

## **2100 Series End Drive Conveyors**





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## Warnings – General Safety

	<b>WARNING</b>	
<p>The safety alert symbol, black triangle with white exclamation, is used to alert you to potential personal injury hazards.</p>		

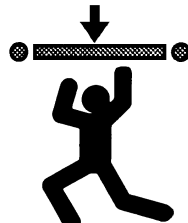

		<b>WARNING</b>
<p>Gearmotors may be HOT. <b>DO NOT TOUCH</b> Gearmotors.</p>		

		<b>DANGER</b>
<p>Climbing, sitting, walking or riding on conveyor will cause severe injury. <b>KEEP OFF CONVEYORS.</b></p>		

		<b>WARNING</b>
<p>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, <b>CHECK FOR POTENTIAL PINCH POINTS</b> and other mechanical hazards before system start-up.</p>		

		<b>DANGER</b>
<p><b>DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT.</b></p>		

		<b>WARNING</b>
<p>Exposed moving parts can cause severe injury. <b>LOCK OUT POWER</b> before removing guards or performing maintenance.</p>		

		<b>WARNING</b>
<p>Loosening stand height or angle adjustment screws may cause conveyor sections to drop down, causing severe injury. <b>SUPPORT CONVEYOR SECTIONS PRIOR TO LOOSENING STAND HEIGHT OR ANGLE ADJUSTMENT SCREWS.</b></p>		

## Introduction

**IMPORTANT:** Some illustrations may show guards removed. Do NOT operate equipment without guards.

Upon receipt of shipment:

- Compare shipment with packing slip. Contact factory regarding discrepancies.
- Inspect packages for shipping damage. Contact carrier regarding damage.
- Accessories may be shipped loose. See accessory instructions for installation.

Dorner's Limited Warranty applies.

Dorner 2100 Series conveyors are covered by Patent No. 5,174,435, 5,131,529 and corresponding patents and patent applications in other countries.

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

## General Instructions for All Conveyors

1. Using appropriate lifting means, carefully remove conveyor assembly or section from shipping container and place it in its correct operating position and direction.
2. Use Dorner stands and compatible mounting hardware (or mounting provided by the user) to securely mount the conveyor. Refer to the Metric Support Stands Parts, Assembly & Maintenance Manual for appropriate mounting details.
3. Conveyor must be mounted straight, flat and level, within confines of conveyor. Use a straight edge and a level for initial set up (Figure 1).

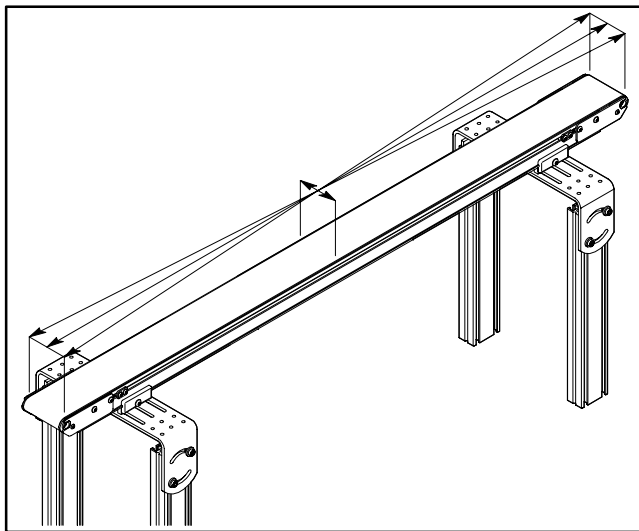


Figure 1

**IMPORTANT:** Do not bend or twist conveyor frame when mounting the conveyor.

4. All low side conveyors without optional guiding, have factory installed belt tracking guides (A of Figure 2) installed on both ends of conveyor. Each guide is a 3.5" (89 mm) long piece of formed plastic which snaps onto the portion of the conveyor sidewall (B) above the T-slot channel.
  - a. **To remove guide** from conveyor sidewall, apply a slight outward and downward finger-pressure on one top corner of guide and gradually peel it off conveyor sidewall (B).
  - b. **To install guide** onto conveyor sidewall, first place lower lip (C) of guide against upper edge of conveyor sidewall T-slot channel. Apply inward and upward pressure to completely snap it into place.

**NOTE:** Use belt tracking guides (A of Figure 2) during initial conveyor start-up for tracking conveyor belt, as necessary. Guides may be left on or removed, after start-up. Be sure to save belt tracking guides for start-up after belt cleaning or replacement.

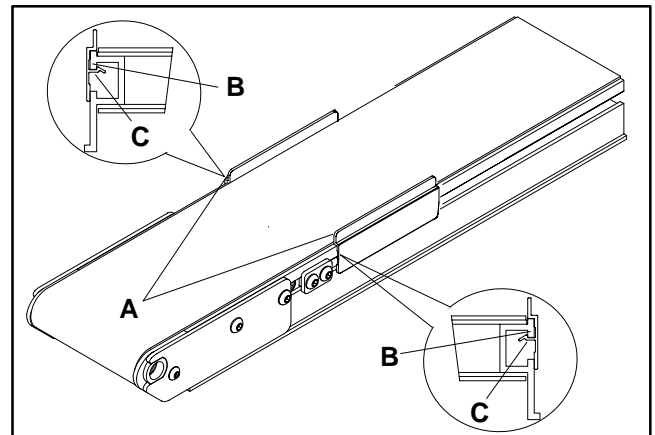


Figure 2

## Flat Belt Mounting Brackets

### SAE Hardware Illustration References

- D 5/16 x 3/4 Button Head Cap Screw (2x)
- E 1/4 x 3/4 Socket Head Cap Screw & Hard Washer (4x)

### Metric Hardware Illustration References

- D M8 x 18 Button Head Cap Screw (2x)
- E M6 x 18 Socket Head Cap Screw & Hard Washer (4x)

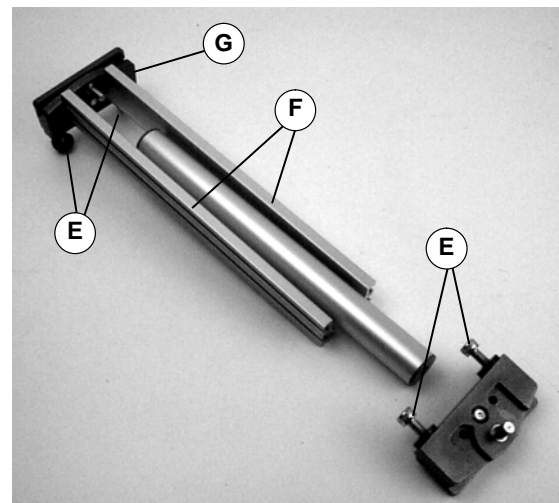
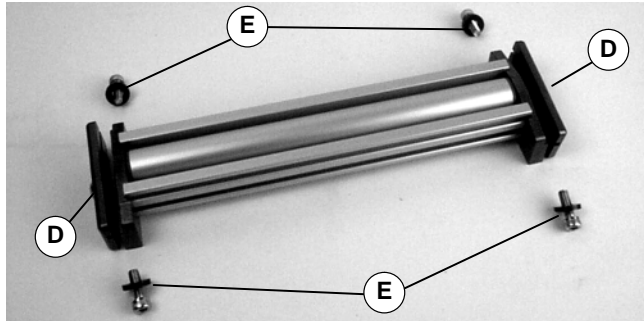


Figure 3

1. Typical Components (Figure 3).

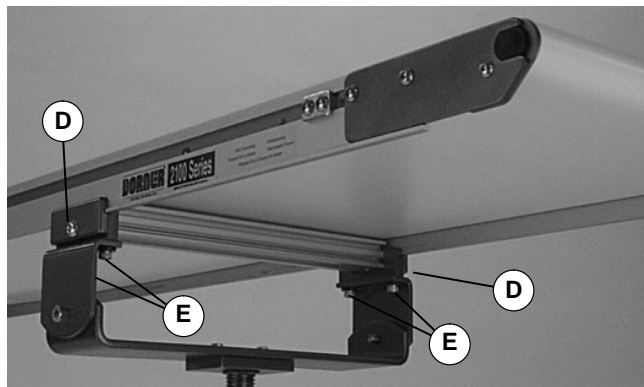
# Installation

**NOTE:** Roller Guards (F) are shipped fastened to block (G) only. Do NOT fasten to other block.



**Figure 4**

2. Assemble components as shown (Figure 4). Loosen (but do not remove) screws (D) and remove screws and washers (E).



**Figure 5**

3. Attach clamp plates on each side of conveyor (Figure 5). Align assembly perpendicular to conveyor frame. Secure the 5/16 button head screws (D) with 150 in-lb (17 Nm) torque or the M8 button head screws (D) with 80 in-lb (9 Nm) torque.
4. Mount to support stand. Secure the 1/4 or M6 socket head screws (E) with 80 in-lb (9 Nm) torque. Make sure belt is free to move.

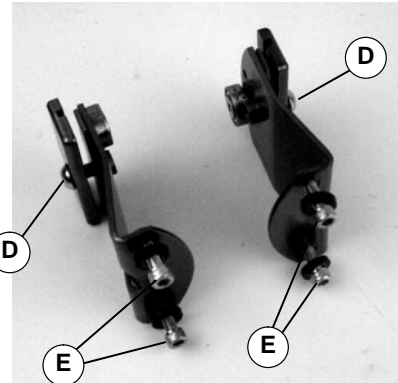
## Cleated Belt Mounting Brackets

### SAE Hardware Illustration References

- |   |  |
|---|--|
| D | 5/16 x 3/4 Button Head Cap Screw (2x)              |
| E | 1/4 x 3/4 Socket Head Cap Screw & Hard Washer (4x) |

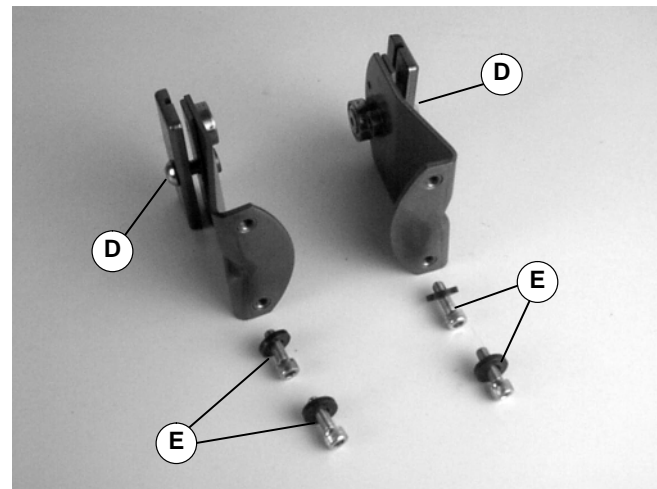
### Metric Hardware Illustration References

- |   |  |
|---|--|
| D | M8 x 18 Button Head Cap Screw (2x)               |
| E | M6 x 18 Socket Head Cap Screw & Hard Washer (4x) |



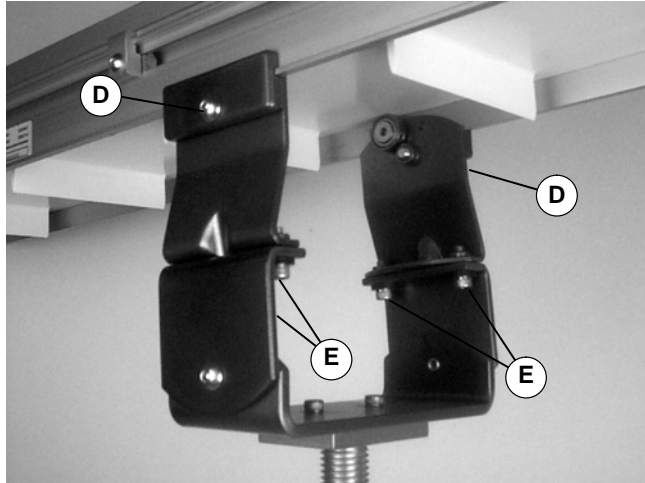
**Figure 6**

1. Typical Components (Figure 6)



**Figure 7**

2. Loosen (but do not remove) screws (D) and remove screws and washers (E) (Figure 7).



**Figure 8**

3. Attach clamp plates on each side of conveyor (Figure 8). Secure the 5/16 button head screws (D) with 150 in-lb (17 Nm) torque or the M8 button head screws (D) with 80 in-lb (9 Nm) torque.
4. Mount to support stand. Secure the 1/4 or M6 socket head screws (E) with 80 in-lb (9 Nm) torque. Make sure belt is free to move.

## Start-up & Preliminary Belt Tracking Check

**IMPORTANT:** Stop conveyor immediately if belt does not track properly. Refer to “Conveyor Belt Tracking Adjustment” section on page 12.


1. Ensure conveyor belt tension is set properly. Refer to “Conveyor Belt Tension for End Drive Conveyors or Conveyor Belt Slack Take-up for Center Drive Conveyors” section beginning on page 11.
2. If not already installed, install belt tracking guides on both ends of low side conveyors. Refer to Figure 2 on page 3.
3. Energize power to conveyor drive motor and, on center-driven conveyors only, turn on supply air to take-up cylinder.
  - a. **On fixed speed conveyors**, jog conveyor on and off in very short cycles a maximum of 6 starts per minute. Observe belt tracking on both ends. Gradually increase run cycle.
  - b. **On variable speed conveyors**, set control at its lowest speed. Run conveyor and observe belt tracking at both ends. Gradually increase belt speed.

**IMPORTANT:** Stop conveyor immediately if belt does not track properly. Refer to “Conveyor Belt Tracking Adjustment” section on page 12. In addition, long conveyors may require observation at both ends.


4. Make tracking adjustments following information in “Conveyor Belt Tracking Adjustment” section on page 12.

# Preventive Maintenance & Adjustment

## Lubrication



**WARNING**



To prevent injury, make sure all electrical and pneumatic power sources have been disconnected and locked-out before you perform any maintenance, make any adjustments or replace any components.

## Pulley Bearings

**NOTE:** When lubricating pulley bearings, use a conventional hand grease gun with a maximum of one pump per application, unless otherwise specified. *Do not over-lubricate.* To prevent damage to bearing, do not use a power grease gun. This creates pressure that may unseat bearing. In addition, 2" (44 mm) wide conveyors use shielded ball bearings and do not require lubrication.

Use Dorner Red Grease 14 oz. cartridge, part number 829-002, or 14 oz. can, part number 829-003. Lubricate pulley bearings every 750 hours or more frequently, depending on operating conditions.

All non-driven positions have a plastic plug (A of Figure 9) installed into the ends of the pulley retaining sleeves (B). Use a small flat-bladed screwdriver to remove this plug.

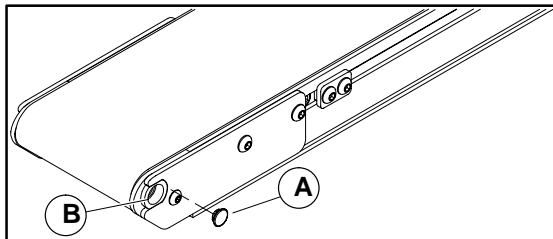


Figure 9

### Non-driven Positions

1. Install Dorner greasing adapter part number 200046 (C of Figure 10).

2. Make sure the adapter shoulder (E) is seated against the conveyor tail plate. Proper seating assures alignment of the internal lubrication passages (D).
3. When lubrication is finished, grease adapter (C) can be left in place or can be replaced with the plastic plug (A of Figure 9).

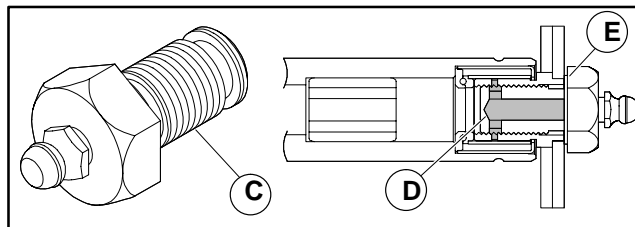


Figure 10

### Driven Positions

#### Top or Bottom Mounting Package

1. On 3" (70 mm) and wider conveyors, lubricate the pulley bearing on the drive side through the outboard drive shaft grease fitting (N of Figure 11).

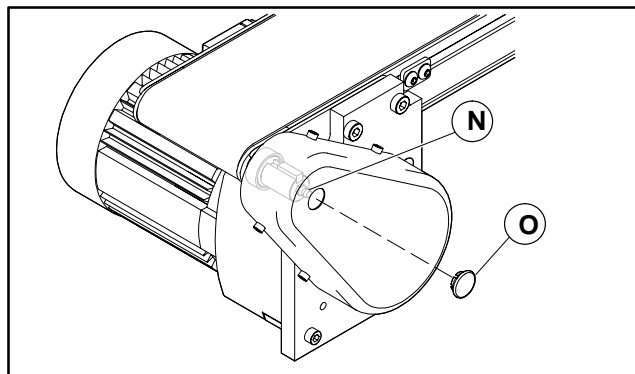


Figure 11

2. Remove cap (O) from drive belt guard.
3. When lubricating pulley bearings for first time, outboard shaft assembly must be filled with grease before bearings will get any lubrication. Use a maximum of two pumps. *Do not over-lubricate.*
4. When lubricating any of pulley bearings anytime after initial lubrication, use a maximum of one pump per application. *Do not over-lubricate.*
5. Replace cap (O).

# Preventive Maintenance & Adjustment

## Standard Load Flat Belt Side Mounting Package

1. Locate drive shaft grease fitting (F of Figure 12). Lubricate pulley bearings through grease fitting.

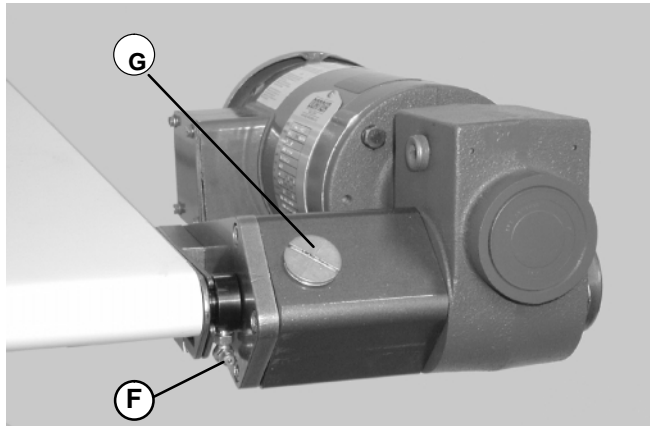


Figure 12

2. When lubricating pulley bearings for first time, outboard retaining sleeve must be filled with grease before bearings will get any lubrication. Use a maximum of two pumps. **Do not over-lubricate.**
3. When lubricating any of pulley bearings, anytime after initial lubrication, use a maximum of one pump per application. **Do not over-lubricate.**

## Standard Load Cleated Belt Side Mounting Package

1. With a flat blade screwdriver, remove cap (G of Figure 13).
2. Loosen (2) set screws on the coupling.

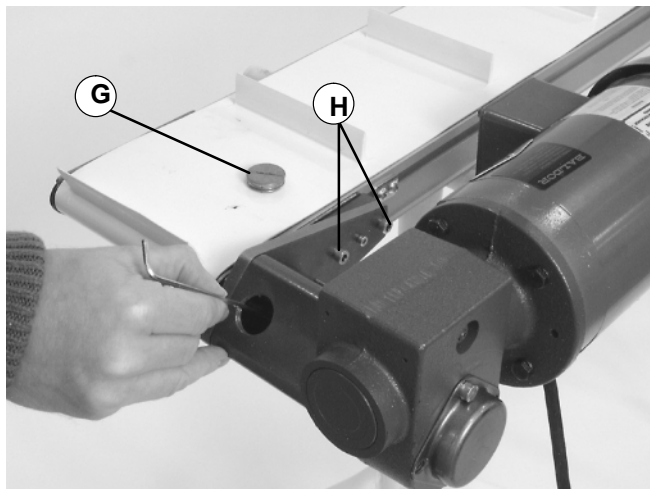


Figure 13

3. Remove (2) motor mounting screws (H of Figure 13).

4. Remove motor and mounting package. Lubricate the pulley bearing on the drive side through the drive shaft grease fitting (I of Figure 14).

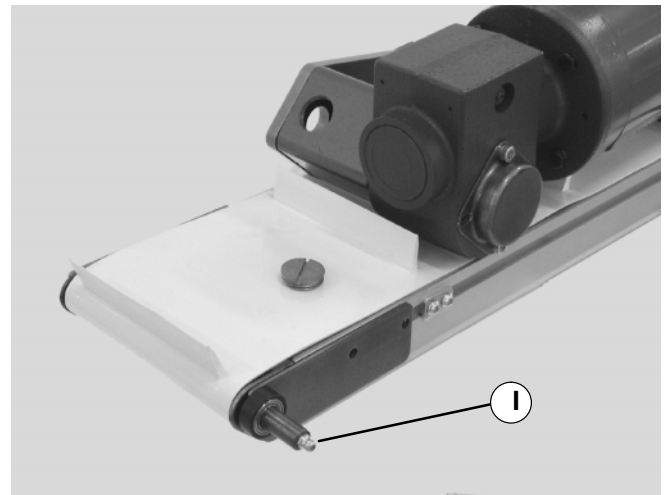


Figure 14

5. When lubricating pulley bearings for first time, outboard shaft assembly must be filled with grease before bearings will get any lubrication. Use a maximum of two pumps. **Do not over-lubricate.**
6. When lubricating any of pulley bearings, anytime after initial lubrication, use a maximum of one pump per application. **Do not over-lubricate.**
7. Reinstall side mount package by following steps 4 through 1 in reverse order.

## Light Load Side Mounting Package

1. Remove (4) motor mounting screws (J of figure 15).

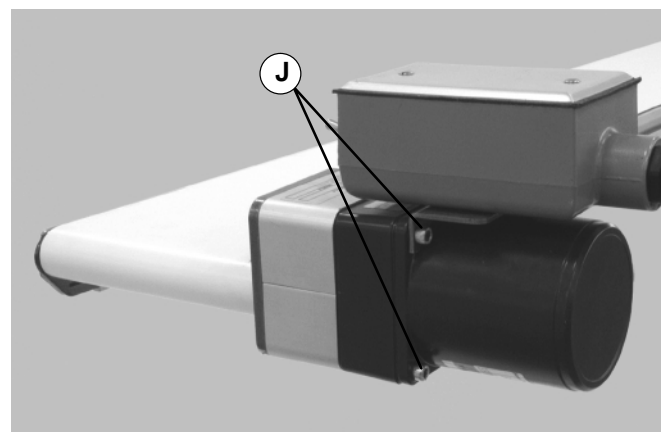


Figure 15

2. Loosen (2) set screws (K of Figure 16) on timing belt pulley (L).

# Preventive Maintenance & Adjustment

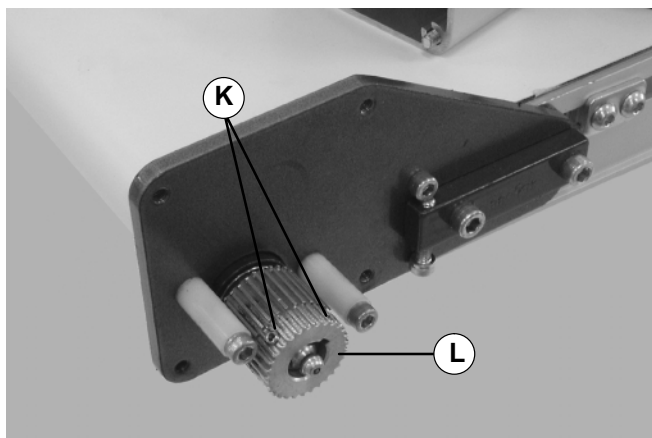


Figure 16

3. Remove timing belt pulley (L).

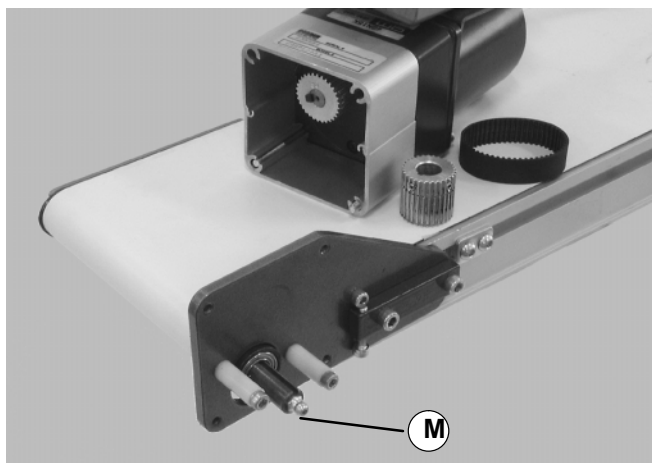


Figure 17

4. Lubricate the pulley bearing on drive side through drive shaft grease fitting (M of Figure 17).
5. When lubricating pulley bearings for first time, outboard shaft assembly must be filled with grease before the bearings will get any lubrication. Use a maximum of two pumps. **Do not over-lubricate.**
6. When lubricating any of pulley bearings, anytime after initial lubrication, use a maximum of one pump per application. **Do not over-lubricate.**
7. Reinstall side mount package by following steps 4 through 1 in reverse order.

## Conveyor Belts

### Inspection

Inspect conveyor belt for:

- Surface cuts or wear
- Tracking problems
- Worn edges

- Stalling or slipping
- Stretching or breaking
- Belts that walk to one side
- Non-uniform movement of the conveyor belt
- Lines or rough edges on belt

### Problem Identification

**NOTE:** When a problem is identified, be sure to perform the necessary corrective maintenance.

Belts that walk to one side indicate:

- Belt tracking incorrectly. Refer to “Conveyor Belt Tracking Adjusting” topic beginning on page 12.
- Twisted or damaged conveyor frame
- Dirt accumulating on the outside diameter of the pulleys
- Side load on belt.

Non-uniform movement indicates:

- Excessive load on conveyor belt
- Intermittent jam or drive train problems
- Conveyor belt or drive timing belt, when applicable, are not properly tensioned

Lines or rough edges on belt could indicate:

- Belt tracking incorrectly. Refer to “Conveyor Belt Tracking Adjustment” topic on page 12.
- Jammed part
- Accumulated dirt in wipers
- Foreign material inside the conveyor
- Improperly positioned accessories

**NOTE:** Refer to Troubleshooting Guide on page 18.

### Cleaning

**IMPORTANT:** Do not use belt cleaners that contain alcohol, acetone, Methyl Ethyl Ketone (MEK) or other harsh chemicals.

For most conveyor belts, use Dorner Belt Cleaner, part number 625619, or equivalent. Mild soap and water may also be used. Do not soak the belt.

Due to the texture of woven polyester and black anti-static belts, use a small semi-stiff bristled brush to improve cleaning.



# Preventive Maintenance & Adjustment

## Conveyor Repair Preparations

### Tools

Use Dorner Tool Kit Part Number 2500M-for metric conveyors and 2500 for SAE conveyors.

### Checklist

- Have complete pulley assemblies, replacement belts, return rollers, drive components, gearmotors and fasteners in stock and ready for use.
- Inspect entire conveyor while it is disassembled.
- Thoroughly clean conveyor inside and outside during repair. Remove any impacted dirt from knurls on outside diameter of pulley.
- Replace all worn and damaged parts.
- Check all bearings for smooth operation.
- To minimize downtime when multiple same-size conveyors are used, stock a complete conveyor that can be exchanged with damaged conveyor. Damaged conveyor can be repaired at your convenience.

## Conveyor Belt Replacement Procedure

### Belt Removal for Conveyor Only (No Stands or Gearmotor Mounting Package)

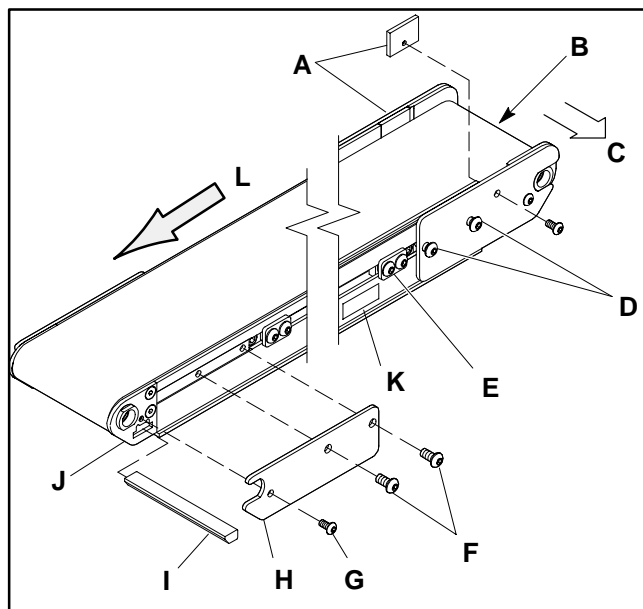


Figure 18

1. If you are working on a high-side conveyor, remove filler plates (A of Figure 18).
2. If engaged, loosen belt tracking cam assemblies (E) on both sides of tensioning end (B), identified with a label (K), and slide them toward middle of conveyor.
3. Loosen tail cover plate screws (D) on both sides of tensioning end of the conveyor.
4. Position tensioning end (B) of conveyor by pushing it back into conveyor frame. This loosens belt sufficiently for removal.
5. Find bottom wiper (I) at discharge end of conveyor. Remove tail cover plate screws (F and G) on one side of conveyor. Remove tail cover plate (H) and slide out bottom wiper (I) through hole in tail plate (J).
6. Remove old belt by sliding it sideways (C) from conveyor.

### Belt Removal for End Drive Conveyors with Gearmotors and/or Support Stands



## WARNING



To prevent injury, make sure all electrical power sources have been disconnected and locked-out before you perform any maintenance, make any adjustments or replace any components.

In addition, the weight of the gearmotor is all on one end of the conveyor. This could cause the conveyor to tip off the stands when the mounting clamps are removed. Be sure to provide some form of support (P of Figure 20) underneath the gearmotor while the belt is being changed.

**NOTE:** For a conveyor under 4 ft (1,220 mm) long, it may be more convenient to completely detach conveyor from support stands and remove entire assembly to clean workbench for conveyor belt replacement.

1. Disconnect and lockout electrical power source.
2. To facilitate re-assembly, mark critical locations on conveyor frame and remove guiding, controls, stops and other attached accessories which would interfere with belt removal on side opposite (R of Figure 20) drive assembly.
3. If you are working on a high-side conveyor, remove filler plates (A of Figure 18).
4. If engaged, loosen belt tracking cam assemblies (E) on both sides of tensioning end (B), identified with a label (K), and slide them toward middle of conveyor.

# Preventive Maintenance & Adjustment

5. Loosen tail cover plate screws (D) on both sides at tensioning end.
6. Re-position tensioning end (B) of conveyor by pushing it back into conveyor frame using the heel of your hand. This loosens belt sufficiently for removal.

**NOTE:** For conveyor with a Heavy Load Bottom or Top Mount Package, bracket (N of Figure 19) must be removed.

- ▮ Remove two (2) M6 x 16 mm socket head screws (M).
- ▮ Remove two (2) M6 x 12 mm socket head screws (O).
- ▮ Remove bracket (N).

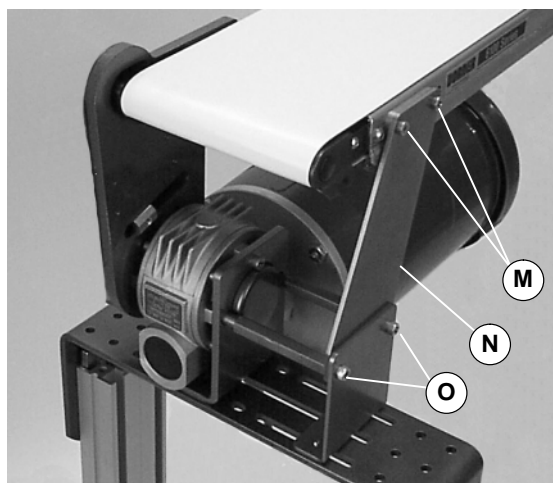


Figure 19

7. Find and remove bottom wiper (I of Figure 18) at discharge end of conveyor. Remove tail cover plate screws (F and G) on one side of conveyor. Remove tail cover plate (H) and slide out bottom wiper (I) through hole in tail plate (J).
8. Loosen mounting clamp plate screws (Q of Figure 20) on side of conveyor opposite drive assembly. Screws only need to be loosened far enough to allow conveyor to clear mounting clamp plates.

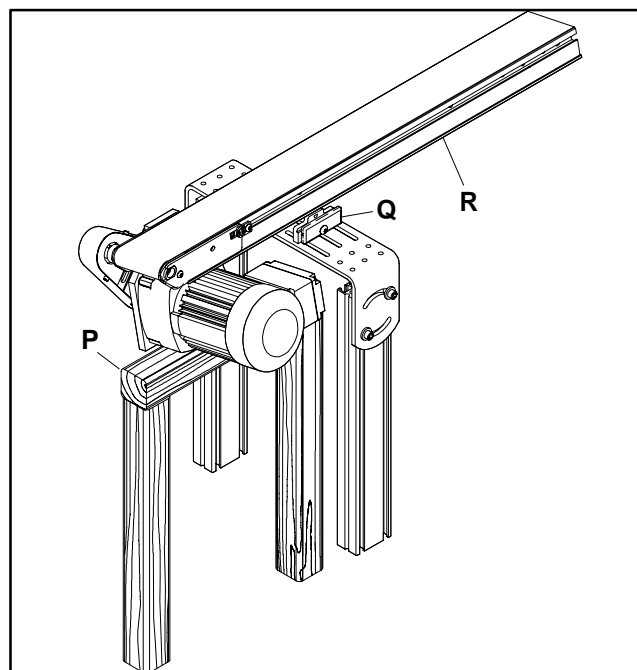


Figure 20



**WARNING**



To prevent injury from support stand tipping-over when the conveyor is uncoupled, be sure to anchor stand to floor or otherwise properly stabilize stand before it is detached from the conveyor.

9. Carefully loosen mounting clamp plate screws on drive side of conveyor. Loosen just far enough to allow conveyor to be safely tipped for belt removal.
10. Remove old belt by sliding it off the side opposite drive assembly.
11. Continue with following “Belt Replacement for All End Drive Conveyors” section.

## Belt Replacement for All End Drive Conveyors

1. Orient replacement belt so belt splice leading fingers (T of Figure 21) point in direction of belt travel (L), towards bottom wiper end (U) of conveyor, and that outside fingers (V) are positioned as shown.

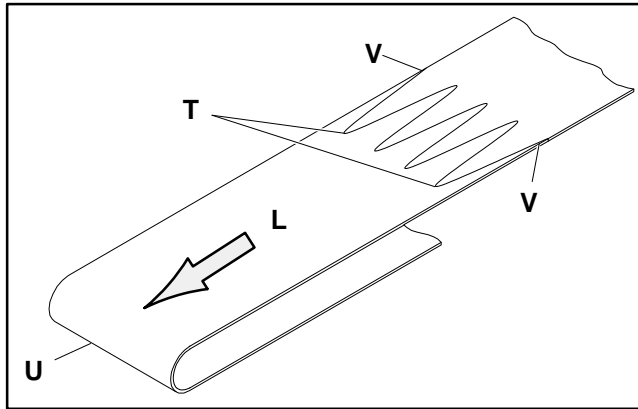


Figure 21

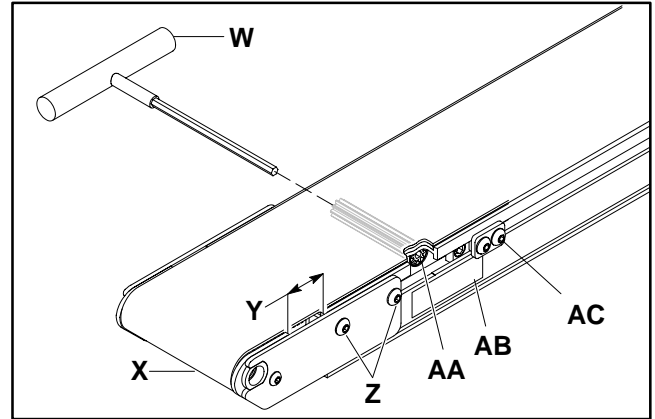


Figure 22

2. Install new belt by sliding it sideways onto conveyor frame assembly onto side opposite drive assembly (R of Figure 20). Push conveyor back down onto mounting clamp blocks being careful not to pinch conveyor belt. Fully tighten clamp plate screws to secure mounting clamp plate (Q of Figure 20) to clamp block.
3. Re-install bottom wiper (I of Figure 18) and tail cover plate (H).
4. Ensure all hardware is fully tightened except tail cover plate screws (F) on tensioning end of conveyor.
5. Refer to "Conveyor Belt Tension for End Drive Conveyors," page 11, and set conveyor belt tension.
6. If you are working on a high-side conveyor, replace filler plates (A of Figure 18).
7. Replace guiding, controls, stops and other attached accessories referring to positions previously marked.
8. Re-connect electrical power source.
9. Refer to "Start-up & Preliminary Belt Tracking Check" section on page 5.

## Conveyor Belt Tension for End Drive Conveyors

1. Locate tension end (X of Figure 22) of conveyor, identified with a label (AB).

2. If engaged, loosen and slide belt tracking cam assemblies (AC) towards center of conveyor on both sides of tension end (X).
3. Loosen tail cover plate screws (Z) on both sides of tension end (X).
4. Insert a hex key wrench (W) into either end of pinion (AA).
5. Rotate pinion (AA) to extend tensioning end until gap (Y) between pulley plate and conveyor frame measures 1.19" (30 mm) for a new end-driven belt or any center driven belt, or as required to stop drive pulley slippage.
6. Refer to Troubleshooting Guide on page 19 for additional belt slippage information.

**NOTE: Over-tensioning adds unnecessary loading to the pulley bearings.**

7. While holding pinion (AA) in tensioned position, tighten cover plate screws (Z) on both sides of conveyor. Torque screws to approximately 18 in/lb (2.03 Nm).
8. If you are working on a high side conveyor, replace filler plates. Refer to Figure 18 in "Belt Removal for Conveyor Only (No Stands or Gearmotor Mounting Package)" on page 9.
9. Position belt tracking cam against the slide bar while making sure groove is correctly oriented. See Figure 23 on page 12. Then, secure the belt tracking cam assemblies into position on both sides of the conveyor.
10. Refer to the "Start-up & Preliminary Belt Tracking Check" section on page 5.

# Preventive Maintenance & Adjustment

## Conveyor Belt Tracking Adjustment

Make sure the belt is properly tensioned and that the conveyor is straight and level in all directions within the confines of the conveyor.

This conveyor is equipped with an articular linkage which allows the pulley to be positioned at a slight angle to facilitate belt tracking.

If you are working on a low side conveyor, re-install the belt tracking guide assemblies following the details on page 11.

Check both ends of the conveyor for proper belt tracking. The belt should track centered between the tail plates on both ends of the conveyor. Conveyor belt tracking should always be adjusted on the discharge end, as determined by the direction of belt travel (L of Figure 23) of conveyor first. Then, check the tracking on the opposite (infeed) end of the conveyor and readjust it, if necessary.

Before proceeding to adjust the belt tracking, make sure the cover plate screws (Z) on both sides of the conveyor are tightly secured. Then, adjust belt tracking as follows:

1. Loosen (but do not remove) the two (2) cam clamping plate screws (AD) on both sides of the conveyor discharge.
2. Slide both belt tracking cam assemblies (AC) as far as they can be toward the end of the conveyor.
3. The belt tracking cam (AE) must be set to the low point at the point of contact as illustrated. The slot (AF) in the belt tracking cam should be horizontal and pointing towards the end of the conveyor.
4. Tighten the two (2) cam clamping plate screws (AD), on both sides of the conveyor.
5. **Only loosen the two tail cover plate screws (Z of Figure 23) on the side of the conveyor that the belt is tracking toward.**
6. With the conveyor running, use the 5 mm hex key wrench (W of Figure 22) to slowly rotate the belt tracking cam (AE of Figure 23). Rotate the cam in small increments, in either direction to cause the belt to track away from the conveyor side, until the belt tracks in the center of the conveyor. Always allow the conveyor belt to make several revolutions between adjustments.

**IMPORTANT:** Rotate belt tracking cam very slowly and in small increments, to prevent the belt from moving beyond the desired centered position.

7. Tighten the tail cover plate clamp screws (Z) and re-check the belt tracking.
8. Re-check belt tracking, on opposite end of the conveyor, and adjust if needed.

**NOTE:** Carefully feel the conveyor ends for hot spots and belt edge wear which would indicate that the conveyor belt is rubbing against the conveyor frame and thus tracking improperly. Repeat the tracking adjustment, if necessary.

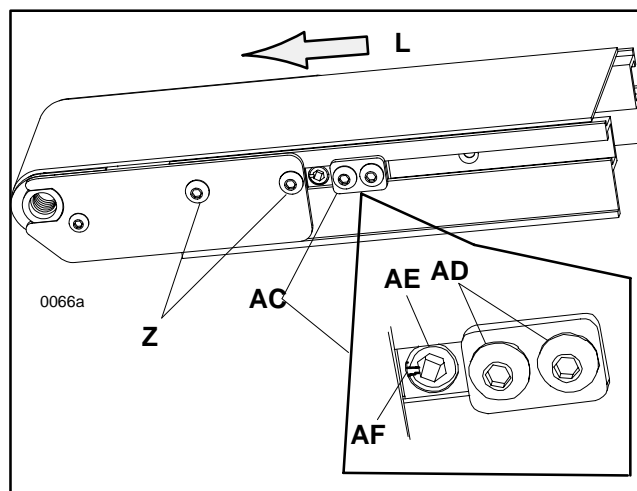


Figure 23

## Outboard Drive Shaft Replacement

### Removal

Removal of the outboard drive shaft (C of Figure 24 and M of Figure 25) requires use of Dorner hex key wrench extension tool (A of Figure 24 and L of Figure 25).

For replacement of hex key wrench extension tool use part number † 25-08 for conveyors 2" (44 mm) to 12" (305 mm) wide, or part number ‡ 25-08A for conveyors wider than 12" (305 mm).

### Type 1 Outboard Drive Shaft

#### For 2" through 12" Wide Conveyors

1. Insert the small end (B of Figure 24) of hex key wrench extension tool (A) into the spindle (H) end opposite the outboard drive shaft assembly (C) and

# Preventive Maintenance & Adjustment

remove special spindle screw (D) and washers (E and F).

2. Pull the outboard drive shaft assembly (C) out from the outboard bearing retaining sleeve (G).

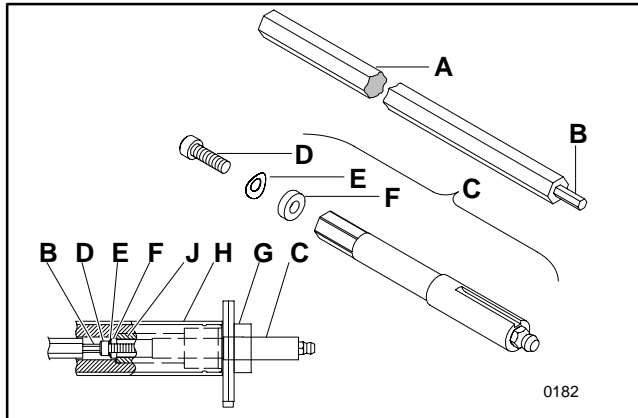


Figure 24

## Type 2 Outboard Drive Shaft

### For 18" through 24" Wide Conveyors

3. Remove the outboard drive shaft assembly (M of Figure 25) by inserting the blunt end (K) of the hex key wrench extension tool (L) into the spindle (Q) end opposite the outboard drive shaft assembly (M).
4. While pushing in the spring loaded plunger (N) with the hex key wrench extension tool (L), pull out the outboard drive shaft assembly (M).

## Installation

For outboard drive shaft assembly (C of Figure 24 and M of Figure 25) installation, the spindle (H of Figure 24 and Q of Figure 25) may have to be turned around in the conveyor frame. The hex bore (J of Figure 24 and R of Figure 25) is off center on spindles for conveyors measuring 5" (127 mm) and wider. If necessary, remove the spindle following the "Spindle Removal Procedure" on page 14, turn it around, and replace it following the "Spindle Replacement Procedure" on page 16.

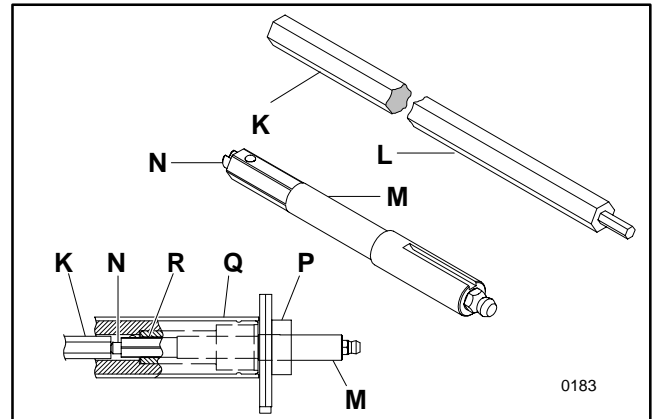


Figure 25: Type 2 for 15 to 25" (381 to 610 mm) Wide Conveyors

Conveyor Width	Insert Shaft at Spindle End
2" (44 mm) to 4" (95mm)	Either
5" (127mm) and wider	Closest to hex bore

Install the outboard bearing retaining sleeve in the desired drive location. Be sure the spindle hex bore (J of Figure 24 and R of Figure 25) is properly located as indicated in the previous chart.

## Type 1 Outboard Drive Shaft

### For 2" through 12" Wide Conveyors

1. Push the outboard drive shaft assembly (C of Figure 24) into the outboard bearing retaining sleeve (G).
2. Place the curved spring washer (E), then the flat hard washer (F) onto the special spindle screw (D). Turn the screw/washer set into the outboard drive shaft assembly (C) using the small end (B) of hex key wrench extension tool (A). Tighten the screw until it is just seated in the shaft [80 in/lb (9 Nm) maximum] which fully compresses the spring washer. Then, back off the screw 1/2 turn (180°).

**NOTE:** Replace the screw after it has been removed and replaced several times.

## Type 2 Outboard Drive Shaft

### For 18" through 24" Wide Conveyors

1. Insert the blunt end (K of Figure 25) of the hex key wrench extension tool (L) into the end of the spindle (Q) opposite the outboard bearing retaining sleeve (P).
2. Exert inward pressure on the hex key wrench extension tool (L) to release the spring loaded plunger (N), at the same time push inward on the outboard drive shaft assembly (M) until it is fully seated.

# Preventive Maintenance & Adjustment

3. The hex key wrench extension tool (L) may now be removed. Make sure outboard drive shaft assembly (M) is locked in position by pulling outward on the assembly.

‡ - Part of Tool Kit, Part Number 2500.

♠ - Shipped with conveyors wider than 12" (305 mm).

## Pulley Removal Procedure

1. Remove conveyor belt. Refer to the "Conveyor Belt Replacement Procedure" topic beginning on page 9 for your type of gearmotor mounting package.
2. Remove the tail cover plate screws (S of Figure 26) and tail cover plates (T) on both sides of the conveyor.

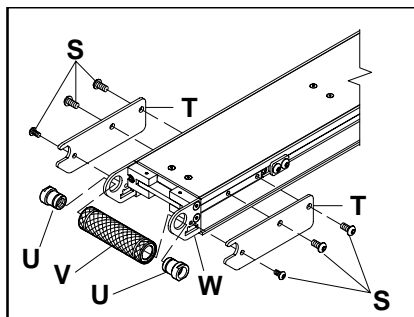


Figure 26

3. Remove the retaining sleeves (U) and pulley (V). If retaining sleeves are frozen, continue with the next step.
4. All non-driven positions have a plastic plug (X of Figure 27) installed into the ends of the pulley retaining sleeves (Y). Use a small flat screwdriver to remove this plug.

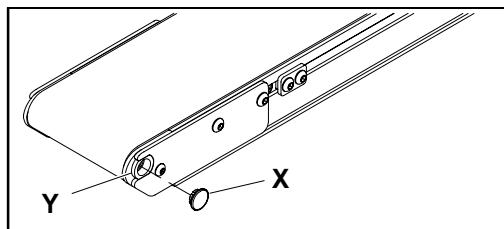


Figure 27

5. Position the bearing anvil/sleeve removal tool (AE of Figure 28), part number ‡ 25-09, over the retaining sleeve (U of Figure 26 or AB of Figure 28).

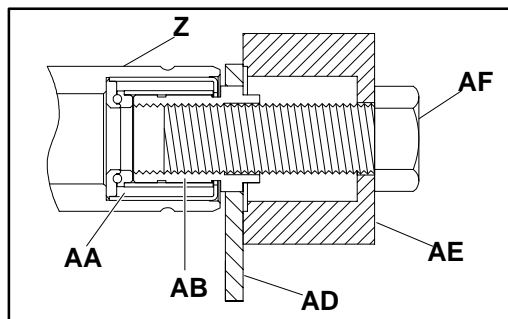


Figure 28

6. Insert the special threaded bolt (AF of Figure 28), part number ‡ 906-278, through the bearing anvil/sleeve removal tool (AE) and into the retaining sleeve (AB).
7. Tighten the bolt (AF) until the retaining sleeve (AB) is free of the tail pulley plate (AD).
8. Remove the retaining sleeve (AB) from the bolt (AF) and repeat for the other side.
9. Take pulley (Z) out of the conveyor frame.

## Pulley Bearing Replacement

Bearings in the pulleys on the 2" (44 mm) wide conveyor cannot be replaced. If the bearings are worn, the entire pulley must be replaced. Refer to Pulley Assembly chart on page 21 for the correct part number for your conveyor.

Bearings in pulleys on the 3" (70 mm) and wider conveyors can be removed with Dorner Bearing Removal Tool (AG of Figure 29), part number ‡ 25-05.

## Removal

Use procedure below to remove pulley bearings:

1. Make sure that the flair (AI) on the bearing removal tool is completely closed. If it is slightly open it may not fit into the bearing (AL of Figure 30). Use the hex key wrench extension tool (AJ), either part number ‡ 25-08 or ♠ 25-08A and loosen the tapered screw (AH of Figure 29) while compressing the flair (AI) inward to make sure that the tool is completely closed.

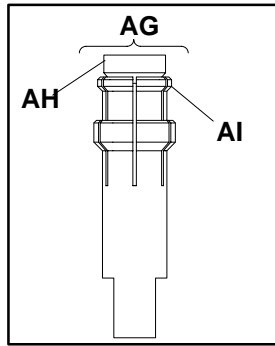


Figure 29

2. Insert bearing removal tool (AK of Figure 30) into the pulley (AM) through bearing (AL).

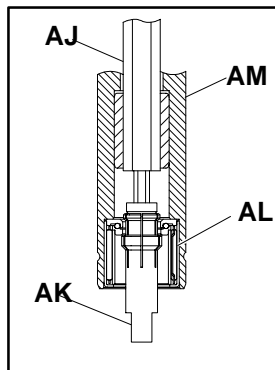


Figure 30

† - Part of Tool Kit, Part Number 2500M-ENG.

◇ - Shipped with conveyors wider than 12" (305 mm).

While holding the hex key wrench extension tool (AV of Figure 31), part number † 25-08 or ◇ 25-08A, rotate bearing removal tool using flats (AQ) to tighten the bearing removal tool's tapered screw (AT) until the flair (AN) of the tool is completely spread open behind the bearing (AS).

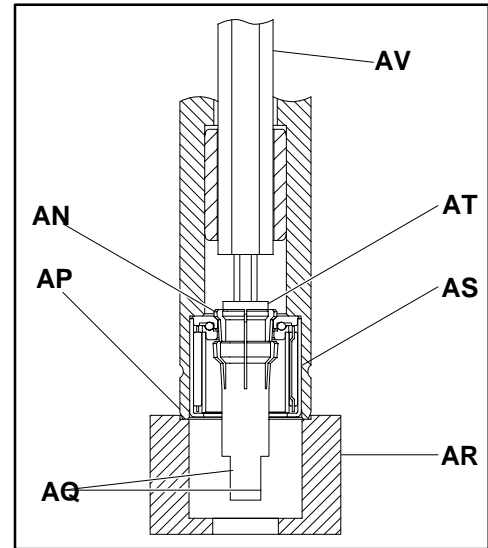


Figure 31

3. Support pulley end (AP) with bearing anvil/sleeve removal tool (AR), part number † 25-09. Using an arbor press or drill press, press bearing (AS) out of the pulley into bearing anvil/sleeve removal tool (AR).

**IMPORTANT:** Heavy tapping or hammering will damage the hex key wrench extension tool (AV) and/or bearing (AS).

## Installation

Use the following procedure to install pulley bearings (AX of Figure 32).

1. Hold the pulley (BA) in an upright position with "V" block or other means. Support the bottom end of pulley (BA) using the bearing anvil/sleeve removal tool (AR of Figure 31), part number † 25-09.
2. Install the bearing insertion tool (AW of Figure 32), part number † 25-10 in an arbor press or drill press. Then, align bearing insertion tool (AW) with pulley bore (AZ).
3. Slide bearing (AX) onto the bearing insertion tool (AW).

# Preventive Maintenance & Adjustment

**NOTE:** Keep bearings (AX) and pulley (BA) aligned when installing. Misalignment tilts bearing and may result in bearing damage.

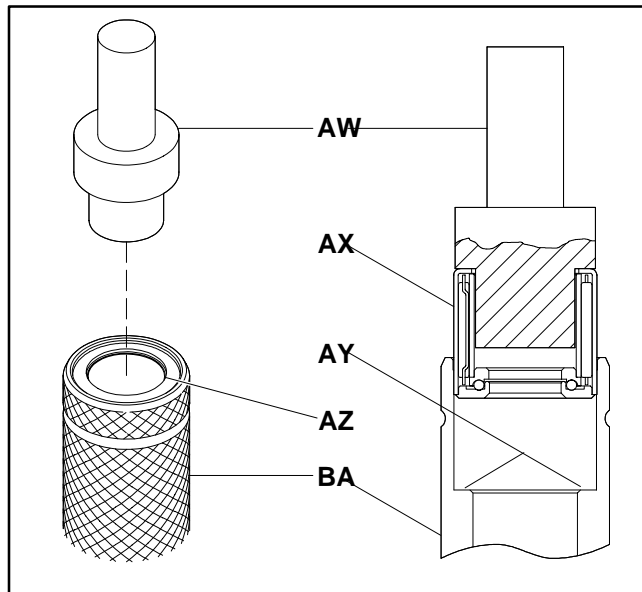


Figure 32

4. Press bearing (AX) firmly and slowly into pulley (BA) until it bottoms out on pulley shoulder (AY). If bearing fits too loosely in the pulley bore (AZ) or if the bore is out of round, the pulley must be replaced.

## Pulley Replacement Procedure

Refer to Figure 26 on page 14 to install pulleys as described below:

**NOTE:** If outboard drive shaft is being replaced, be sure hex broach in pulley is oriented correctly. Refer to “Outboard Drive Shaft Replacement” section on page 12.

1. Insert pulley (V of Figure 26) between the tail pulley plates (W).
2. Slide the retaining sleeves (U) through openings in the tail pulley plates (W) and into the pulley (V) on each side.
3. Install the plastic plug (X of Figure 27) into the ends of the pulley retaining sleeves (Y).
4. Secure the tail cover plates (T of Figure 26) to the conveyor with tail cover plate screws (S).

5. Install the conveyor belt. Refer to the “Conveyor Belt Replacement” topic beginning on page 9, the “Conveyor Belt Tension for End Drive Conveyors or Conveyor Belt Slack Take-up for Center Drive Conveyors” topic on page 11, and the “Conveyor Belt Tracking” procedure beginning on page 12.

† - Part of Tool Kit, Part Number 2500M-ENG.

‡ - Shipped with conveyors wider than 12” (305 mm).

## Timing Belt Tension Adjustment

**WARNING**

To prevent injury, make sure all electrical power sources have been disconnected and locked-out before you perform any maintenance, make any adjustments or replace any components.

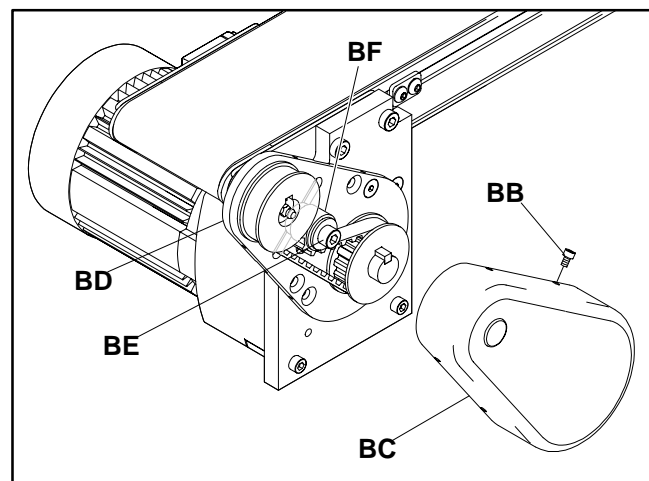


Figure 33

**NOTE:** The following information applies to both top (Figures 34 & 35) mounting and bottom mounting (Figures 36 & 37) packages. The position of the tensioning bearing assembly (BF) with respect to the timing belt (BG) is dictated by the direction of conveyor belt travel (L).

6. Disconnect power. Then, remove the screws (BB of Figure 33) securing the belt guard (BC). Then, remove the belt guard.
7. Check the timing belt for wear. Replace if worn.
8. Loosen the cap screw (BE) which secures the tensioning bearing assembly (BF).



# Preventive Maintenance & Adjustment

- Slide the tensioning bearing assembly (BF) against the timing belt (BG), until the deflection of the belt at the midpoint of the section of belt (BH) (opposite the tensioning bearing assembly) is 1/8" (3 mm) for a 1 lb (0.5 kg) force applied at that point. For optimum performance, the timing belt should be tensioned so as to prevent jumping of teeth under the most severe conditions which the drive will encounter.

**NOTE:** Over-tensioning timing belt may cause reduced belt life or bearing and drive damage and early failure.

- Tighten the tensioning bearing assembly cap screw (BE of Figure 33) with 18 ft-lb (24 Nm) of torque.
- Re-assemble the belt guard (BC) and belt guard screws (BB) to the back guard plate (BD).

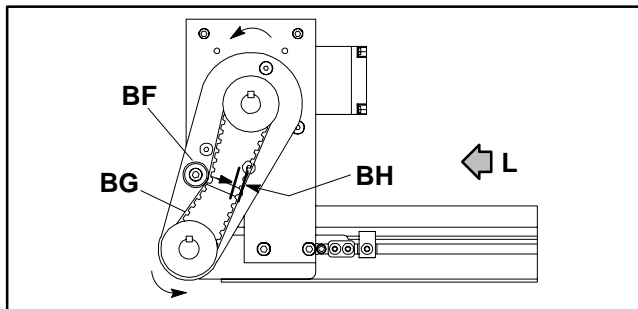


Figure 34

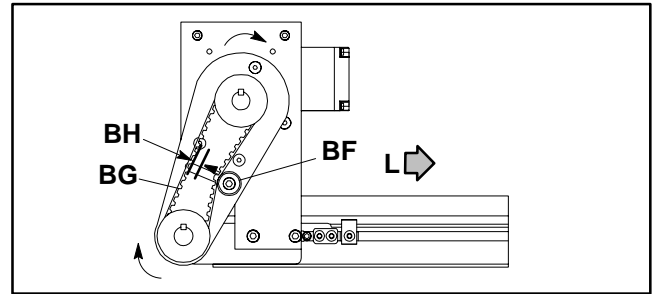


Figure 35

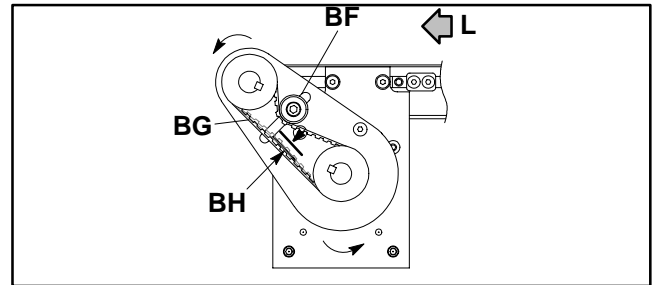


Figure 36

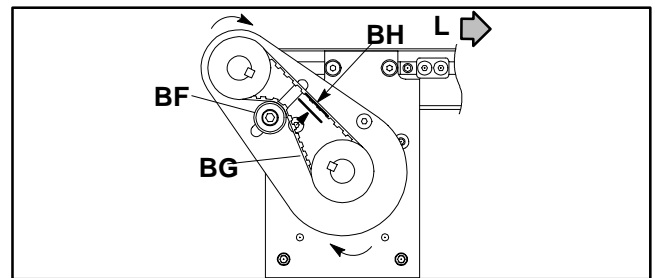


Figure 37

# Troubleshooting Guide

## Bearings

Problem	Possible Cause	Solution
Bearing failure	Grit getting into bearing.	Side wipers and bottom wiper may be needed along with increased frequency of lubrication.
	Solvent getting into bearings.	Same as above. Keep greasing adapters in retaining sleeves. Install guards and tilt conveyor to reduce amount of solvent on conveyor.
	Drive shaft misaligned or excessive side force on shaft and couplings.	Be sure spindle, sleeves and bearings are correctly installed and shaft is aligned. Flexible or Universal couplings may be required.
	Excessive heat in application.	Increase frequency of lubrication.
	Damage due to improper re-assembly.	Use tool kit for proper re-assembly.
Bearing seizure.	Grit getting into bearings. Failure to lubricate bearings periodically.	Lubricate bearings periodically.

## Gearmotors

	<b>WARNING</b>	
<b>Remove power before attempting to re-wire motor or system electrical control.</b>		

Problem	Possible Cause	Solution
Motor cuts out intermittently.	Overloading.	Check conveyor load. Use torque wrench to determine input torque. Check for guides or accessories rubbing on belt. Check belt tracking.
	Improper cooling.	Check motor operation and ambient temperature.
Motor running hot, above 170°F (77°C).	Overloading.	Check amperage draw, replace motor, reduce conveyor load.
	Jammed part.	Remove jam.
	Incorrect voltage/wiring.	Check wiring diagram. Replace motor or change wiring.
	Improper cooling.	Reduce excessive ambient temperature.
Conveyor runs in wrong direction.	Improper wiring.	Check wiring diagram.

## Conveyor Belt

Problem	Possible Cause	Solution
Belt slipping.	Belt is too loose.	Adjust belt tension. If belt is still loose, replace belt. <b>Note: Belt may have stretched. See “Belt stretching” problem below.</b>
	Dirt impacted in knurl on end of driven spindle.	Clean spindle.
	Knurl worn on spindle.	Replace spindle.
	Excessive weight on conveyor. <b>Note: May be a combination of drive “pushing” belt or magnets too strong for application.</b>	Reduce weight on conveyor by reducing production rate, or increasing belt speed.
	Drive is “pushing” belt. <b>Note: May be a combination of this and excessive weight on conveyor.</b>	Move end drive to discharge end of conveyor. Turn center drive 180° so gearmotor and driven spindle are towards discharge end.
	Magnets too strong for application.	Increase belt speed or replace magnetic bedplate.
	Debris wedged in belt path or in conveyor.	Clean conveyor and install chute and/or wipers.
Belt stretching.	Solvent or chemical reaction with belt.	Remove solvent or try a different belt material. Test solvent with belt sample. <b>Note: A belt-type conveyor may not be applicable.</b>
	Belt repeatedly stalled, causing spindle to wear or “burn” in to backside of belt.	Replace belt and identify reason for stalling.
Cuts on belt surface.	Parts getting caught in bottom wiper	Replace wiper.
	Bottom wiper is damaged, missing or on wrong end of the conveyor.	Replace wiper. <b>Note: Conveyor belt should always be run towards bottom wiper.</b>
	Parts getting under belt. Wiper shears top surface leaving marks in belt surface.	High sides, side wipers or side deflectors may be needed.
	Side wipers damaged or missing which is allowing material to get under belt.	Replace or add wipers, as needed.
	Sharp parts penetrating belt surface.	Install baffle to reduce energy of falling part.
	Guides or accessories rubbing on belt.	Re-adjust guides, as necessary.
Worn belt edges.	Debris impacted on spindles causing belt tracking problems.	Clean spindles. Correct source of contamination. See “Belt tracking incorrectly” problem below.
	Belt tracking incorrectly.	Refer to the “Conveyor Belt Tracking” topic beginning on page 12.
Belt breaking at splice.	Solvent or chemical reaction with belt.	Remove solvent or try a different belt material. Test solvent with belt sample. <b>Note: A belt-type conveyor may not be applicable.</b>
Belt tracking incorrectly.	Spindles not perpendicular to conveyor center line.	Inspect spindles and/or sleeves. Reposition spindles or reinstall sleeves, if necessary.
	Frame misalignment. <b>Note: Frame mounting surface may be misaligned.</b>	Frame mounting must be straight and in same plane. Check this with a straight edge and level.
	Frame distortion due to damage.	Repair or replace frame components and/or bed plate. Check with a straight edge.
	Side force being applied to belt.	Check for jammed part or mechanical pusher force on belt.
	Belt tracking cam incorrectly adjusted.	Refer to the “Conveyor Belt Tracking” topic beginning on page 12.

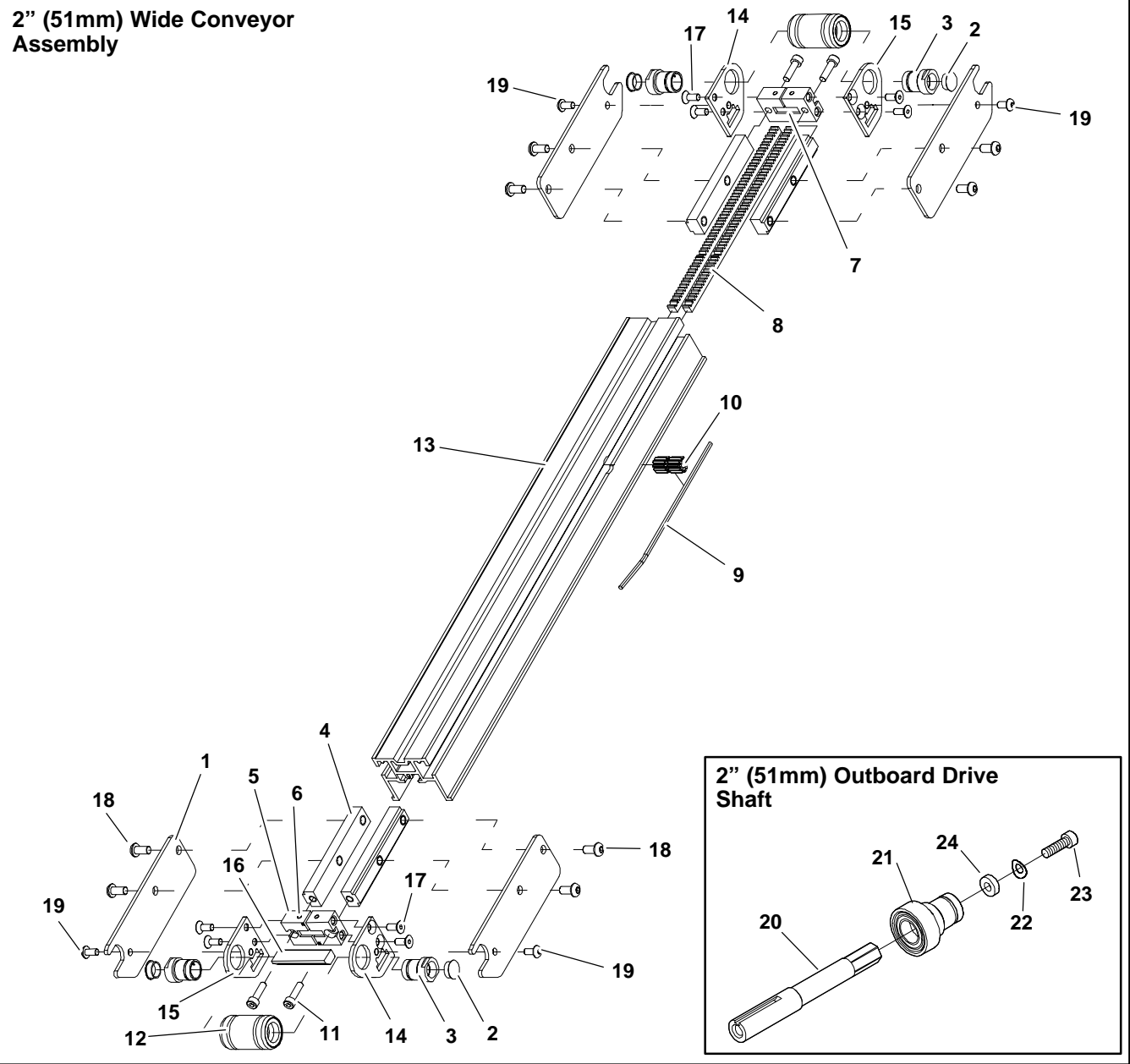
## Timing Belt

Problem	Possible Cause	Solution
Intermittent conveyor belt travel.	Timing belt is too loose.	Adjust belt tension. Refer to “Timing Belt Tension Adjustment for Top or Bottom Mounting Packages” topic on page 16.
	Worn or damaged timing (drive) belt.	Replace defective timing belt.

# Service Parts

NOTE: For replacement parts other than those shown on this page, contact an authorized Dorner Service Center or the factory.

## 2" (51mm) Wide Conveyor Assembly



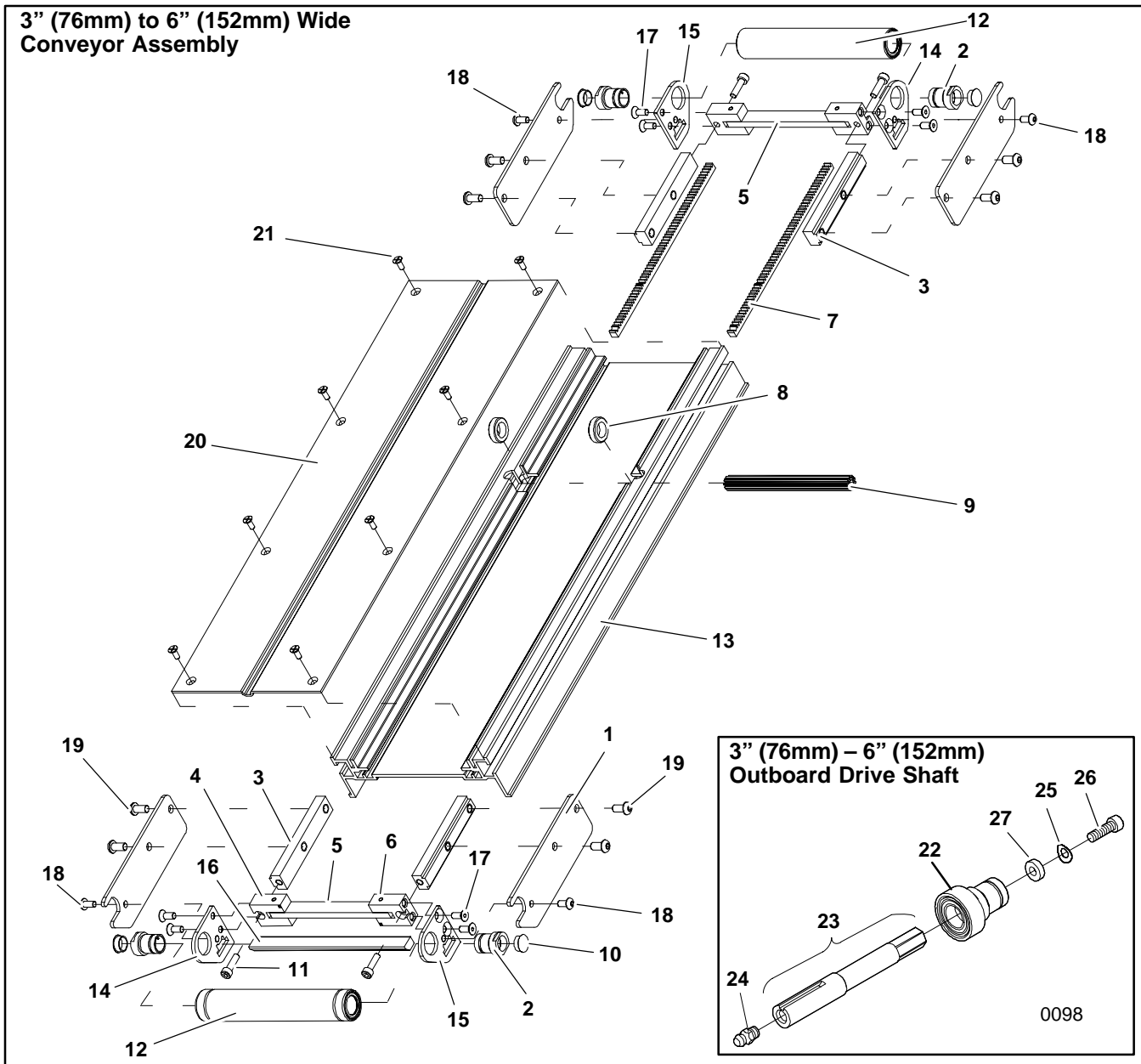
Item	Part Number	Description
1	200030	Cover Plate, SAE
	200030M	Cover Plate, Metric
	200351	Cover Plate, Notched (Only 2' (610mm) Long Conveyor), SAE
	200351M	Cover Plate, Notched (Only 2' (610mm) Long Conveyor), Metric
2	807-784	Plastic Plug
3	200035	Pulley Spindle Retaining Sleeve
4	241129	Tension Slide Bar, SAE
	241128	Tension Slide Bar, Metric
5	200659	Mounting Block, SAE
	200659M	Mounting Block, Metric
6	200695P	Knurl Pin
7	201472	Flex Link Bar
8	240420	Rack Gear 14.5 PA x 24 P
9	240422	Pinion Pin
10	240423	Pinion 2" (51mm)
11	902-112	Socket Head Screw #10-32 x .75"
	920518M	Socket Head Screw M5 x 18mm
12	21-2-34	Spindle 2" (51mm)
13	See Chart Below	2" (51mm) Frame
14	200027	Tail Plate, SAE, RH
	200027M	Tail Plate, Metric, RH
15	200028	Tail Plate, SAE, LH
	200028M	Tail Plate, Metric, LH
16	203502	Bottom Wiper

17	903-108	Flat Head Screw #10-32 x .50"
	930512M	Flat Head Screw M5 x 12mm
18	901-129	Button Head Screw 1/4-20 x .50"
	910612M	Button Head Screw M6 x 12mm
19	901-106	Button Head Screw #10-32 x .38"
	910510M	Button Head Screw M5 x 10mm
20	43-38-2-12	.5" DIA Outboard Drive Shaft for 2" (44mm) Wide Conveyor
	216202M	12mm DIA Outboard Drive Shaft for 2" (44mm) Wide Conveyor
21	200223	Outboard Bearing Retaining Sleeve
22	807-247	Curved Spring Washer
23	902-902	Socket Head Cap Screw #10-32 x .63"
24	43-38-06	Flat Hard Washer

Item 13: 2" (51mm) Conveyor Frame	
Length	Part Number
2' (610mm)	240402-01908
3' (914mm)	240402-03108
4' (1219mm)	240402-04308
5' (1524mm)	240402-05508
6' (1829mm)	240402-06708
7' (2134mm)	240402-07908
8' (2438mm)	240402-09108
9' (2743mm)	240402-10308
10' (3048mm)	240402-11508
11' (3353mm)	240402-12708
12' (3658mm)	240402-13908

# Service Parts

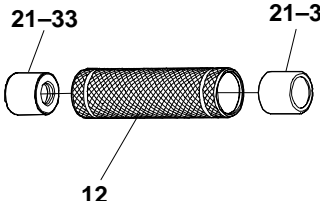
## 3" (76mm) to 6" (152mm) Wide Conveyor Assembly



Item	Part Number	Description
1	200030	Cover Plate, SAE
	200030M	Cover Plate, Metric
	200351	Cover Plate, Notched (Only 2' (610mm) Long Conveyor), SAE
	200351M	Cover Plate, Notched (Only 2' (610mm) Long Conveyor), Metric
2	200035	Pulley Spindle Retaining Sleeve
3	241129	Tension Slide Bar, SAE
	241128	Tension Slide Bar, Metric
4	200659	Mounting Block, SAE
	200659M	Mounting Block, Metric
5	207603	Flex-Link Bar 3" (76mm)
	207604	Flex-Link Bar 4" (102mm)

	207605	Flex-Link Bar 5" (127mm)
	207606	Flex-Link Bar 6" (152mm)
6	200695P	Knurl Pin
7	240420	Rack Gear 14.5 PA x 24 P
8	240421	Pinion Bushing
9	203003M	Gear Pinion 3" (76mm)
	203004M	Gear Pinion 4" (102mm)
	203005M	Gear Pinion 5" (127mm)
	203006M	Gear Pinion 6" (152mm)
10	807-784	Plastic Plug
11	902-112	Socket Head Cap Screw #10-32 x .75"
	920518M	Socket Head Cap Screw M5 x 18mm

12	See chart below	Spindle Assembly
13	See chart below	Conveyor Frame
14	200028	Tail Plate, SAE, LH
	200028M	Tail Plate, Metric, LH
15	200027	Tail Plate, SAE, RH
	200027M	Tail Plate, Metric, RH
16	203503	Bottom Wiper 3" (76mm)
	203504	Bottom Wiper 4" (102mm)
	203505	Bottom Wiper 5" (127mm)
	203506	Bottom Wiper 6" (152mm)
17	903-108	Flat Head Screw #10-32 x .50"
	930512M	Flat Head Screw M5 x 12mm
18	901-106	Button Head Screw #10-32 x .38"
	910510M	Button Head Screw M5 x 10mm
19	901-129	Button Head Screw 1/4-20 x .50"
	910612M	Button Head Screw M6 x 12mm
20	See chart below	Bed Plate
21	807-1074	Flat Head Screw M4 x 10mm
22	200223	Outboard Bearing Retaining Sleeve
23	43-38-3-15	.5" DIA Outboard Drive Shaft for 3" (70mm) Wide Conveyor
	43-38-4-16	.5" DIA Outboard Drive Shaft for 4" (102mm) - 12" (305mm) Wide Conv.
	216203M	12mm DIA Outboard Drive Shaft for 3" (70mm) Wide Conveyor
	216204M	12mm DIA Outboard Drive Shaft for 4" (102mm) - 12" (305mm) Wide Conv.
24	810-292	Grease Fitting
25	807-247	Curved Spring Washer
26	902-902	Socket Head Cap Screw #10-32 x .63"
27	43-38-06	Flat Hard Washer

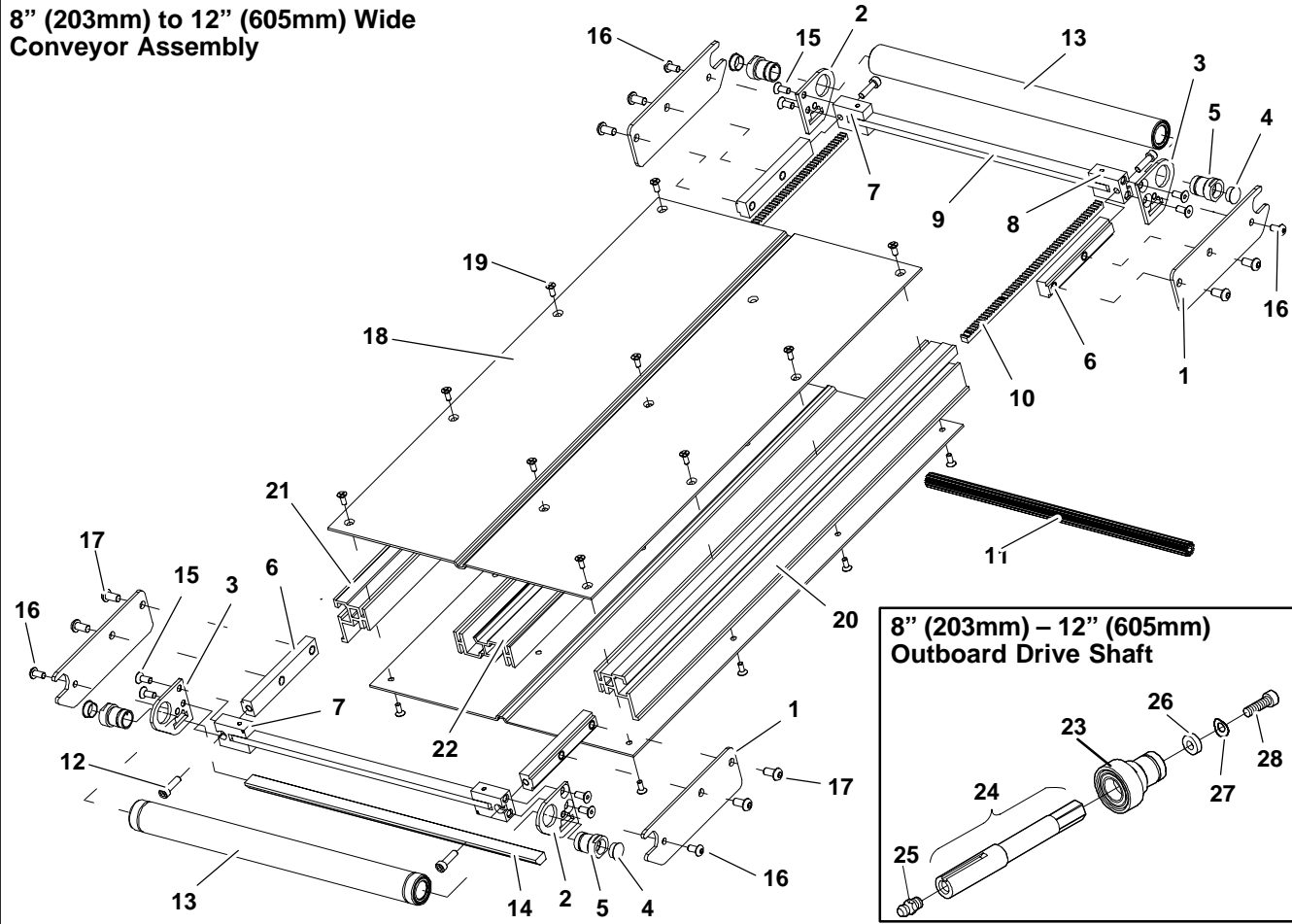
		
Item 12: Spindle Assembly		
Width	With Bearings (21-33)	Without Bearings
3" (76mm)	21-3-34	21-3-28
4" (102mm)	21-4-34	21-4-28
5" (127mm)	21-5-34	21-5-28
6" (152mm)	21-6-34	21-6-28

Item 13: Conveyor Frame		
Length	Part Number	
2' (610mm)	2404WW-01908	
3' (914mm)	2404WW-03108	
4' (1219mm)	2404WW-04308	
5' (1524mm)	2404WW-05508	
6' (1829mm)	2404WW-06708	
7' (2134mm)	2404WW-07908	
8' (2438mm)	2404WW-09108	
9' (2743mm)	2404WW-10308	
10' (3048mm)	2404WW-11508	
11' (3353mm)	2404WW-12708	
12' (3658mm)	2404WW-13908	
13' (3962mm)	2404WW-06708	2404WW-07908*
14' (4267mm)	2404WW-06708	2404WW-09108*
15' (4572mm)	2404WW-06708	2404WW-10308*
16' (4877mm)	2404WW-06708	2404WW-11508*
17' (5182mm)	2404WW-06708	2404WW-12708*
18' (5486mm)	2404WW-06708	2404WW-13908*
WW = Conveyor width reference: 03, 04, 05, 06 * = 6" (152mm) and wider conveyors		

Item 20: Bed Plate		
Length	Part Number	
2' (610mm)	2405WW-01904	
3' (914mm)	2405WW-03104	
4' (1219mm)	2405WW-04304	
5' (1524mm)	2405WW-05504	
6' (1829mm)	2405WW-06704	
7' (2134mm)	2405WW-07904	
8' (2438mm)	2405WW-09104	
9' (2743mm)	2405WW-10304	
10' (3048mm)	2405WW-11504	
11' (3353mm)	2405WW-12704	
12' (3658mm)	2405WW-13904	
13' (3962mm)	2405WW-07196	2404WW-07904*
14' (4267mm)	2405WW-07196	2404WW-09104*
15' (4572mm)	2405WW-07196	2404WW-10304*
16' (4877mm)	2405WW-07196	2404WW-11504*
17' (5182mm)	2405WW-07196	2404WW-12704*
18' (5486mm)	2405WW-07196	2404WW-13904*
WW = Conveyor Width reference: 03, 04, 05, 06 * = 6" (152mm) and wider conveyors		

# Service Parts

## 8" (203mm) to 12" (605mm) Wide Conveyor Assembly

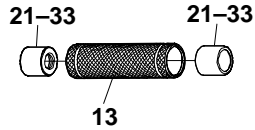


Item	Part Number	Description
1	200030	Cover Plate, SAE
	200030M	Cover Plate, Metric
	200351	Cover Plate, Notched (Only 2' (610mm) Long Conveyor), SAE
	200351M	Cover Plate, Notched (Only 2' (610mm) Long Conveyor), Metric
2	200027	Tail Plate, SAE, RH
	200027M	Tail Plate, Metric, RH
3	200028	Tail Plate, SAE, LH
	200028M	Tail Plate, Metric, LH
4	807-784	Plastic Plug
5	200035	Pulley Spindle Retaining Sleeve
6	241128	Tension Slide Bar, Metric
	241129	Tension Slide Bar, SAE
7	200659	Mounting Block, SAE
	200659M	Mounting Block, Metric
8	200695P	Knurl Pin
9	207608	Flex-Link Bar 8" (203mm)
	207610	Flex-Link Bar 10" (254mm)
	207612	Flex-Link Bar 12" (305mm)
10	240420	Rack Gear 14.5 PA x 24 P

11	203008M	Gear Pinion 8" (203mm)
	203010M	Gear Pinion 10" (254mm)
	203012M	Gear Pinion 12" (305mm)
12	902-112	Socket Head Cap Screw #10-32 x .75"
	920518M	Socket Head Cap Screw M5 x 18mm
13	See chart below	Spindle Assembly
14	203508	Bottom Wiper 8" (203mm)
	203510	Bottom Wiper 10" (254mm)
	203512	Bottom Wiper 12" (305mm)
15	903-108	Flat Head Screw #10-32 x .50"
	930512M	Flat Head Screw M5 x 12
16	901-106	Button Head Screw #10-32 x .38"
	910510M	Button Head Screw M5 x 10mm
17	901-129	Button Head Screw 1/4-20 x .50"
	910612M	Button Head Screw M6 x 12mm
18	See chart below	Bed Plate
19	807-1074	Flat Head Screw M4 x 10mm
20	See chart below	Side Rail RH 8-24" (203-610mm) Wide
21	See chart below	Side Rail LH 8-24" (203-610mm) Wide
22	See chart below	Center Rail 8-12" (203-305mm) Wide
23	200223	Outboard Bearing Retaining Sleeve



24	43-38-4-16	.5" DIA Outboard Drive Shaft for 4" (102mm) – 12" (605mm) Wide Conv.
	216204M	12mm DIA Outboard Drive Shaft for 4" (102mm) – 12" (605mm) Wide Conv.
25	810-292	Grease Fitting
26	43-38-06	Flat Hard Washer
27	807-247	Curved Spring Washer
28	902-902	Socket Head Screw #10-32 x .63"



Item 13: Spindle Assembly

Width	With Bearings (21-33)	Without Bearings
8" (76mm)	21-8-37	21-8-28
10" (102mm)	21-10-34	21-12-28
12" (127mm)	21-12-34	21-12-28

Item 11: Side Rail RH 8-24" (203-610mm) Wide

Length	Part Number
2' (610mm)	240412-01908
3' (914mm)	240412-03108
4' (1219mm)	240412-04308
5' (1524mm)	240412-05508
6' (1829mm)	240412-06708
7' (2134mm)	240412-07908
8' (2438mm)	240412-09108
9' (2743mm)	240412-10308
10' (3048mm)	240412-11508
11' (3353mm)	240412-12708
12' (3658mm)	240412-13908
13' (3962mm)	240412-07200 240412-07908
14' (4267mm)	240412-07200 240412-09108
15' (4572mm)	240412-07200 240412-10308
16' (4877mm)	240412-07200 240412-11508
17' (5182mm)	240412-07200 240412-12708
18' (5486mm)	240412-07200 240412-13908

Item 12: Side Rail LH 8-24" (203-610mm) Wide

Length	Part Number
2' (610mm)	240413-01908
3' (914mm)	240413-03108
4' (1219mm)	240413-04308
5' (1524mm)	240413-05508
6' (1829mm)	240413-06708
7' (2134mm)	240413-07908
8' (2438mm)	240413-09108
9' (2743mm)	240413-10308
10' (3048mm)	240413-11508
11' (3353mm)	240413-12708

12' (3658mm)	240413-13908
13' (3962mm)	240413-07200 240413-07908
14' (4267mm)	240413-07200 240413-09108
15' (4572mm)	240413-07200 240413-10308
16' (4877mm)	240413-07200 240413-11508
17' (5182mm)	240413-07200 240413-12708
18' (5486mm)	240413-07200 240413-13908

Item 13: Center Rail 8-12" (203-305mm) Wide

Length	Part Number
2' (610mm)	240414-01273
3' (914mm)	240414-02473
4' (1219mm)	240414-03673
5' (1524mm)	240414-04873
6' (1829mm)	240414-06073
7' (2134mm)	240414-07273
8' (2438mm)	240414-08473
9' (2743mm)	240414-09673
10' (3048mm)	240414-10873
11' (3353mm)	240414-12073
12' (3658mm)	240414-13273
13' (3962mm)	240414-07200 240414-07273
14' (4267mm)	240414-07200 240414-08473
15' (4572mm)	240414-07200 240414-09673
16' (4877mm)	240414-07200 240414-10873
17' (5182mm)	240414-07200 240414-12073
18' (5486mm)	240414-07200 240414-13273

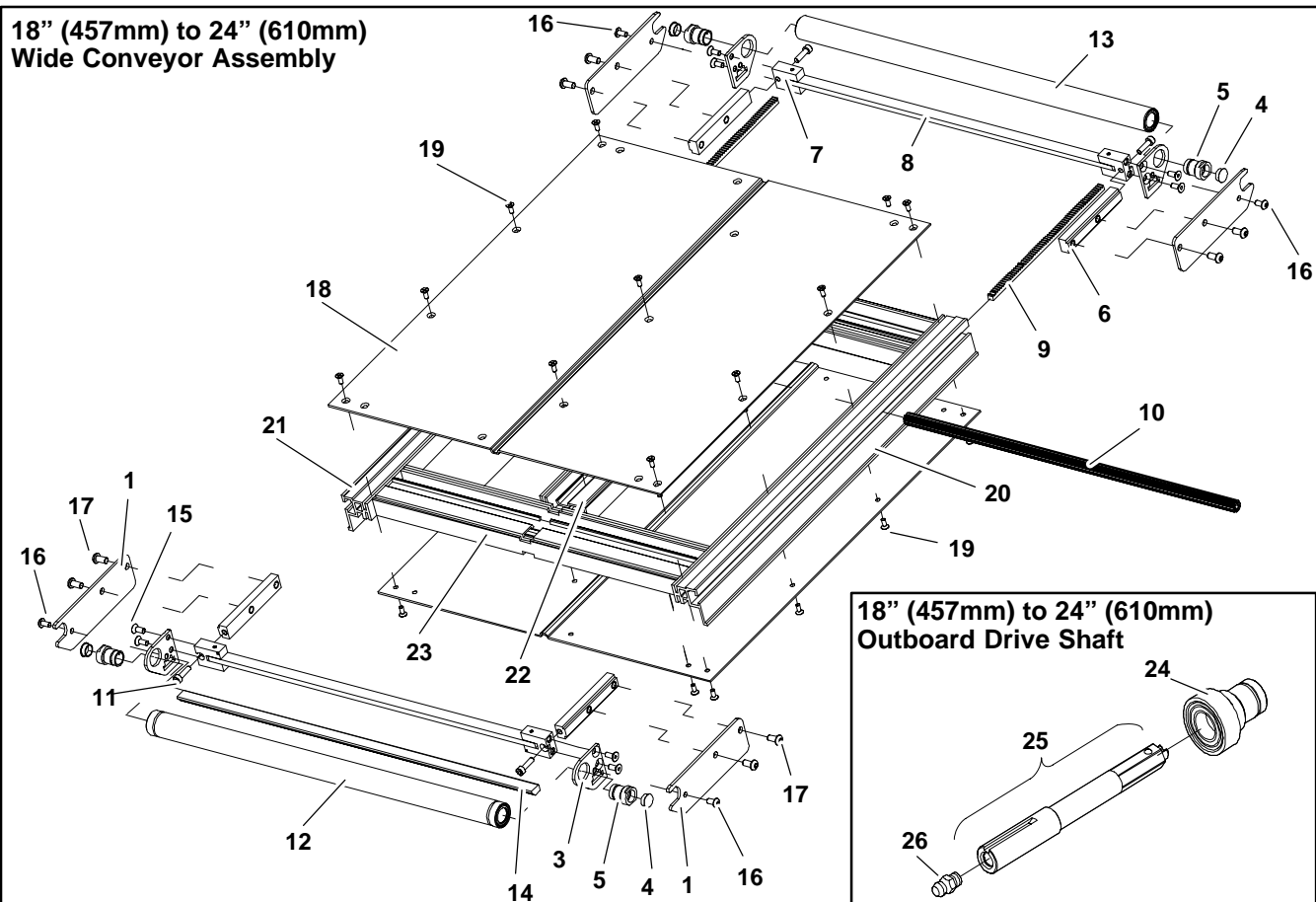
Item 14: Bed Plate

Length	Part Number
2' (610mm)	2405WW-01904
3' (914mm)	2405WW-03104
4' (1219mm)	2405WW-04304
5' (1524mm)	2405WW-05504
6' (1829mm)	2405WW-06704
7' (2134mm)	2405WW-07904
8' (2438mm)	2405WW-09104
9' (2743mm)	2405WW-10304
10' (3048mm)	2405WW-11504
11' (3353mm)	2405WW-12704
12' (3658mm)	2405WW-13904
13' (3962mm)	2405WW-07196 2405WW-07904
14' (4267mm)	2405WW-07196 2405WW-09104
15' (4572mm)	2405WW-07196 2405WW-10304
16' (4877mm)	2405WW-07196 2405WW-11504
17' (5182mm)	2405WW-07196 2405WW-12704
18' (5486mm)	2405WW-07196 2405WW-13904

WW = Conveyor Width reference: 08, 10, 12

# Service Parts

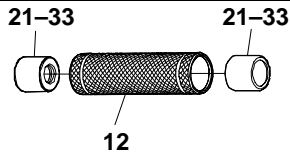
## 18" (457mm) to 24" (610mm) Wide Conveyor Assembly



Item	Part Number	Description
1	200030	Cover Plate, SAE
	200030M	Cover Plate, Metric
	200351	Cover Plate, Notched (Only 2' (610mm) Long Conveyor), SAE
	200351M	Cover Plate, Notched (Only 2' (610mm) Long Conveyor), Metric
2	200027	Tail Plate, SAE
	200027M	Tail Plate, Metric
3	200028	Tail Plate, SAE
	200028M	Tail Plate, Metric
4	807-784	Plastic Plug
5	200035	Pulley Spindle Retaining Sleeve
6	241129	Tension Slide Bar, SAE
	241128	Tension Slide Bar, Metric
7	200659	Mounting Block, SAE
	200659M	Mounting Block, Metric
8	207618	Flex-Link Bar 18" (457mm)
	207621	Flex-Link Bar 21" (533mm)
	207624	Flex-Link Bar 24" (610mm)
9	240420	Rack Gear 14.5 PA x 24 P
10	203018M	Gear Pinion 18" (457mm)
	203021M	Gear Pinion 21" (533mm)
	203024M	Gear Pinion 24" (610mm)
11	902-112	Socket Head Cap Screw #10-32 x .75"

12	See chart below	Drive Spindle Assembly
13	See chart below	Idler Spindle Assembly
14	203518	Bottom Wiper 18" (457mm)
	203521	Bottom Wiper 21" (533mm)
	203524	Bottom Wiper 24" (610mm)
15	903-108	Flat Head Screw #10-32 x .50"
	930512M	Flat Head Screw M5 x 12mm
16	901-106	Button Head Screw #10-32 x .38"
	910510M	Button Head Screw M5 x 10mm
	910612M	Button Head Screw M6 x 12mm
17	901-129	Button Head Screw 1/4-20 x .50"
18	See chart below	Bed Plate
19	807-1074	Flat Head Screw M4 x 10mm
20	See chart below	Side Rail RH 8-24" (203-610mm) Wide
21	See chart below	Side Rail LH 8-24" (203-610mm) Wide
22	See chart below	Center Rail 8-12" (203-305mm) Wide
23	240417	Center Rail Cross Support 18" (457mm)
	240419	Center Rail Cross Support 21" (533mm)
	240418	Center Rail Cross Support 24" (610mm)
24	200223	Outboard Bearing Retaining Sleeve

25	204734	.5" DIA Outboard Drive Shaft for 18" (457mm) – 24" (610mm) Wide Conv.
	216205M	12mm DIA Outboard Drive Shaft 18" (457mm) – 24" (610mm) Wide Conv.
26	810–292	Grease Fitting



Item 12: Drive Spindle Assembly		
Width	With Bearings (21–33)	Without Bearings
18" (457mm)	21–18–34	21–18–28
21" (533mm)	21–21–34	21–21–28
24" (610mm)	21–24–34	21–24–28

Item 18: Bed Plate	
Length	Part Number
2' (610mm)	2405WW–01904
3' (914mm)	2405WW–03104
4' (1219mm)	2405WW–04304
5' (1524mm)	2405WW–05504
6' (1829mm)	2405WW–06704
7' (2134mm)	2405WW–07904
8' (2438mm)	2405WW–09104
9' (2743mm)	2405WW–10304
10' (3048mm)	2405WW–11504
11' (3353mm)	2405WW–12704
12' (3658mm)	2405WW–13904
13' (3962mm)	2405WW–07196 2405WW–07904
14' (4267mm)	2405WW–07196 2405WW–09104
15' (4572mm)	2405WW–07196 2405WW–10304
16' (4877mm)	2405WW–07196 2405WW–11504
17' (5182mm)	2405WW–07196 2405WW–12704
18' (5486mm)	2405WW–07196 2405WW–13904
WW = Conveyor Width reference: 18, 21, 24	

Item 20: Side Rail RH 8–24" (203–610mm) Wide	
Length	Part Number
2' (610mm)	240412–01908
3' (914mm)	240412–03108
4' (1219mm)	240412–04308
5' (1524mm)	240412–05508
6' (1829mm)	240412–06708
7' (2134mm)	240412–07908
8' (2438mm)	240412–09108
9' (2743mm)	240412–10308
10' (3048mm)	240412–11508
11' (3353mm)	240412–12708

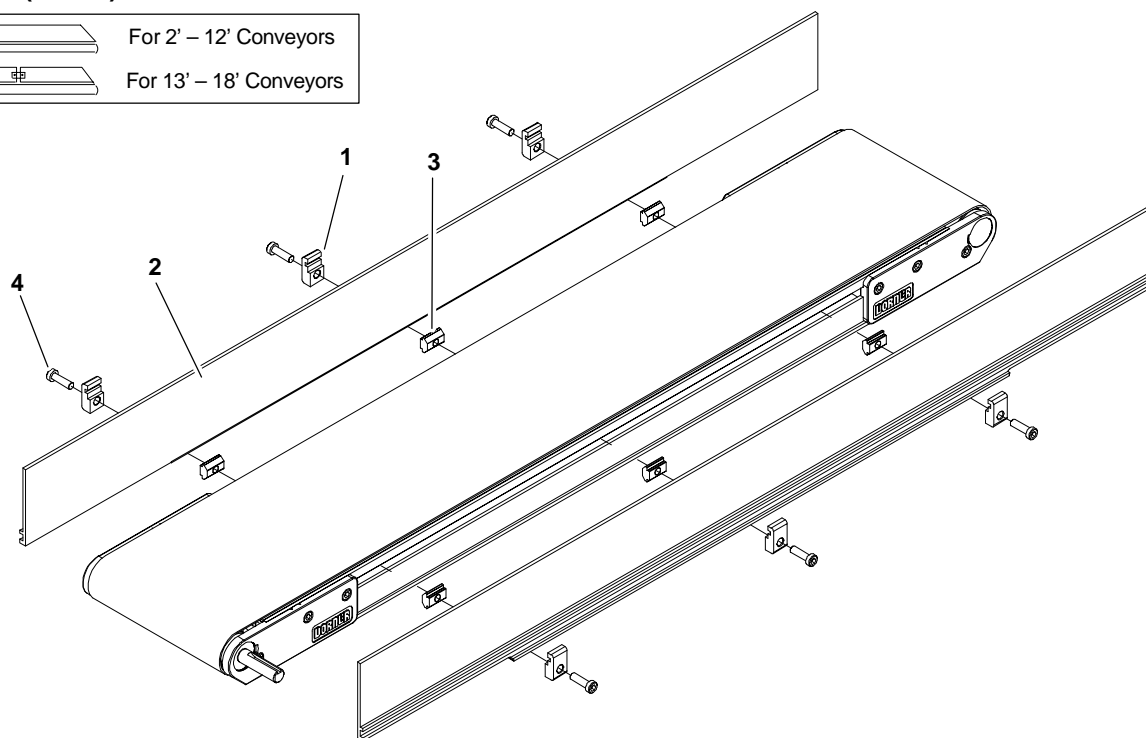
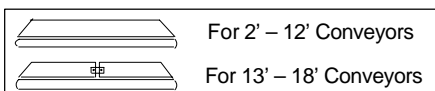
12' (3658mm)	240412–13908
13' (3962mm)	240412–07200 240412–07908
14' (4267mm)	240412–07200 240412–09108
15' (4572mm)	240412–07200 240412–10308
16' (4877mm)	240412–07200 240412–11508
17' (5182mm)	240412–07200 240412–12708
18' (5486mm)	240412–07200 240412–13908

Item 21: Side Rail LH 8–24" (203–610mm) Wide	
Length	Part Number
2' (610mm)	240413–01908
3' (914mm)	240413–03108
4' (1219mm)	240413–04308
5' (1524mm)	240413–05508
6' (1829mm)	240413–06708
7' (2134mm)	240413–07908
8' (2438mm)	240413–09108
9' (2743mm)	240413–10308
10' (3048mm)	240413–11508
11' (3353mm)	240413–12708
12' (3658mm)	240413–13908
13' (3962mm)	240413–07200 240413–07908
14' (4267mm)	240413–07200 240413–09108
15' (4572mm)	240413–07200 240413–10308
16' (4877mm)	240413–07200 240413–11508
17' (5182mm)	240413–07200 240413–12708
18' (5486mm)	240413–07200 240413–13908

Item 22: Center Rail 8–12" (203–305mm) Wide	
Length	Part Number
2' (610mm)	240414–00998
3' (914mm)	240414–02198
4' (1219mm)	240414–03398
5' (1524mm)	240414–04498
6' (1829mm)	240414–05798
7' (2134mm)	240414–06998
8' (2438mm)	240414–08198
9' (2743mm)	240414–09398
10' (3048mm)	240414–10598
11' (3353mm)	240414–11798
12' (3658mm)	240414–12998
13' (3962mm)	240414–06700 240414–06998
14' (4267mm)	240414–06700 240414–08198
15' (4572mm)	240414–06700 240414–09398
16' (4877mm)	240414–06700 240414–10598
17' (5182mm)	240414–06700 240414–11798
18' (5486mm)	240414–06700 240414–12998

# Service Parts

## -04 3" (76mm) Aluminum Side

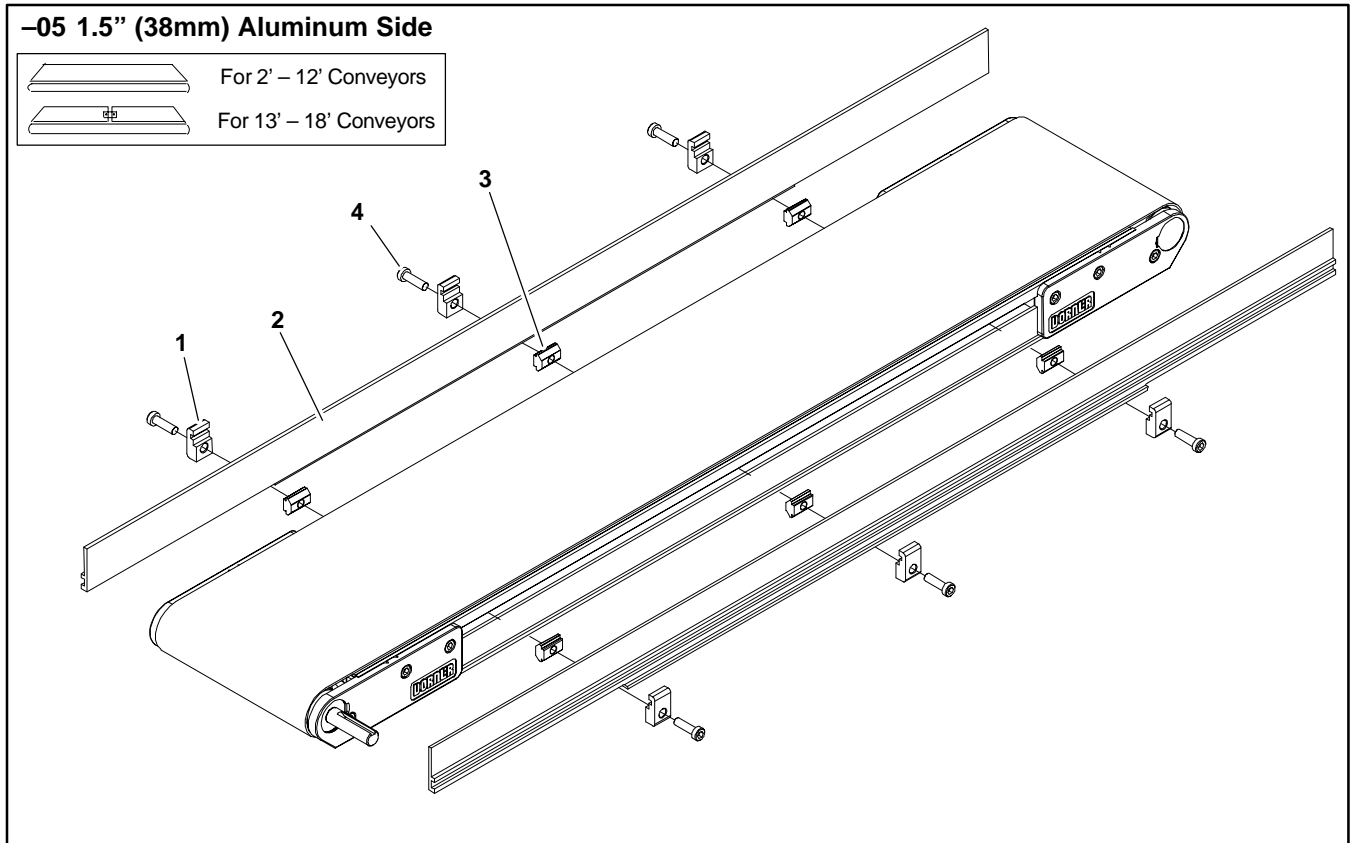
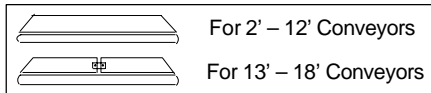


Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	2100 Guide 3" (76mm) HS
3	200695P	Single Drop-in Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

Item 2: 2100 Guide 3" (76mm) HS			
Length		End Guide	End Guide
2' (610mm)	Left Hand	280403-02400	N/A
	Right Hand	280403-02400	N/A
3' (914mm)	Left Hand	280403-03600	N/A
	Right Hand	280403-03600	N/A
4' (1219mm)	Left Hand	280403-04800	N/A
	Right Hand	280403-04800	N/A
5' (1524mm)	Left Hand	280403-06000	N/A
	Right Hand	280403-06000	N/A
6' (1829mm)	Left Hand	280403-07200	N/A
	Right Hand	280403-07200	N/A
7' (2134mm)	Left Hand	280403-08400	N/A
	Right Hand	280403-08400	N/A
8' (2438mm)	Left Hand	280403-09600	N/A
	Right Hand	280403-09600	N/A

9' (2743mm)	Left Hand	280403-10800	N/A
	Right Hand	280403-10800	N/A
10' (3048mm)	Left Hand	280403-12000	N/A
	Right Hand	280403-12000	N/A
11' (3353mm)	Left Hand	280403-13200	N/A
	Right Hand	280403-13200	N/A
12' (3658mm)	Left Hand	280403-14400	N/A
	Right Hand	280403-14400	N/A
13' (3962mm)	Left Hand	280401-07500	280401-08100
	Right Hand	280402-07500	280402-08100
14' (4267mm)	Left Hand	280401-07500	280401-09300
	Right Hand	280402-07500	280402-09300
15' (4572mm)	Left hand	280401-07500	280401-10500
	Right Hand	280402-07500	280402-10500
16' (4877mm)	Left Hand	280401-07500	280401-11700
	Right Hand	280402-07500	280402-11700
17' (5182mm)	Left Hand	280401-07500	280401-12900
	Right Hand	280402-07500	280402-12900
18' (5486mm)	Left Hand	280401-07500	280401-14100
	Right Hand	280402-07500	280402-14100

## -05 1.5" (38mm) Aluminum Side



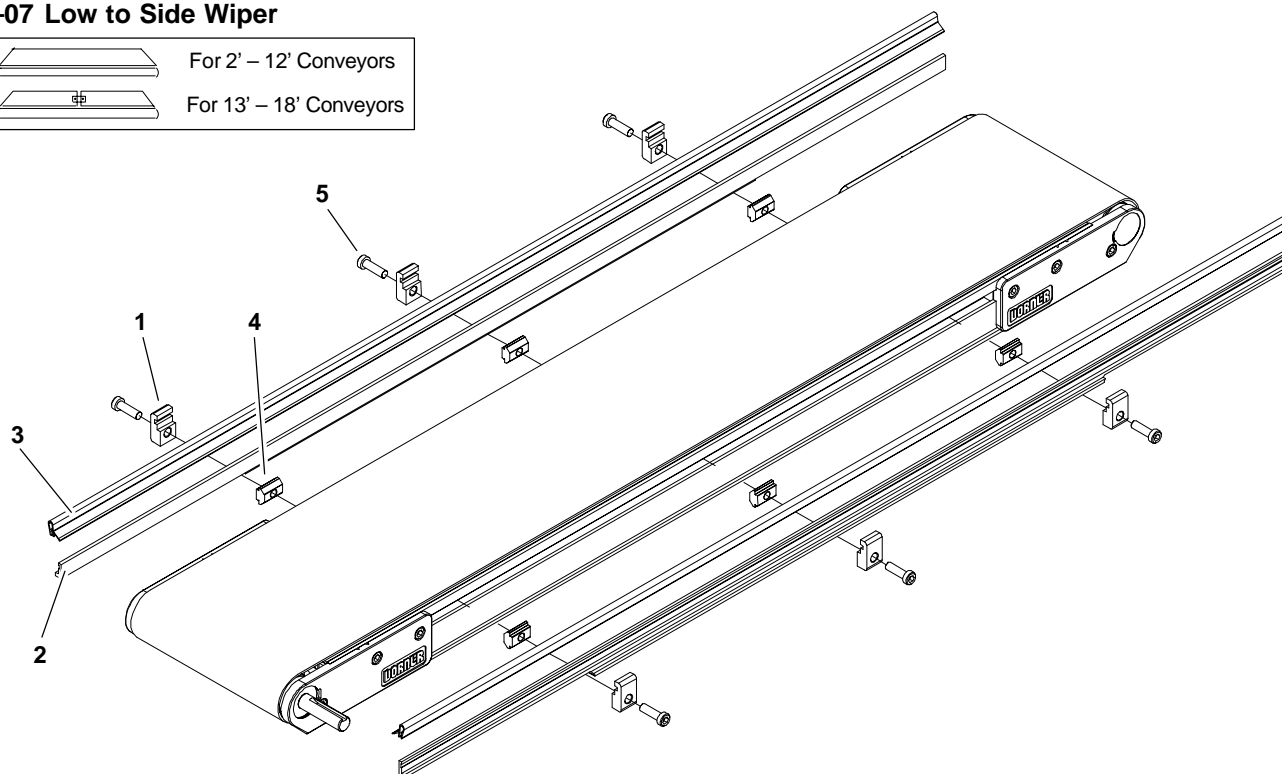
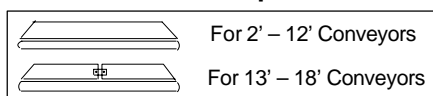
Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	2100 Guide .5" (13mm) HS
3	639971M	Single Drop-in Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

Item 2: 2100 Guide .5" (13mm) HS			
Length		End Guide	End Guide
2' (610mm)	Left Hand	280503-02400	N/A
	Right Hand	280503-02400	N/A
3' (914mm)	Left Hand	280503-03600	N/A
	Right Hand	280503-03600	N/A
4' (1219mm)	Left Hand	280503-04800	N/A
	Right Hand	280503-04800	N/A
5' (1524mm)	Left Hand	280503-06000	N/A
	Right Hand	280503-06000	N/A
6' (1829mm)	Left Hand	280503-07200	N/A
	Right Hand	280503-07200	N/A
7' (2134mm)	Left Hand	280503-08400	N/A
	Right Hand	280503-08400	N/A
8' (2438mm)	Left Hand	280503-09600	N/A
	Right Hand	280503-09600	N/A

9' (2743mm)	Left Hand	280503-10800	N/A
	Right Hand	280503-10800	N/A
10' (3048mm)	Left Hand	280503-12000	N/A
	Right Hand	280503-12000	N/A
11' (3353mm)	Left Hand	280503-13200	N/A
	Right Hand	280503-13200	N/A
12' (3658mm)	Left Hand	280503-14400	N/A
	Right Hand	280503-14400	N/A
13' (3962mm)	Left Hand	280501-07500	280501-08100
	Right Hand	280502-07500	280502-08100
14' (4267mm)	Left Hand	280501-07500	280501-09300
	Right Hand	280502-07500	280502-09300
15' (4572mm)	Left hand	280501-07500	280501-10500
	Right Hand	280502-07500	280502-10500
16' (4877mm)	Left Hand	280501-07500	280501-11700
	Right Hand	280502-07500	280502-11700
17' (5182mm)	Left Hand	280501-07500	280501-12900
	Right Hand	280502-07500	280502-12900
18' (5486mm)	Left Hand	280501-07500	280501-14100
	Right Hand	280502-07500	280502-14100

# Service Parts

## -07 Low to Side Wiper

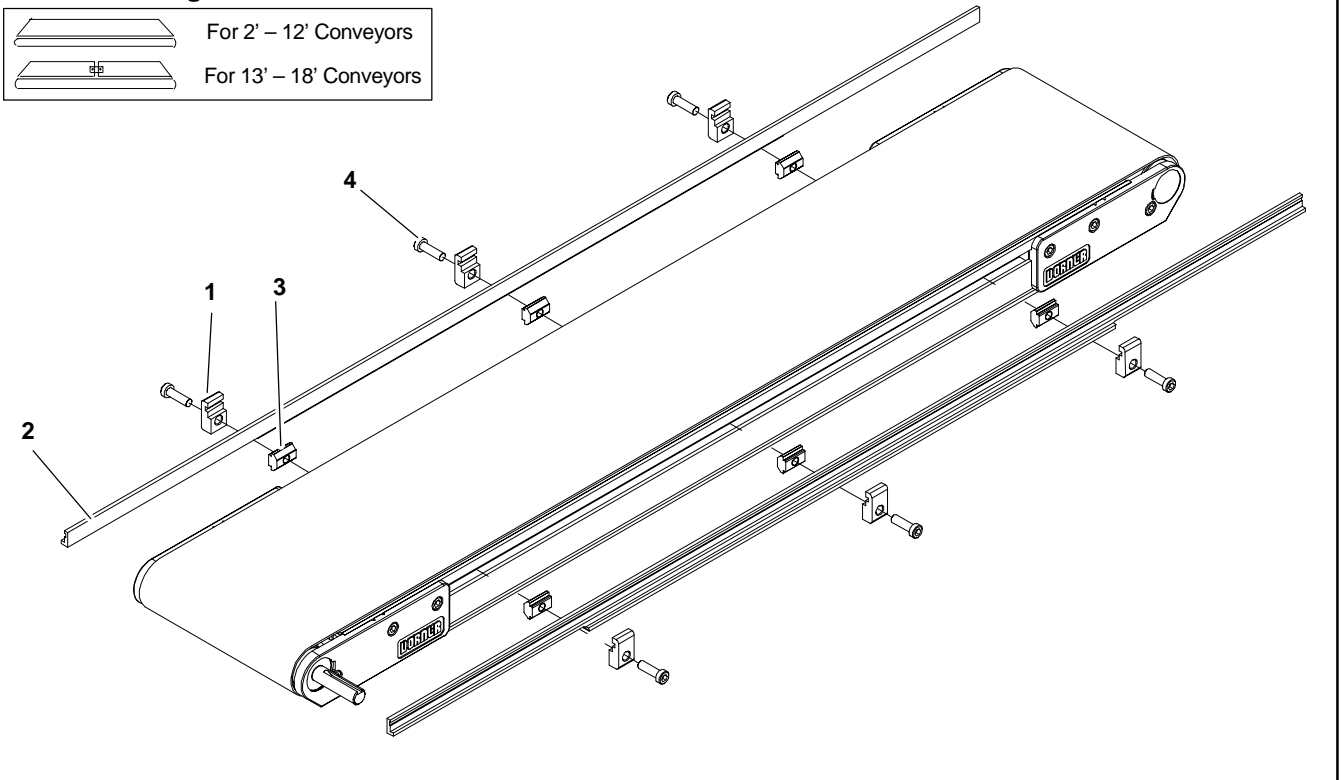
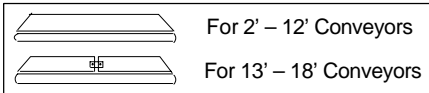


Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	2100 Guide .5" (13mm) HS
3	41-00-24	Side Wiper Nylatron (per foot)
4	639971M	Single Drop-in Tee Bar
5	920694M	Socket Head Screw M6 x 20mm

Item 2: 2100 Guide .5" (13mm) HS			
Length		End Guide	End Guide
2' (610mm)	Left Hand	280903-02400	N/A
	Right Hand	280903-02400	N/A
3' (914mm)	Left Hand	280903-03600	N/A
	Right Hand	280903-03600	N/A
4' (1219mm)	Left Hand	280903-04800	N/A
	Right Hand	280903-04800	N/A
5' (1524mm)	Left Hand	280903-06000	N/A
	Right Hand	280903-06000	N/A
6' (1829mm)	Left Hand	280903-07200	N/A
	Right Hand	280903-07200	N/A
7' (2134mm)	Left Hand	280903-08400	N/A
	Right Hand	280903-08400	N/A

8' (2438mm)	Left Hand	280903-09600	N/A
	Right Hand	280903-09600	N/A
9' (2743mm)	Left Hand	280903-10800	N/A
	Right Hand	280903-10800	N/A
10' (3048mm)	Left Hand	280903-12000	N/A
	Right Hand	280903-12000	N/A
11' (3353mm)	Left Hand	280903-13200	N/A
	Right Hand	280903-13200	N/A
12' (3658mm)	Left Hand	280903-14400	N/A
	Right Hand	280903-14400	N/A
13' (3962mm)	Left Hand	280901-07500	280901-08100
	Right Hand	280902-07500	280902-08100
14' (4267mm)	Left Hand	280901-07500	280901-09300
	Right Hand	280902-07500	280902-09300
15' (4572mm)	Left hand	280901-07500	280901-10500
	Right Hand	280902-07500	280902-10500
16' (4877mm)	Left Hand	280901-07500	280901-11700
	Right Hand	280902-07500	280902-11700
17' (5182mm)	Left Hand	280901-07500	280901-12900
	Right Hand	280902-07500	280902-12900
18' (5486mm)	Left Hand	280901-07500	280901-14100
	Right Hand	280902-07500	280902-14100

## -09 Low to High Side



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	2100 Guide .5" (13mm) HS
3	639971M	Single Drop-in Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

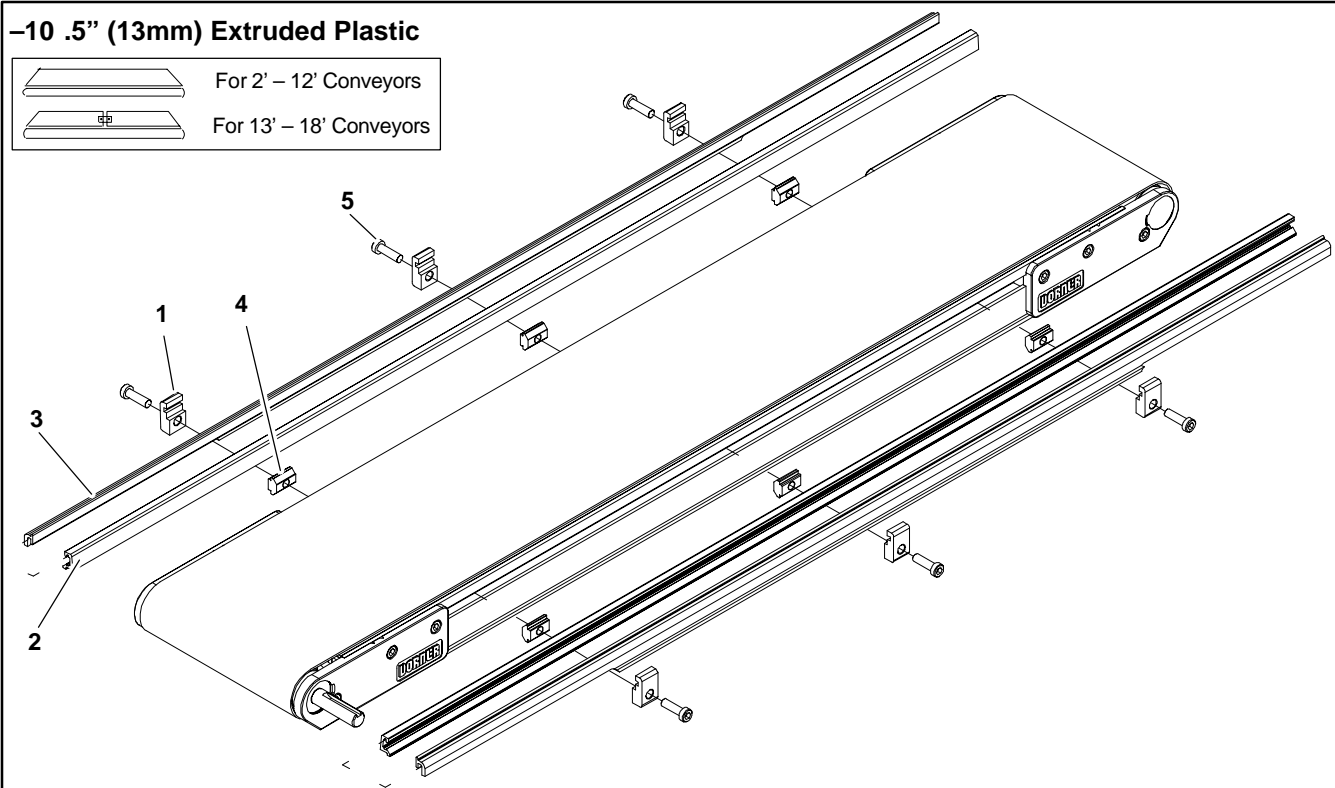
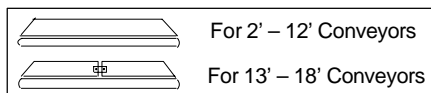
### Item 2: 2100 Guide .5" (13mm) HS

Length		End Guide	End Guide
2' (610mm)	Left Hand	280903-02400	N/A
	Right Hand	280903-02400	N/A
3' (914mm)	Left Hand	280903-03600	N/A
	Right Hand	280903-03600	N/A
4' (1219mm)	Left Hand	280903-04800	N/A
	Right Hand	280903-04800	N/A
5' (1524mm)	Left Hand	280903-06000	N/A
	Right Hand	280903-06000	N/A
6' (1829mm)	Left Hand	280903-07200	N/A
	Right Hand	280903-07200	N/A
7' (2134mm)	Left Hand	280903-08400	N/A
	Right Hand	280903-08400	N/A
8' (2438mm)	Left Hand	280903-09600	N/A
	Right Hand	280903-09600	N/A

9' (2743mm)	Left Hand	280903-10800	N/A
	Right Hand	280903-10800	N/A
10' (3048mm)	Left Hand	280903-12000	N/A
	Right Hand	280903-12000	N/A
11' (3353mm)	Left Hand	280903-13200	N/A
	Right Hand	280903-13200	N/A
12' (3658mm)	Left Hand	280903-14400	N/A
	Right Hand	280903-14400	N/A
13' (3962mm)	Left Hand	280901-07500	280901-08100
	Right Hand	280902-07500	280902-08100
14' (4267mm)	Left Hand	280901-07500	280901-09300
	Right Hand	280902-07500	280902-09300
15' (4572mm)	Left hand	280901-07500	280901-10500
	Right Hand	280902-07500	280902-10500
16' (4877mm)	Left Hand	280901-07500	280901-11700
	Right Hand	280902-07500	280902-11700
17' (5182mm)	Left Hand	280901-07500	280901-12900
	Right Hand	280902-07500	280902-12900
18' (5486mm)	Left Hand	280901-07500	280901-14100
	Right Hand	280902-07500	280902-14100

# Service Parts

## -10 .5" (13mm) Extruded Plastic



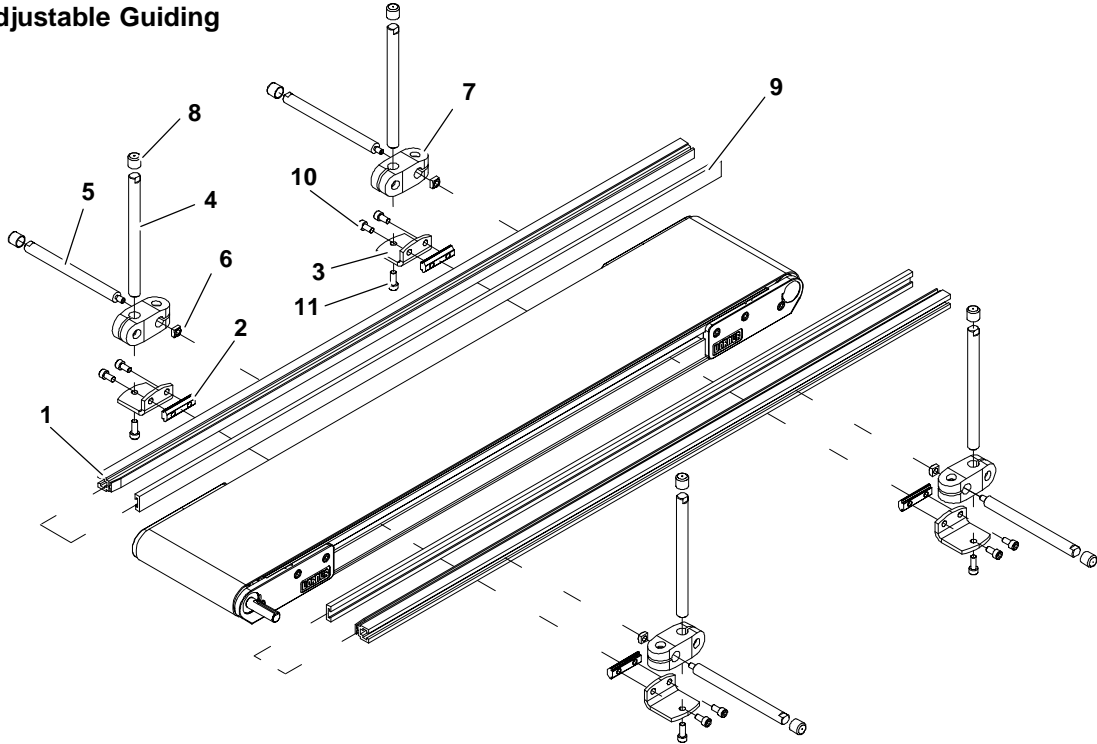
Item	Part Number	Description
1	200121	Guide Retaining Clip
2	200054P	Snap-On Guide (per foot)
3	See Chart Below	2100 Guide
4	639971M	Single Drop-in Tee Bar
5	920694M	Socket Head Screw M6 x 20mm

Item 3: 2100 Guide			
Length		End Guide	End Guide
2' (610mm)	Left Hand	281003-02400	N/A
	Right Hand	281003-02400	N/A
3' (914mm)	Left Hand	281003-03600	N/A
	Right Hand	281003-03600	N/A
4' (1219mm)	Left Hand	281003-04800	N/A
	Right Hand	281003-04800	N/A
5' (1524mm)	Left Hand	281003-06000	N/A
	Right Hand	281003-06000	N/A
6' (1829mm)	Left Hand	281003-07200	N/A
	Right Hand	281003-07200	N/A
7' (2134mm)	Left Hand	281003-08400	N/A
	Right Hand	281003-08400	N/A

8' (2438mm)	Left Hand	281003-09600	N/A
	Right Hand	281003-09600	N/A
9' (2743mm)	Left Hand	281003-10800	N/A
	Right Hand	281003-10800	N/A
10' (3048mm)	Left Hand	281003-12000	N/A
	Right Hand	281003-12000	N/A
11' (3353mm)	Left Hand	281003-13200	N/A
	Right Hand	281003-13200	N/A
12' (3658mm)	Left Hand	281003-14400	N/A
	Right Hand	281003-14400	N/A
13' (3962mm)	Left Hand	281001-07500	281001-08100
	Right Hand	281002-07500	281002-08100
14' (4267mm)	Left Hand	281001-07500	281001-09300
	Right Hand	281002-07500	281002-09300
15' (4572mm)	Left hand	281001-07500	281001-10500
	Right Hand	281002-07500	281002-10500
16' (4877mm)	Left Hand	281001-07500	281001-11700
	Right Hand	281002-07500	281002-11700
17' (5182mm)	Left Hand	281001-07500	281001-12900
	Right Hand	281002-07500	281002-12900
18' (5486mm)	Left Hand	281001-07500	281001-14100
	Right Hand	281002-07500	281002-14100



## -13 Adjustable Guiding

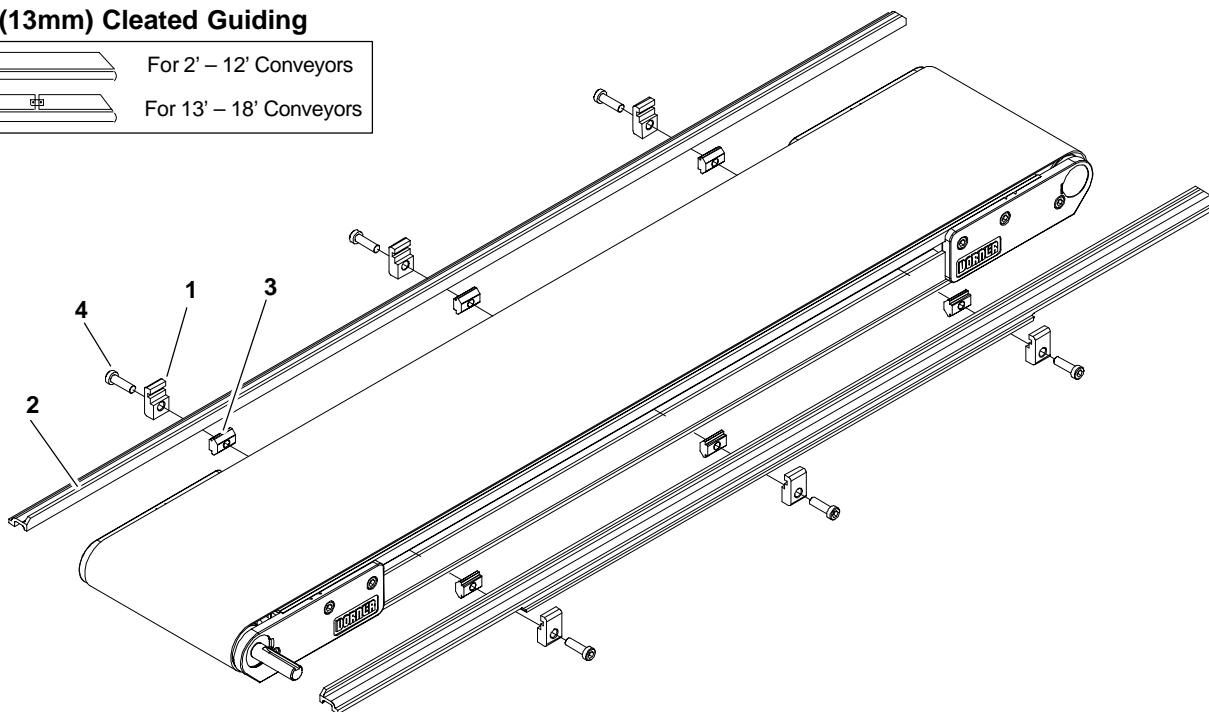
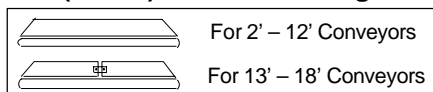


Item	Part Number	Description
1	202983	Aluminum Profile Guide 2' (610mm)
	202984	Aluminum Profile Guide 3' (914mm)
	202985	Aluminum Profile Guide 4' (1219mm)
	202986	Aluminum Profile Guide 5' (1524mm)
	202987	Aluminum Profile Guide 6' (1829mm)
	202988	Aluminum Profile Guide 7' (2134mm)
	202989	Aluminum Profile Guide 8' (2438mm)
	202990	Aluminum Profile Guide 9' (2743mm)
	202991	Aluminum Profile Guide 10' (3048mm)
	202992	Aluminum Profile Guide 11' (3353mm)
	202993	Aluminum Profile Guide 12' (3658mm)
	202994	Aluminum Profile Guide 13' (3962mm)

2	200830M	Drop-In Tee Bar
3	202004	Mounting Bracket
4	202027M	Guide Mounting Shaft Vertical
5	202028M	Guide Mounting Shaft Horizontal
6	674175MP	Square Nut
7	807-652	Cross Block
8	807-948	Vinyl Shaft Cap
9	614068P	Flat Extruded Guide (per foot)
10	920612M	Socket Head Screw M6 x 12mm
11	920616M	Socket Head Screw M6 x 16mm

# Service Parts

## .5" (13mm) Cleated Guiding

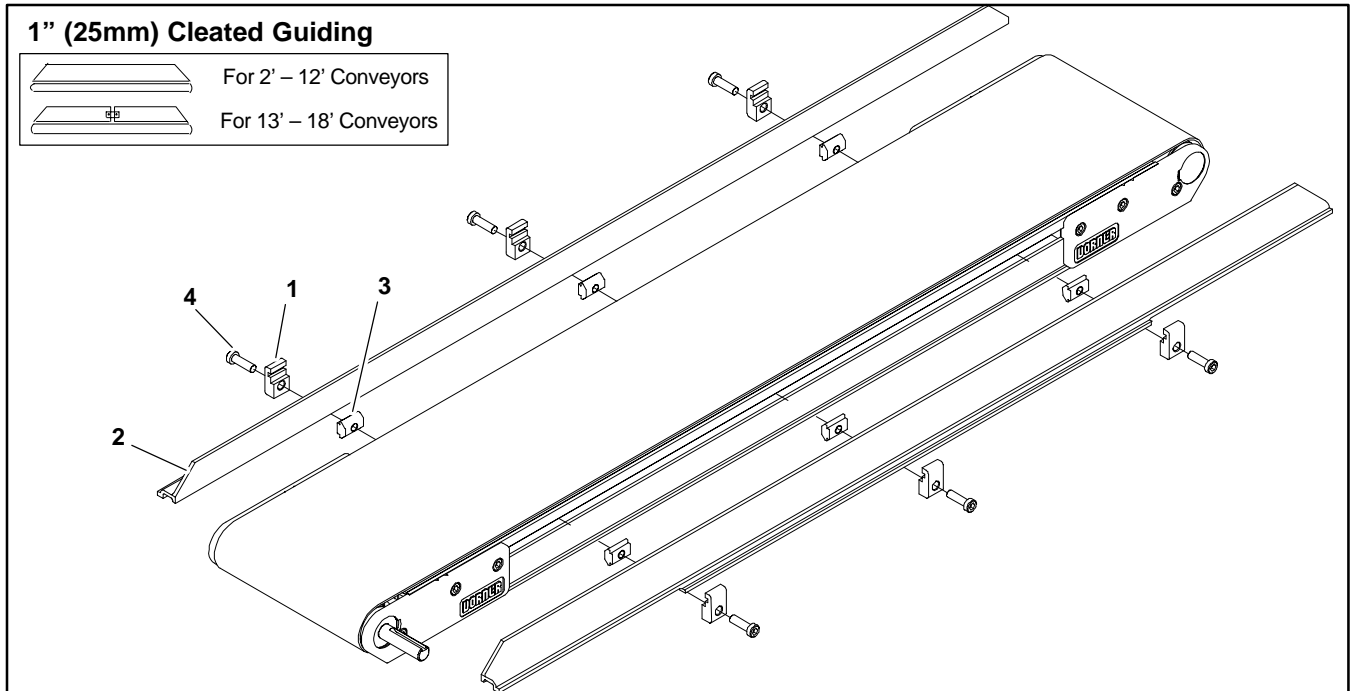
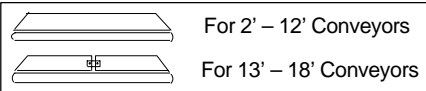


Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	2100 Guide .47" (13mm) Cleated
3	639971M	Drop-In Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

Item 2: 2100 Guide			
Length		End Guide	End Guide
2' (610mm)	Left Hand	281603-02256	N/A
	Right Hand	281603-02256	N/A
3' (914mm)	Left Hand	281603-03456	N/A
	Right Hand	281603-03456	N/A
4' (1219mm)	Left Hand	281603-04656	N/A
	Right Hand	281603-04656	N/A
5' (1524mm)	Left Hand	281603-05856	N/A
	Right Hand	281603-05856	N/A
6' (1829mm)	Left Hand	281603-07056	N/A
	Right Hand	281603-07056	N/A
7' (2134mm)	Left Hand	281603-08256	N/A
	Right Hand	281603-08256	N/A
8' (2438mm)	Left Hand	281603-09456	N/A
	Right Hand	281603-09456	N/A

9' (2743mm)	Left Hand	281603-10656	N/A
	Right Hand	281603-10656	N/A
10' (3048mm)	Left Hand	281603-11856	N/A
	Right Hand	281603-11856	N/A
11' (3353mm)	Left Hand	281603-13056	N/A
	Right Hand	281603-13056	N/A
12' (3658mm)	Left Hand	281603-14256	N/A
	Right Hand	281603-14256	N/A
13' (3962mm)	Left Hand	281601-07428	281601-08028
	Right Hand	281602-07428	281602-08028
14' (4267mm)	Left Hand	281601-07428	281601-09228
	Right Hand	281602-07428	281602-09228
15' (4572mm)	Left hand	281601-07428	281601-10428
	Right Hand	281602-07428	281602-10428
16' (4877mm)	Left Hand	281601-07428	281601-11628
	Right Hand	281602-07428	281602-11628
17' (5182mm)	Left Hand	281601-07428	281601-12828
	Right Hand	281602-07428	281602-12828
18' (5486mm)	Left Hand	281601-07428	281601-14028
	Right Hand	281602-07428	281602-14028

## 1" (25mm) Cleated Guiding

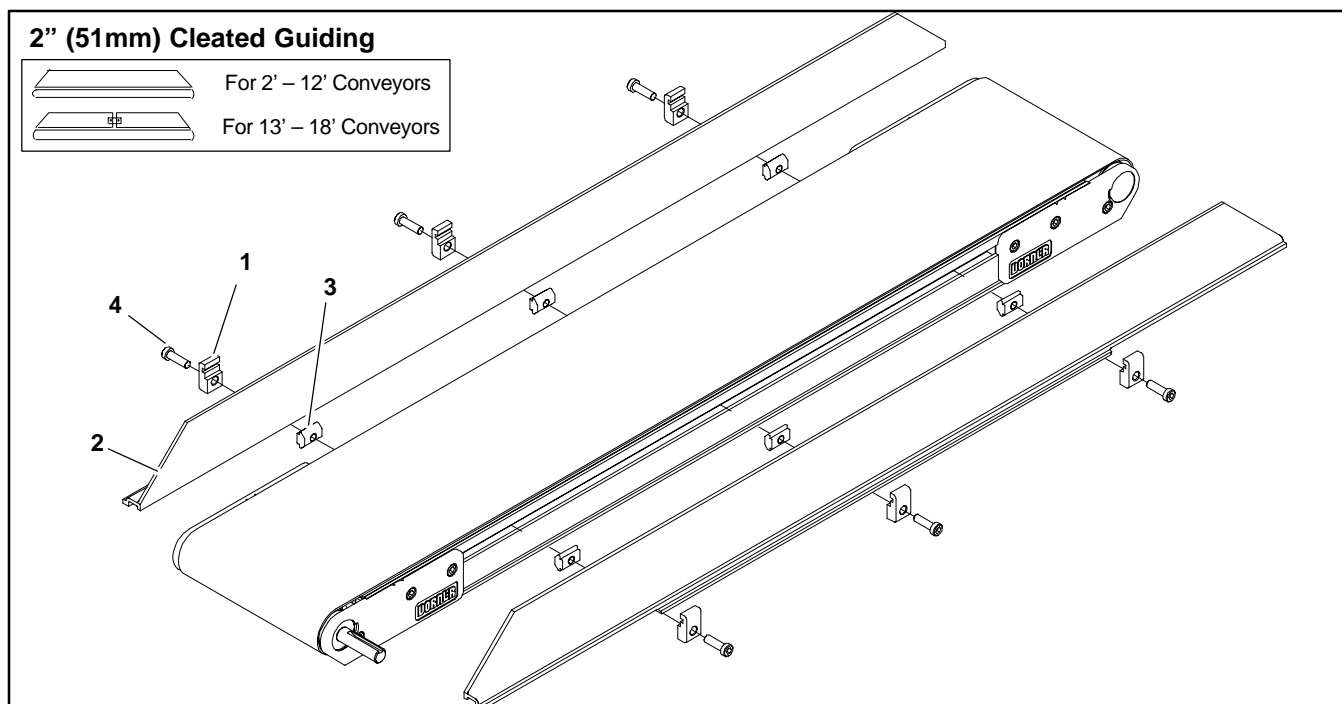


Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	2100 Guide 1" (25mm) Cleated
3	639971M	Drop-In Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

Item 2: 2100 Guide			
Length		End Guide	End Guide
2' (610mm)	Left Hand	281703-02256	N/A
	Right Hand	281703-02256	N/A
3' (914mm)	Left Hand	281703-03456	N/A
	Right Hand	281703-03456	N/A
4' (1219mm)	Left Hand	281703-04656	N/A
	Right Hand	281703-04656	N/A
5' (1524mm)	Left Hand	281703-05856	N/A
	Right Hand	281703-05856	N/A
6' (1829mm)	Left Hand	281703-07056	N/A
	Right Hand	281703-07056	N/A
7' (2134mm)	Left Hand	281703-08256	N/A
	Right Hand	281703-08256	N/A
8' (2438mm)	Left Hand	281703-09456	N/A
	Right Hand	281703-09456	N/A

9' (2743mm)	Left Hand	281703-10656	N/A
	Right Hand	281703-10656	N/A
10' (3048mm)	Left Hand	281703-11856	N/A
	Right Hand	281703-11856	N/A
11' (3353mm)	Left Hand	281703-13056	N/A
	Right Hand	281703-13056	N/A
12' (3658mm)	Left Hand	281703-14256	N/A
	Right Hand	281703-14256	N/A
13' (3962mm)	Left Hand	281701-07428	281701-08028
	Right Hand	281702-07428	281702-08028
14' (4267mm)	Left Hand	281701-07428	281701-09228
	Right Hand	281702-07428	281702-09228
15' (4572mm)	Left hand	281701-07428	281701-10428
	Right Hand	281702-07428	281702-10428
16' (4877mm)	Left Hand	281701-07428	281701-11628
	Right Hand	281702-07428	281702-11628
17' (5182mm)	Left Hand	281701-07428	281701-12828
	Right Hand	281702-07428	281702-12828
18' (5486mm)	Left Hand	281701-07428	281701-14028
	Right Hand	281702-07428	281702-14028

# Service Parts

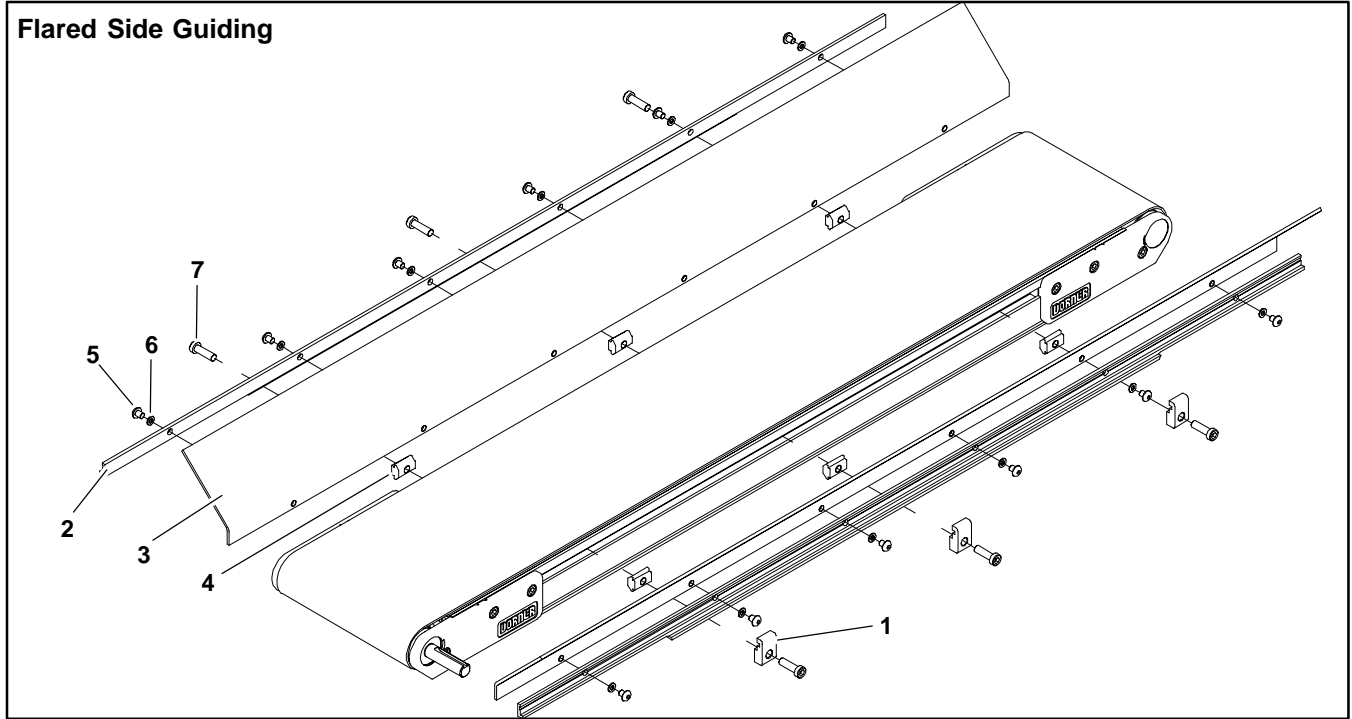


Item	Part Number	Description
1	200121	Guide Retaining Clip
2	See Chart Below	2100 Guide 2.3" Cleated
3	639971M	Drop-In Tee Bar
4	920694M	Socket Head Screw M6 x 20mm

Item 2: 2100 Guide			
Length		End Guide	End Guide
2' (610mm)	Left Hand	281903-02256	N/A
	Right Hand	281903-02256	N/A
3' (914mm)	Left Hand	281903-03456	N/A
	Right Hand	281903-03456	N/A
4' (1219mm)	Left Hand	281903-04656	N/A
	Right Hand	281903-04656	N/A
5' (1524mm)	Left Hand	281903-05856	N/A
	Right Hand	281903-05856	N/A
6' (1829mm)	Left Hand	281903-07056	N/A
	Right Hand	281903-07056	N/A
7' (2134mm)	Left Hand	281903-08256	N/A
	Right Hand	281903-08256	N/A
8' (2438mm)	Left Hand	281903-09456	N/A
	Right Hand	281903-09456	N/A

9' (2743mm)	Left Hand	281903-10656	N/A
	Right Hand	281903-10656	N/A
10' (3048mm)	Left Hand	281903-11856	N/A
	Right Hand	281903-11856	N/A
11' (3353mm)	Left Hand	281903-13056	N/A
	Right Hand	281903-13056	N/A
12' (3658mm)	Left Hand	281903-14256	N/A
	Right Hand	281903-14256	N/A
13' (3962mm)	Left Hand	281901-07428	281901-08028
	Right Hand	281902-07428	281902-08028
14' (4267mm)	Left Hand	281901-07428	281901-09228
	Right Hand	281902-07428	281902-09228
15' (4572mm)	Left hand	281901-07428	281901-10428
	Right Hand	281902-07428	281902-10428
16' (4877mm)	Left Hand	281901-07428	281901-11628
	Right Hand	281902-07428	281902-11628
17' (5182mm)	Left Hand	281901-07428	281901-12828
	Right Hand	281902-07428	281902-12828
18' (5486mm)	Left Hand	281901-07428	281901-14028
	Right Hand	281902-07428	281902-14028

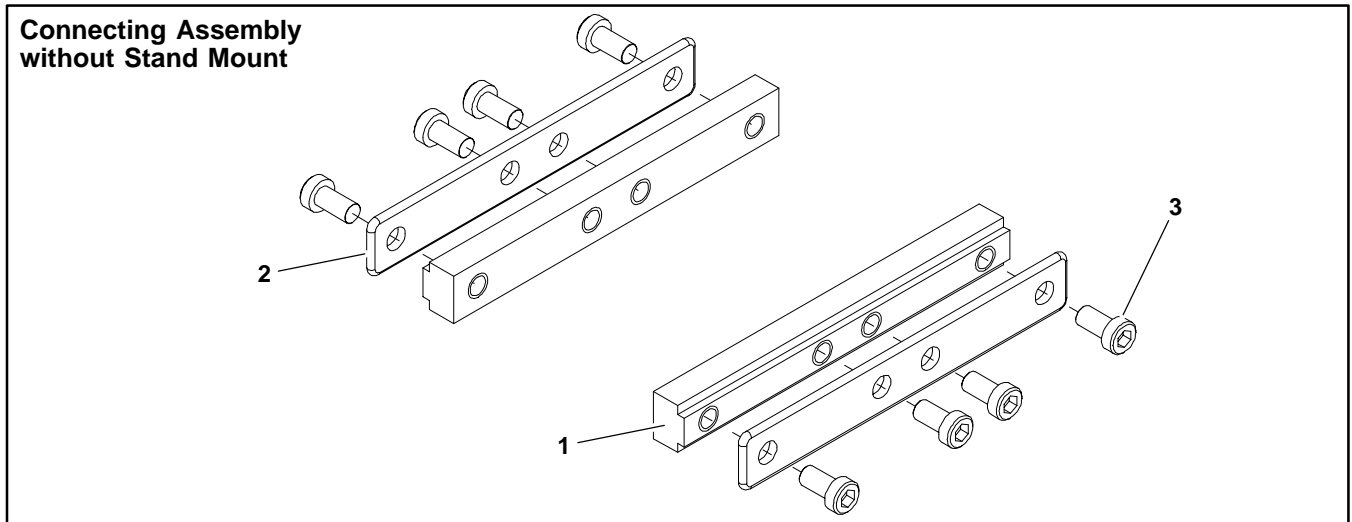
## Flared Side Guiding



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	202212	Side-Flare Mounting Guide 2' (610mm)
	202213	Side-Flare Mounting Guide 3' (914mm)
	202214	Side-Flare Mounting Guide 4' (1219mm)
	202215	Side-Flare Mounting Guide 5' (1524mm)
	202216	Side-Flare Mounting Guide 6' (1829mm)

3	202522M	Flared Guide 45° 2' (610mm)
	202523M	Flared Guide 45° 3' (914mm)
	202523M	Flared Guide 45° 4' (1219mm)
	202523M	Flared Guide 45° 5' (1524mm)
	202523M	Flared Guide 45° 6' (1829mm)
4	639971	Drop-In Tee Bar
5	910506M	Button Head Screw M5 x 6mm
6	911-512	Washer
7	920694M	Cap Low-Head Screw M6 x 20mm

## Connecting Assembly without Stand Mount

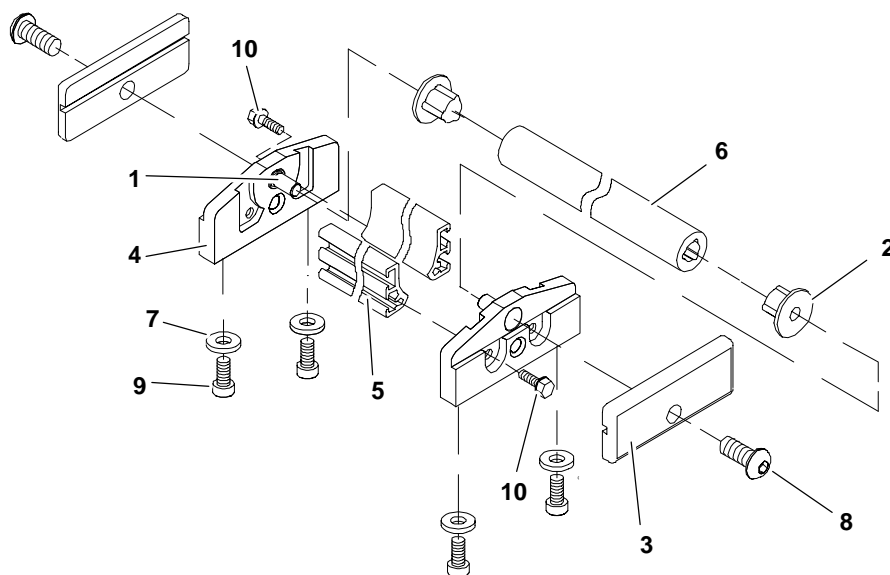


Item	Part Number	Description
1	240849	Frame Bar Connector, SAE
	240331	Frame Bar Connector, Metric

2	300153M	Intermediate Clamp Plate
3	901-129	Button Head Screw 1/3-20 x .50"
	920692M	Socket Head Screw M6 x 12mm

# Service Parts

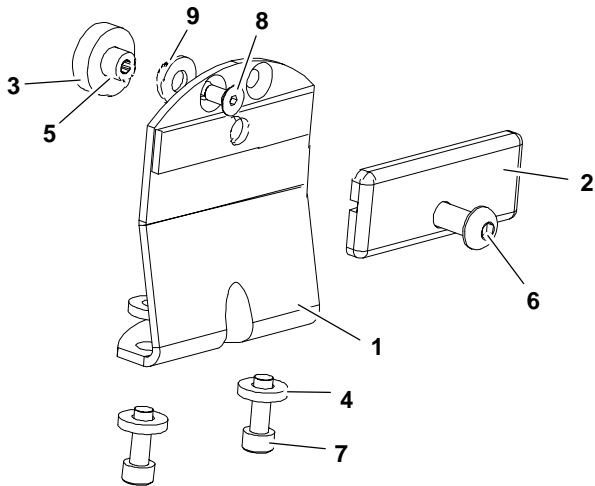
## Flat Belt Mounting Bracket with Return Roller



Item	Part Number	Description
1	202348P	Bearing Pin
2	202311P	Return Roller Bearing
3	200022	Stand Clamp Plate, SAE
	200022M	Stand Clamp Plate, Metric
4	202351	Return Roller Mounting Block, SAE
	202351M	Return Roller Mounting Block, Metric
5	207802	Return Roller Guard 2" (44mm)
	207803	Return Roller Guard 3" (70mm)
	207804	Return Roller Guard 4" (95mm)
	207805	Return Roller Guard 5" (127mm)
	207806	Return Roller Guard 6" (152mm)
	207808	Return Roller Guard 8" (203mm)
	207810	Return Roller Guard 10" (254mm)
	207812	Return Roller Guard 12" (305mm)
	207818	Return Roller Guard 18" (457mm)
	207821	Return Roller Guard 21" (533mm)
	207824	Return Roller Guard 24" (610mm)

6	207702	Return Roller Tube, 2" (44mm)
	207703	Return Roller Tube, 3" (70mm)
	207704	Return Roller Tube, 4" (95mm)
	207705	Return Roller Tube, 5" (127mm)
	207706	Return Roller Tube, 6" (152mm)
	207708	Return Roller Tube, 8" (203mm)
	207710	Return Roller Tube, 10" (254mm)
	207712	Return Roller Tube, 12" (305mm)
	207718	Return Roller Tube, 18" (457mm)
	207721	Return Roller Tube, 21" (533mm)
	207724	Return Roller Tube, 24" (610mm)
7	605279P	Hard Washer .281 x .620 x .120
8	901-181	Button Head Screw 5/16 x .62"
	910816M	Button Head Screw M8 x 16mm
9	902-132	Socket Head Screw 1/4 x .75"
	920618M	Socket Head Screw M6 x 18mm
10	960498M	Hex Head Screw M/4 x 12mm

Cleated Belt Mounting  
Bracket with Return Roller



Item	Part Number	Description
1	201911	Mounting Bracket Plate, SAE
	201911M	Mounting Bracket Plate, Metric
2	200022	Stand Clamp Plate, SAE
	200022M	Stand Clamp Plate, Metric
3	802-027	Sealed Ball Bearing
4	605279P	Hard Washer .281 x .620 x .120
5	639249	Return Roller Hub, SAE
	639249M	Return Roller Hub, Metric

6	901-183	Button Head Screw 5/16-18 x .75"
	910818M	Button Head Screw M8 x 18mm
7	902-132	Socket Head Screw 1/4-20 x .75"
	920618M	Socket Head Screw M6 x 18mm
8	903-106	Flat Head Screw #10-32 x .38"
	930510M	Flat Head Screw M5 x 10mm
9	911-007	Flat Washer 1/4"

Conveyor Belt Part Number Configuration

Flat Belt Conveyor Model Number

2100 M WW LL A PP / BB

Cleated Belt Conveyor Model Number

2140 M WW LL A D SSSS

**DORNER®**

PATENTS 5131529 5156261 5203417 5875883  
5156260 5174435 5265714  
AND CORRESPONDING PATENTS AND PATENT APPLICATIONS IN OTHER COUNTRIES

SERIAL #

MODEL #

DORNER MFG. CORP  
HARTLAND, WI USA

Figure 38

Flat Belt Part Number Configuration

Refer to Dorner patent plate (Figure 38). From the model number, determine conveyor width (“WW”), length (“LL”) and belt type (“BB”). Use data to configure belt part number as indicated below.

22 - WW LL / BB

21 -      (Fill In) /

Cleated Belt Part Number Configuration

Refer to Dorner patent plate (Figure 38). From the model number, determine conveyor width (“WW”), length (“LL”), cleat type (“A”) and cleat spacing (“SSSS”). Use data to configure belt part number as indicated below.

21 - WW LL A SSSS

21 -      (Fill In)

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## Return Policy

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No returns will be accepted without prior written factory authorization. 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. Item(s) being returned.
3. Reason for return.
4. Customer's original order number used when ordering the item(s).
5. Dorner or distributor invoice number.

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

There will be a 15% restocking charge on all new items returned for credit where Dorner was not at fault. These will not be accepted after 60 days from original invoice date. The restocking charge covers inspection, cleaning, disassembly, and reissuing 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. Feel free to contact Dorner for the name of your local representative. Our technical sales and service staff will gladly help with your questions on Dorner products.

For a copy of Dorner's Limited Warranty, contact factory, distributor, service center or visit our website at [www.dorner.com](http://www.dorner.com).

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

**DORNER<sup>®</sup>**

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