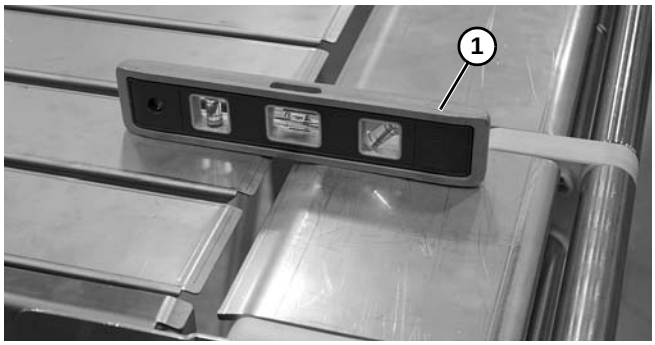


Figure 155

b. If needed, tighten or loosen screw **(Figure 156, item 1)** on each side to move idler tail up or down to level with conveyor bed rail.

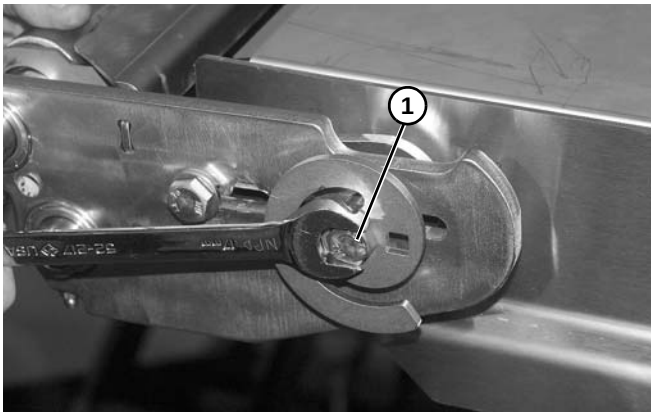


Figure 156

48 mm Nose Bar

1. Remove conveyor belt. Refer to "End Drive Conveyor Belt Replacement" on page 26.
2. Remove screw **(Figure 157, item 1)** securing bearing cover **(Figure 157, item 2)**.

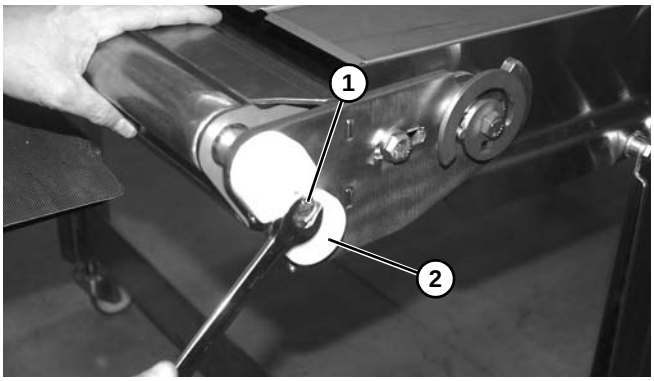


Figure 157

3. Remove screw **(Figure 158, item 1)** and bearing cover **(Figure 158, item 2)** from side plate **(Figure 158, item 3)**.

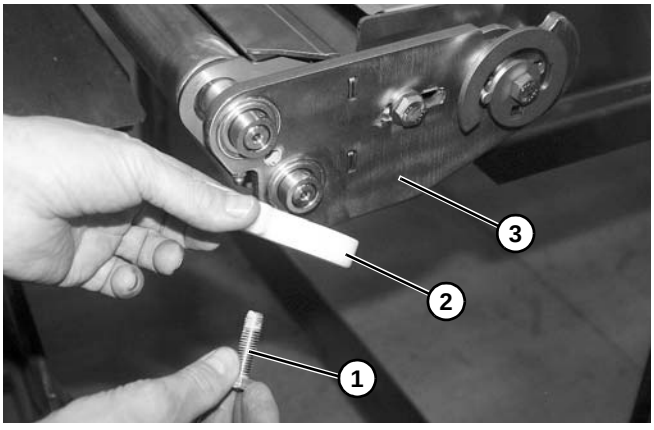


Figure 158

4. Loosen two set screws **(Figure 159, item 1)** on each bearing **(Figure 159, item 2)**.

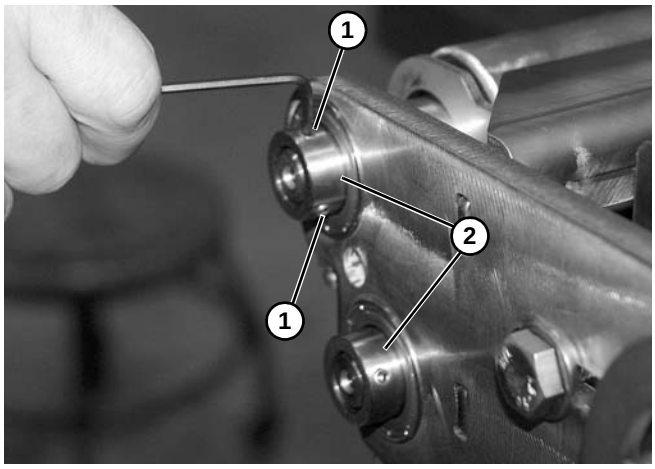


Figure 159

5. Loosen headplate screw **(Figure 160, item 1)** on each side.

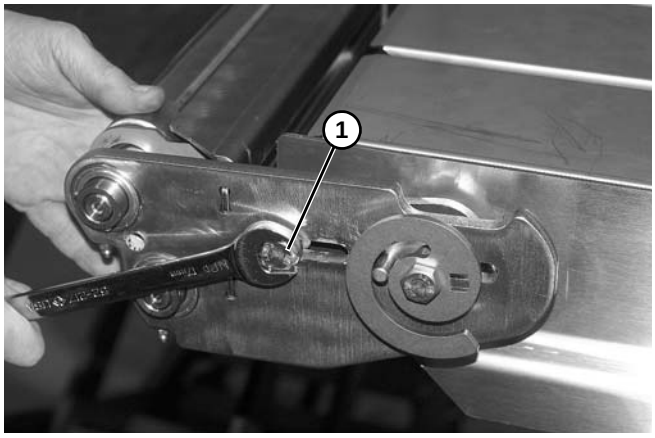


Figure 160

6. Remove headplate adjusting screw **(Figure 161, item 1)** on each side.

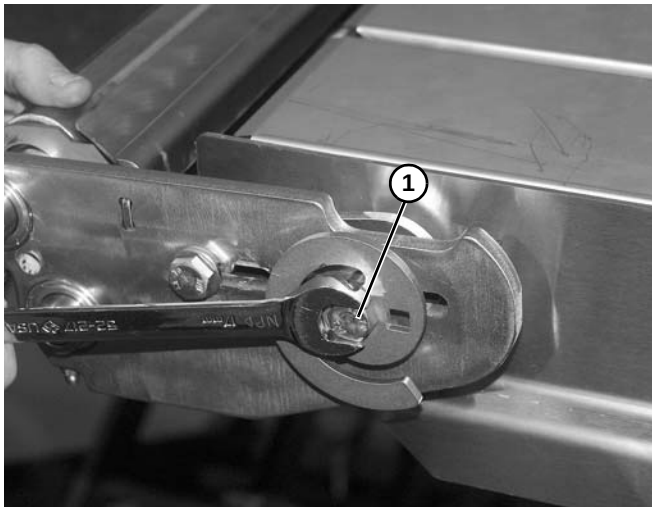


Figure 161

⚠ CAUTION

Spindles are heavy. Use caution when removing or installing spindles.

7. Remove idler assembly **(Figure 162, item 1)** from spindle **(Figure 162, item 2)** on each side.

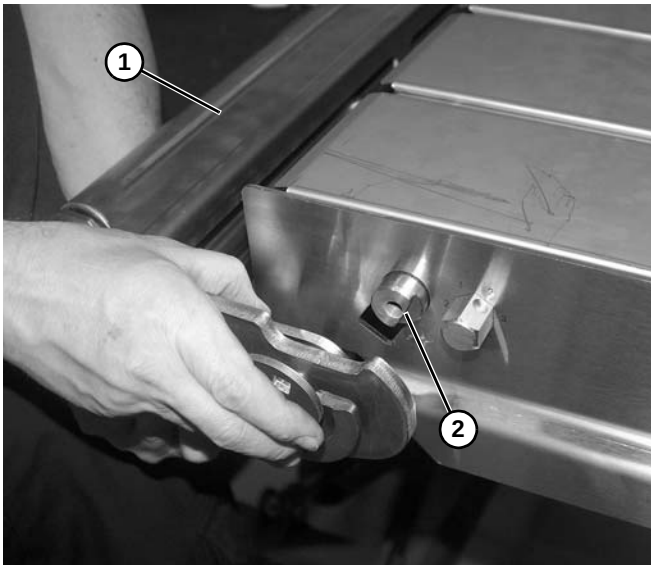


Figure 162

8. Remove side plate with bearings **(Figure 163, item 1)** off of both spindles **(Figure 163, item 2)**.

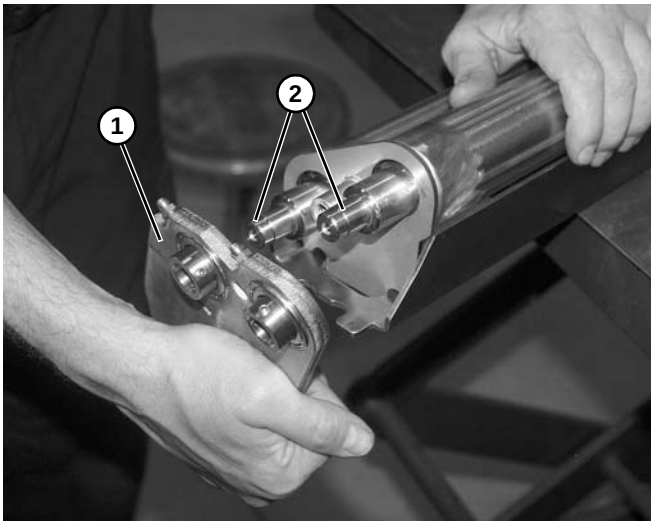


Figure 163

9. Remove plate **(Figure 164, item 1)** from both spindles.

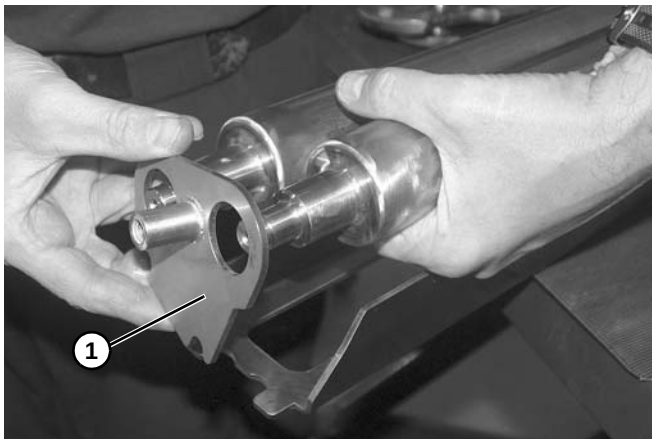


Figure 164

10. Replace parts, as needed.
11. Install parts in reverse order of removal.
12. Check level of idler tail by placing a level **(Figure 165, item 1)** on top of bed rail and support bracket.

Figure 165

13. If needed, tighten or loosen screw **(Figure 166, item 1)** on each side to move idler tail up or down to level with conveyor bed rail.

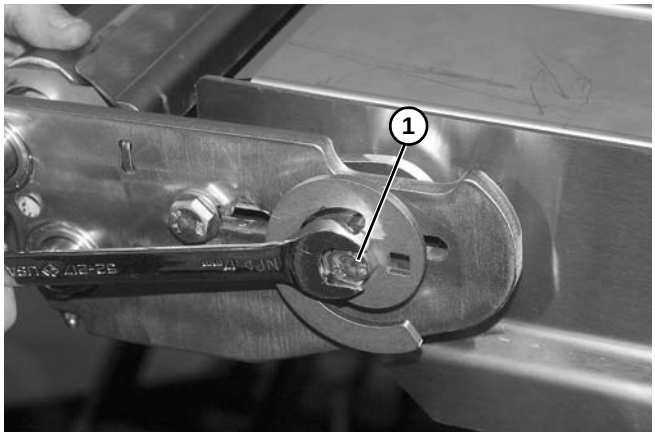


Figure 166

Center Drive Spindle Replacement

WARNING

SEVERE HAZARD!

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

- A – Gearmotor Removal
- B – Spindle Replacement
- C – Center Drive Spindle Replacement

A - Gearmotor Removal

1. Tip up tail **(Figure 167, item 1)**.

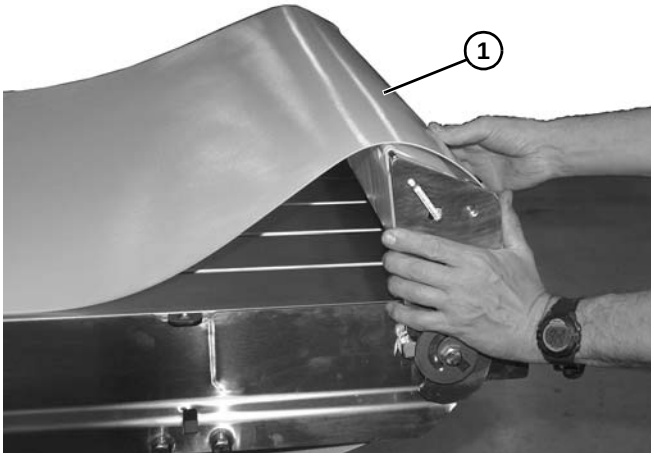


Figure 167

2. Remove four screws **(Figure 168, item 1)** holding motor **(Figure 168, item 2)** onto the gear reducer **(Figure 168, item 3)**.

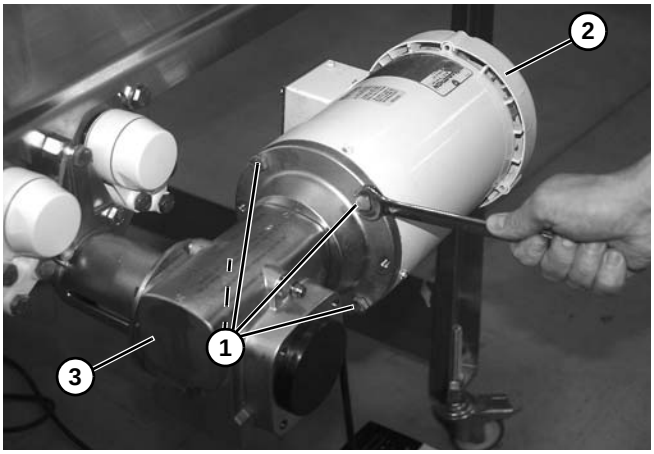


Figure 168

3. Remove motor **(Figure 169, item 1)** from the gear reducer **(Figure 169, item 2)**.

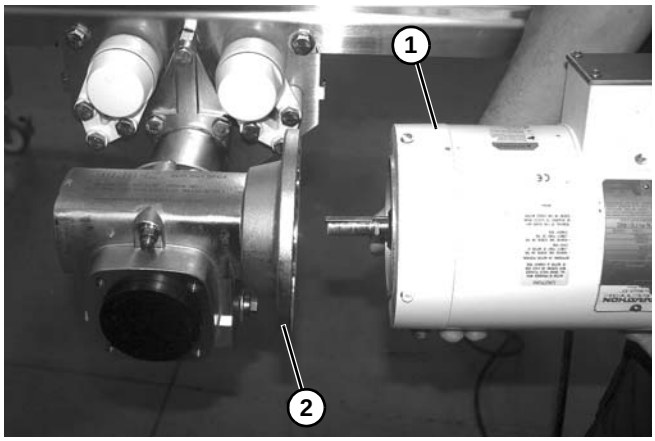


Figure 169

4. Loosen four screws **(Figure 170, item 1)** holding gear reducer **(Figure 170, item 2)** onto the motor mount **(Figure 170, item 3)**.

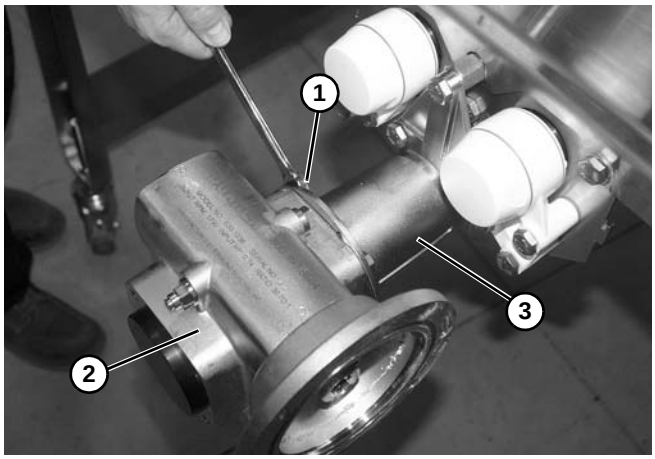


Figure 170

5. Rotate and remove gear reducer **(Figure 171, item 1)** from the motor mount **(Figure 171, item 2)**.

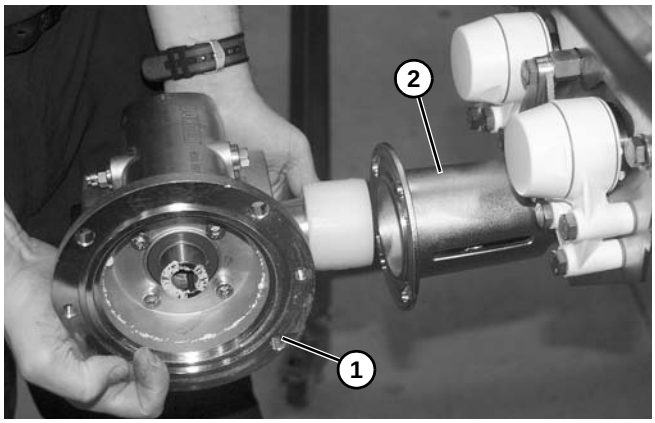


Figure 171

B –Spindle Replacement

1. Use a flat blade screwdriver to remove slotted area on cover **(Figure 172, item 1)** from tab **(Figure 172, item 2)** on center drive side plate.

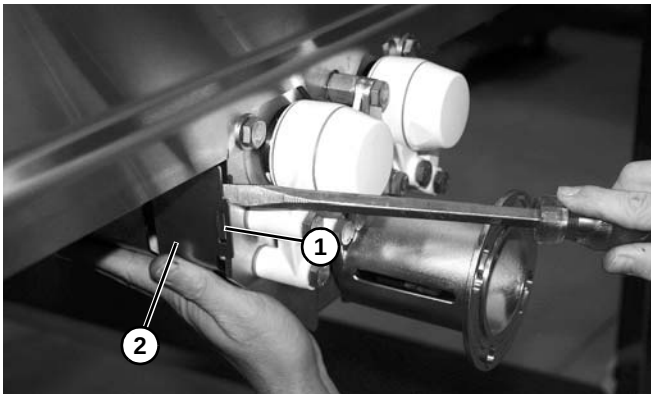


Figure 172

2. Repeat on opposite side and opposite end, and remove cover **(Figure 173, item 1)** from center drive side plates **(Figure 173, item 2)**.

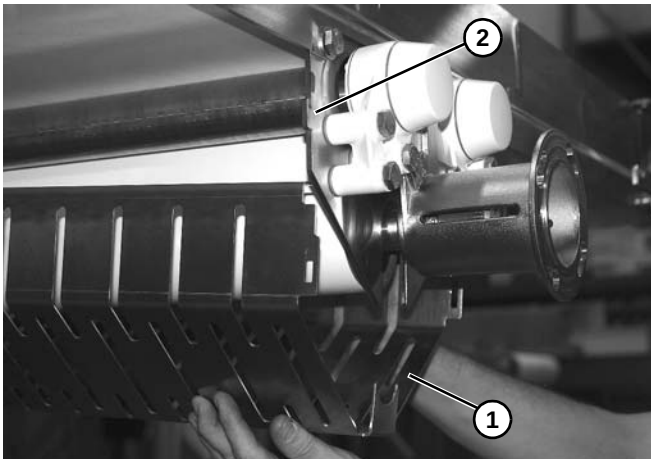


Figure 173

3. Remove three screws **(Figure 174, item 1)** on each roller bearing housing **(Figure 174, item 2)**.

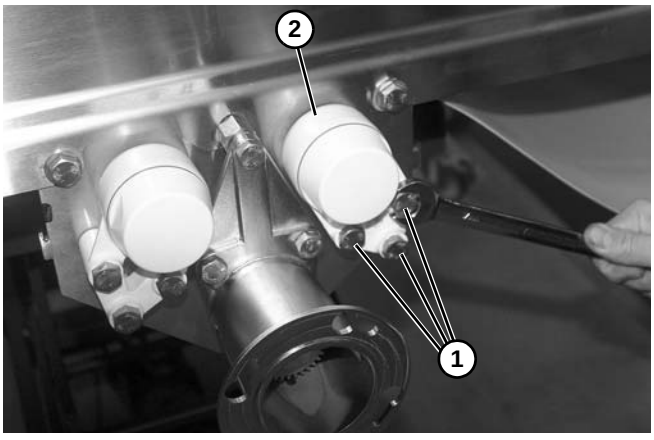


Figure 174

4. Remove bearing cap **(Figure 175, item 1)** on each roller bearing housing **(Figure 175, item 2)**.

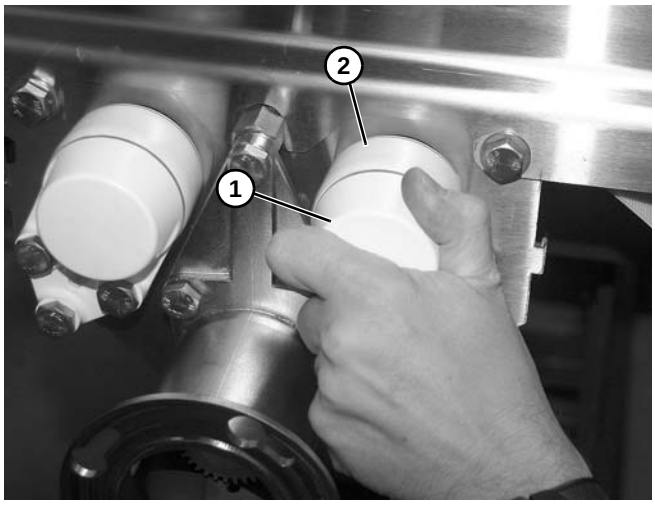


Figure 175

5. Loosen two set screws **(Figure 176, item 1)** securing bearing onto idler spindle **(Figure 176, item 2)**.

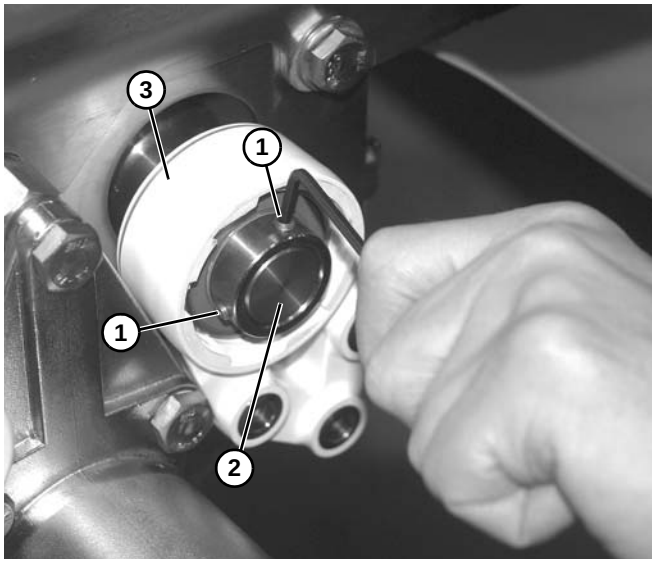


Figure 176

6. Remove roller bearing housing **(Figure 176, item 3)** from idler spindle **(Figure 176, item 2).** Repeat to remove second roller bearing housing.

⚠ CAUTION

Spindles are heavy. Use caution when removing or installing spindles.

7. Remove two idler spindles **(Figure 177, item 1)** from center drive plates **(Figure 177, item 2)**.

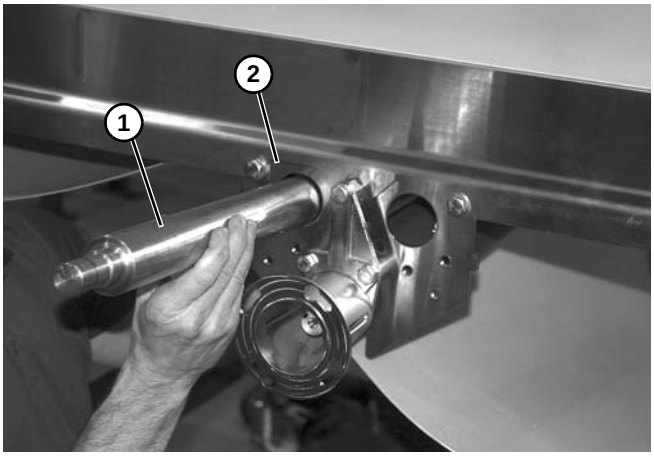


Figure 177

C – Center Drive Spindle Replacement

⚠ WARNING

Drive shaft keyway may be sharp.
HANDLE WITH CARE.

1. Remove gearmotor and gear reducer. See AquaPruf Drive Packages Manual 851-947 for detailed instructions.
2. Using a hex key wrench through slotted access **(Figure 178, item 1)** of motor mount, loosen two set screws **(Figure 178, item 2)** from the center drive gear.

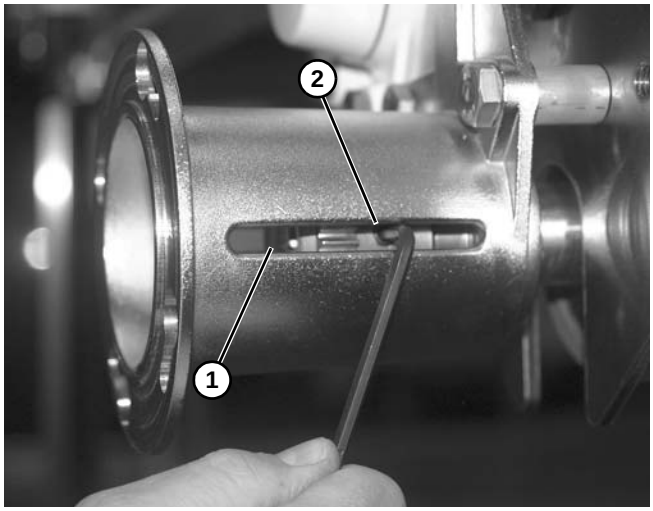


Figure 178

3. Remove drive gear **(Figure 179, item 1)** and key **(Figure 179, item 2)** from the center drive shaft.

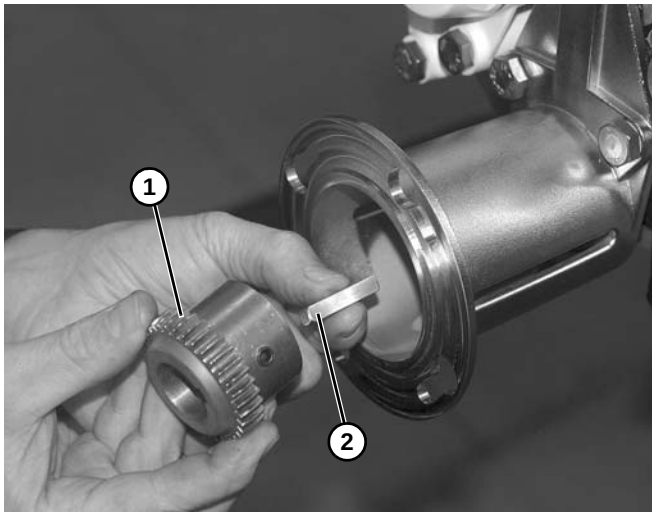


Figure 179

4. Remove three screws **(Figure 180, item 1)** securing motor mount **(Figure 180, item 2)** onto conveyor side plate.

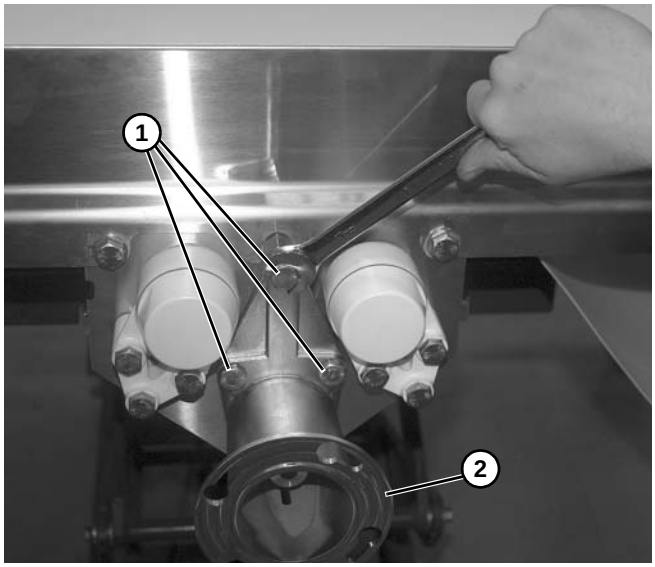


Figure 180

5. Remove motor mount **(Figure 181, item 1)** from side plate **(Figure 181, item 2)**.

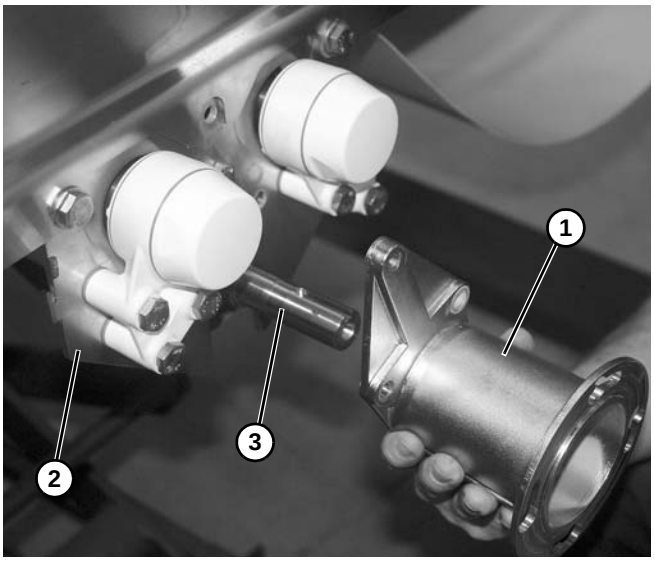


Figure 181

⚠ CAUTION

Spindles are heavy. Use caution when removing or installing spindles.

6. Remove drive spindle **(Figure 181, item 3)**.
7. Remove bearing from motor mount **(Figure 181, item 1)**. (See "Bearing Replacement" on page 50".)
8. Install parts in reverse order of removal.

Bearing Replacement

⚠ WARNING

SEVERE HAZARD!

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

Drive and Idler Bearing Replacement

⚠ WARNING

PUNCTURE HAZARD!

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

1. For drive bearing, refer to "End Drive Spindle Replacement" on page 37. Follow steps 1 through 7.
2. For idler bearing, refer to "Idler Spindle Replacement" on page 40. Follow steps 1 through 7.
3. Turn bearing **(Figure 182, item 1)** to align with slots **(Figure 182, item 2)** and anti-rotation nub **(Figure 182, item 3)**, as shown, in bearing housing. Then remove bearing.

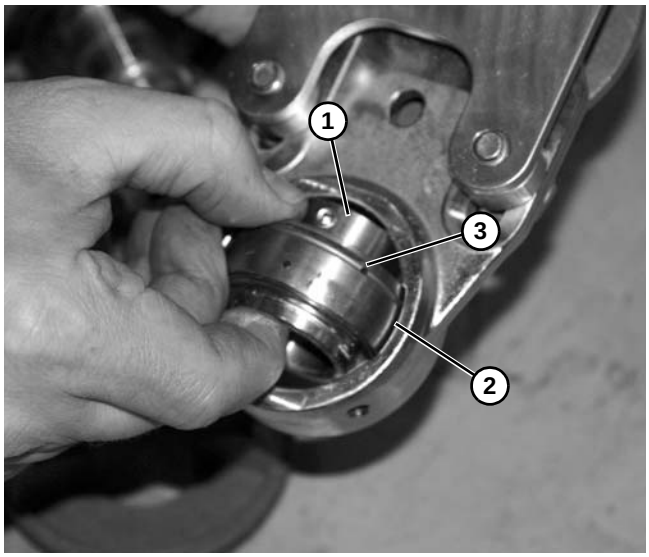


Figure 182

4. Inspect bearing housing bearing surface. Replace if worn or damaged. Refer to "Service Parts" on page 58.

5. Insert bearing **(Figure 183, item 1)** into housing slot. Locate anti-rotation nub **(Figure 183, item 2)** to align with slot **(Figure 183, item 3)** and twist bearing into housing.

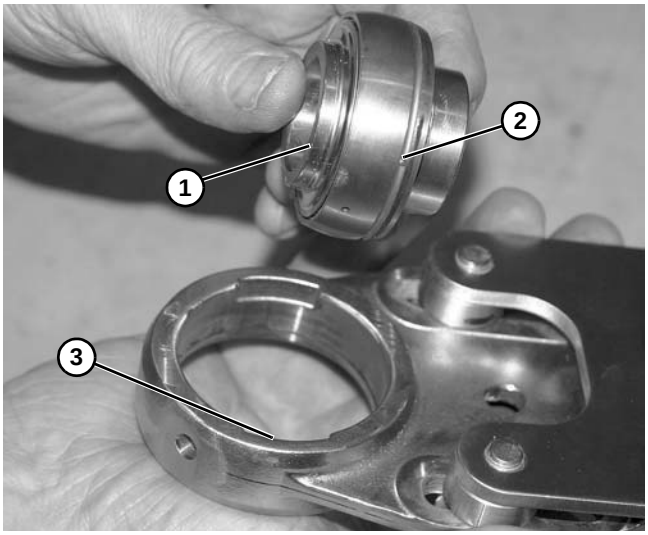


Figure 183

Center Drive Bearing Replacement

1. For center drive bearing, refer to "Center Drive Spindle Replacement" on page 47. Follow steps 1 through 5.
2. Turn bearing **(Figure 184, item 1)** to align with slots **(Figure 184, item 2)** and anti-rotation nub **(Figure 184, item 3)**, as shown, in motor mount. Then remove bearing.

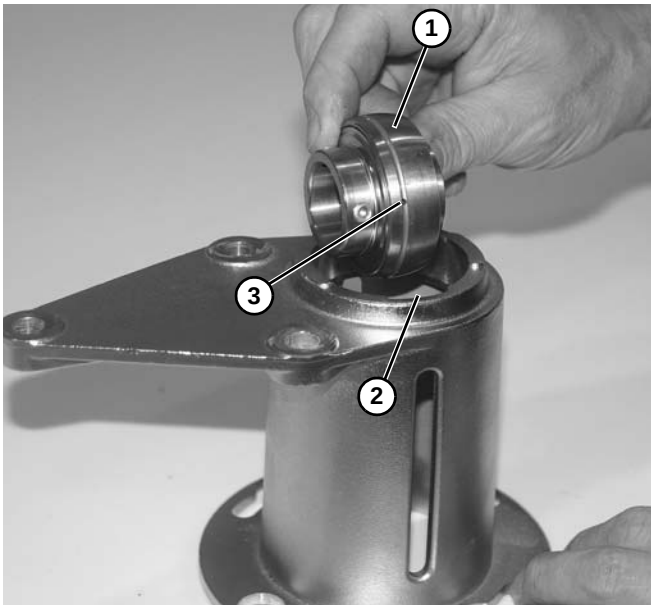


Figure 184

3. Inspect motor mount bearing surface. Replace if worn or damaged. Refer to "Service Parts" on page 58.
4. Install in reverse order of removal.

Knuckle Maintenance

⚠ WARNING

SEVERE HAZARD!

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

Lower Knuckle

Bearing and Shaft Replacement

1. Remove bearing cap **(Figure 185, item 1)**.

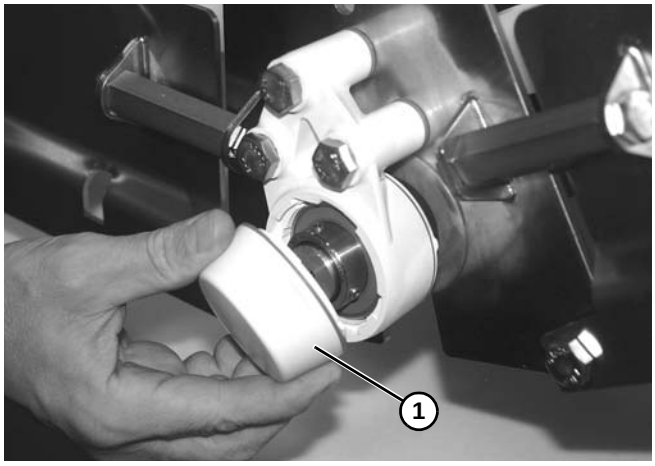


Figure 185

2. Using a hex key wrench, loosen two set screws **(Figure 186, item 1)** on bearing.

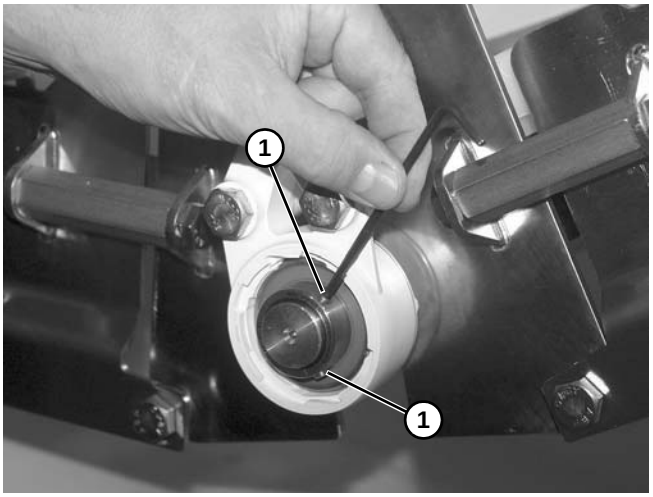


Figure 186

3. Repeat steps 1-2 on the opposite side of conveyor.

4. Remove three screws **(Figure 187, item 1)** securing bearing housing onto conveyor frame.

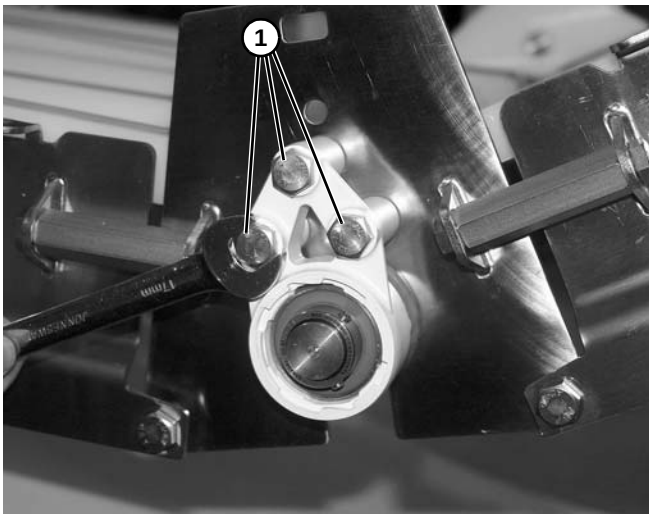


Figure 187

5. Remove bearing housing **(Figure 187, item 1)** and spindle shaft **(Figure 187, item 2)** from lower knuckle.

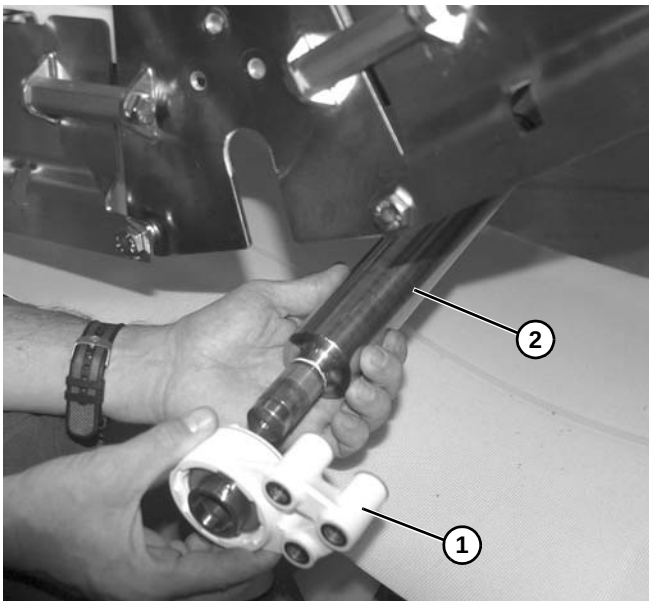


Figure 188

6. Install parts in reverse order of removal.

Roller Guard and Roller Replacement

1. Remove pull pin **(Figure 189, item 1)** securing roller guard to lower knuckle plate.

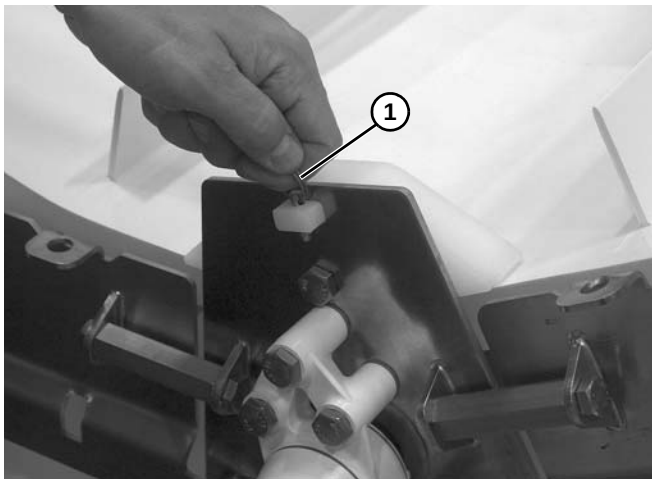


Figure 189

2. Remove roller guard **(Figure 190, item 1)**.

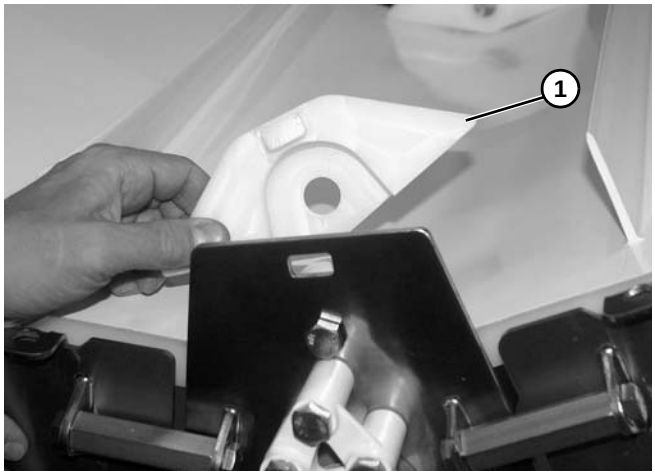


Figure 190

3. Remove roller **(Figure 191, item 1)** from hex post **(Figure 191, item 2)**.

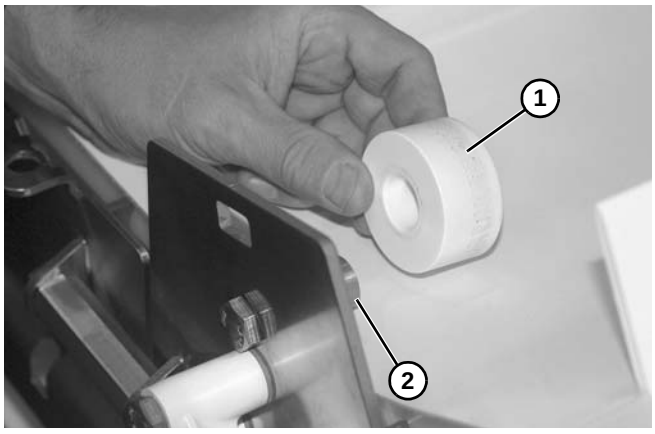


Figure 191

4. Use two wrenches to loosen and remove hex post **(Figure 192, item 1)** from lower knuckle plate.

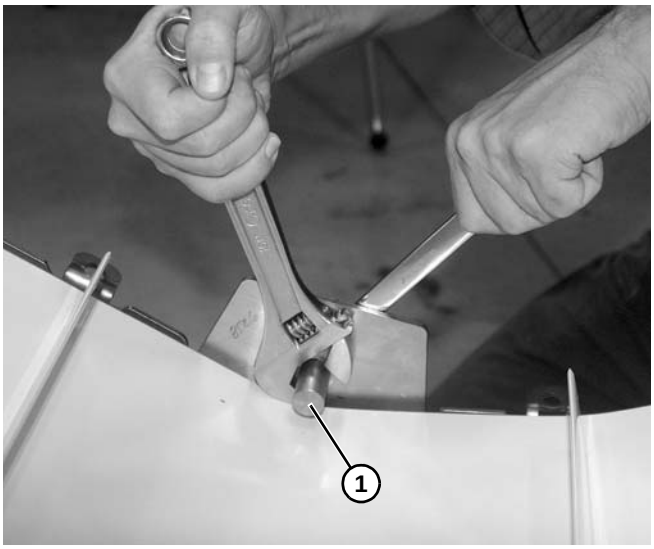


Figure 192

5. Install parts in reverse order of removal.

Upper Knuckle

Bearing and Shaft Replacement

1. Remove bearing cap **(Figure 193, item 1)**.

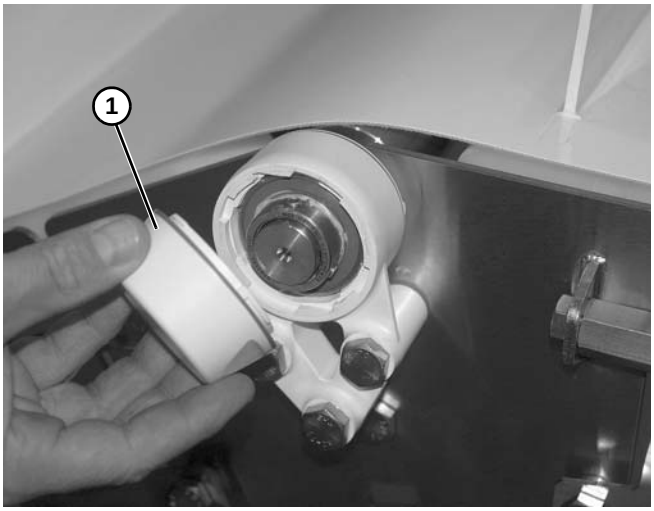


Figure 193

2. Using a hex key wrench, loosen two set screws **(Figure 194, item 1)** on bearing.

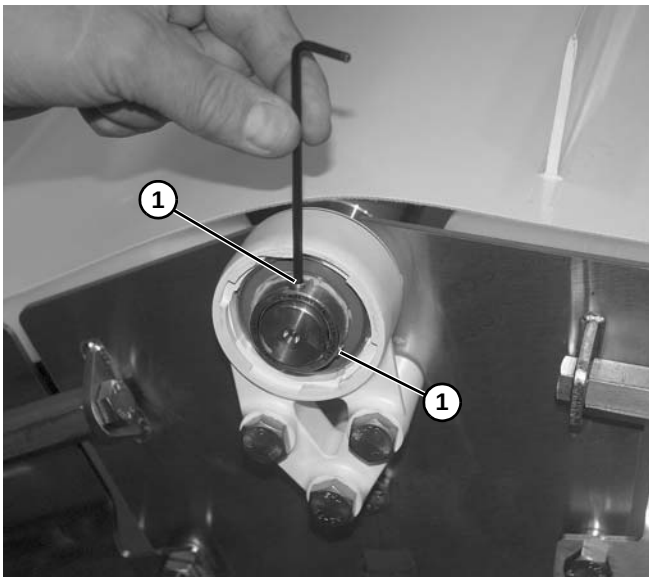


Figure 194

3. Repeat steps 1-2 on the opposite side of conveyor.
4. Remove three screws **(Figure 195, item 1)** securing bearing housing onto conveyor frame.

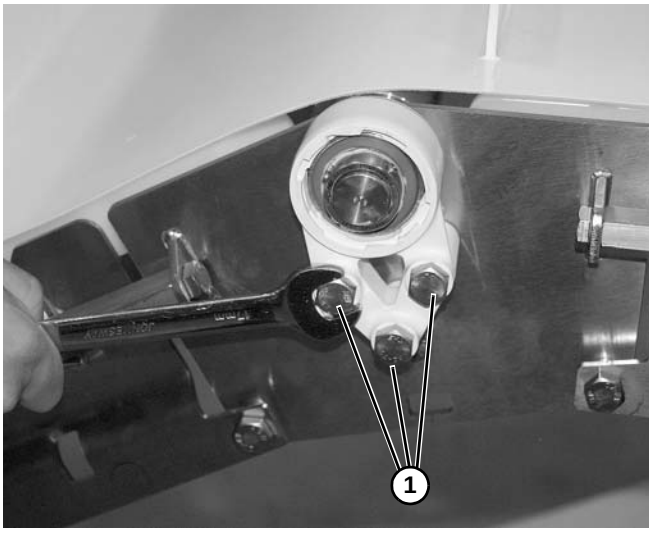


Figure 195

5. Remove bearing housing **(Figure 196, item 1)** from spindle shaft **(Figure 196, item 2)**.

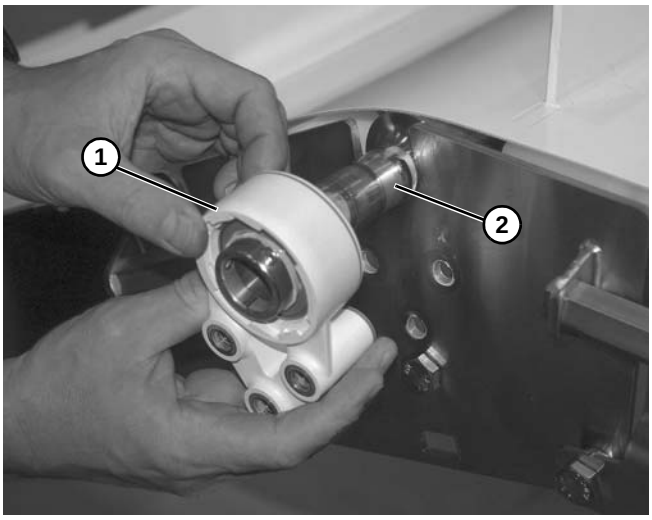


Figure 196

6. Remove spindle shaft **(Figure 197, item 1)** from upper knuckle.

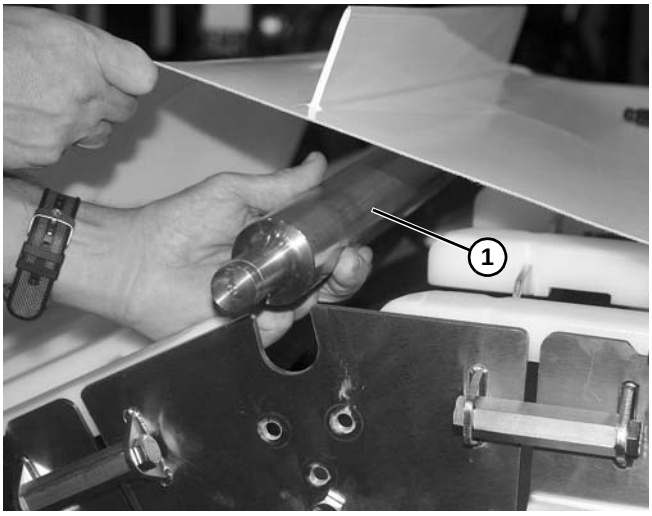


Figure 197

7. Install parts in reverse order of removal.

Roller Guard and Roller Replacement

1. Remove pull pin **(Figure 198, item 1)** securing roller guard to upper knuckle plate.

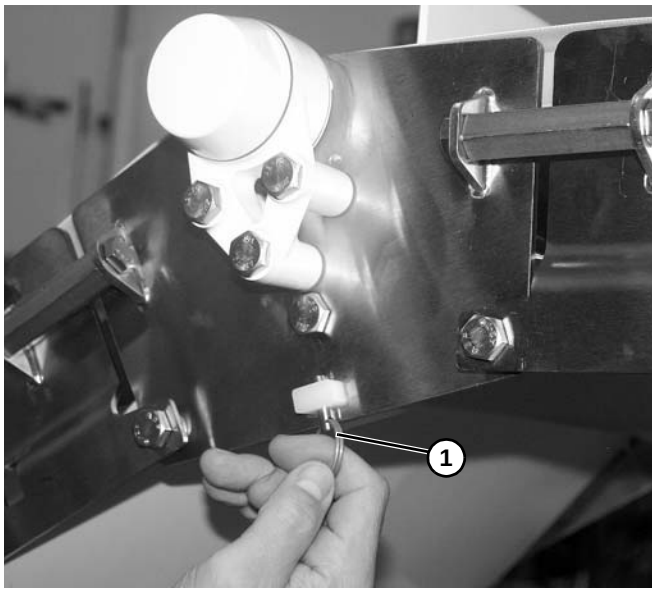


Figure 198

2. Remove roller guard **(Figure 199, item 1)**.

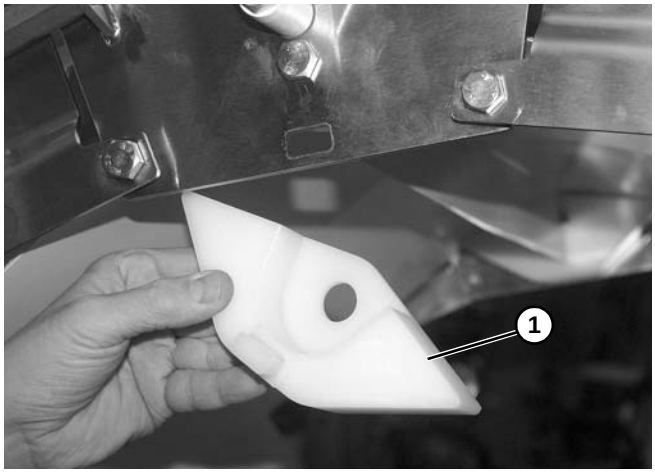


Figure 199

3. Remove roller **(Figure 200, item 1)** from hex post **(Figure 200, item 2)**.

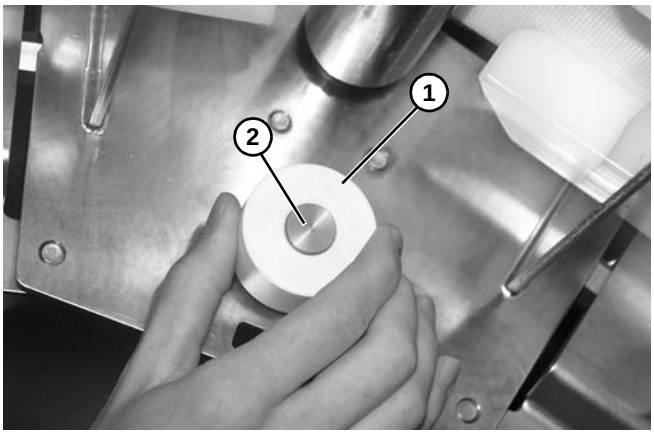


Figure 200

4. Use two wrenches to loosen and remove hex post **(Figure 201, item 1)** from upper knuckle plate.

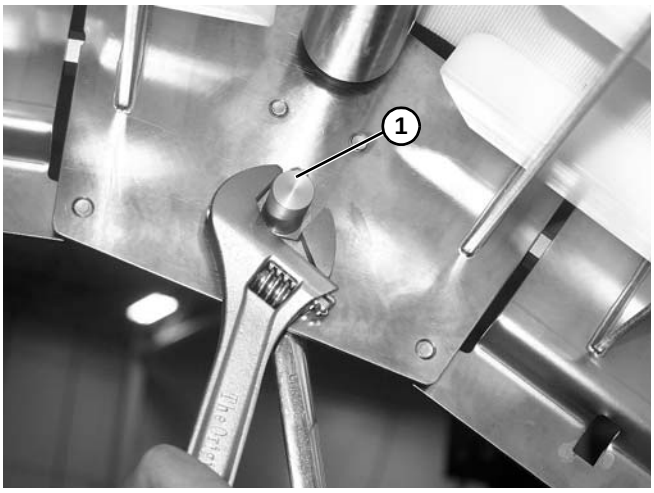


Figure 201

5. Install parts in reverse order of removal.

Belt Return Maintenance

⚠ WARNING

SEVERE HAZARD!

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

Flat Belt Returns 660 mm Wide and Wider

1. Remove belt return assembly **(Figure 202, item 1)** from slotted holes **(Figure 202, item 2)** on each side of conveyor frame.

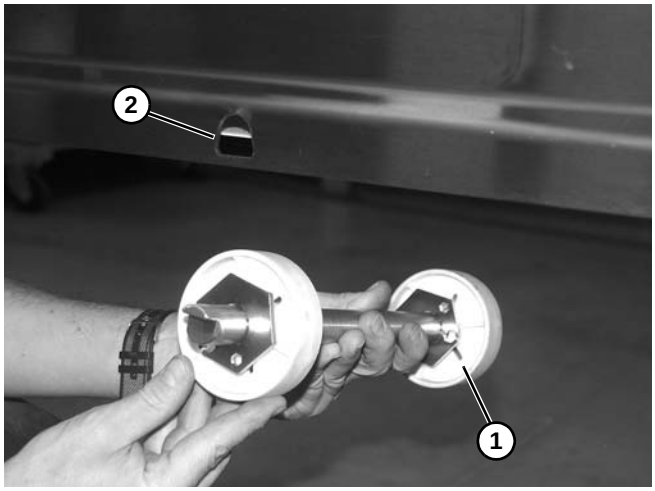


Figure 202

2. Insert an 8 mm **(Figure 203, item 1)** and 6 mm **(Figure 203, item 2)** hex wrench into the retainer plate.

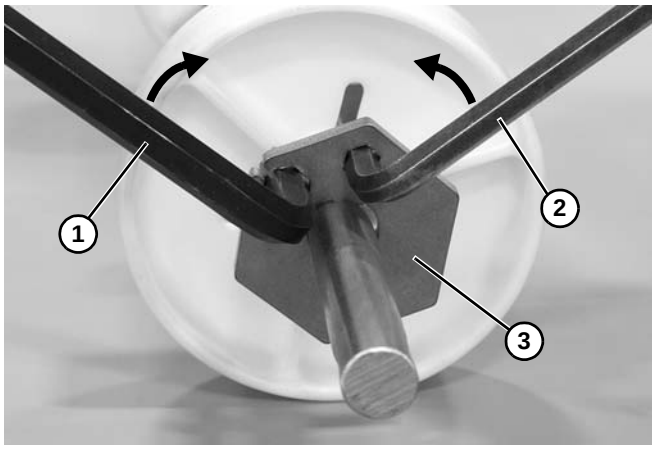


Figure 203

3. Move wrenches toward each other to unlock the retainer plate **(Figure 203, item 3)** and remove from the shaft.

4. Remove puck **(Figure 204, item 1)** from the shaft.

Figure 204

5. Repeat steps 3 through 5 as needed.
6. Install new pucks with retainer plates on both sides.
   a. Insert an 8 mm **(Figure 205, item 1)** and 6 mm **(Figure 205, item 2)** hex wrench into the retainer plate.

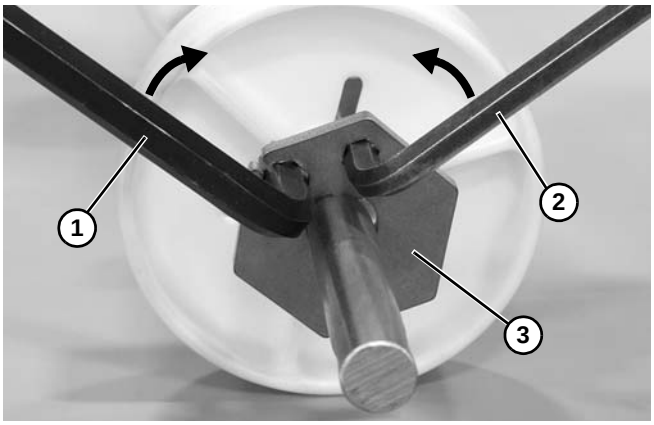


Figure 205

   b. Move wrenches toward each other to open the retainer plate **(Figure 205, item 3)** and install onto the shaft. Position retainer plate where needed.
   c. To lock the retainer plate **(Figure 206, item 1)** in place, move the wrenches **(Figure 206, item 2)** away from each other.

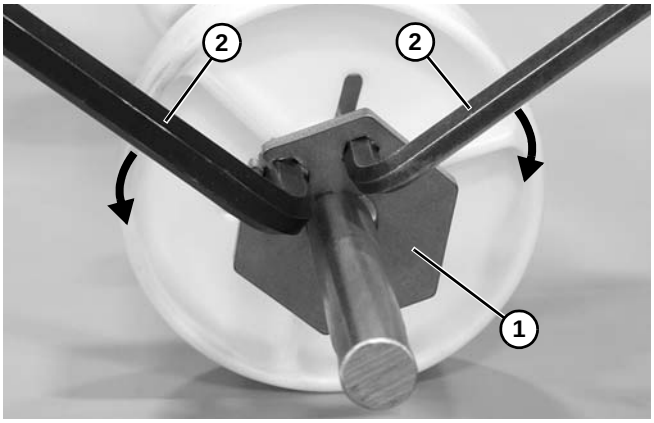


Figure 206

NOTE

*When assembling pucks **(Figure 207, item 1)** with retainer plates **(Figure 207, item 2)**, make certain that there is a minimum of 38 mm (1.5") of clearance **(Figure 207, item 3)** on each end.*

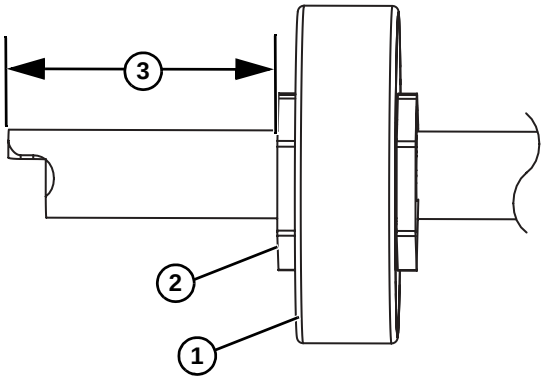


Figure 207

7. Install belt return assembly in reverse order of removal.

Cleated Belt and Flat Belt Returns Under 660 mm Wide

1. Remove the notched end of the return shaft **(Figure 208, item 1)** from the small hole **(Figure 208, item 2)** in the inside of the conveyor frame.

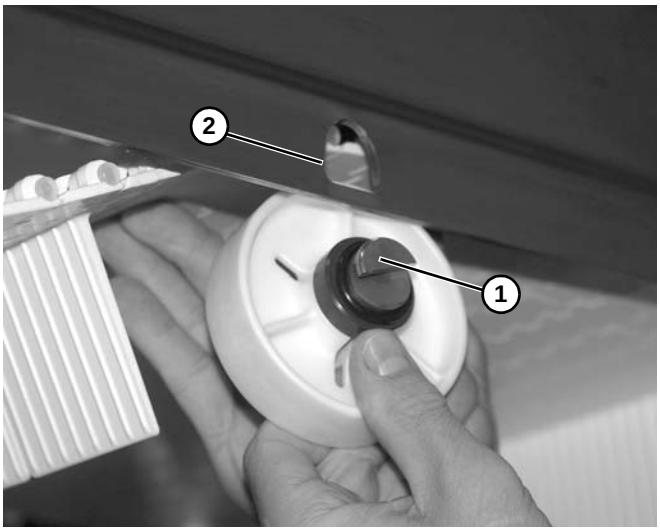


Figure 208

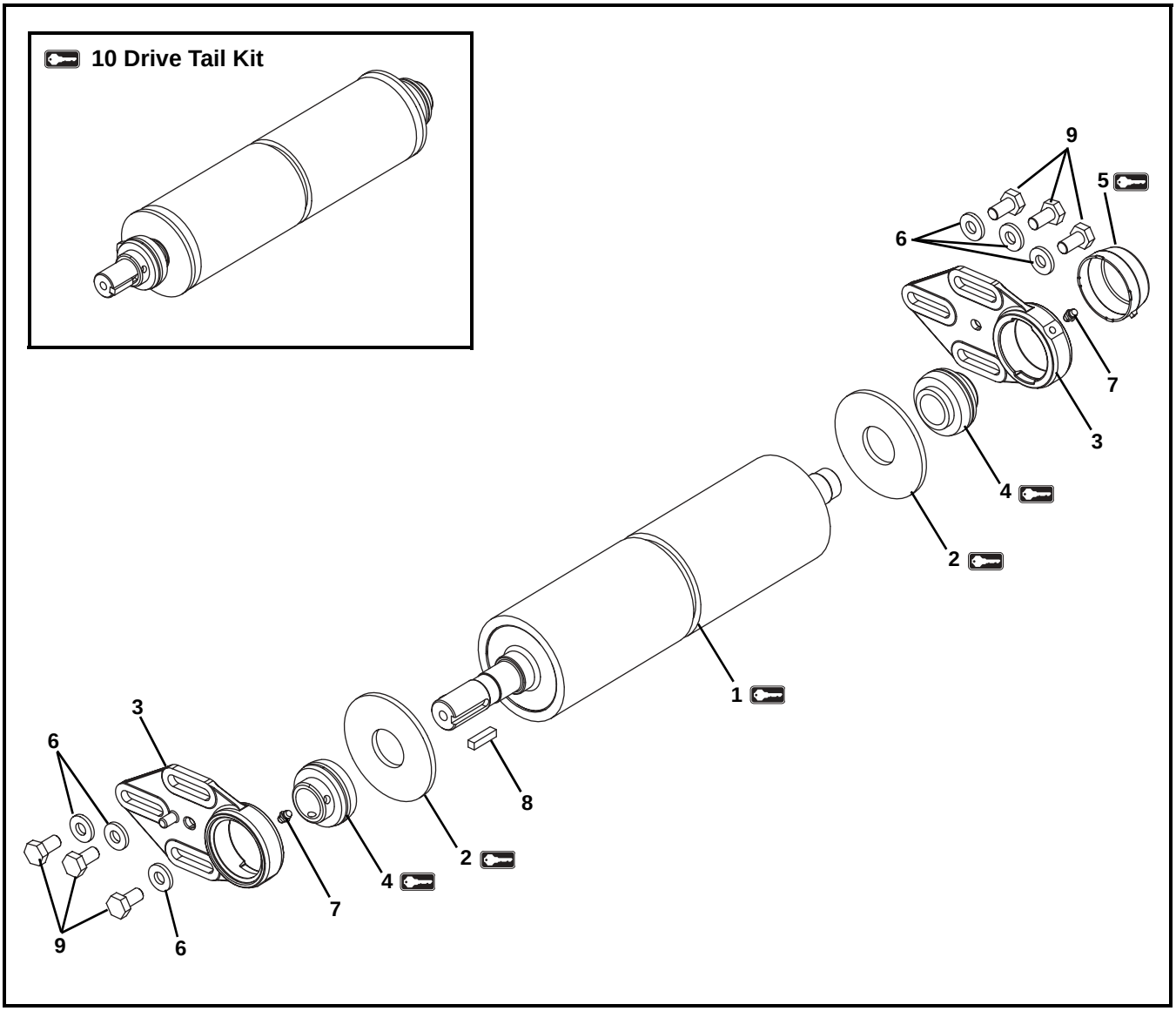
2. Repeat the procedure for all other belt returns.
3. Remove puck from stub shaft.
4. Replace worn or damaged parts.
5. Install parts in reverse order of removal.

Notes

Service Parts

NOTE
For replacement parts other than those shown in this section, contact an authorized Dorner distributor or Dorner directly. Recommended Critical Service Parts and Kits are identified by the Key Service Parts symbol . Dorner recommends keeping these parts on hand.

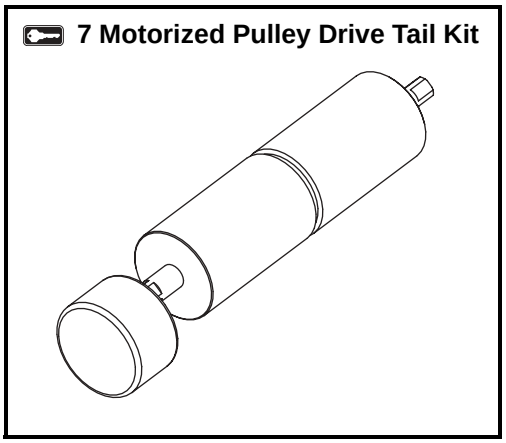
End Drive Tail

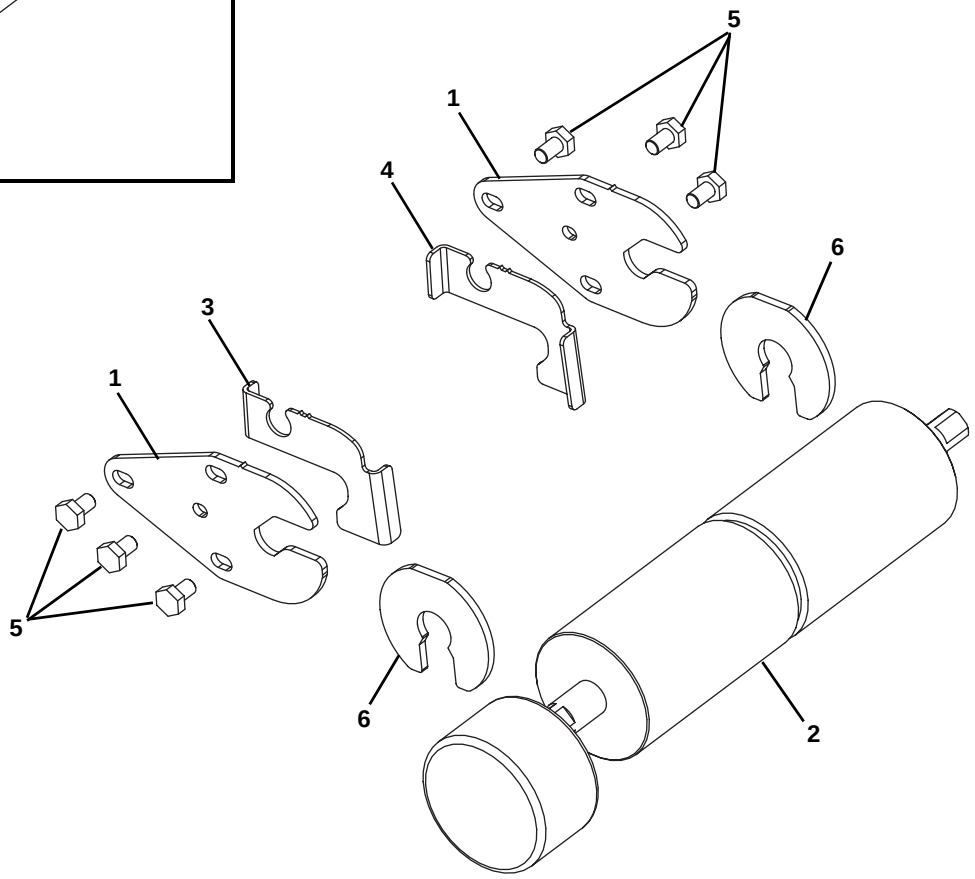


Item	Part Number	Description
1	529880-BK-WWWW-M	Drive Spindle
	529880-KK-WWWW-M	Dual Shaft Drive Spindle
2	530796	Spindle Guard
3	529901-B	Bearing Housing
4	802-162	Bearing
5	807-1454	Bearing Cap
6	807-1821	Washer
7	810-187	Grease Fitting

Item	Part Number	Description
8	912-108SS	Square Key, 0.25" x 1.00"
9	961020MSS	Hex Head Cap Screw, M10-1.50 x 20 mm
10	530800-WWWW	Drive Tail Kit (Includes Items 1, 2, 4, and 8)
	530801-WWWW	Dual Shaft Drive Tail Kit (Includes Items 1, 2, 4, and 8)
WWWW = Conveyor width reference in mm 0152 - 1219		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Motorized Pulley Drive Tail





Item	Part Number	Description
1	529895	Mount Plate
2	530287-WWWW-M	Motorized Pulley
3	530184-LH	Spindle Guard, Left Hand
4	530184-RH	Spindle Guard, Right Hand
5	961016MSS	Hex Head Cap Screw, M10-1.50 x 16 mm
6	530782	Spacer
7	530802-WWWWN	Motorized Pulley Drive Tail Kit (Includes item 2)

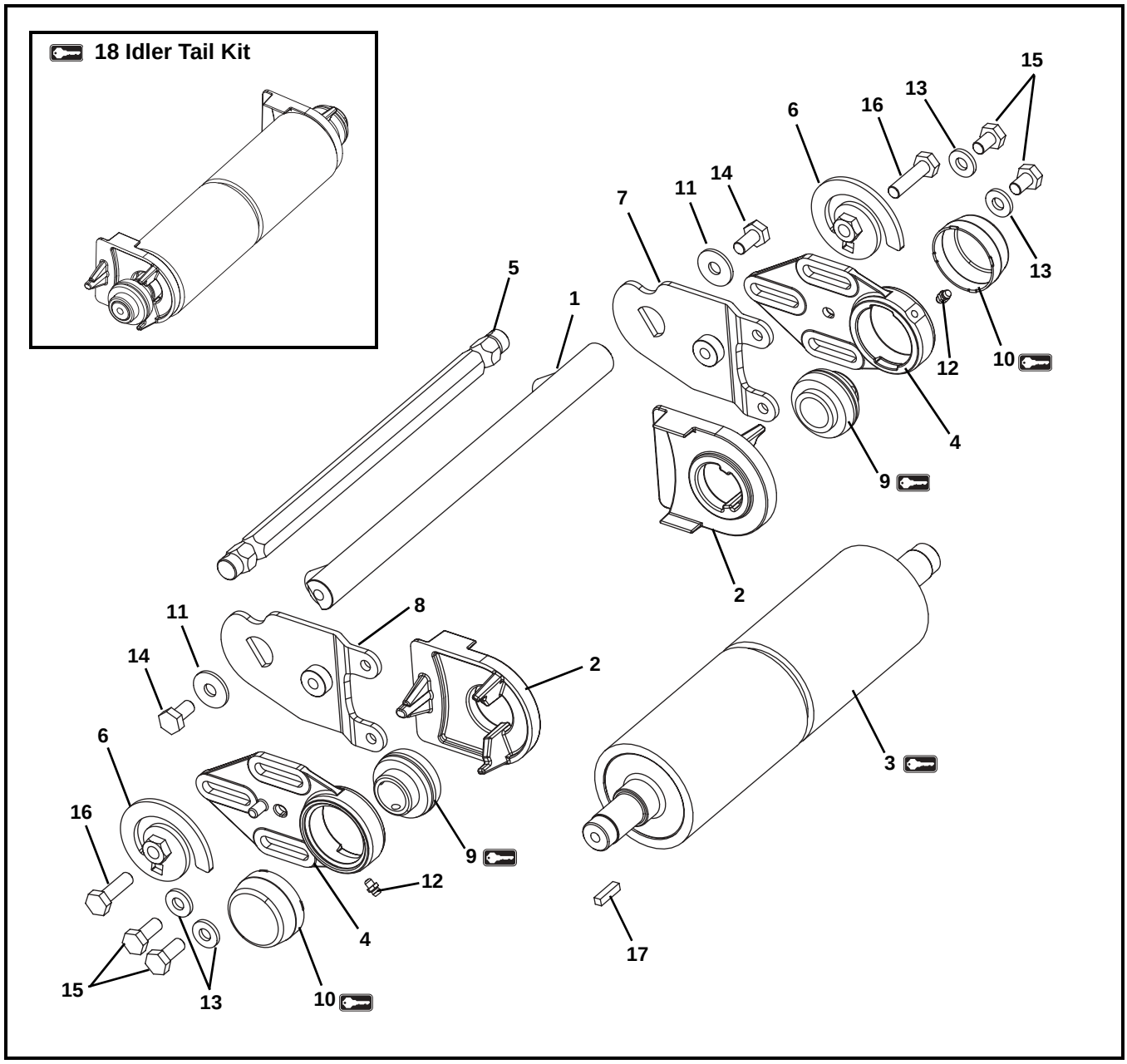
WWWW = Conveyor width reference in mm 0152 - 1219

See Specifications chart on page 8 for conveyor belt widths.

Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com

Service Parts

Idler Tail



Item	Part Number	Description
1	529788-WWWW-M	Tip Up Bar
2	529867	Pinch Guard
3	529880-BB-WWWW-M	Idler Spindle
	529880-BK-WWWW-M	Idler Spindle with Auxiliary Shaft
	529880-KK-WWWW-M	Idler Spindle with Dual Auxiliary Shafts
	529880-DD-WWWW-M	Idler Spindle for Fixed Idler Tail on Center Drive Conveyors
	529880-DA-WWWW-M	Idler Spindle for Fixed Idler Tail on Center Drive Conveyors with Auxiliary Shaft
	529880-AA-WWWW-M	Idler Spindle for Fixed Idler Tail on Center Drive Conveyors with Dual Auxiliary Shafts
4	529901-B	Bearing Housing
5	530172-WWWWN	Stop Bar for Standard Conveyors
	530172-WWWWY	Stop Bar for Ultimate 3A Conveyors
6	530636	Tension Scroll
7	530639-LH	Tip Up Tail Plate, Left Hand
8	530639-RH	Tip Up Tail Plate, Right Hand
9	802-162	Bearing
10	807-1454	Bearing Cap
11	807-1821	Washer
12	810-187	Grease Fitting
13	911-723	Washer
14	961020MSS	Hex Head Cap Screw, M10-1.50 x 20 mm
15	961025MSS	Hex Head Cap Screw, M10-1.50 x 25 mm
16	961035MSS	Hex Head Cap Screw, M10-1.50 x 35
17	912-108SS	Square Key, 0.25" x 1.00" for Auxiliary Shafts Only

Item	Part Number	Description
18	530861-BB-WWWWN	Idler Tail Kit for Standard Conveyors (Includes items 2, 3, and 9)
	530861-BB-WWWWY	Idler Tail Kit for Ultimate 3A Conveyors (Includes items 2, 3, and 9)
	530861-BK-WWWWN	Idler Tail Kit with Auxiliary Shaft for Standard Conveyors (Includes items 2, 3, 9, and 17)
	530861-BK-WWWWY	Idler Tail Kit with Auxiliary Shaft for Ultimate 3A Conveyors (Includes items 2, 3, 9, and 17)
	530861-KK-WWWWN	Idler Tail Kit with Dual Auxiliary Shaft for Standard Conveyors (Includes items 2, 3, 9, and 17)
	530861-KK-WWWWY	Idler Tail Kit with Dual Auxiliary Shaft for Ultimate 3A Conveyors (Includes items 2, 3, 9, and 17)
	530861-DD-WWWWN	Idler Tail Kit for Fixed Idler Tail on Center Drive Conveyors for Standard Conveyors (Includes items 2, 3, 9, and 17)
	530861-DD-WWWWY	Idler Tail Kit for Fixed Idler Tail on Center Drive Conveyors for Ultimate 3A Conveyors (Includes items 2, 3, 9, and 17)
	530861-DA-WWWWN	Idler Tail Kit for Fixed Idler Tail on Center Drive Conveyors with Auxiliary Shaft for Standard Conveyors (Includes items 2, 3, 9, and 17)
	530861-DA-WWWWY	Idler Tail Kit for Fixed Idler Tail on Center Drive Conveyors with Auxiliary Shaft for Ultimate 3A Conveyors (Includes items 2, 3, 9, and 17)
	530861-AA-WWWWN	Idler Tail Kit for Fixed Idler Tail on Center Drive Conveyors with Dual Auxiliary Shaft for Standard Conveyors (Includes items 2, 3, 9, and 17)
	530861-AA-WWWWY	Idler Tail Kit for Fixed Idler Tail on Center Drive Conveyors with Dual Auxiliary Shaft for Ultimate 3A Conveyors (Includes items 2, 3, 9, and 17)

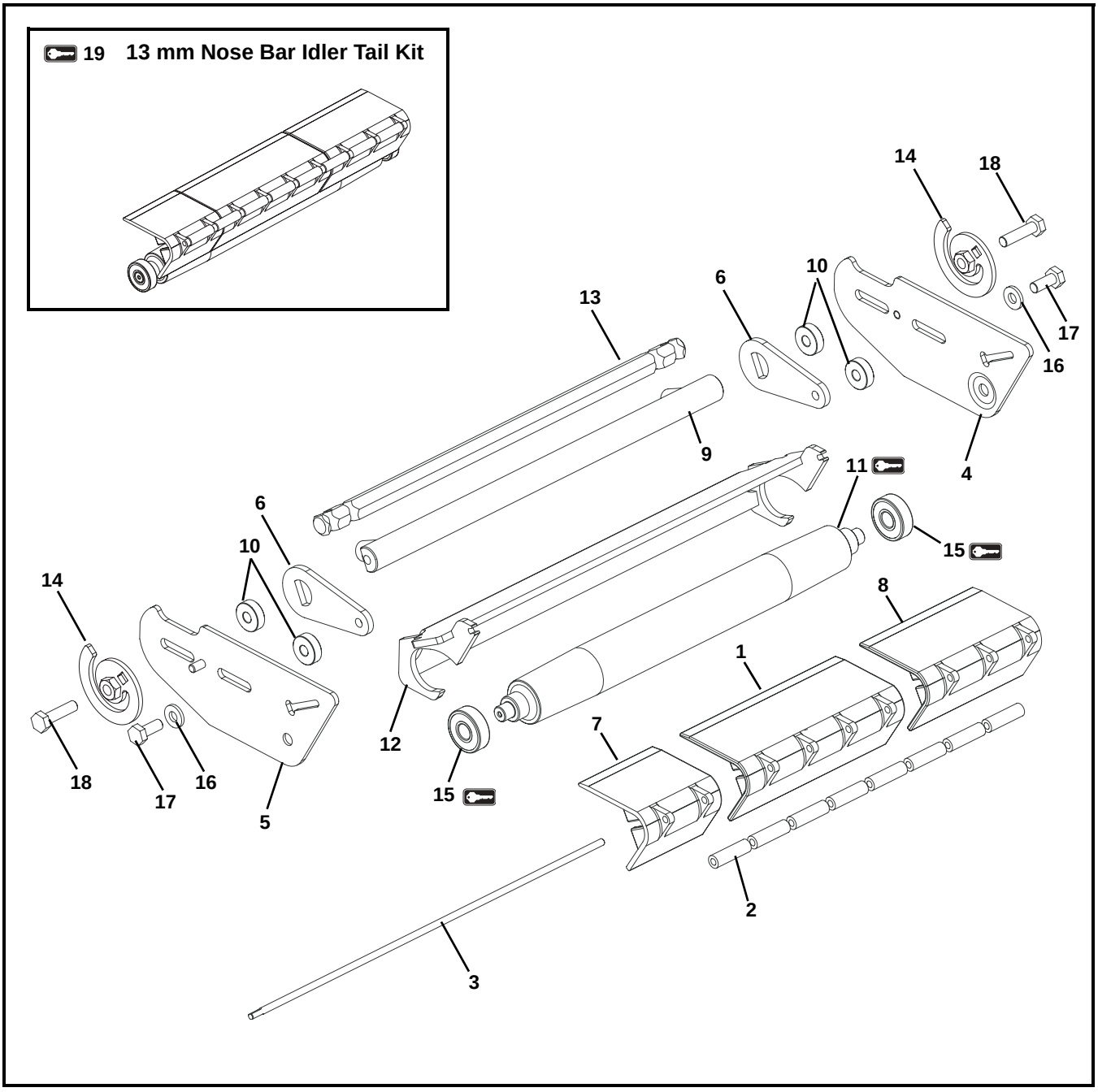
WWWW = Conveyor width reference in mm 0152 - 1219

See Specifications chart on page 8 for conveyor belt widths.

Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com

Service Parts

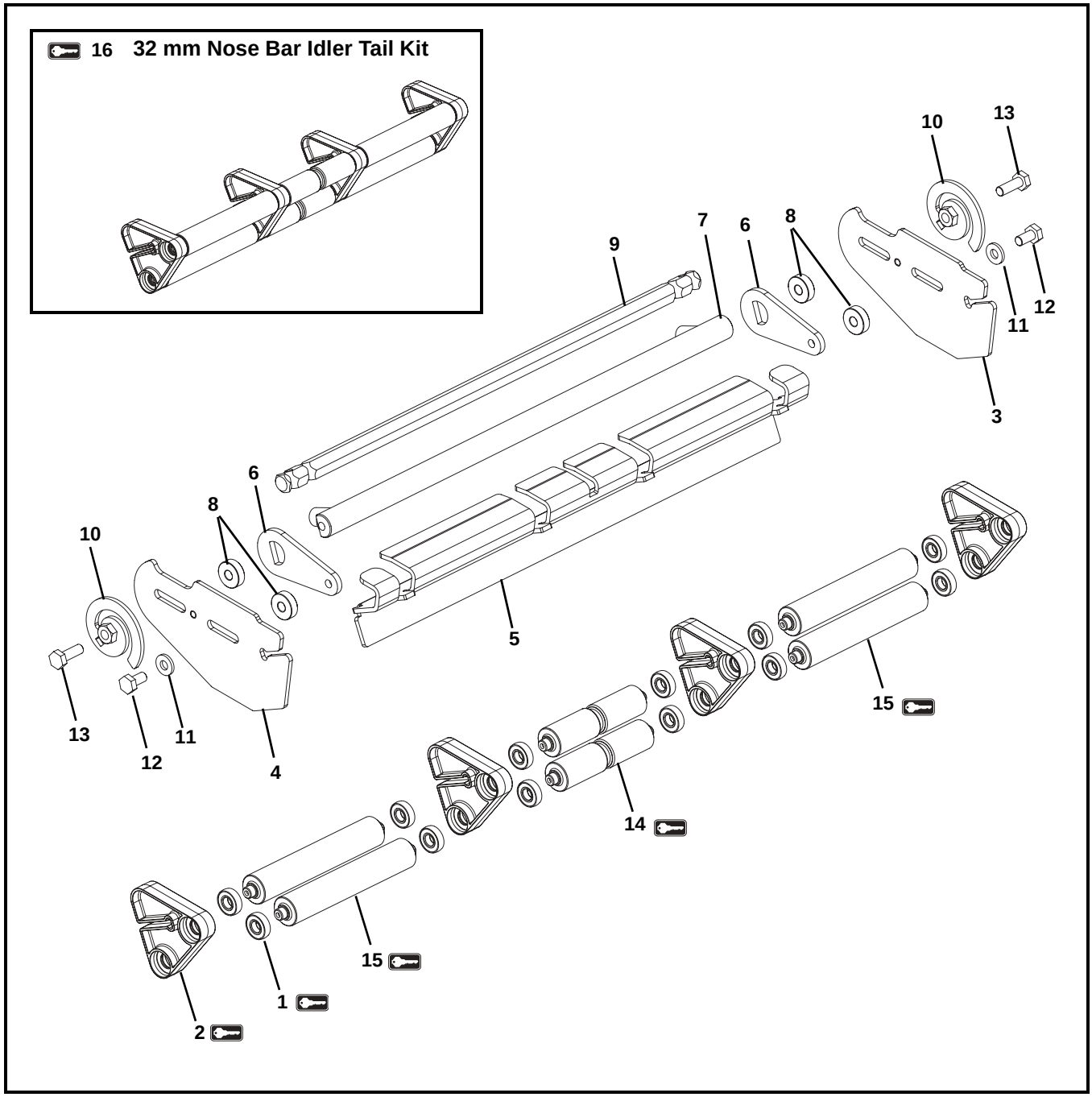
13 mm Nose Bar Idler Tail



Item	Part Number	Description
1	501077	Center Roller Mounting
2	501086	Roller
3	530019-WWWW-M	Axle Rod
4	530025-LH	Pivot Plate, Left Hand
5	530025-RH	Pivot Plate, Right Hand
6	530074	Locking Bar
7	530077-01	Roller Mounting, For 152, 203, 406, 610, 813, 1016 & 1219 wide Conveyors
	530077-02	Roller Mounting, For 254, 457, 660, 864 & 1067 wide Conveyors
	530077-03	Roller Mounting, For 305, 356, 508, 559, 711, 762, 914, 965, 1118 & 1168 wide Conveyors
8	530078-01	Roller Mounting, For 152 wide Conveyors
	530078-02	Roller Mounting, For 203, 254, 305, 406, 457, 508, 610, 660, 711, 813, 864, 914, 1016, 1067, 1118 & 1219 wide Conveyors
	530078-03	Roller Mounting, For 356, 559, 762, 965 & 1168 wide Conveyors
9	530088-WWWW-M	Tip Up Assembly
10	530171	Spacer
11	530173-WWWW-M	Spindle
12	530174-WWWW-M	Support Assembly
13	530175-WWWW-M	Stop Bar
14	530636	Scroll Assembly
15	802-428	Bearing
16	807-1821	Washer
17	961025MSS	Hex Head Cap Screw, M10-1.50 x 25 mm
18	961040MSS	Hex Head Cap Screw, M10-1.50 x 40 mm
19	530862-WWWW	Nose Bar Idler Tail Kit (Includes Items 1, 2, 7, 8, 11, and 15)
WWWW = Conveyor width reference in mm 0152 - 1219		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

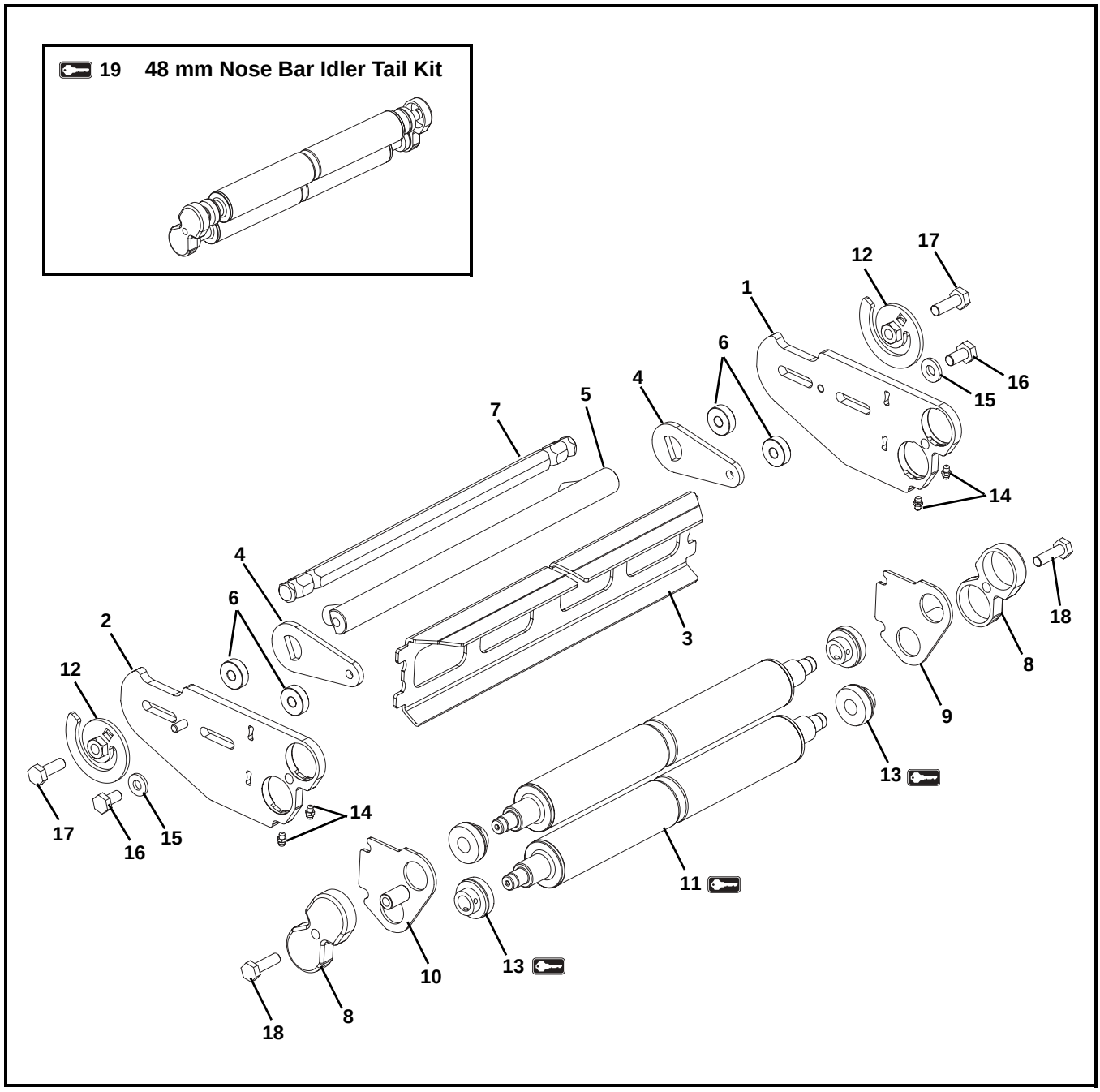
32 mm Nose Bar Idler Tail



Item	Part Number	Description
1	240338	Bearing
2	516929	Nose Bar Puck
3	530015-LH	Side Plate, Left Hand
4	530015-RH	Side Plate, Right Hand
5	530023-WWWW-M	Nose Bar Support
6	530074	Locking Bar
7	530088-WWWW-M	Tip Up Assembly
8	530171	Spacer
9	530175-WWWW-M	Stop Bar
10	530636	Scroll Assembly
11	807-1821	Washer
12	961025MSS	Hex Head Cap Screw, M10-1.50 x 25 mm
13	961045MSS	Hex Head Cap Screw, M10-1.50 x 45 mm
14	530268-0152-M	Center Spindle for 152, 559 & 965 wide Conveyors
	530268-0203-M	Center Spindle for 203, 610, & 1016 wide Conveyors
	530268-0254-M	Center Spindle for 254, 660, & 1067 wide Conveyors
	530268-0305-M	Center Spindle for 305, 711 & 1118 wide Conveyors
	530268-0356-M	Center Spindle for 356, 762 & 1168 wide Conveyors
	530268-0406-M	Center Spindle for 406, 813 & 1219 wide Conveyors
	530268-0457-M	Center Spindle for 457 & 864 wide Conveyors
	530268-0508-M	Center Spindle for 508 & 914 wide Conveyors
15	530176-0203-M	End Spindle for 559, 610, 660, 711, 762, 813, 864 & 914 wide Conveyors
	530176-0406-M	End Spindle for 965, 1016, 1067, 1118, 1168 & 1219 wide Conveyors
16	530863-WWWW	32 mm Nose Bar Idler Tail Kit (Includes Items 1, 2, 14, and 15)
WWWW = Conveyor width reference in mm 0152 - 1219		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

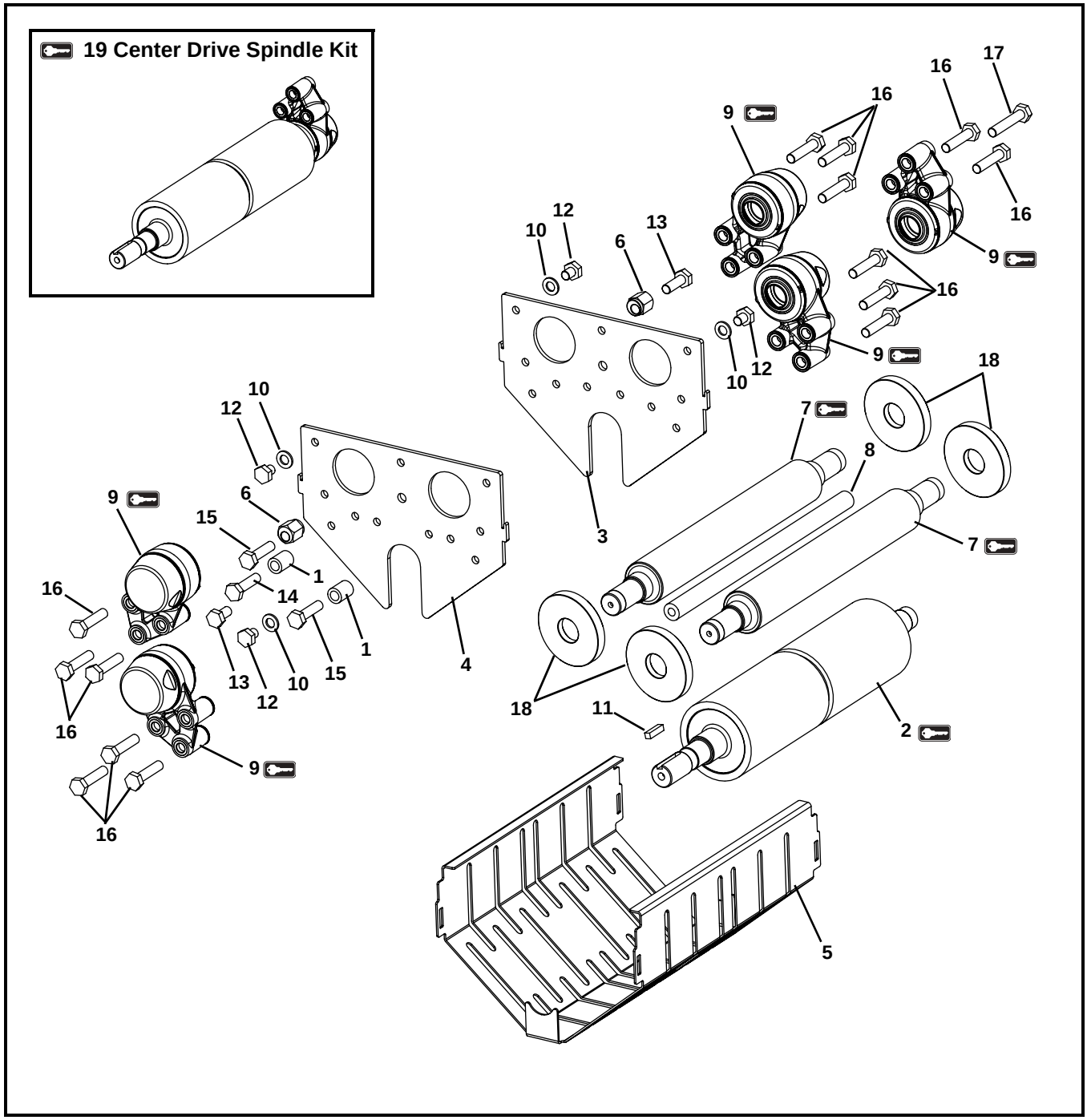
48 mm Nose Bar Idler Tail



Item	Part Number	Description
1	530035-LH	Pivot Plate, Left Hand
2	530035-RH	Pivot Plate, Right Hand
3	530071-WWWW-M	Support Angle
4	530074	Locking Bar
5	530088-WWWW-M	Tip Up Assembly
6	530171	Spacer
7	530175-WWWW-M	Stop Bar
8	530179	Bearing Cover
9	530195-LH	Guard Assembly, Left Hand
10	530195-RH	Guard Assembly, Right Hand
11	530271-WWWW-M	Spindle Assembly
12	530636	Scroll Assembly
13	802-171	Bearing
14	807-1821	Grease Fitting
15	810-187	Washer
16	961030MSS	Hex Head Cap Screw, M10-1.50 x 30 mm
17	961035MSS	Hex Head Cap Screw, M10-1.50 x 35 mm
18	961045MSS	Hex Head Cap Screw, M10-1.50 x 45 mm
19	530864-WWWW	48 mm Nose Bar Idler Tail Kit (Includes Items 8, 11, and 13)
WWWW = Conveyor width reference in mm 0152 - 1219		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

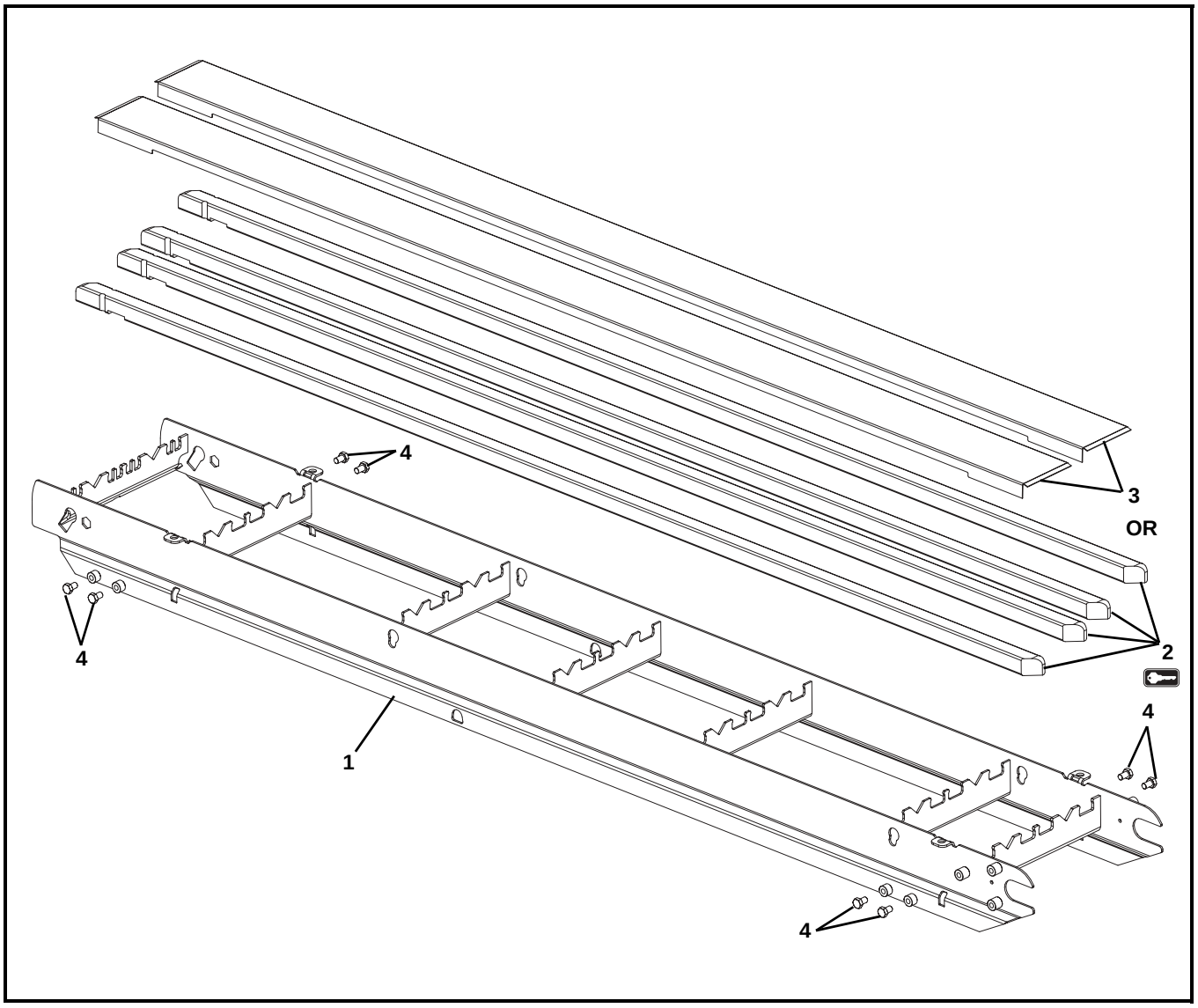
Center Drive Module



Item	Part Number	Description
1	12822-00228-M	Tube
2	529880-DA-WWWW-M	Center Drive Spindle Assembly
3	529999-B	Side Plate
4	529999-D	Drive Side Plate
5	530001-WWWW-M	Bottom Guard
6	530002	Tracking Cam
7	530005-WWWW-M	Spindle
8	530093-WWWW-M	Cross Member Post
9	802-432	Bearing
10	807-1880	Washer
11	912-108SS	Square Key, .25" x 1.00"
12	961012MSS	Hex Head Cap Screw, M10-1.50 x 12 mm
13	961020MSS	Hex Head Cap Screw, M10-1.50 x 20 mm
14	961030MSS	Hex Head Cap Screw, M10-1.50 x 30 mm
15	961040MSS	Hex Head Cap Screw, M10-1.50 x 40 mm
16	961045MSS	Hex Head Cap Screw, M10-1.50 x 45 mm
17	961055MSS	Hex Head Cap Screw, M10-1.50 x 55 mm
18	530891	Tracking Disc
19	530865-WWWW	Center Drive Spindle Kit (Includes items 2, 9, and 11)
WWWW = Conveyor width reference in mm 0152 - 1219		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

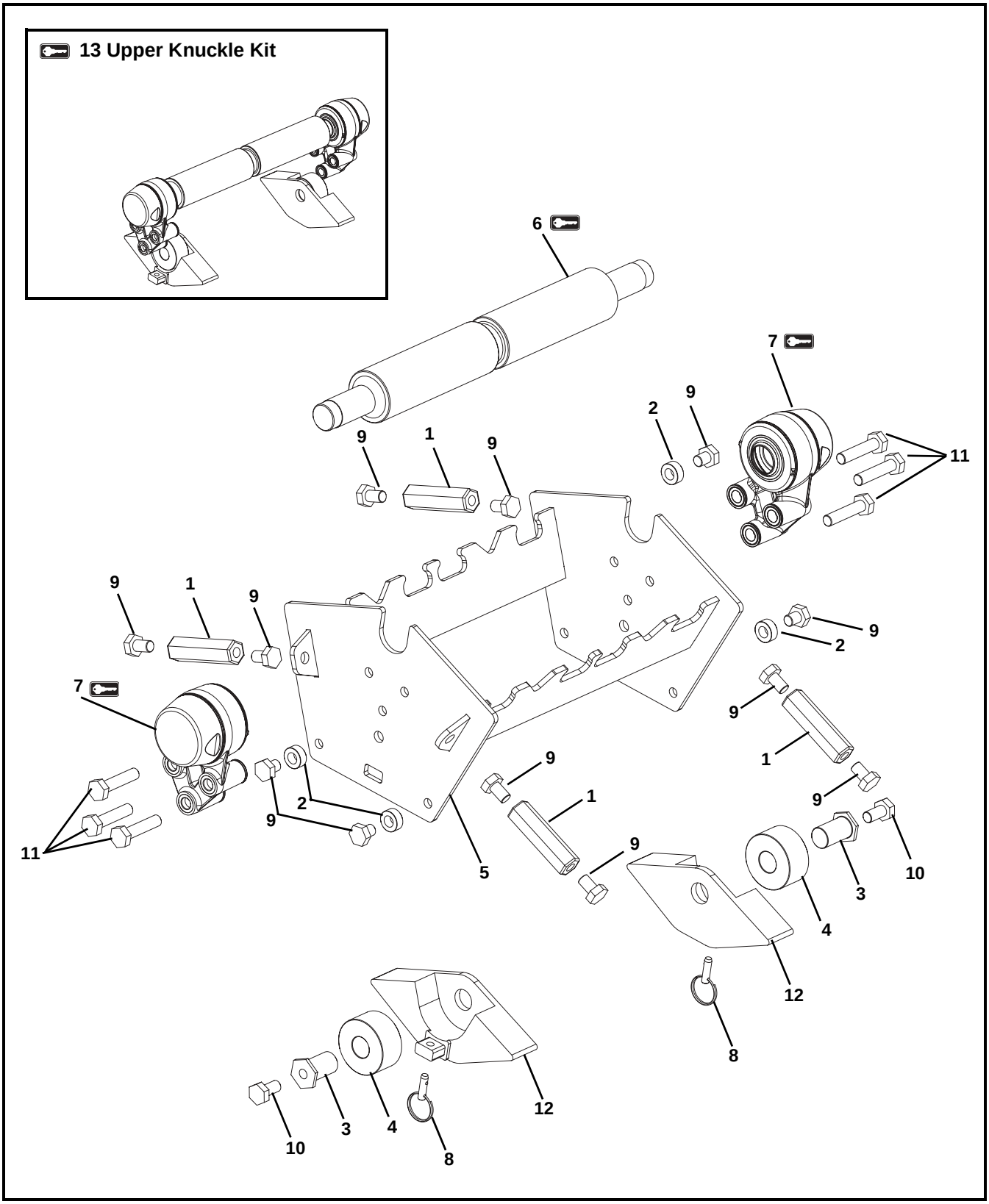
Frame



Item	Part Number	Description
1	----------	Consult Factory for Frame Part Number
2	530384-LLLLL-M	Wear Strip for Conveyors with UHMW Bed
3	530285-WWWW-LLLLL-M	Bed Plate for Conveyors with Stainless Bed
4	960840MSS	Hex Head Cap Screw, M10-1.50 x 16 mm
LLLLL = Part length in mm.		
Example: Part length = 1000 mm LLLLL = 01000		
WWWW = Conveyor width reference in mm 0152 - 1219		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

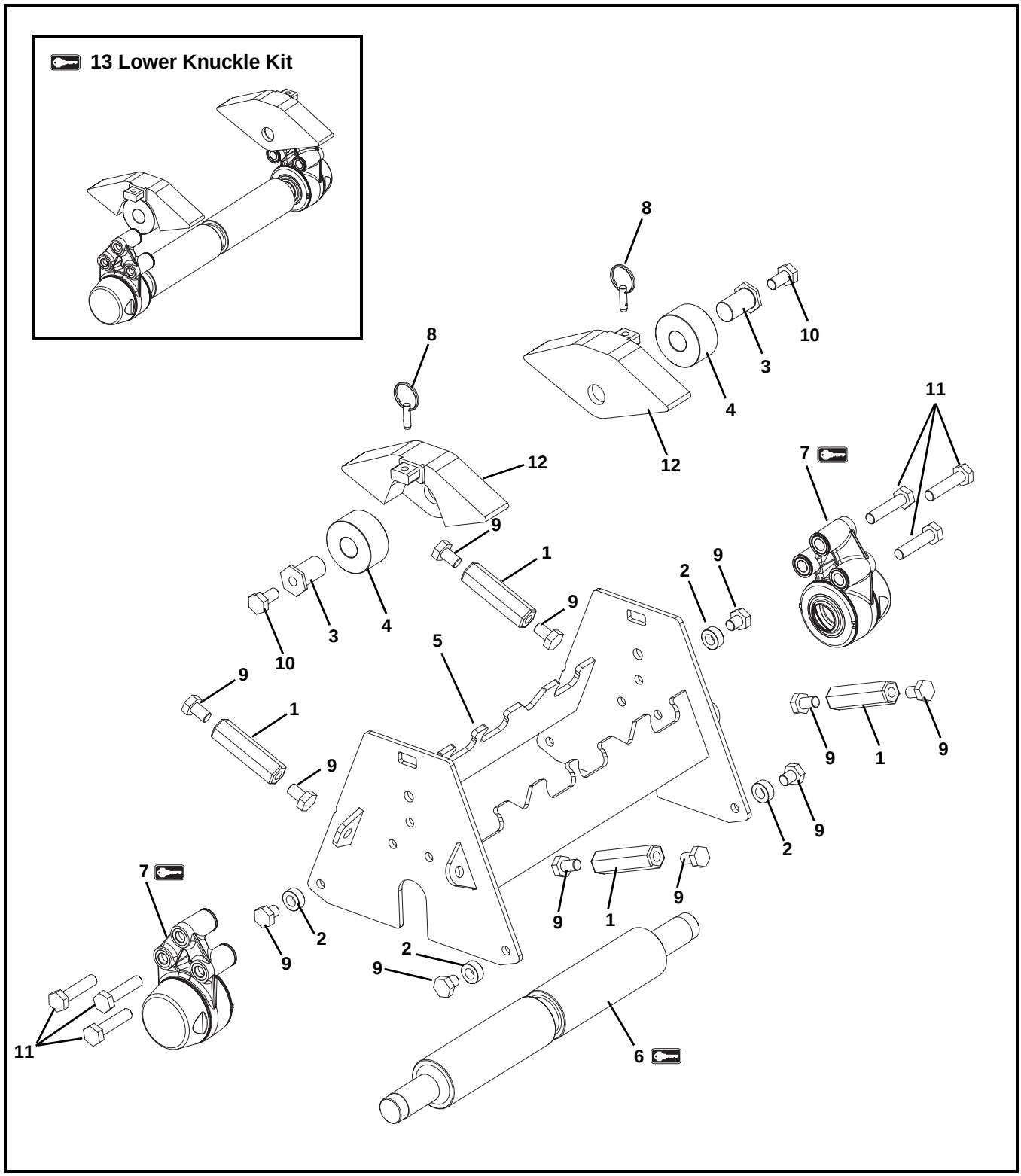
Upper Knuckle



Item	Part Number	Description
1	520477	Connector Hex Post
2	529147	Spacer
3	529149	Hex Post
4	529151	Sleeve
5	530590-N-AA-WWWW-M	Knuckle Frame Assembly for Standard Conveyor
	530590-Y-AA-WWWW-M	Knuckle Frame Assembly for Ultimate 3A Conveyor
6	530588-WWWW-M	Spindle
7	802-432	Bearing
8	807-5064	Pin
9	961016MSS	Hex Head Cap Screw, M10-1.50 x 16 mm
10	961020MSS	Hex Head Cap Screw, M10-1.50 x 20 mm
11	961045MSS	Hex Head Cap Screw, M10-1.50 x 45 mm
12	529801-AA	Roller Guard Cover
13	530866-AA-WWWWN	Knuckle Kit for Standard Conveyor (Includes items 4, 6, 7, and 12)
	530866-AA-WWWWY	Knuckle Kit for Ultimate 3A Conveyor (Includes items 4, 6, 7, and 12)
AA = Angle 30, 35, 40, 45, 50, 55, 60		
WWWW = Conveyor width reference in mm 0203 - 0610		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

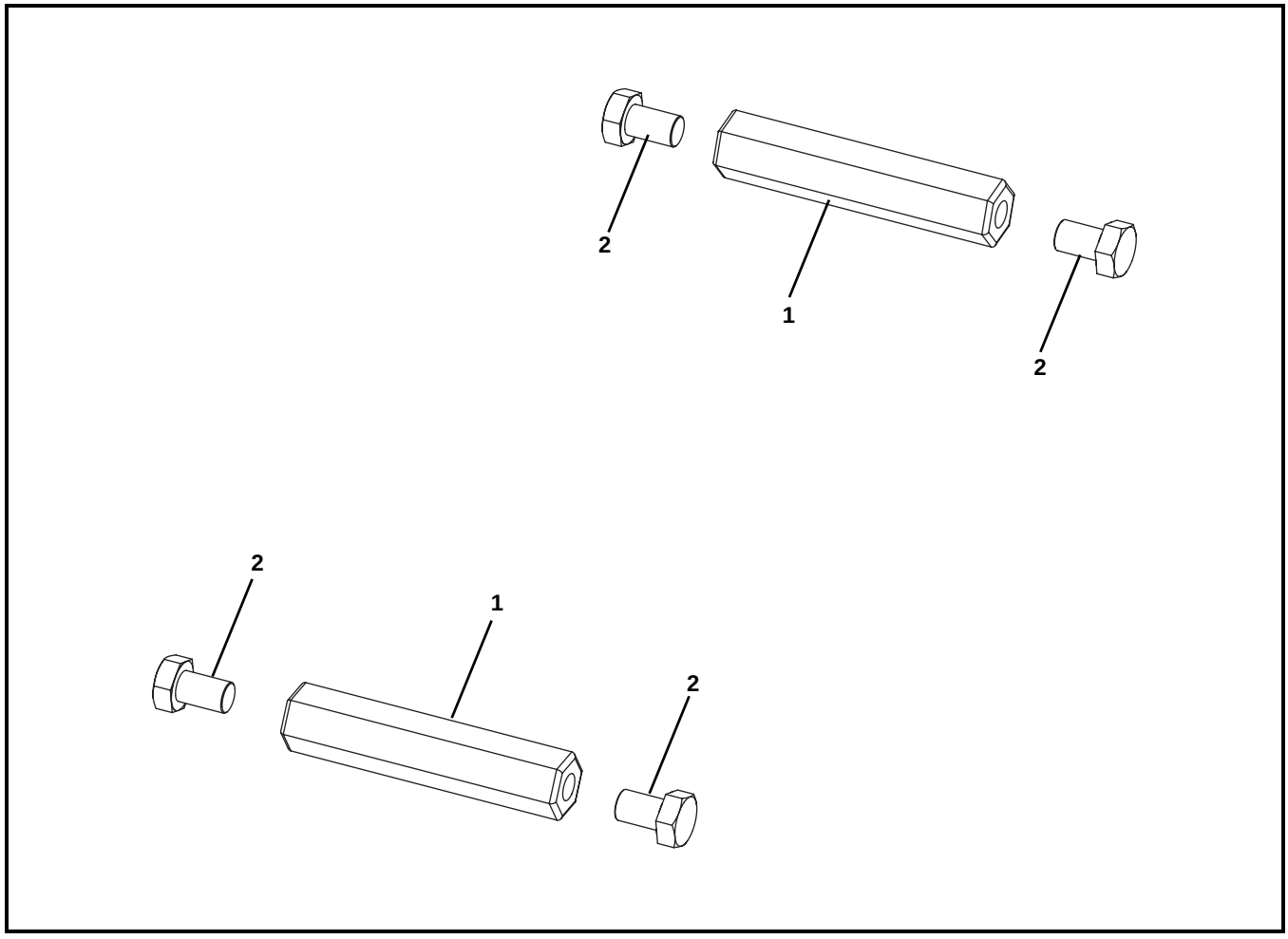
Lower Knuckle



Item	Part Number	Description
1	520477	Connector Hex Post
2	529147	Spacer
3	529149	Hex Post
4	529151	Sleeve
5	530593-N-AA-WWWW-M	Knuckle Frame Assembly for Standard Conveyor
	530593-Y-AA-WWWW-M	Knuckle Frame Assembly for Ultimate 3A Conveyor
6	530588-WWWW-M	Spindle
7	802-432	Bearing
8	807-5064	Pin
9	961016MSS	Hex Head Cap Screw, M10-1.50 x 16 mm
10	961020MSS	Hex Head Cap Screw, M10-1.50 x 20 mm
11	961045MSS	Hex Head Cap Screw, M10-1.50 x 45 mm
12	529801-AA	Roller Guard Cover
13	530867-AA-WWWWN	Knuckle Kit for Standard Conveyor (Includes items 4, 6, 7 and 12)
	530867-AA-WWWWY	Knuckle Kit for Ultimate 3A Conveyor (Includes items 4, 6, 7 and 12)
AA = Angle 30, 35, 40, 45, 50, 55, 60		
WWWW = Conveyor width reference in mm 0203 - 0610		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

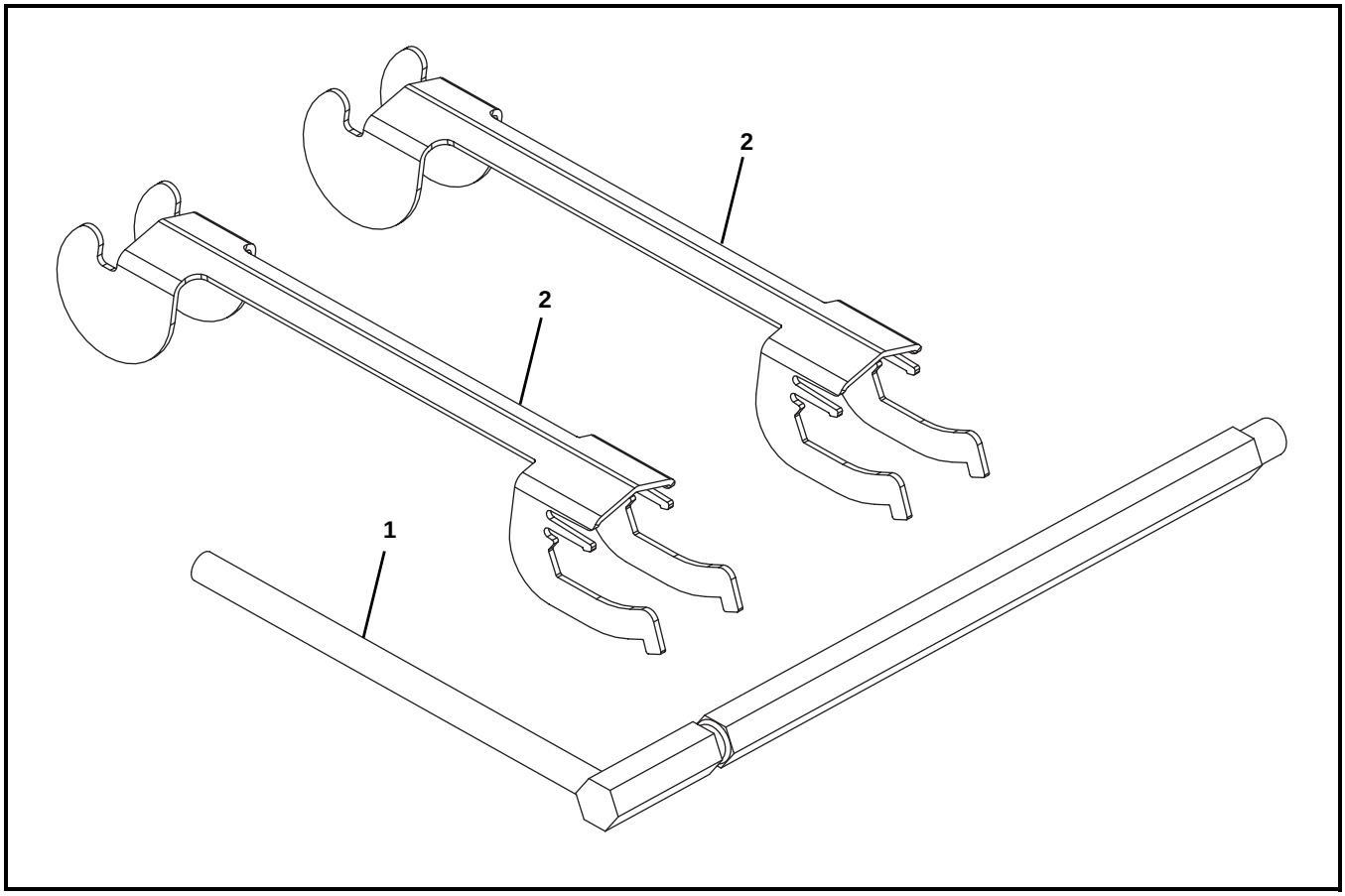
Service Parts

Connecting Assembly



Item	Part Number	Description
1	500193	Connectors
2	961016MSS	Hex Head Cap Screw, M10-1.50 x 16 mm
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

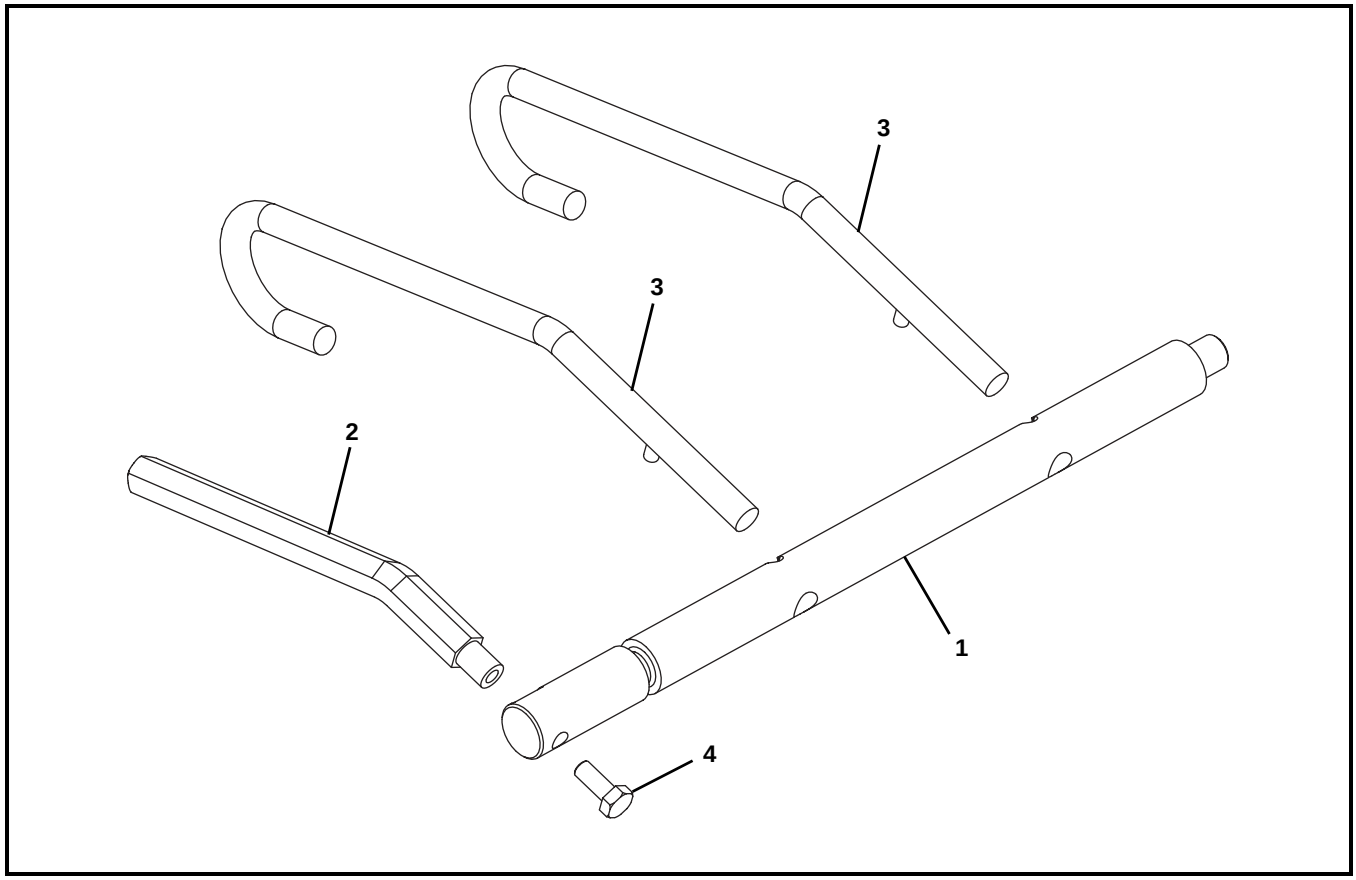
Belt Lifters for Standard Conveyors



Item	Part Number	Description
1	530768-WWWWN	Lifter Bar
2	530605	Lifter
WWWW = Conveyor width reference in mm 0152 - 1219 increments		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

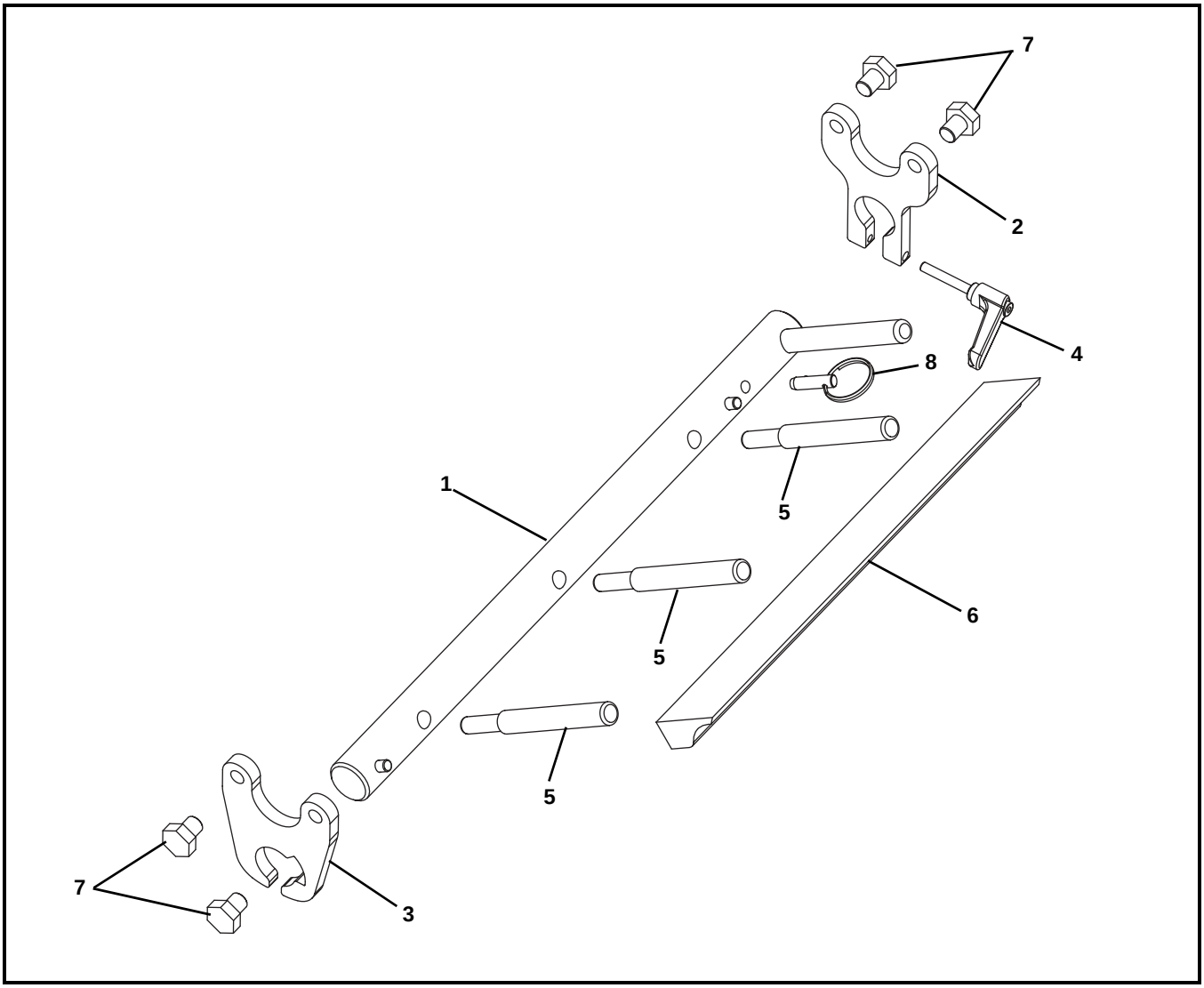
Service Parts

Belt Lifters for Ultimate 3A Conveyors



Item	Part Number	Description
1	530097-WWWW-M	Lifter Bar
2	500491	Lifter Handle
3	501376	Lifter
4	960820MSS	Hex Head Cap Screw, M8-1.25 x 20 mm
WWWW = Conveyor width reference in mm 0152 - 1219 increments		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

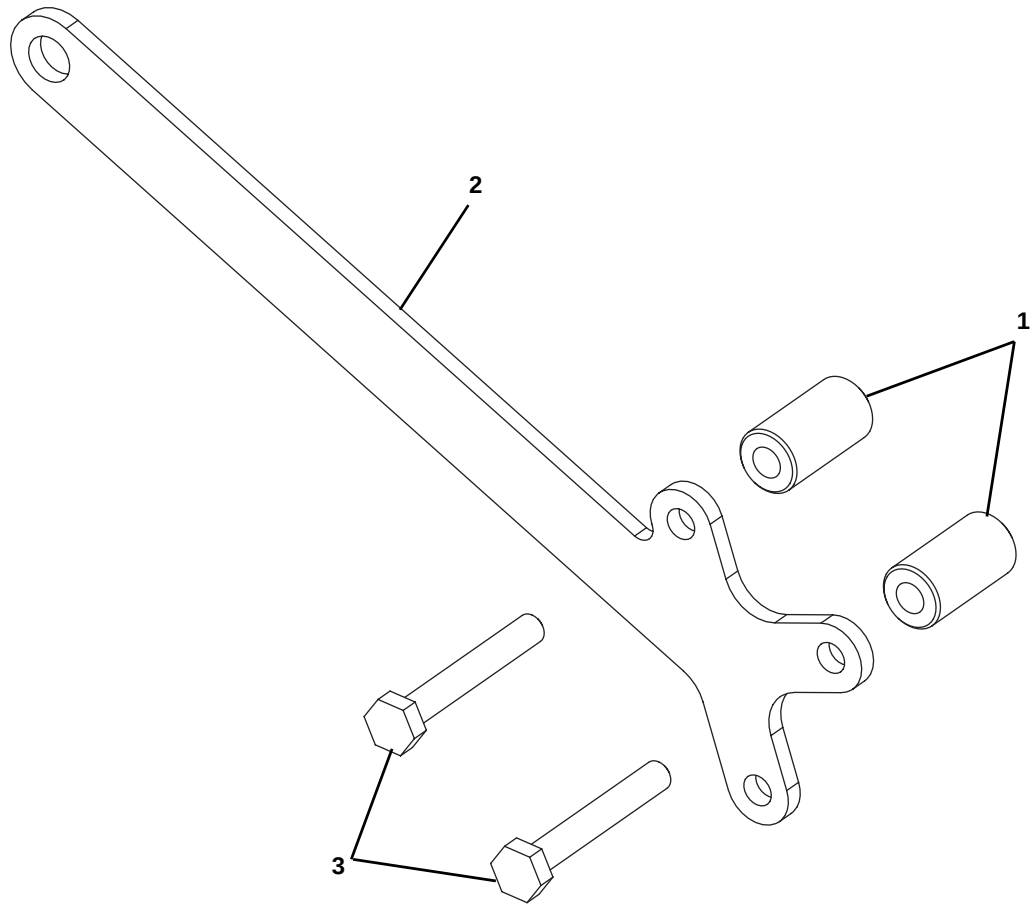
Scraper



Item	Part Number	Description
1	530197-WWWW-M	Scraper Shaft Assembly
2	500878	Scraper Adjust Plate
3	500879	Scraper Mount Plate
4	807-1559	Handle
5	500899	Scraper Bar
6	530199-WWWW-M	Scraper
7	961012MSS	Hex Head Cap Screw, M10-1.50 x 12 mm
8	807-1553	Pin
WWWW = Conveyor width reference in mm 0152 - 1219		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

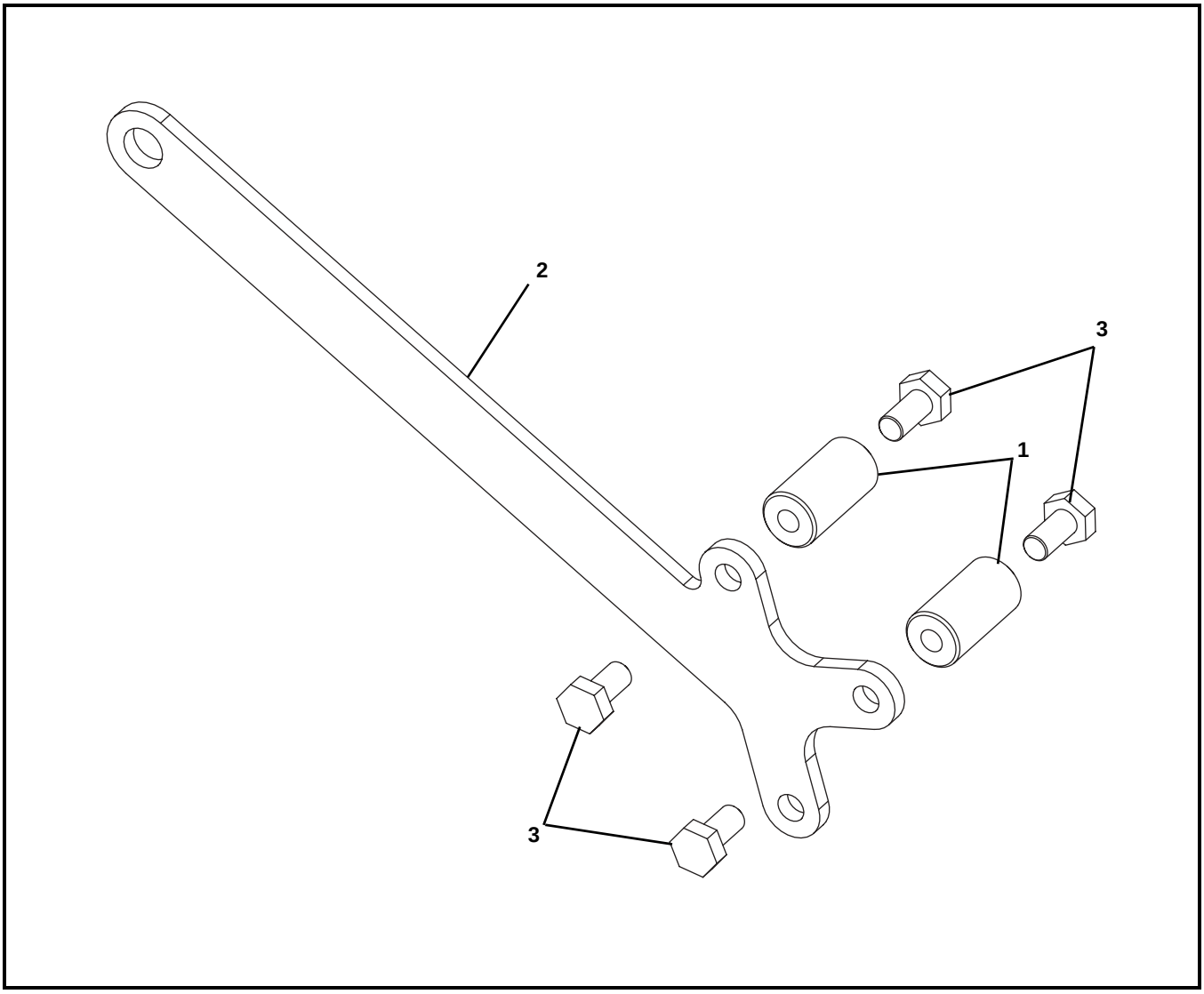
Service Parts

Tip Up Handle for Idler Tail



Item	Part Number	Description
1	530894	Spacer
2	531291	Tip Up Handle
3	961070MSS	Hex Head Cap Screw, M10-1.50 x 70 mm
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Tip Up Handle for Nose Bar Idler Tail

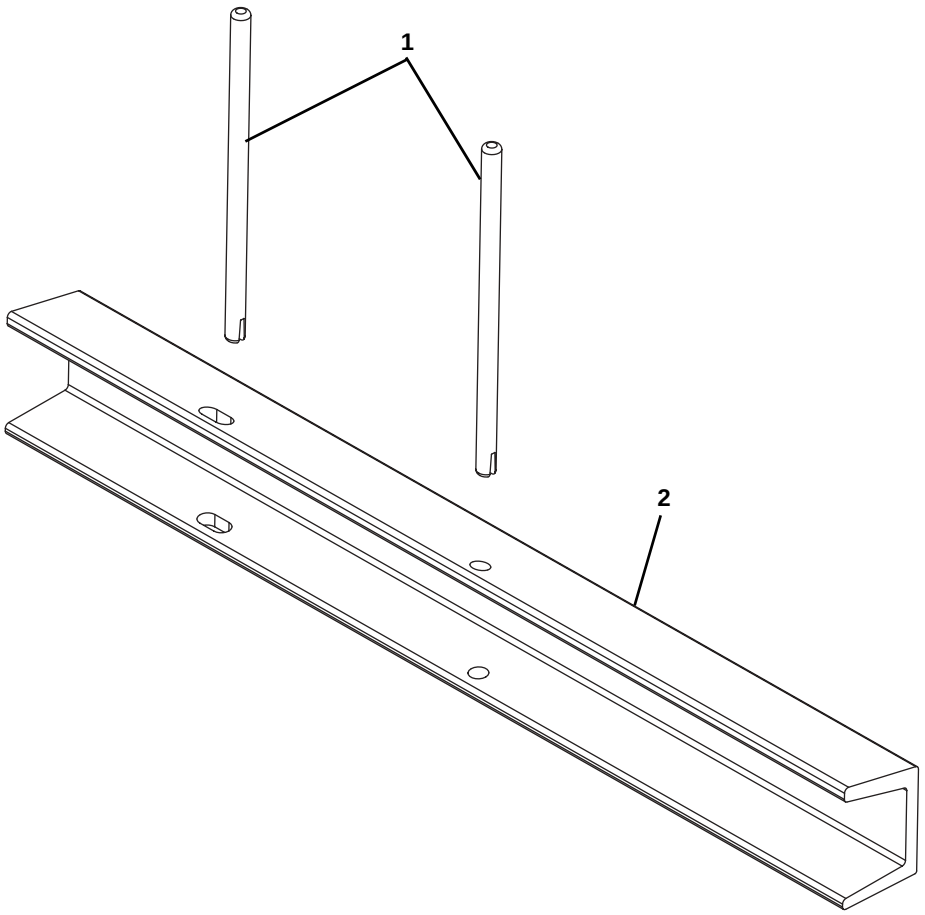


Item	Part Number	Description
1	531290	Spacer
2	531291	Tip Up Handle
3	961020MSS	Hex Head Cap Screw, M10-1.50 x 20 mm

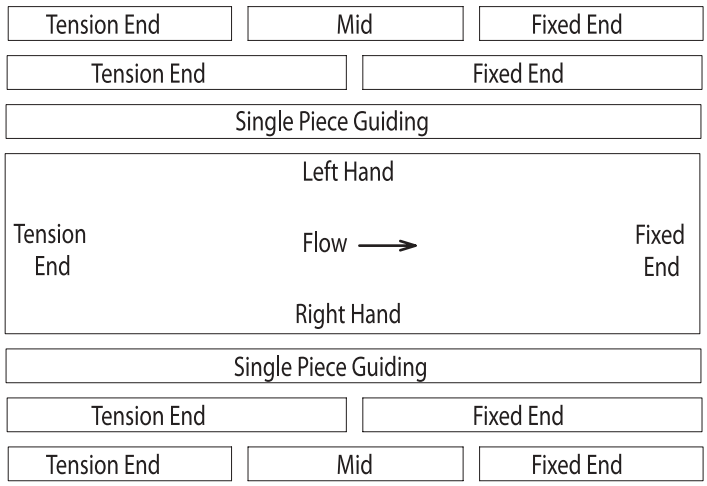
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com

Service Parts

75 mm Tall UHMW High Sides



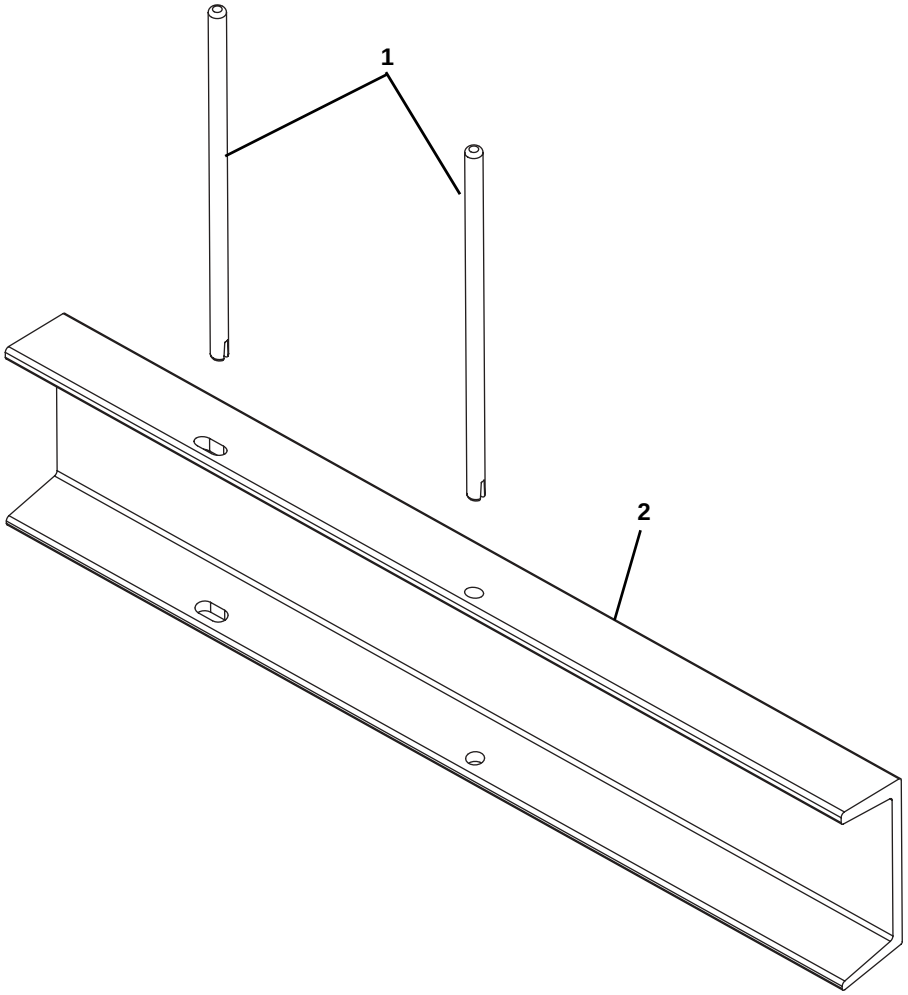
Item 2 Guide Section Description



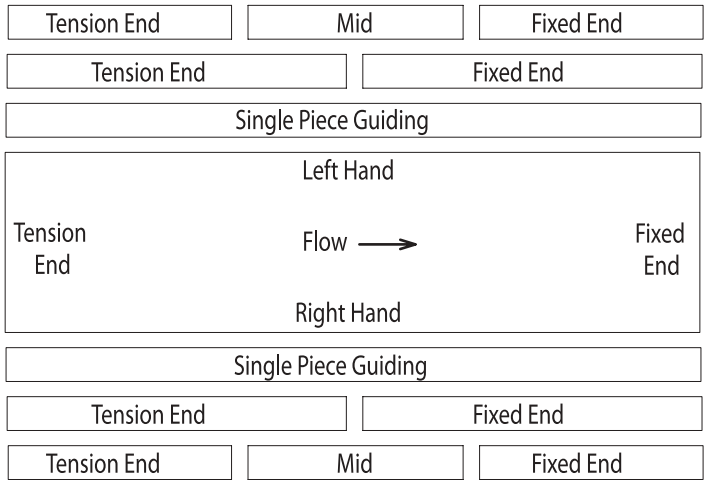
Item	Part Number	Description
1	529796-02480-M	Guide Post
2	530666-EE-7ALLLLL	Single Piece Guiding for Flat Belt Conveyors, Left Hand
	530666-EE-7DLLLLL	Single Piece Guiding for Flat Belt Conveyors, Right Hand
	530666-FE-7ALLLLL	Tension End Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530666-EF-7DLLLLL	Tension End Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530666-FF-7ALLLLL	Mid Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530666-FF-7DLLLLL	Mid Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530666-EF-7ALLLLL	Fixed End Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530666-FE-7DLLLLL	Fixed End Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530686-EA-7ALLLLL	Single Piece Guiding for Cleated Belt Conveyors, Left Hand
	530686-AE-7DLLLLL	Single Piece Guiding for Cleated Belt Conveyors, Right Hand
	530686-FA-7ALLLLL	Tension End Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530686-AF-7DLLLLL	Tension End Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	530686-FF-7ALLLLL	Mid Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530686-FF-7DLLLLL	Mid Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	530686-EF-7ALLLLL	Fixed End Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530686-FE-7DLLLLL	Fixed End Guiding for Cleated Belt Multi Section Conveyors, Right Hand
LLLLL = Part length in mm.		
Example: Part length = 1000 mm LLLLL = 01000		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

152 mm Tall UHMW High Sides



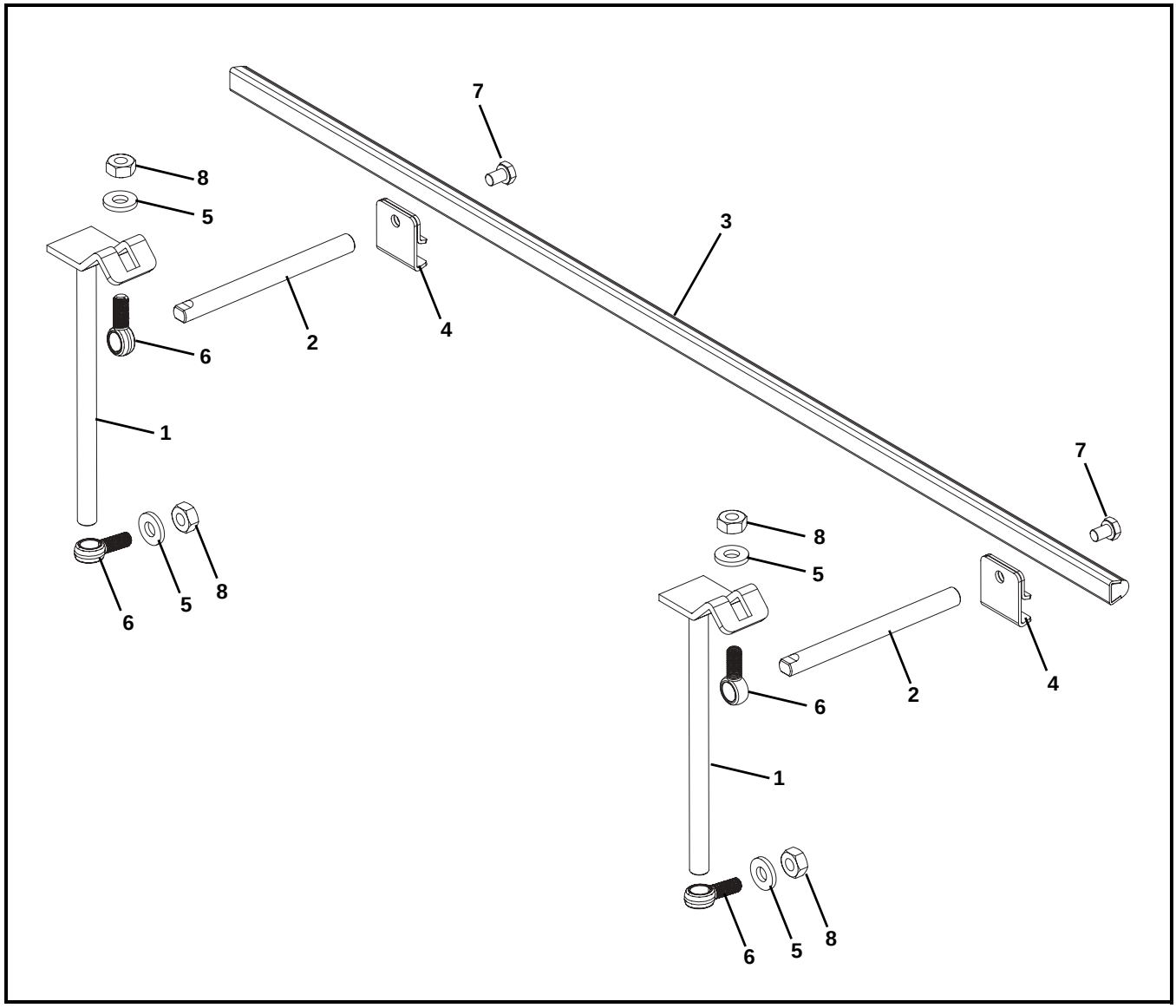
Item 2
Guide
Section
Description



Item	Part Number	Description
1	529796-03250-M	Guide Post
2	530666-EE-8ALLLLL	Single Piece Guiding for Flat Belt Conveyors, Left Hand
	530666-EE-8DLLLLL	Single Piece Guiding for Flat Belt Conveyors, Right Hand
	530666-FE-8ALLLLL	Tension End Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530666-EF-8DLLLLL	Tension End Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530666-FF-8ALLLLL	Mid Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530666-FF-8DLLLLL	Mid Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530666-EF-8ALLLLL	Fixed End Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530666-FE-8DLLLLL	Fixed End Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530686-EA-8ALLLLL	Single Piece Guiding for Cleated Belt Conveyors, Left Hand
	530686-AE-8DLLLLL	Single Piece Guiding for Cleated Belt Conveyors, Right Hand
	530686-FA-8ALLLLL	Tension End Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530686-AF-8DLLLLL	Tension End Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	530686-FF-8ALLLLL	Mid Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530686-FF-8DLLLLL	Mid Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	530686-EF-8ALLLLL	Fixed End Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530686-FE-8DLLLLL	Fixed End Guiding for Cleated Belt Multi Section Conveyors, Right Hand
LLLLL = Part length in mm.		
Example: Part length = 1000 mm LLLLL = 01000		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

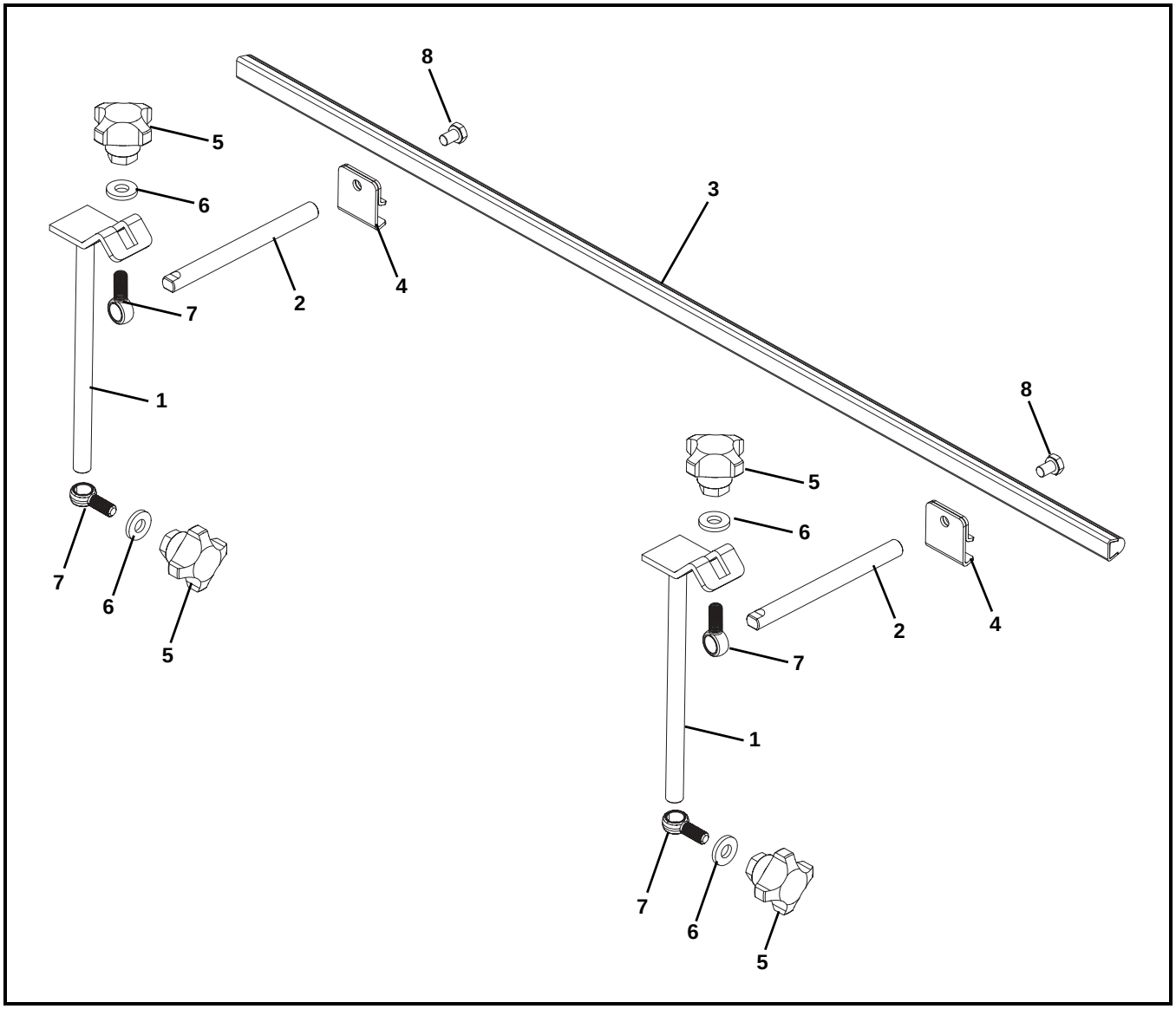
Service Parts

Fully Adjustable Round Guides



Item	Part Number	Description
1	509876	Vertical Post Assembly
2	532300	Guide Post
3	532167-LLLLL	Round Guide Rail
4	807-015	Rail Clamp
5	807-1821	Washer
6	807-1994	Eye Bolt, M10 x 1.50
7	960812MSS	Hex Head Cap Screw, M8-1.25 x 12 mm
8	991001MSS	Hex Nut, M10 - 1.50
LLLLL = Part length in mm.		
Example: Part length = 1000 mm LLLLL = 01000		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

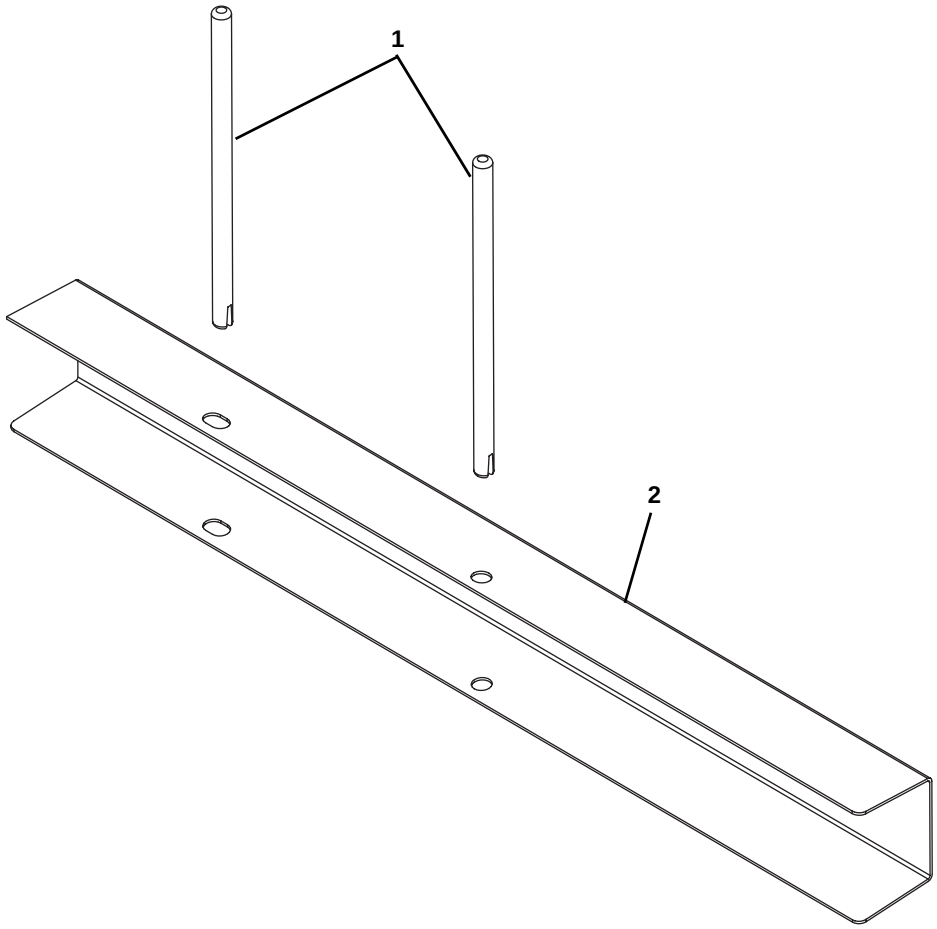
Tool-Less Fully Adjustable Round Guides



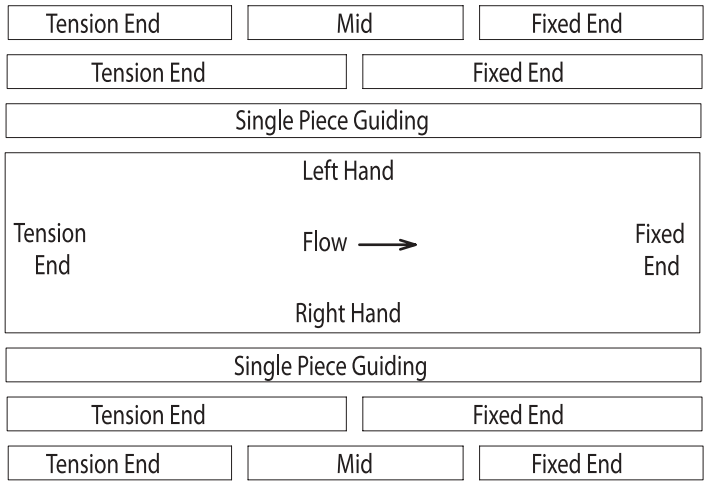
Item	Part Number	Description
1	509876	Vertical Post Assembly
2	532300	Guide Post
3	532167-LLLLL	Round Guide Rail
4	807-015	Rail Clamp
5	807-1057	Handle
6	807-1821	Washer
7	807-1994	Eye Bolt, M10 x 1.50
8	960812MSS	Hex Head Cap Screw, M8-1.25 x 12 mm
LLLLL = Part length in mm.		
Example: Part length = 1000 mm LLLLL = 01000		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

75 mm Tall Stainless Steel High Sides



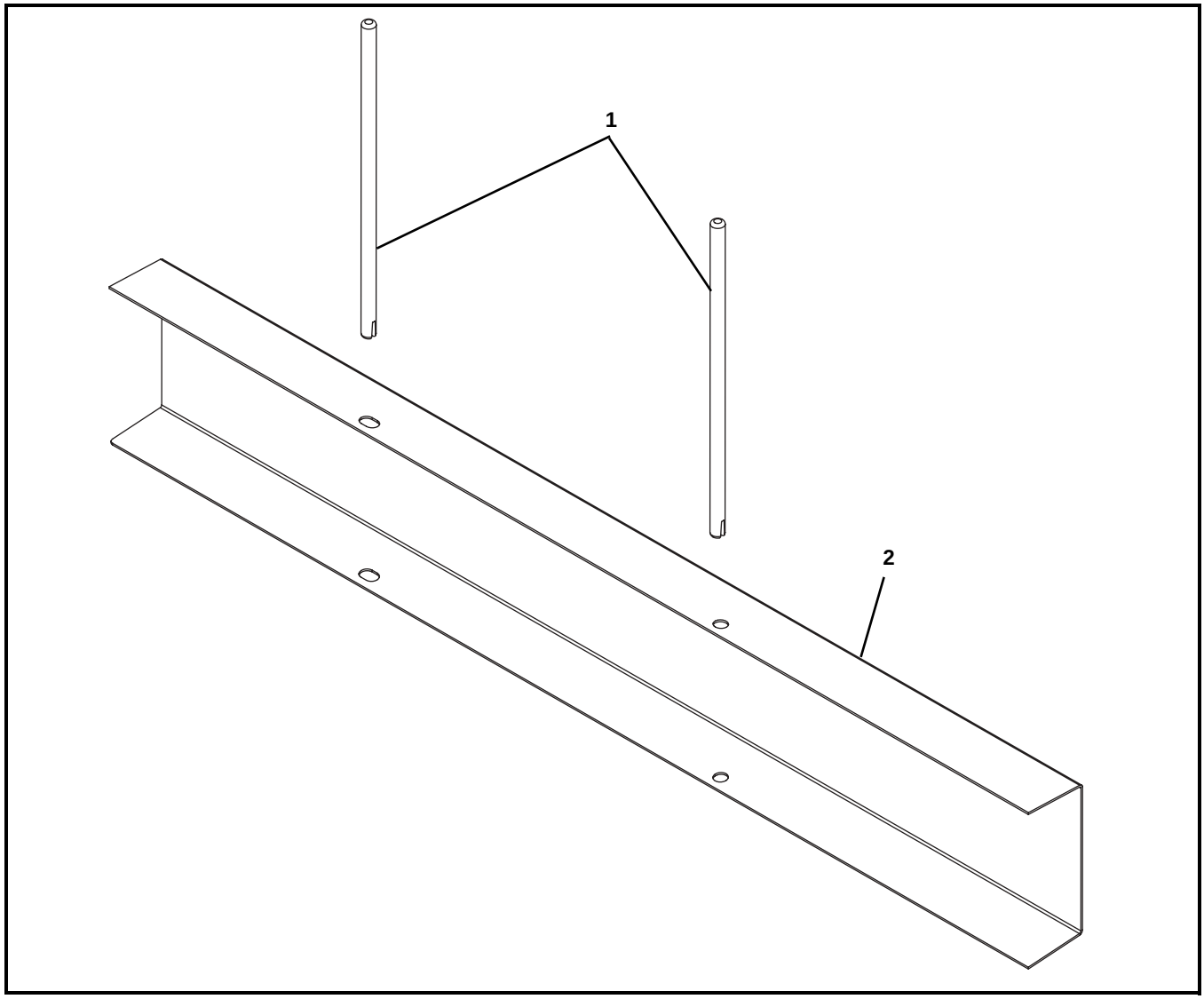
Item 2
Guide
Section
Description



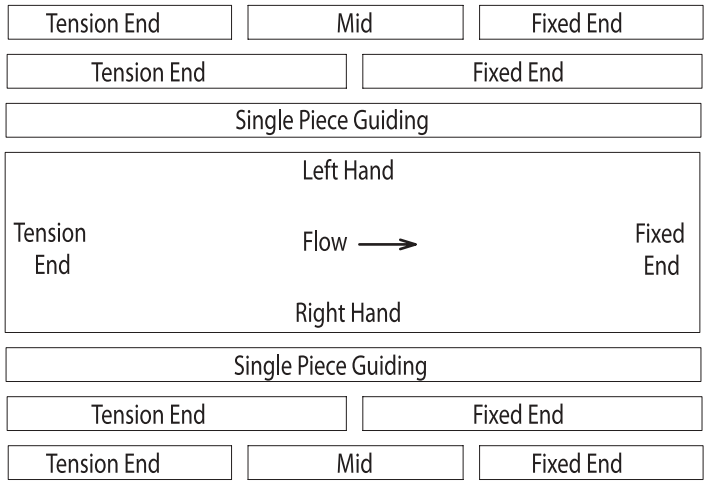
Item	Part Number	Description
1	529796-02480-M	Guide Post
2	530364-EE-7ALLLLL	Single Piece Guiding for Flat Belt Conveyors, Left Hand
	530364-EE-7DLLLLL	Single Piece Guiding for Flat Belt Conveyors, Right Hand
	530364-FE-7ALLLLL	Tension End Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530364-EF-7DLLLLL	Tension End Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530364-FF-7ALLLLL	Mid Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530364-FF-7DLLLLL	Mid Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530364-EF-7ALLLLL	Fixed End Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530364-FE-7DLLLLL	Fixed End Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530627-EA-7ALLLLL	Single Piece Guiding for Cleated Belt Conveyors, Left Hand
	530627-AE-7DLLLLL	Single Piece Guiding for Cleated Belt Conveyors, Right Hand
	530627-FA-7ALLLLL	Tension End Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530627-AF-7DLLLLL	Tension End Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	530627-FF-7ALLLLL	Mid Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530627-FF-7DLLLLL	Mid Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	530627-EF-7ALLLLL	Fixed End Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530627-FE-7DLLLLL	Fixed End Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	------	Consult Factory for LPZ Conveyor Guiding Part Numbers
LLLLL = Part length in mm.		
Example: Part length = 1000 mm LLLLL = 01000		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Service Parts

152 mm Tall Stainless Steel High Sides



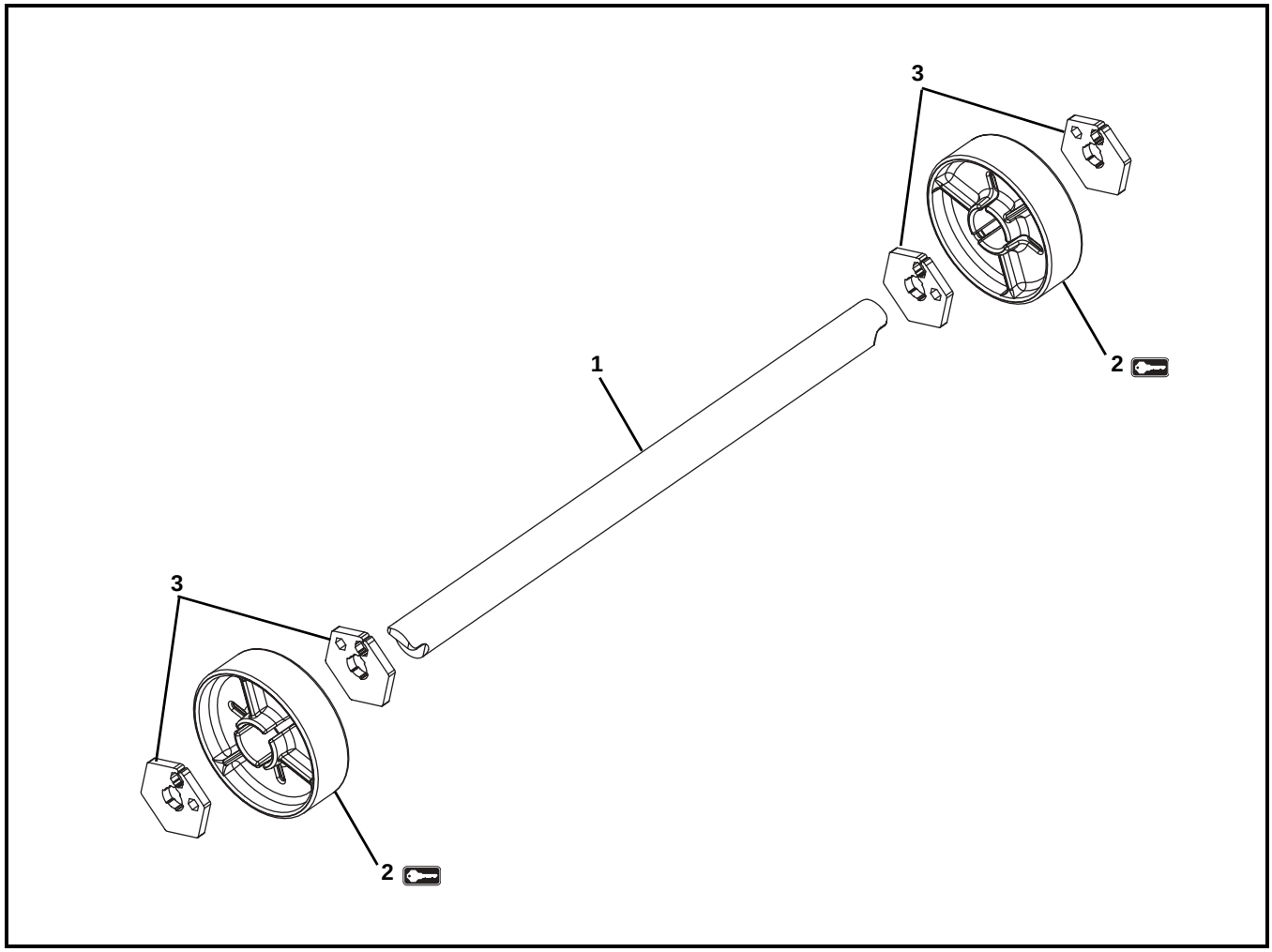
Item 2
Guide
Section
Description



Item	Part Number	Description
1	529796-03250-M	Guide Post
2	530364-EE-8ALLLLL	Single Piece Guiding for Flat Belt Conveyors, Left Hand
	530364-EE-8DLLLLL	Single Piece Guiding for Flat Belt Conveyors, Right Hand
	530364-FE-8ALLLLL	Tension End Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530364-EF-8DLLLLL	Tension End Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530364-FF-8ALLLLL	Mid Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530364-FF-8DLLLLL	Mid Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530364-EF-8ALLLLL	Fixed End Guiding for Flat Belt Multi Section Conveyors, Left Hand
	530364-FE-8DLLLLL	Fixed End Guiding for Flat Belt Multi Section Conveyors, Right Hand
	530627-EA-8ALLLLL	Single Piece Guiding for Cleated Belt Conveyors, Left Hand
	530627-AE-8DLLLLL	Single Piece Guiding for Cleated Belt Conveyors, Right Hand
	530627-FA-8ALLLLL	Tension End Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530627-AF-8DLLLLL	Tension End Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	530627-FF-8ALLLLL	Mid Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530627-FF-8DLLLLL	Mid Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	530627-EF-8ALLLLL	Fixed End Guiding for Cleated Belt Multi Section Conveyors, Left Hand
	530627-FE-8DLLLLL	Fixed End Guiding for Cleated Belt Multi Section Conveyors, Right Hand
	------	Consult Factory for LPZ Conveyor Guiding Part Numbers
LLLLL = Part length in mm.		
Example: Part length = 1000 mm LLLLL = 01000		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

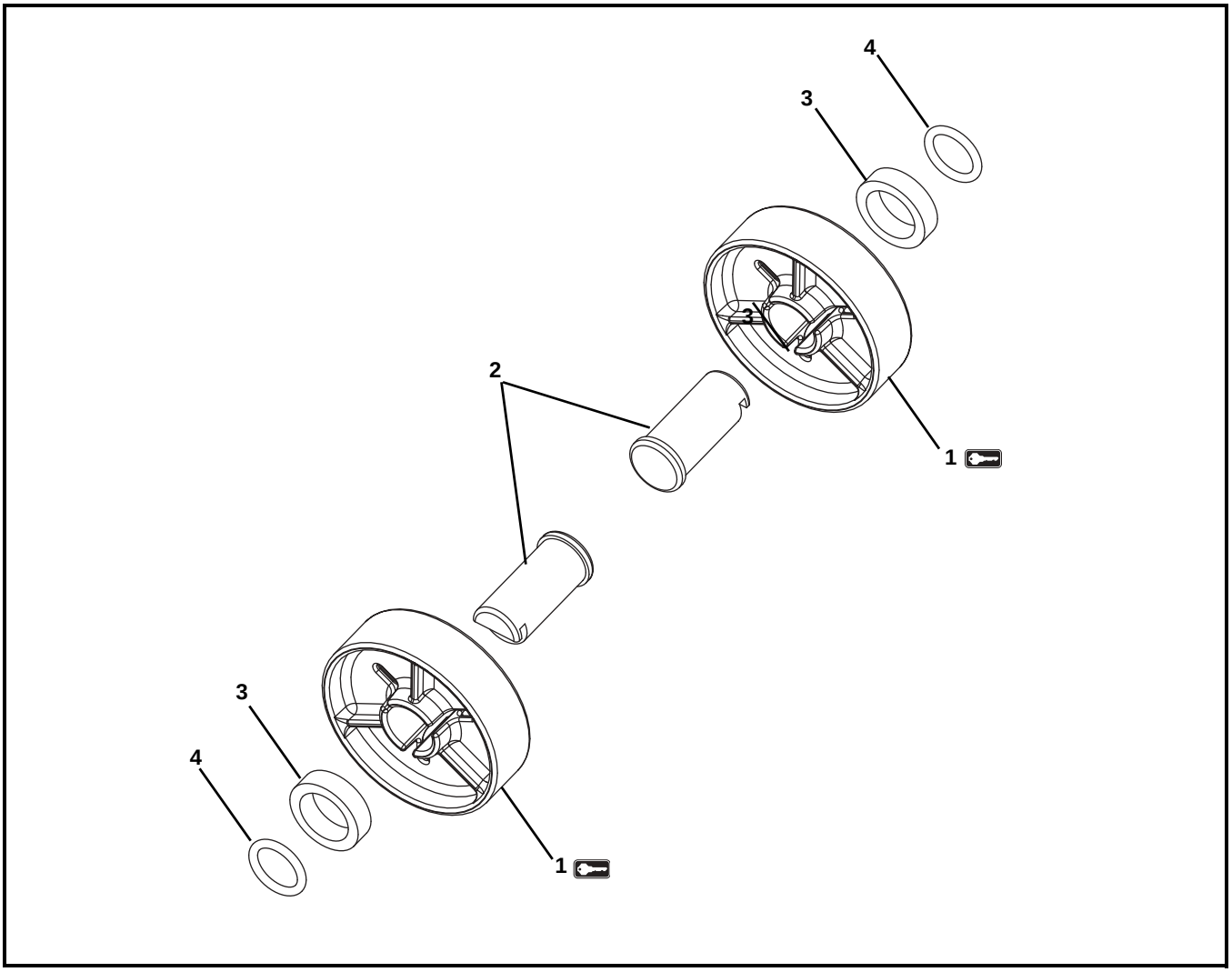
Service Parts

Flat Belt Returns 660 mm Wide and Wider



Item	Part Number	Description
1	530177-WWWW-M	Return Shaft
2	506296	Puck
3	517575	Retaining Plate
WWWW = Conveyor width reference in mm 0660 - 1219		
See Specifications chart on page 8 for conveyor belt widths.		
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Cleated Belt and Flat Belt Returns Under 660 mm Wide



Item	Part Number	Description
1	506296	Puck
2	501097	Shaft
3	530273	Spacer
4	812-107	O-Ring
Service parts can be obtained through your distributor or directly from Dorner Mfg. Corp. (800) 397-8664 or customerservice@dorner.com		

Configuring Conveyor Belt Part Number

Figure 209

Flat Belt Part Number Configuration

Refer to model number on the conveyor frame **(Figure 209)**. From the model number determine the conveyor width (WWW), length (LLLLL) and belt type (BB). Use data to configure belt part number as indicated below. *Add “V” for v-guided belts or add “VG” for 06, 08, 57, 59, and 64 v-guided belt types.

76E-WWWW LLLLL / BB V*

76E- _____ _____ / ___ V*

(Fill In)

Cleated Belt Part Number Configuration

Refer to model number on the conveyor frame **(Figure 209)**. From the model number determine the conveyor width (WWW), length (LLLLL), cleat type (B) and cleat spacing (SSSS). Use data to configure belt part number as indicated below. *Add “V” for v-guided belts.

76E-WWWW LLLLL C SSSS V*

76E- _____ _____ _ _____ V*

(Fill In)

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. Include part serial number if available.

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

<table>
<tr><th></th><th colspan="9">Product Type</th></tr>
<tr><th></th><th colspan="8">Standard Products</th><th>Engineered to order parts</th></tr>
<tr><th>Product Line</th><th>Conveyors</th><th>Gearmotors & Mounting Packages</th><th>Support Stands</th><th>Accessories</th><th>Spare Parts (non-belt)</th><th>Spare Belts - Standard Flat Fabric</th><th>Spare Belts - Cleated & Spec. Fabric</th><th>Spare Belts - Plastic Chain</th><th>All equipment and parts</th></tr>
<tr><td>1100 Series</td><td colspan="6" rowspan="7">30% return fee for all products except:
50% return fee for conveyors with modular belt, cleated belt or speciality belts

All Electrical items are assigned original manufacturers return policy.</td><td colspan="2" rowspan="13">non-returnable</td><td rowspan="13">case-by-case</td></tr>
<tr><td>2200 Series</td></tr>
<tr><td>3200 Series</td></tr>
<tr><td>Pallet Systems</td></tr>
<tr><td>FlexMove/SmartFlex</td></tr>
<tr><td>GAL Series</td></tr>
<tr><td>All Electrical</td></tr>
<tr><td>7100 Series</td><td colspan="6" rowspan="4">50% return fee for all products</td></tr>
<tr><td>7200/7300 Series</td></tr>
<tr><td>AquaGard 7350 Series Version 2</td></tr>
<tr><td>GES Series</td></tr>
<tr><td>AquaGard 7350/7360 Series</td><td colspan="8" rowspan="2">non-returnable</td></tr>
<tr><td>AquaPruf Series</td></tr>
</table>

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

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

For a copy of Dorner's Warranty, contact Dorner, an authorized sales channel or visit our website: www.dorner.com.

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

www.dorner.com

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