



7350 Series Bottom Mount Parallel Shaft Drive Package

Installation, Maintenance & Parts Manual



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

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

Warnings - General Safety

WARNING

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

DANGER



Climbing, sitting, walking or riding on conveyor will cause severe injury.
KEEP OFF CONVEYORS.

DANGER



DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT.

WARNING



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

WARNING



Gearmotors may be **HOT**.
DO NOT TOUCH Gearmotors.

WARNING



Exposed moving parts can cause severe injury.
REPLACE ALL GUARDS BEFORE RUNNING CONVEYOR.

WARNING



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.

Product Description

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

- | | |
|---|-----------------------|
| 1 | Conveyor |
| 2 | Cover |
| 3 | Driven Pulley |
| 4 | Timing Belt |
| 5 | Drive Pulley |
| 6 | Gearmotor |
| 7 | Timing Belt Tensioner |
| 8 | Mounting Bracket |

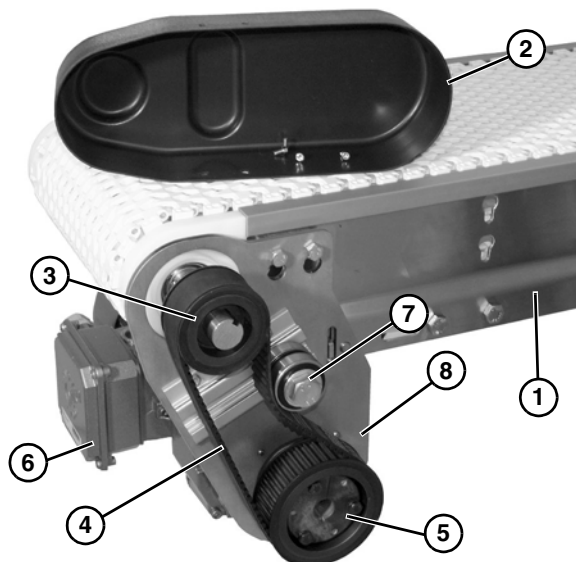


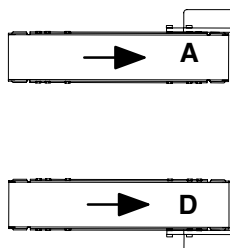
Figure 1

Specifications

Gearmotor Mounting Package Models:

735 M B P S A 28 28

Language Drive Type Gearmotor Type Gearmotor Size Drive Position Gearmotor Sprocket Conveyor Sprocket



Specifications

Table 1: Gearmotor Specifications

| Item | Fixed Speed | Variable Speed |
|------------------|---|----------------|
| Output Power | 0.16 hp (0.12 kW), 0.25 hp (0.19 kW), 0.50 hp (0.37 kW), 0.75 hp (0.56 kW), 1.00 hp (0.75 kW) | |
| Input Voltage | 230 / 460 V.A.C. 3 Phase | |
| Input Frequency | 60 Hz | 6 - 60 Hz |
| Gearmotor Ratios | 6:1, 8:1, 10:1, 13:1, 20:1, 34:1, 54:1, 81:1 | |
| Motor Type | Totally Enclosed, Non-ventilated, Fan Cooled | |

Table 2: Fixed Speed Gearmotors

| Part Number | Belt Speed | | RPM | HP | kW | Volts | Phase | FLA | in-lbs | N-m |
|---------------|------------|-------|-----|------|------|---------|-------|-------------|--------|-----|
| | Ft/min | M/min | | | | | | | | |
| 74M081PS423FN | 21 | 6.4 | 21 | 0.16 | 0.12 | 230/460 | 3 | .88 / .44 | 483 | 55 |
| 74M054PS423FN | 31 | 9.4 | 31 | 0.25 | 0.19 | 230/460 | 3 | 1.12 / 0.56 | 507 | 57 |
| 74M034PS423FN | 50 | 15.2 | 50 | 0.50 | 0.37 | 230/460 | 3 | 1.90 / 0.95 | 633 | 72 |
| 74M020PS423FN | 84 | 25.6 | 84 | 0.75 | 0.56 | 230/460 | 3 | 2.70 / 1.35 | 563 | 64 |
| 74M013PS423FN | 122 | 37.2 | 122 | 1.00 | 0.75 | 230/460 | 3 | 3.66 / 1.83 | 517 | 58 |
| 74M010PS423FN | 170 | 51.8 | 170 | 1.00 | 0.75 | 230/460 | 3 | 3.66 / 1.83 | 374 | 42 |
| 74M008PS423FN | 190 | 57.9 | 190 | 1.00 | 0.75 | 230/460 | 3 | 3.66 / 1.83 | 333 | 38 |
| 74M006PS423FN | 258 | 78.6 | 258 | 1.00 | 0.75 | 230/460 | 3 | 3.66 / 1.83 | 246 | 28 |

Table 3: Variable Speed Gearmotors

| Part Number | Belt Speed | | RPM | | HP | kW | Volts | FLA | in-lbs | N-m |
|---------------|------------|-------|------|-----|------|------|-------|------|--------|-----|
| | Ft/min | M/min | Min | Max | | | | | | |
| 74M081PS423EN | 21 | 6.4 | 4.2 | 21 | 0.16 | 0.12 | 230 | .88 | 483 | 55 |
| 74M054PS423EN | 31 | 9.4 | 6.2 | 31 | 0.25 | 0.19 | 230 | 1.12 | 507 | 57 |
| 74M034PS423EN | 50 | 15.2 | 10 | 50 | 0.50 | 0.37 | 230 | 1.90 | 633 | 72 |
| 74M020PS423EN | 84 | 25.6 | 16.8 | 84 | 0.75 | 0.56 | 230 | 2.70 | 563 | 64 |
| 74M013PS423EN | 122 | 37.2 | 24.4 | 122 | 1.00 | 0.75 | 230 | 3.66 | 517 | 58 |
| 74M010PS423EN | 170 | 51.8 | 34 | 170 | 1.00 | 0.75 | 230 | 3.66 | 374 | 42 |
| 74M008PS423EN | 190 | 57.9 | 38 | 190 | 1.00 | 0.75 | 230 | 3.66 | 333 | 38 |
| 74M006PS423EN | 258 | 78.6 | 51.6 | 258 | 1.00 | 0.75 | 230 | 3.66 | 246 | 28 |

NOTE

For belt speed other than those listed, contact factory for details.

Installation

Required Tools

- 5/16" wrench
- 4 mm wrench
- 13 mm wrench
- 14 mm wrench
- Large flat head screwdriver
- Torque wrench

Bottom Mount Parallel Shaft Drive Package

⚠ WARNING



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

Typical components (**Figure 2**).

- | | |
|---|---------------------------------|
| 1 | Bottom Mount Assembly |
| 2 | Drive Pulley |
| 3 | Cover |
| 4 | M4 Hex Head Screws (4x) |
| 5 | Driven Pulley |
| 6 | M8 x 35 mm Hex Head Screws (2x) |
| 7 | Timing Belt |
| 8 | Tensioner |

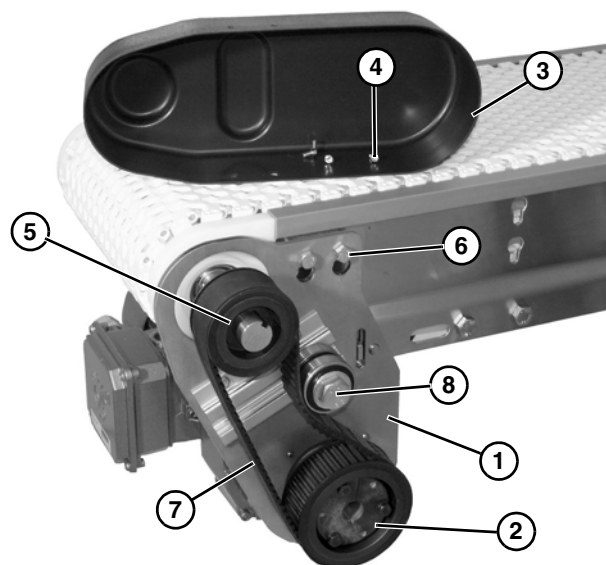


Figure 2

1. Locate drive output shaft (**Figure 3, item 1**). Remove top two existing bolts securing headplate (**Figure 3, item 2**) to conveyor frame.

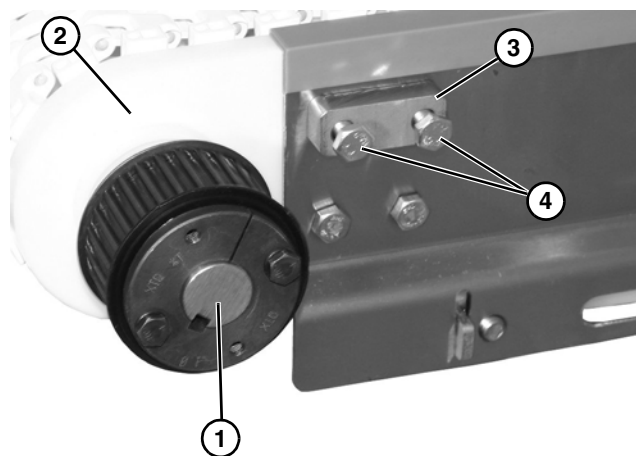


Figure 3

2. Install spacer (**Figure 3, item 3**) and two longer bolts provided (**Figure 3, item 4**) into conveyor frame and headplate. Leave bolts loose with enough space to slide on mounting assembly.

3. Attach bottom mount assembly (**Figure 4, item 1**) with the two bolts (**Figure 4, item 2**).

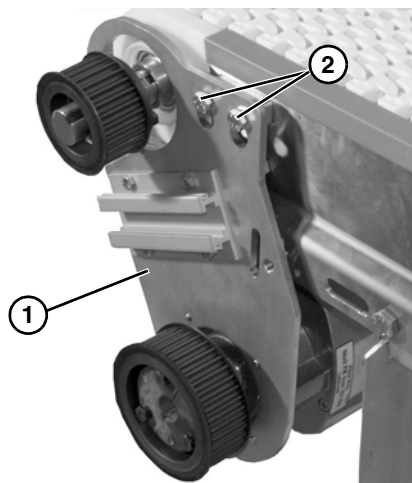


Figure 4

4. Insert bolt (**Figure 5, item 1**) through backside of conveyor into threaded hole in mounting bracket (**Figure 5, item 2**).

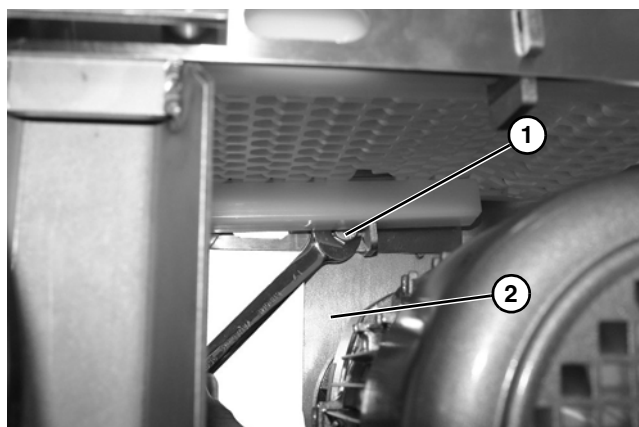


Figure 5

| |
|--|
| ⚠ WARNING |
| |
| <p>Drive shaft keyway may be sharp. HANDLE WITH CARE.</p> |

5. Install key (**Figure 6, item 1**).

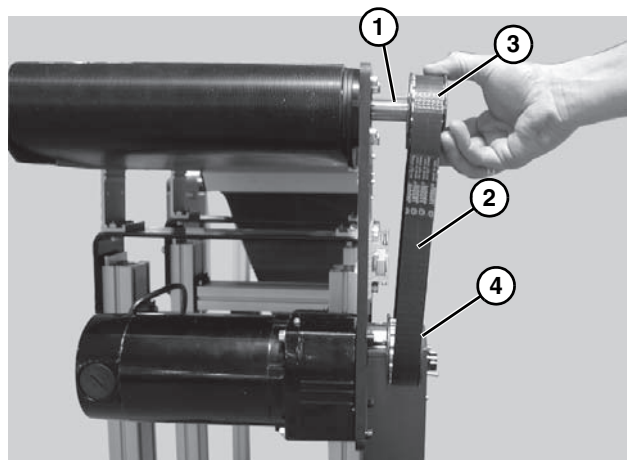


Figure 6

6. Wrap timing belt (**Figure 6, item 2**) around driven pulley (**Figure 6, item 3**) and drive pulley (**Figure 6, item 4**). Install driven pulley onto conveyor shaft.
7. Using a straight edge (**Figure 7, item 1**), align driven pulley (**Figure 7, item 2**) with drive pulley (**Figure 7, item 3**).

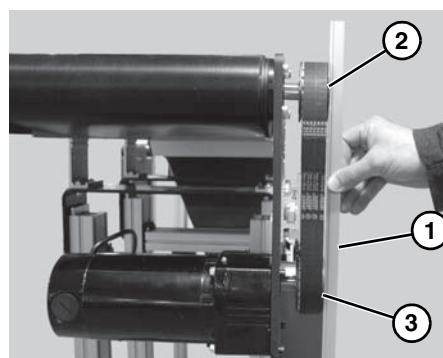


Figure 7

8. Tighten driven pulley taper-lock screws (**Figure 8, item 1**).

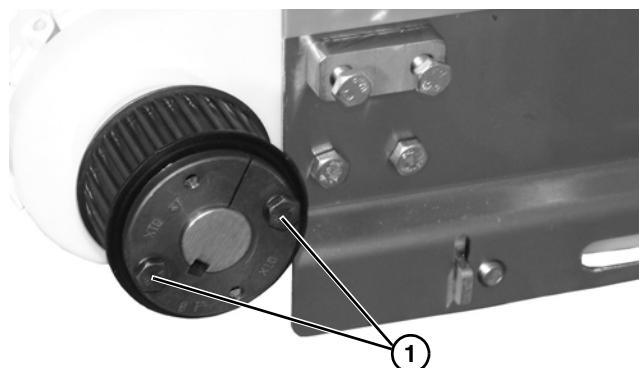


Figure 8

Installation

9. Tension timing belt to obtain 1/8" (3 mm) deflection for 6 lb (3 Kg) of force at timing belt mid-point (**Figure 9, item 1**). Tighten tensioner screw (**Figure 9, item 2**) to 110 in-lb (12 Nm).

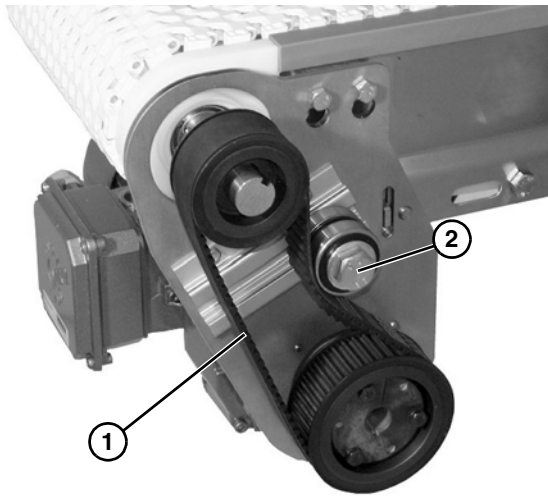


Figure 9

10. Install cover (**Figure 10, item 1**) with four (4) screws (**Figure 10, item 2**). Tighten screws to 35 in-lb (4 Nm).

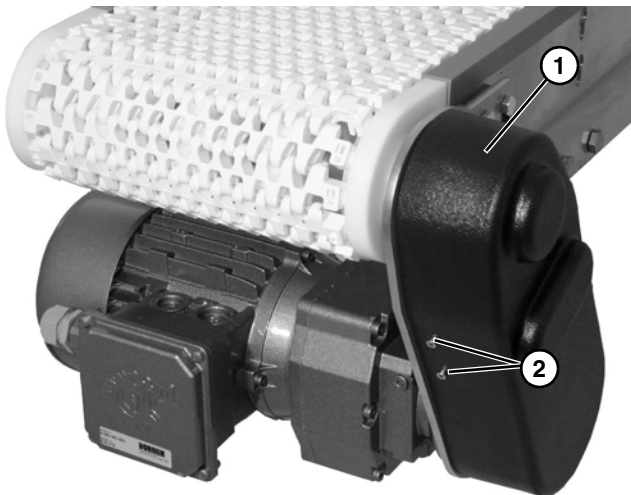


Figure 10

Preventive Maintenance and Adjustment

Required Tools

- 5/16" wrench
- 4 mm wrench
- 13 mm wrench
- 14 mm wrench
- Large flat head screwdriver
- Torque wrench

Timing Belt Tensioning

⚠ WARNING



Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Remove four screws (Figure 11, item 1) and remove cover (Figure 11, item 2).

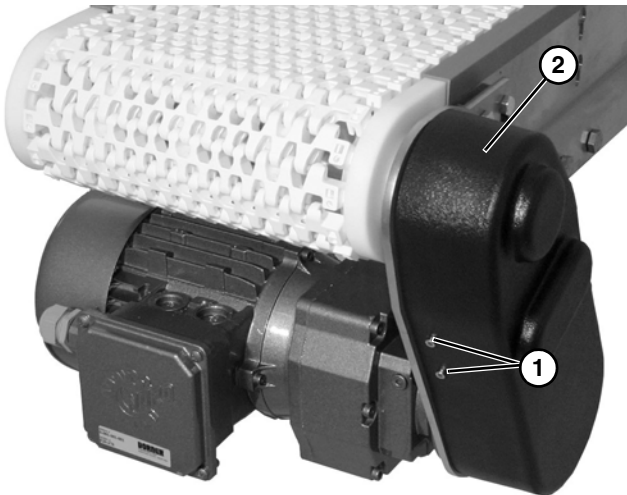


Figure 11

2. Loosen tensioner (Figure 12, item 1).

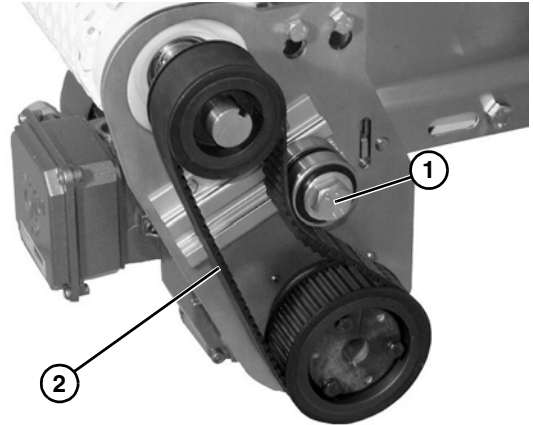


Figure 12

3. Tension timing belt to obtain 1/8" (3 mm) deflection for 6 lb (3 Kg) of force at timing belt mid-point (Figure 12, item 2). Tighten tensioner screw (Figure 12, item 1) to 110 in-lb (12 Nm).
4. Install cover (Figure 11, item 2) with four screws (Figure 11, item 1).

Timing Belt Replacement

⚠ WARNING



Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Remove four screws (Figure 13, item 1) and remove cover (Figure 13, item 2).

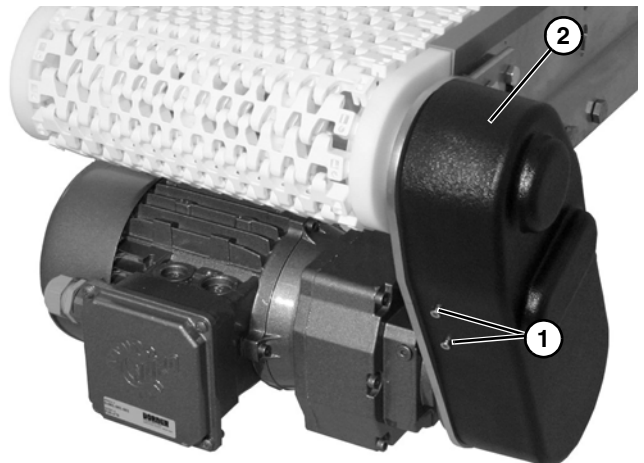


Figure 13

Preventive Maintenance and Adjustment

2. Loosen tensioner (**Figure 14, item 1**).

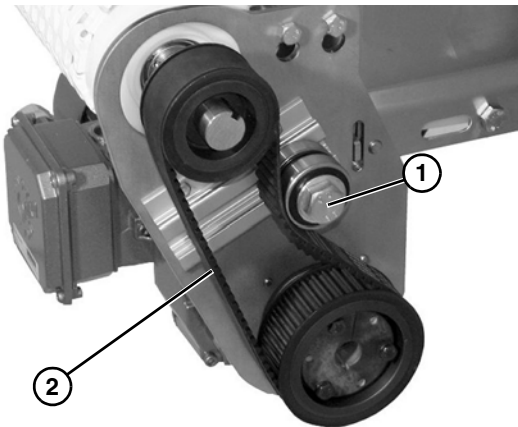


Figure 14

3. Remove timing belt (**Figure 15, item 1**).

NOTE

*If timing belt does not slide over pulley flange, loosen driven pulley taper-lock screws (**Figure 15, item 2**) and remove pulley with belt (**Figure 15, item 1**). For re-installation, see steps 7 thru 9 beginning on page 7.*

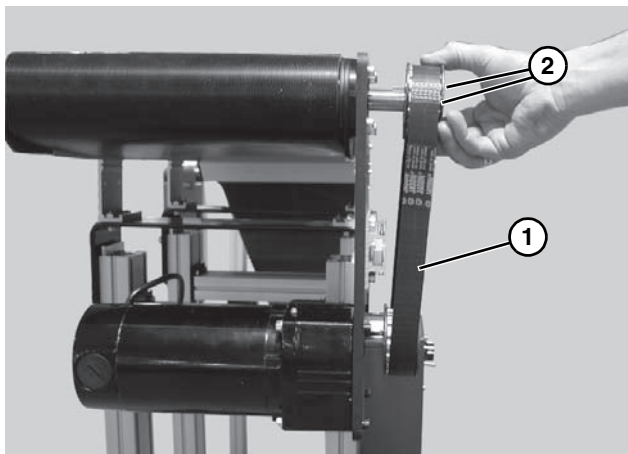


Figure 15

4. Install new timing belt.
5. Tension timing belt to obtain 1/8" (3 mm) deflection for 6 lb (3 Kg) of force at timing belt mid-point (**Figure 14, item 2**). Tighten tensioner screw (**Figure 14, item 1**) to 110 in-lb (12 Nm).

6. Install cover (**Figure 16, item 1**) with four screws (**Figure 16, item 2**). Tighten screws to 35 in-lb (4 Nm).

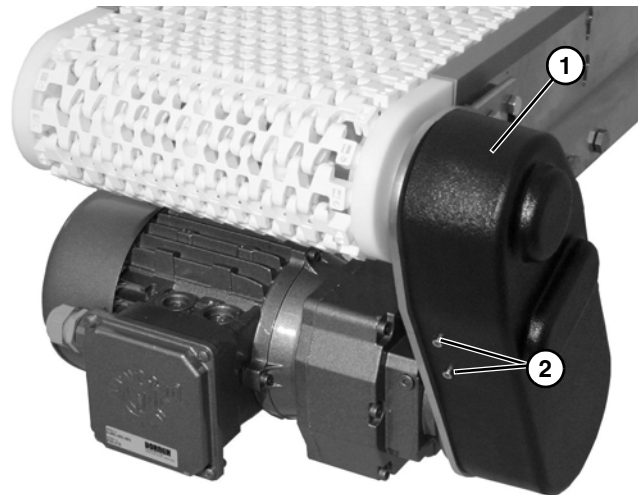


Figure 16

Drive or Driven Pulley Replacement

⚠ WARNING



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

1. Complete steps 1 through 3 of "Timing Belt Replacement" section on page 9.

Preventive Maintenance and Adjustment

2. Remove taper-lock screws (**Figure 17, item 1**). Insert one of taper lock screws in remaining hole (**Figure 17, item 2**). Tighten screw until pulley is loose. Remove pulley and taper hub assembly.

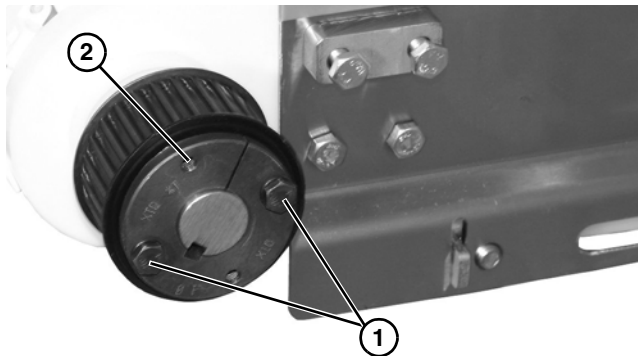


Figure 17

3. To reassemble see steps 5 through 10 of “Installation” section beginning on page 7.

Motor Replacement

⚠ 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.

⚠ DANGER



ELECTRICAL HAZARD!
LOCK OUT POWER BEFORE WIRING.
Exposure to high voltage current can cause death or serious injury.

1. Loosen terminal box screws (**Figure 18, item 1**) and remove cover (**Figure 18, item 2**).

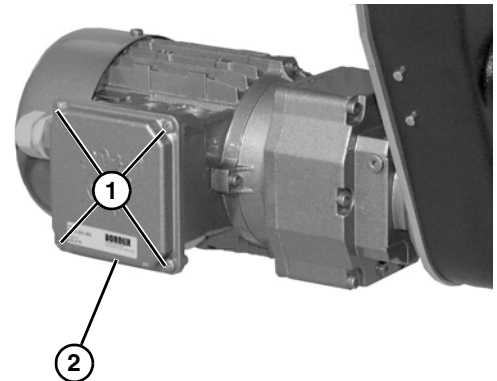


Figure 18

2. Refer to the wiring diagram on the inside of the junction box cover.
3. Loosen the wire nuts and disconnect the wires.
4. Loosen the cord grip and remove the cord.

⚠ WARNING



CRUSH HAZARD!

- **SUPPORT MOTOR PRIOR TO LOOSENING THE BOLTS**
- **Loosening motor bolts may cause it to drop down, causing serious injury.**

5. Remove the drive pulley. See steps 1 and 2 of “Drive or Driven Pulley Replacement” section on page 10.

Preventive Maintenance and Adjustment

6. Remove eight (8) bolts (**Figure 19, item 1**). Detach motor (**Figure 19, item 2**) from the mounting plate (**Figure 19, item 3**). Retain motor output shaft key (**Figure 19, item 4**).

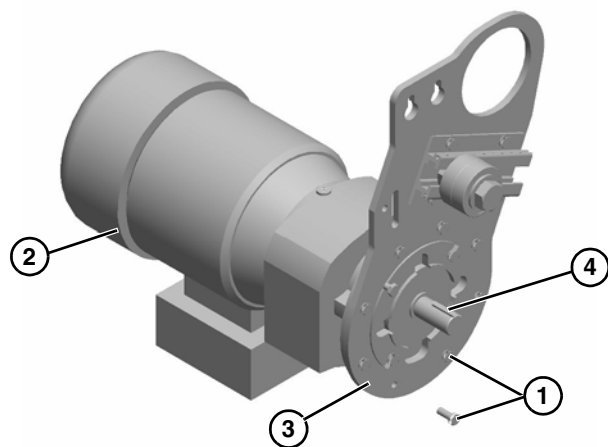


Figure 19

7. Remove four (4) bolts (**Figure 20, item 1**). Detach mounting plates (**Figure 20, item 2**) from motor. Install new motor.

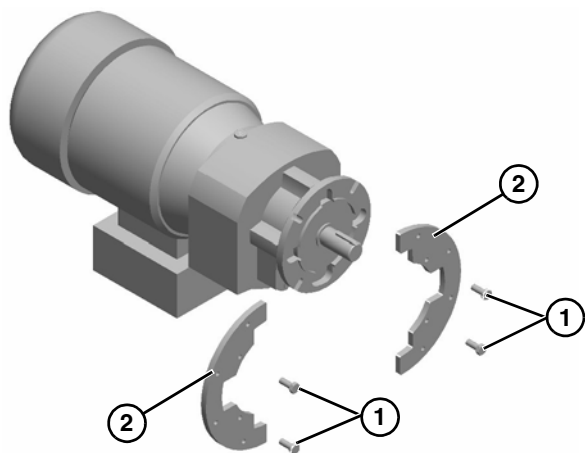



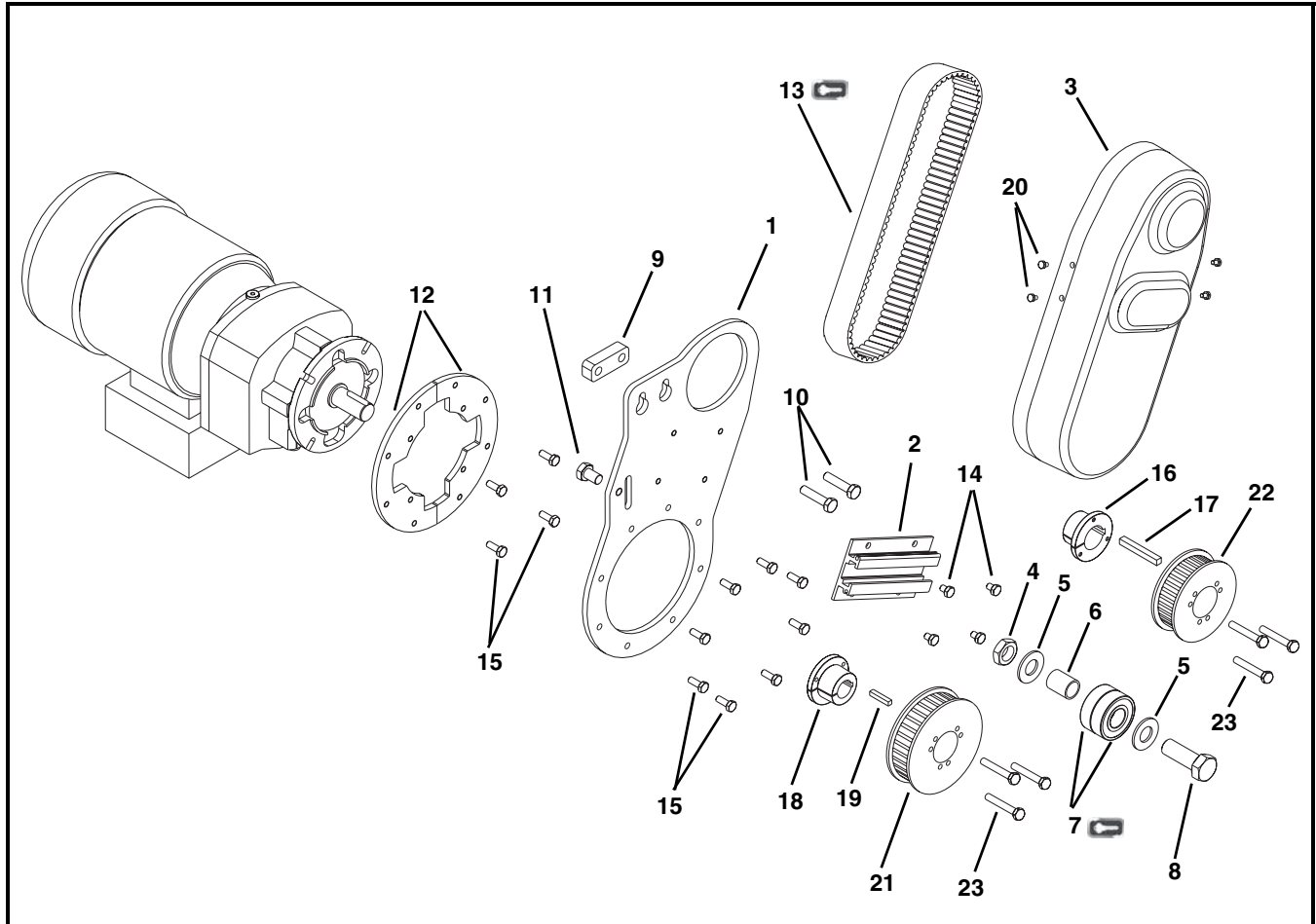
Figure 20

8. Re-install the drive pulley, reverse step 2 of “Drive or Driven Pulley Replacement” section on page 11.
9. Complete steps 6 through 10 of “Installation” section beginning on page 7.
10. Rewire the motor and attach the box cover.


NOTE

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

Bottom Mount Parallel Drive Package

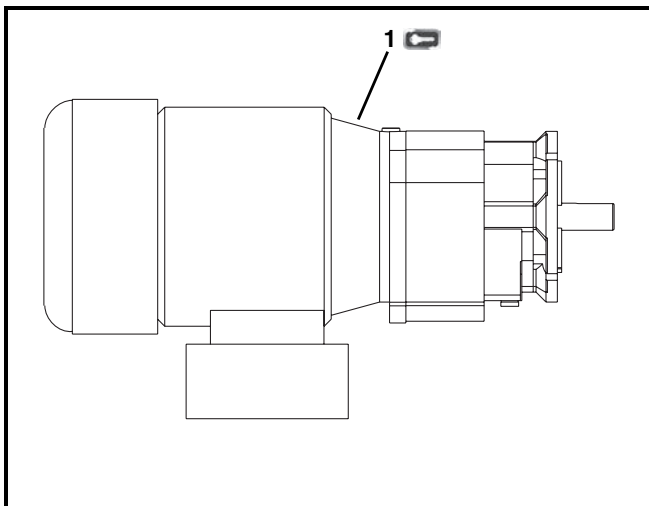



| Item | Part Number | Description |
|------|-------------|--|
| 1 | 532229 | Mounting Plate |
| 2 | 301076 | Slide Tensioner |
| 3 | 532227 | Drive Cover |
| 4 | 991610MSS | Hex Nut |
| 5 | 911-013 | Washer |
| 6 | 801-124 | Bearing |
| 7 | 802-126 | Ball Bearing (Qty: 2) |
| 8 | 961645M | Hex Head Cap Screw M16-2.00 x 45 mm |
| 9 | 532231 | Spacer |
| 10 | 960835MSS | Hex Head Cap Screw M8-1.25 x 35 mm |
| 11 | 961016MSS | Hex Head Cap Screw M10-1.50 x 16 mm |
| 12 | 532247 | Mount Plate |

| Item | Part Number | Description |
|---|-------------|--|
| 13 | 814-144 | Timing Belt for 30:30 Pulley Ratio |
|  | 814-143 | Timing Belt for 36:30 Pulley Ratio |
| 14 | 960608MSS | Hex Head Cap Screw M6-1.00 x 8 mm |
| 15 | 960616MSS | Hex Head Cap Screw M6-1.00 x 16mm |
| 16 | 532235 | Bushing |
| 17 | 912-110SS | Square Key |
| 18 | 532236 | Bushing |
| 19 | 912-080SS | Square Key |
| 20 | 960406MSS | Hex Head Cap Screw M4-0.70 x 6mm |
| 21 | 532234-30 | Drive Pulley 30T |
| | 532234-36 | Drive Pulley 36T |
| 22 | 532234-30 | Driven Pulley 30T |
| 23 | 960645MSS | Hex Head Cap Screw, M6-1.00 x 45 mm |

Service Parts

Parallel Shaft Gearmotors



| Item | Part Number | Description |
|--|---------------|--|
| 1  | 74M081PS423FN | Motor, 0.16 hp (0.12Kw), 81:1, 230-460 Volts, 60 Hz, 3 Phase |
| | 74M054PS423FN | Motor, 0.25 hp (0.19Kw), 54:1, 230-460 Volts, 60 Hz, 3 Phase |
| | 74M034PS423FN | Motor, 0.50 hp (0.37Kw), 34:1, 230-460 Volts, 60 Hz, 3 Phase |
| | 74M020PS423FN | Motor, 0.75 hp (0.56Kw), 20:1, 230-460 Volts, 60 Hz, 3 Phase |
| | 74M013PS423FN | Motor, 1.00 hp (0.75Kw), 13:1, 230-460 Volts, 60 Hz, 3 Phase |
| | 74M010PS423FN | Motor, 1.00 hp (0.75Kw), 10:1, 230-460 Volts, 60 Hz, 3 Phase |
| | 74M008PS423FN | Motor, 1.00 hp (0.75Kw), 8:1, 230-460 Volts, 60 Hz, 3 Phase |
| | 74M006PS423FN | Motor, 1.00 hp (0.75Kw), 6:1, 230-460 Volts, 60 Hz, 3 Phase |
| | 74M081PS423EN | Motor, 0.16 hp (0.12Kw), 81:1, 230 Volts, 60 Hz |
| | 74M054PS423EN | Motor, 0.25 hp (0.19Kw), 54:1, 230 Volts, 60 Hz |
| | 74M034PS423EN | Motor, 0.50 hp (0.37Kw), 34:1, 230 Volts, 60 Hz |
| | 74M020PS423EN | Motor, 0.75 hp (0.56Kw), 20:1, 230 Volts, 60 Hz |
| | 74M013PS423EN | Motor, 1.00 hp (0.75Kw), 13:1, 230 Volts, 60 Hz |
| | 74M010PS423EN | Motor, 1.00 hp (0.75Kw), 10:1, 230 Volts, 60 Hz |
| | 74M008PS423EN | Motor, 1.00 hp (0.75Kw), 8:1, 230 Volts, 60 Hz |
| | 74M006PS423EN | Motor, 1.00 hp (0.75Kw), 6:1, 230 Volts, 60 Hz |

Return Policy

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

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

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

Conveyors and conveyor accessories

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

Parts

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

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

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

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

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



Dorner Mfg. Corp. reserves the right to change or discontinue products without notice. All products and services are covered in accordance with our standard warranty. All rights reserved. © Dorner Mfg. Corp. 2009

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