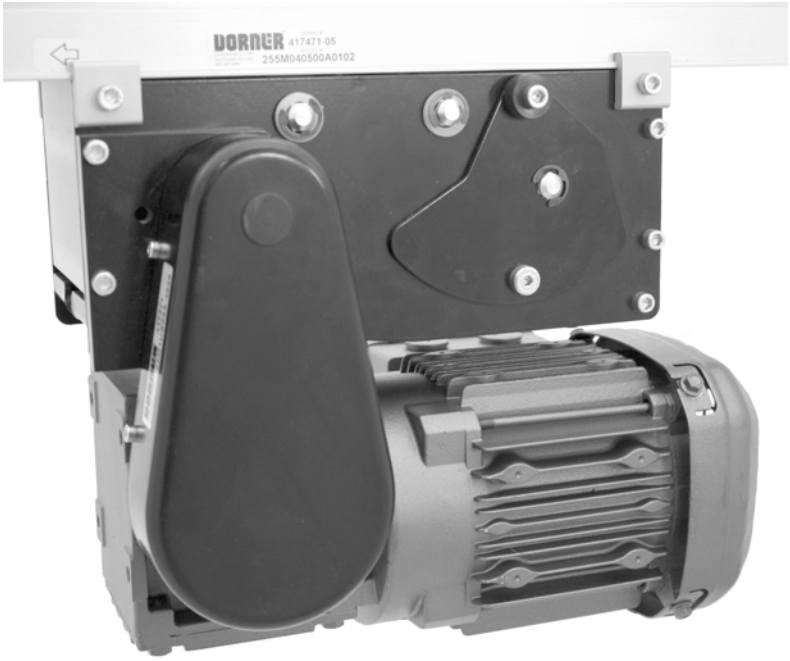
# 2200 and 2300 Series Center Mount Drive Package for SEW 60 Hz Gearmotors

## Setup, Operation & Maintenance Manual

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**851-717 Rev. A**

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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 2200 Series conveyors are covered by patent number 5174435 and corresponding patents and patent applications in other countries.

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 .

**⚠ 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 | Mounting Bracket |
| 3 | Gearmotor |
| 4 | Timing Belt Tensioner |
| 5 | Cover |
| 6 | Timing Belt |
| 7 | Drive Pulley |
| 8 | Driven Pulley |

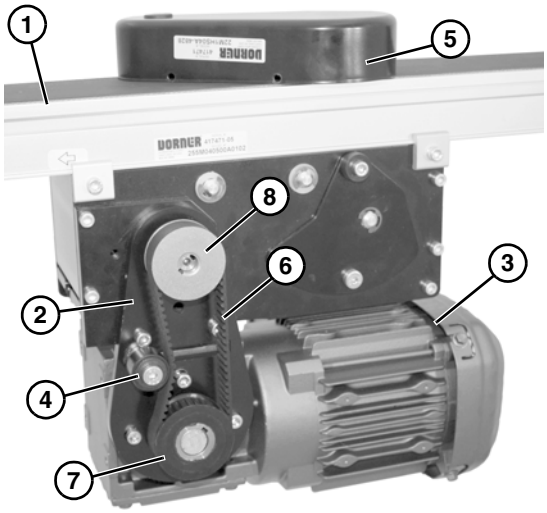



***Figure 1***

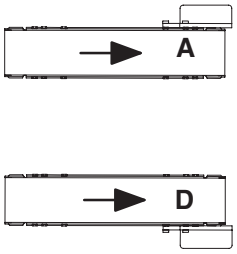
# Specifications

## Gearmotor Mounting Package Models:

Example:

**22 M 1 W S WW A 32 32**

- **Driven Pulley (see Tables 2 & 3)**
- **Drive Pulley (see Tables 2 & 3)**
- **Mount Position = A or D (see detail to the right)**
- **Conveyor Width Reference***
- **Gearmotor Type = Standard Load**
- **Output Shaft Type = SEW**
- **Mount Style: 1 = Type 1, Vertical Mount**
  **2 = Type 2, Bottom Mount**
- **Language Code = U.S. English**
- **22 = 2200, 2300 Series Conveyors**




* See “Ordering and Specifications” Catalog for details.

## Table 1: Gearmotor Specifications

| | Three Phase | | | VFD Vari Speed | | |
|---|---|---|---|---|---|---|
| Output Power | 0.25 Hp (0.19 Kw) | 0.33 hp (0.25 kW) | 0.5 Hp(0.37 kW) | 0.25 Hp (0.19 Kw) | 0.33 hp (0.25 kW) | 0.5 Hp(0.37 kW) |
| Input Voltage | 230/460 | | | 230/460 | | |
| Input Frequency | 60 Hz | | | 10 to 60 Hz | | |
| Input Current | 0.89/0.44 | 1.24/0.62 | 1.84/0.92 | 0.89/0.44 | 1.24/0.62 | 1.84/0.92 |
| RPM | 46 | 109 | 219 | 8 to 46 | 18 to 109 | 37 to 219 |
| Ratio | 39:1 | 16.5:1 | 8.2:1 | 39:1 | 16.5:1 | 8.2:1 |
| Motor Frame | IEC71 | | | IEC71 | | |
| Motor Type | IP54 Totally Enclosed Fan Cooled | | | IP54 Totally Enclosed Fan Cooled | | |

## Table 2: Belt Speeds for Fixed Speed SEW Gearmotors

| Part Number | RPM | In-lb | N-m | Ft/min | M/min | Drive Pulley | Driven Pulley |
|---|---|---|---|---|---|---|---|
| 22M039WS423EN | 46 | 203 | 22.9 | 9.6 | 2.9 | 19 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 11.0 | 3.4 | 19 | 28 |
| 22M039WS423EN | 46 | 203 | 22.9 | 11.1 | 3.4 | 22 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 12.7 | 3.9 | 22 | 28 |
| 22M039WS423EN | 46 | 203 | 22.9 | 14.2 | 4.3 | 28 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 16.2 | 4.9 | 32 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 18.5 | 5.6 | 32 | 28 |
| 22M039WS423EN | 46 | 203 | 22.9 | 20.6 | 6.3 | 28 | 22 |
| 22M039WS423EN | 46 | 203 | 22.9 | 22.3 | 6.8 | 44 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 22.7 | 6.9 | 19 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 23.6 | 7.2 | 32 | 22 |
| 22M039WS423EN | 46 | 203 | 22.9 | 23.9 | 7.3 | 28 | 19 |
| 22M039WS423EN | 46 | 203 | 22.9 | 24.3 | 7.4 | 48 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 25.5 | 7.8 | 44 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 25.9 | 7.9 | 19 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 26.3 | 8.0 | 22 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 27.3 | 8.3 | 32 | 19 |
| 22M039WS423EN | 46 | 203 | 22.9 | 27.8 | 8.5 | 48 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 30.0 | 9.2 | 22 | 28 |
| 22M039WS423EN | 46 | 203 | 22.9 | 32.4 | 9.9 | 44 | 22 |
| 22M017WS423EN | 109 | 159 | 18.0 | 33.4 | 10.2 | 28 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 35.4 | 10.8 | 48 | 22 |
| 22M039WS423EN | 46 | 203 | 22.9 | 37.5 | 11.4 | 44 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 38.2 | 11.6 | 32 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 40.9 | 12.5 | 48 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 43.7 | 13.3 | 32 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 45.6 | 13.9 | 19 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 48.6 | 14.8 | 28 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 52.1 | 15.9 | 19 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 52.5 | 16.0 | 44 | 32 |
| 22M008WS423EN | 219 | 132 | 14.9 | 52.8 | 16.1 | 22 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 55.6 | 16.9 | 32 | 22 |
| 22M017WS423EN | 109 | 159 | 18.0 | 56.3 | 17.2 | 28 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 57.3 | 17.5 | 48 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 60.0 | 18.3 | 44 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 60.3 | 18.4 | 22 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 64.4 | 19.6 | 32 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 65.5 | 20.0 | 48 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 67.2 | 20.5 | 28 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 76.4 | 23.3 | 44 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 76.8 | 23.4 | 32 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 83.4 | 25.4 | 48 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 87.8 | 26.8 | 32 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 88.5 | 27.0 | 44 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 96.5 | 29.4 | 48 | 19 |
| 22M008WS423EN | 219 | 132 | 14.9 | 97.7 | 29.8 | 28 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 105.6 | 32.2 | 44 | 32 |
| 22M008WS423EN | 219 | 132 | 14.9 | 111.7 | 34.1 | 32 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 113.2 | 34.5 | 28 | 19 |
| 22M008WS423EN | 219 | 132 | 14.9 | 115.2 | 35.1 | 48 | 32 |
| 22M008WS423EN | 219 | 132 | 14.9 | 120.7 | 36.8 | 44 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 129.4 | 39.4 | 32 | 19 |
| 22M008WS423EN | 219 | 132 | 14.9 | 131.7 | 40.1 | 48 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 153.6 | 46.8 | 44 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 167.6 | 51.1 | 48 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 177.9 | 54.2 | 44 | 19 |
| 22M008WS423EN | 219 | 132 | 14.9 | 194.0 | 59.1 | 48 | 19 |

# Specifications

## Table 3: Belt Speeds for Variable Speed SEW Gearmotors

| Part Number | RPM | In-lb | N-m | Ft/min (max) | Ft/min (min) | M/min (max) | M/min (min) | Drive Pulley | Driven Pulley |
|---|---|---|---|---|---|---|---|---|---|
| 22M039WS423EN | 46 | 203 | 22.9 | 9.6 | 1.6 | 2.9 | 0.5 | 19 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 11.0 | 1.8 | 3.4 | 0.6 | 19 | 28 |
| 22M039WS423EN | 46 | 203 | 22.9 | 11.1 | 1.9 | 3.4 | 0.6 | 22 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 12.7 | 2.1 | 3.9 | 0.6 | 22 | 28 |
| 22M039WS423EN | 46 | 203 | 22.9 | 14.2 | 2.4 | 4.3 | 0.7 | 28 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 16.2 | 2.7 | 4.9 | 0.8 | 32 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 18.5 | 3.1 | 5.6 | 0.9 | 32 | 28 |
| 22M039WS423EN | 46 | 203 | 22.9 | 20.6 | 3.4 | 6.3 | 1.0 | 28 | 22 |
| 22M039WS423EN | 46 | 203 | 22.9 | 22.3 | 3.7 | 6.8 | 1.1 | 44 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 22.7 | 3.8 | 6.9 | 1.2 | 19 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 23.6 | 3.9 | 7.2 | 1.2 | 32 | 22 |
| 22M039WS423EN | 46 | 203 | 22.9 | 23.9 | 4.0 | 7.3 | 1.2 | 28 | 19 |
| 22M039WS423EN | 46 | 203 | 22.9 | 24.3 | 4.1 | 7.4 | 1.2 | 48 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 25.5 | 4.2 | 7.8 | 1.3 | 44 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 25.9 | 4.3 | 7.9 | 1.3 | 19 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 26.3 | 4.4 | 8.0 | 1.3 | 22 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 27.3 | 4.5 | 8.3 | 1.4 | 32 | 19 |
| 22M039WS423EN | 46 | 203 | 22.9 | 27.8 | 4.6 | 8.5 | 1.4 | 48 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 30.0 | 5.0 | 9.2 | 1.5 | 22 | 28 |
| 22M039WS423EN | 46 | 203 | 22.9 | 32.4 | 5.4 | 9.9 | 1.6 | 44 | 22 |
| 22M017WS423EN | 109 | 159 | 18.0 | 33.4 | 5.6 | 10.2 | 1.7 | 28 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 35.4 | 5.9 | 10.8 | 1.8 | 48 | 22 |
| 22M039WS423EN | 46 | 203 | 22.9 | 37.5 | 6.3 | 11.4 | 1.9 | 44 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 38.2 | 6.4 | 11.6 | 1.9 | 32 | 32 |
| 22M039WS423EN | 46 | 203 | 22.9 | 40.9 | 6.8 | 12.5 | 2.1 | 48 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 43.7 | 7.3 | 13.3 | 2.2 | 32 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 45.6 | 7.6 | 13.9 | 2.3 | 19 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 48.6 | 8.1 | 14.8 | 2.5 | 28 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 52.1 | 8.7 | 15.9 | 2.6 | 19 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 52.5 | 8.8 | 16.0 | 2.7 | 44 | 32 |
| 22M008WS423EN | 219 | 132 | 14.9 | 52.8 | 8.8 | 16.1 | 2.7 | 22 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 55.6 | 9.3 | 16.9 | 2.8 | 32 | 22 |
| 22M017WS423EN | 109 | 159 | 18.0 | 56.3 | 9.4 | 17.2 | 2.9 | 28 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 57.3 | 9.6 | 17.5 | 2.9 | 48 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 60.0 | 10.0 | 18.3 | 3.1 | 44 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 60.3 | 10.1 | 18.4 | 3.1 | 22 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 64.4 | 10.7 | 19.6 | 3.3 | 32 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 65.5 | 10.9 | 20.0 | 3.3 | 48 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 67.2 | 11.2 | 20.5 | 3.4 | 28 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 76.4 | 12.7 | 23.3 | 3.9 | 44 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 76.8 | 12.8 | 23.4 | 3.9 | 32 | 32 |
| 22M017WS423EN | 109 | 159 | 18.0 | 83.4 | 13.9 | 25.4 | 4.2 | 48 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 87.8 | 14.6 | 26.8 | 4.5 | 32 | 28 |
| 22M017WS423EN | 109 | 159 | 18.0 | 88.5 | 14.7 | 27.0 | 4.5 | 44 | 19 |
| 22M017WS423EN | 109 | 159 | 18.0 | 96.5 | 16.1 | 29.4 | 4.9 | 48 | 19 |
| 22M008WS423EN | 219 | 132 | 14.9 | 97.7 | 16.3 | 29.8 | 5.0 | 28 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 105.6 | 17.6 | 32.2 | 5.4 | 44 | 32 |
| 22M008WS423EN | 219 | 132 | 14.9 | 111.7 | 18.6 | 34.1 | 5.7 | 32 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 113.2 | 18.9 | 34.5 | 5.7 | 28 | 19 |
| 22M008WS423EN | 219 | 132 | 14.9 | 115.2 | 19.2 | 35.1 | 5.9 | 48 | 32 |
| 22M008WS423EN | 219 | 132 | 14.9 | 120.7 | 20.1 | 36.8 | 6.1 | 44 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 129.4 | 21.6 | 39.4 | 6.6 | 32 | 19 |
| 22M008WS423EN | 219 | 132 | 14.9 | 131.7 | 21.9 | 40.1 | 6.7 | 48 | 28 |
| 22M008WS423EN | 219 | 132 | 14.9 | 153.6 | 25.6 | 46.8 | 7.8 | 44 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 167.6 | 27.9 | 51.1 | 8.5 | 48 | 22 |
| 22M008WS423EN | 219 | 132 | 14.9 | 177.9 | 29.6 | 54.2 | 9.0 | 44 | 19 |
| 22M008WS423EN | 219 | 132 | 14.9 | 194.0 | 32.3 | 59.1 | 9.9 | 48 | 19 |

**NOTE**

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

## Required Tools

- Hex key wrenches:
  3/32”, 3 mm, 5 mm, 6 mm
- Socket wrenches:
  8 mm, 11 mm
- Torque wrench
- Straight Edge

## Mounting

**⚠ WARNING**

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

**NOTE**

*Type 1 mounting package shown below left **(Figure 2)**. Type 2 mounting package shown below right **(Figure 2)**.*

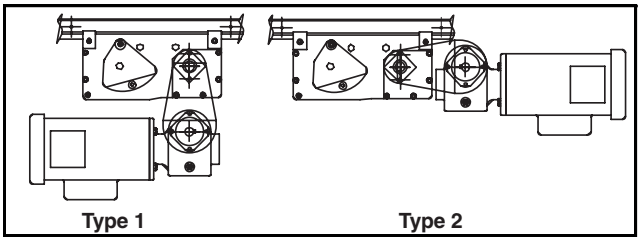



***Figure 2***

**NOTE**

*For Type 1 mounting package, the gearmotor may be operated in positions 1 or 4 **(Figure 3)**.*

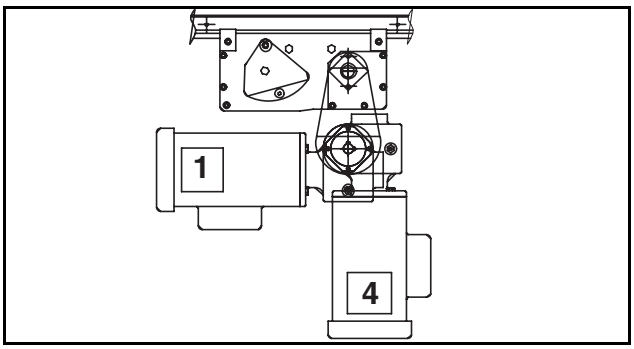



***Figure 3***

**Installation Component List:**

| | |
|---|---|
| 1 | Mount Assembly |
| 2 | Drive Pulley |
| 3 | Cover |
| 4 | M4 Socket Head Screws (4x) |
| 5 | Driven Pulley |
| 6 | Key |
| 7 | M6 Socket Head Screws (3x) |
| 8 | Timing Belt |

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

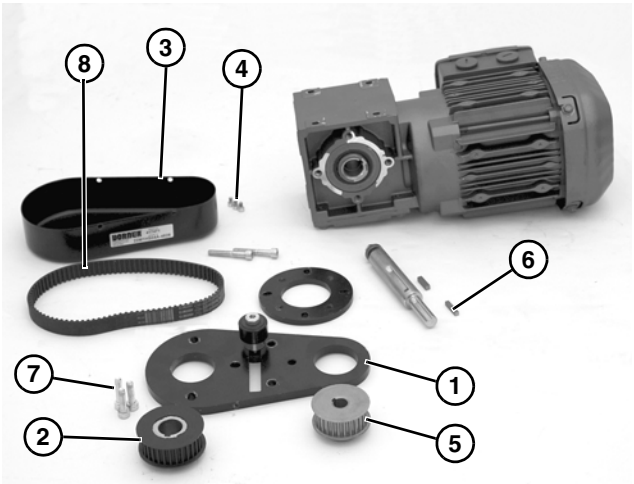



***Figure 4***

**NOTE**

*Type 1 mounting package shown **(Figure 4)**, Type 2 mounting package similar.*

2. If required, change gearmotor position by removing screws **(Figure 5, item 1)**. Rotate gearmotor to other position and replace screws. Tighten to 103 in-lb (12 Nm).

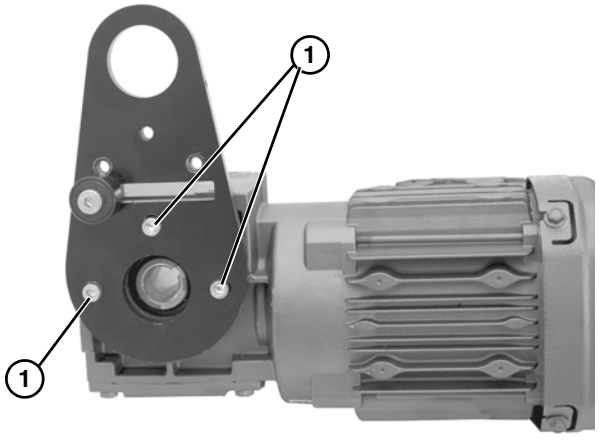



***Figure 5***

3. Locate drive output shaft **(Figure 6, item 1)** and remove two (2) screws **(Figure 6, item 2)**.

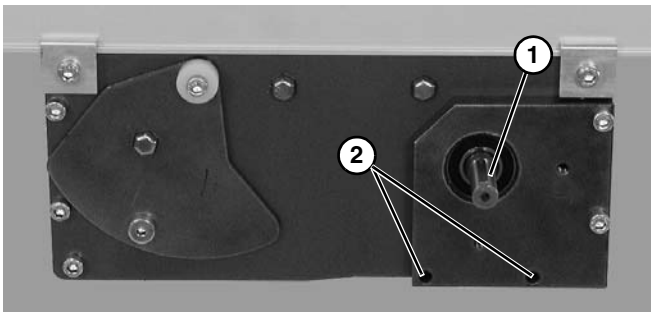



***Figure 6***

4. Attach mount assembly **(Figure 7, item 1)** with mounting screws **(Figure 7, item 2)**. Tighten screws to 80 in-lb (9 Nm.).

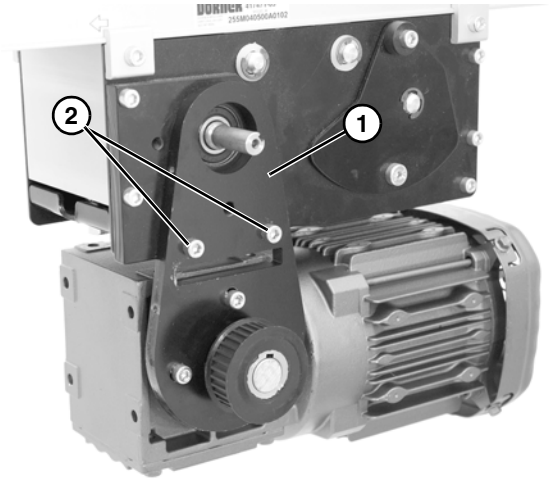



***Figure 7***

**⚠ WARNING**

**Drive shaft keyway may be sharp. HANDLE WITH CARE.**

5. Install key **(Figure 8, item 1)**.

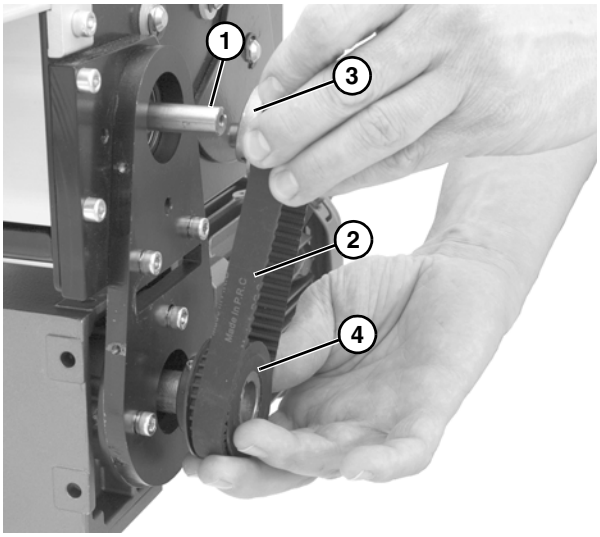



***Figure 8***

6. Wrap timing belt **(Figure 8, item 2)** around driven pulley **(Figure 8, item 3)** and drive pulley **(Figure 8, item 4)**. Install driven pulley **(Figure 8, item 3)** onto conveyor shaft.
7. Using a straight edge **(Figure 9, item 1)**, align driven pulley **(Figure 9, item 2)** with drive pulley **(Figure 9, item 3)**. Tighten driven pulley set screws **(Figure 9, item 4)**.

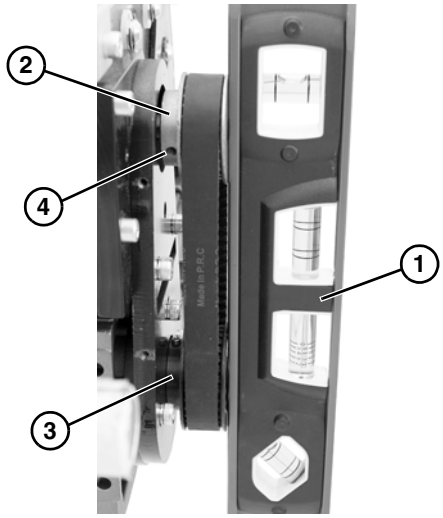



***Figure 9***

8. Depending on direction of conveyor belt travel (1 or 2 of **Figure 10**), position belt tensioner **(Figure 10, item 1)** as shown. Tension belt to obtain .125” (3 mm) deflection for 1.0 lb (456 grams) of force at belt mid-point **(Figure 10, item 2)**. Tighten tensioner screw to 103 in-lb (12 Nm).

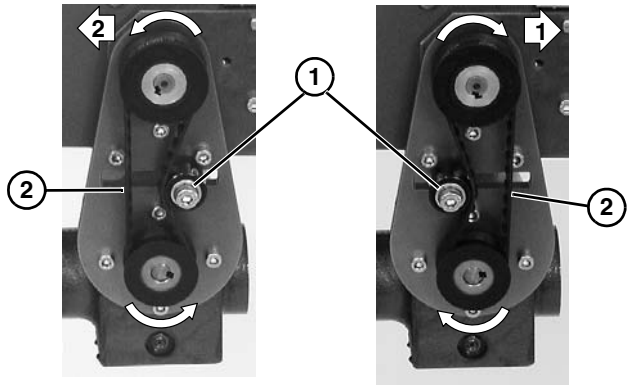



*Figure 10*

9. Install cover **(Figure 11, item 1)** with four (4) screws **(Figure 11, item 2)**. Tighten screws to 35 in-lb (4 Nm).

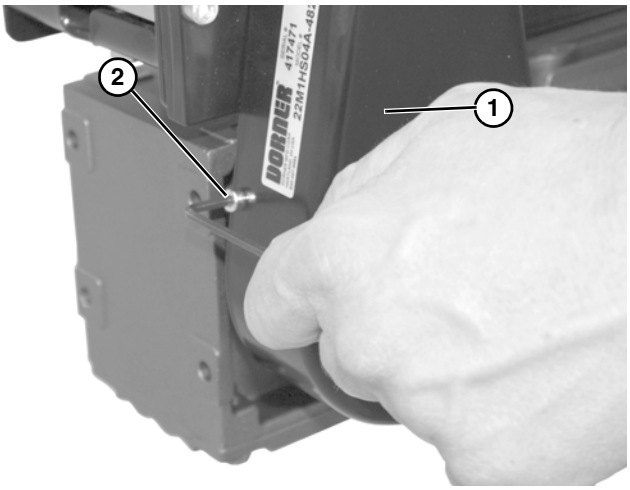



*Figure 11*

## Motor Wiring

**⚠ DANGER**

**Hazardous voltage will cause severe injury or death.**

**LOCK OUT POWER BEFORE WIRING.**

**NOTE**

*Lug terminals are recommended for wiring connections.*

1. Remove cover **(Figure 12, item 1)**.

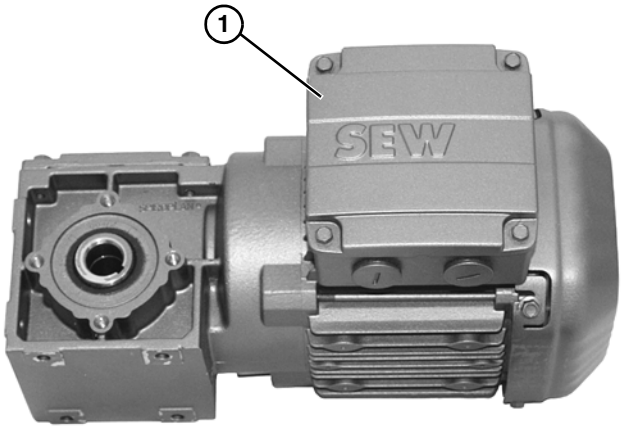



*Figure 12*

2. Determine wiring configuration **(Figure 13)**.

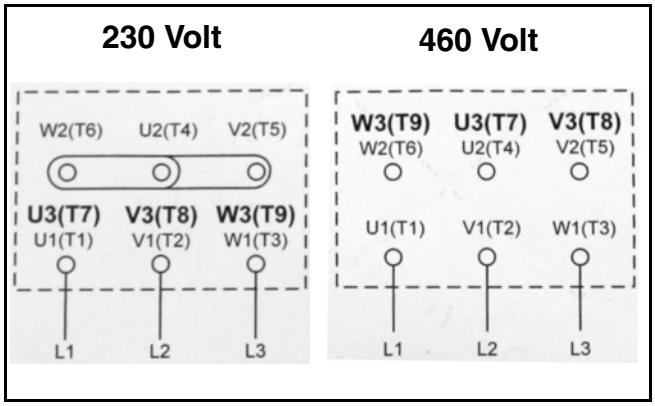



*Figure 13*

3. Install cord grip and power cord **(Figure 14, item 1)** mount to terminal box as required.

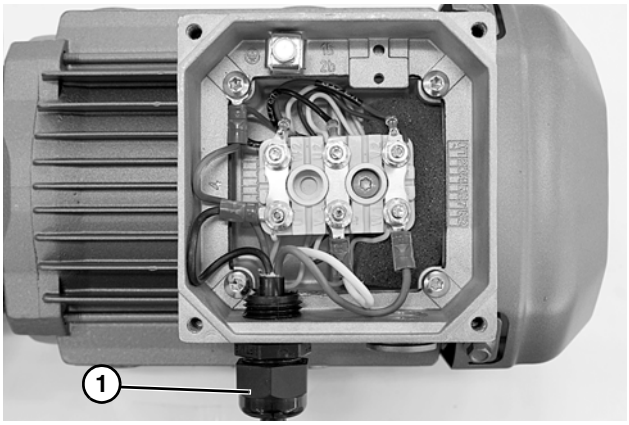



*Figure 14*

4. Connect wires.
5. Close cover.

## Required Tools

- Hex key wrenches:
  3/32”, 3 mm, 5 mm, 6 mm
- Socket wrenches:
  8 mm, 11 mm
- Torque wrench
- Small bubble level

## Timing Belt Tensioning

**⚠ WARNING**

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

1. Remove four (4) screws **(Figure 15, item 1)** and remove cover **(Figure 15, item 2)**.

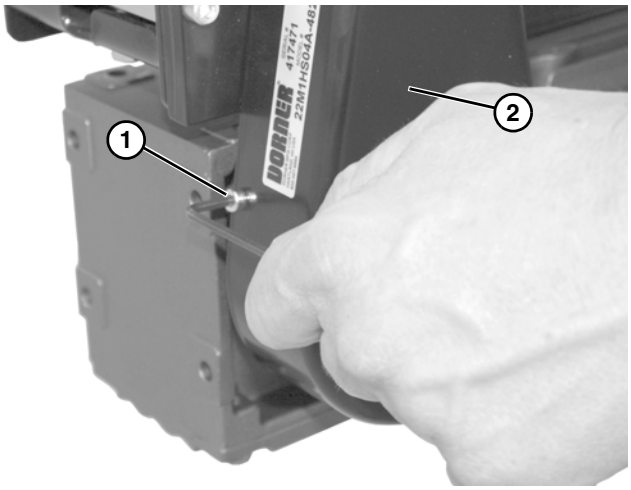



***Figure 15***

2. Loosen tensioner **(Figure 16, item 1)**.

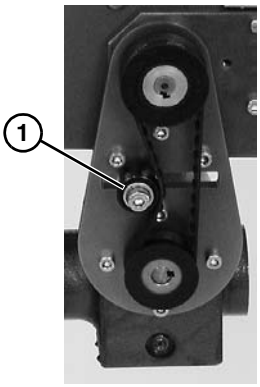



***Figure 16***

3. Depending on direction of conveyor belt travel (1 or 2 of **(Figure 17)**, position belt tensioner **(Figure 17, item 1)** as shown. Tension belt to obtain .125” (3 mm) deflection for 1.0 lb (456 grams) of force at belt mid-point **(Figure 17, item 2)**. Tighten tensioner screw to 103 in-lb (12 Nm).

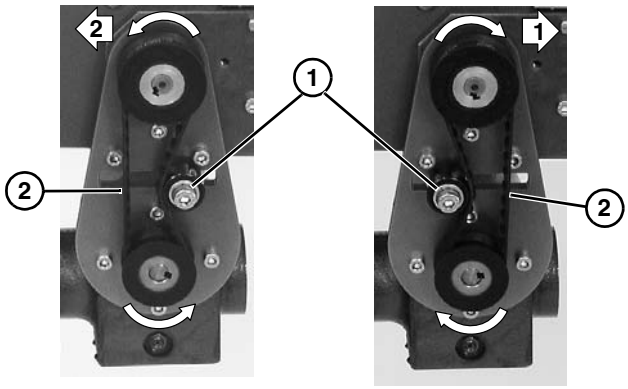



***Figure 17***

4. Install cover **(Figure 15, item 2)** with four (4) screws **(Figure 15, item 1)**.Tighten to 35 in-lb (4 N–m).

## Timing Belt Replacement

**⚠ WARNING**

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

1. Remove four (4) screws **(Figure 18, item 1)** and remove cover **(Figure 18, item 2)**.

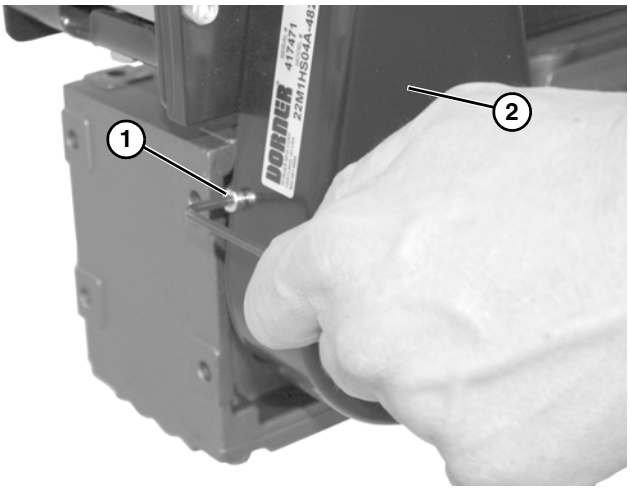



***Figure 18***

2. Loosen tensioner **(Figure 19, item 1)**.

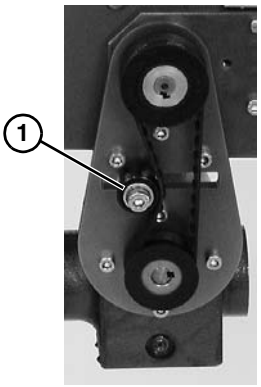



***Figure 19***

3. Remove timing belt **(Figure 20, item 1)**.

**NOTE**

*If timing belt does not slide over pulley flange, loosen driven pulley set screws **(Figure 20, item 2)** and remove pulley with belt. For re-installation, see steps 6 and 7 on page 8.*

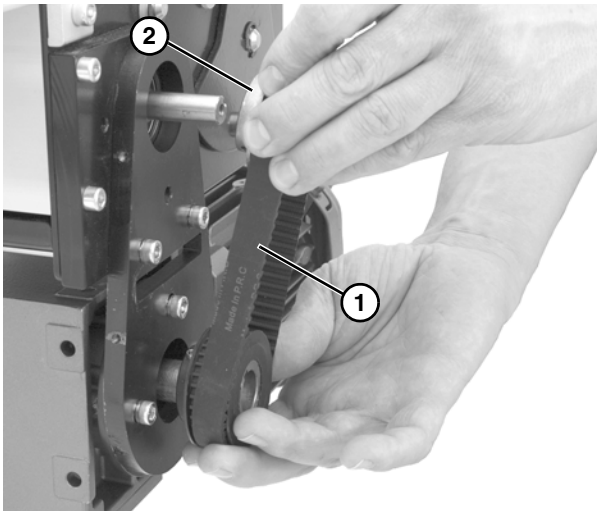



***Figure 20***

4. Install new timing belt.
5. Depending on direction of conveyor belt travel (1 or 2 of **(Figure 21)**, position belt tensioner **(Figure 21, item 1)** as shown. Tension belt to obtain .125" (3 mm) deflection for 1.0 lb (456 grams) of force at belt mid-point **(Figure 21, item 2)**. Tighten tensioner screw to 103 in-lb (12 Nm).

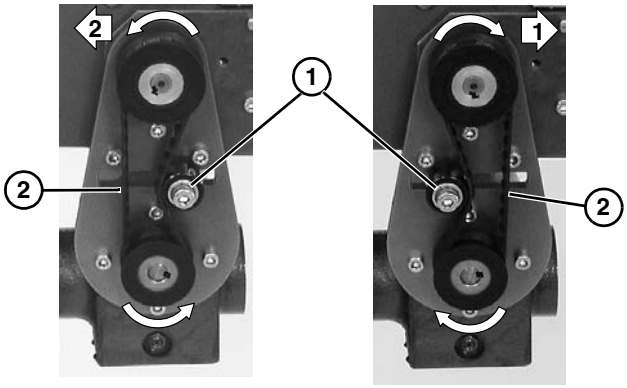



***Figure 21***

6. Install cover **(Figure 18, item 2)** with four (4) screws **(Figure 18, item 1)**.Tighten to 35 in-lb (4 N–m).

## 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 11.
2. Loosen set screws and remove drive or driven pulley.

**NOTE**

*If drive pulley **(Figure 22, item 1)** is replaced, wrap timing belt around drive pulley and complete step 3.*

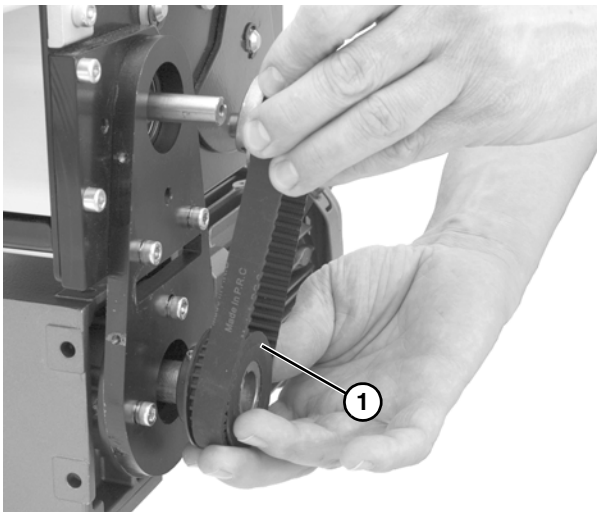



***Figure 22***

3. Complete steps 6 through 9 of “Installation” section beginning on page 8.

## Gearmotor Replacement

**⚠ WARNING**

**Exposed moving parts can cause severe injury.**

**LOCK OUT POWER before removing guards or performing maintenance.**

**⚠ DANGER**

**Hazardous voltage will cause severe injury or death.**

**LOCK OUT POWER BEFORE WIRING.**

1. Disconnect power. Remove terminal box cover and wires.
2. Remove four (4) screws **(Figure 23, item 1)** and remove cover **(Figure 23, item 2)**.

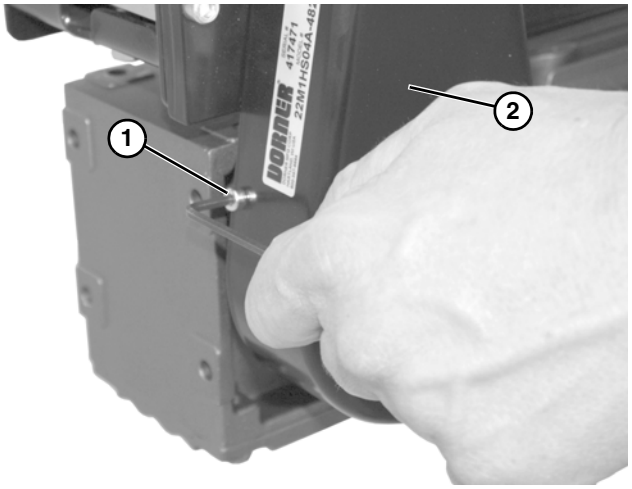



***Figure 23***

3. Loosen tensioner **(Figure 24, item 1)** and remove timing belt **(Figure 24, item 2)**.

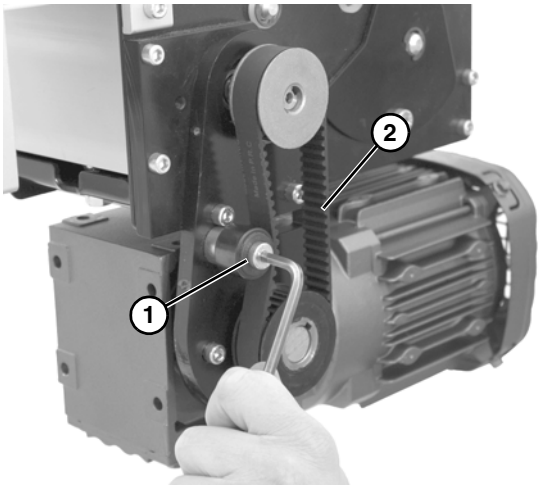



***Figure 24***

4. Loosen set screws and remove drive pulley **(Figure 25, item 1)**.

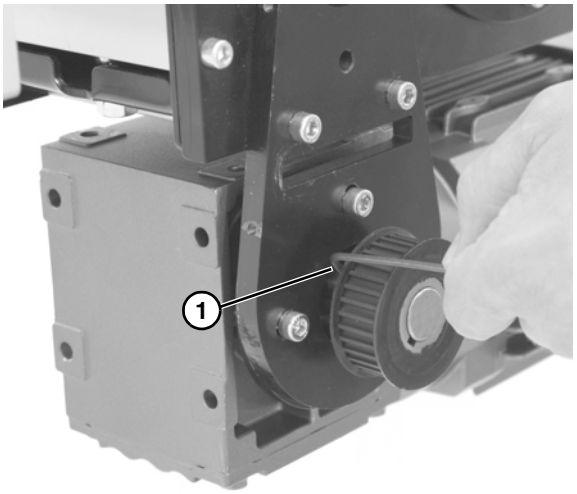



***Figure 25***

5. Remove mounting screws **(Figure 26, item 1)** and remove gearmotor.

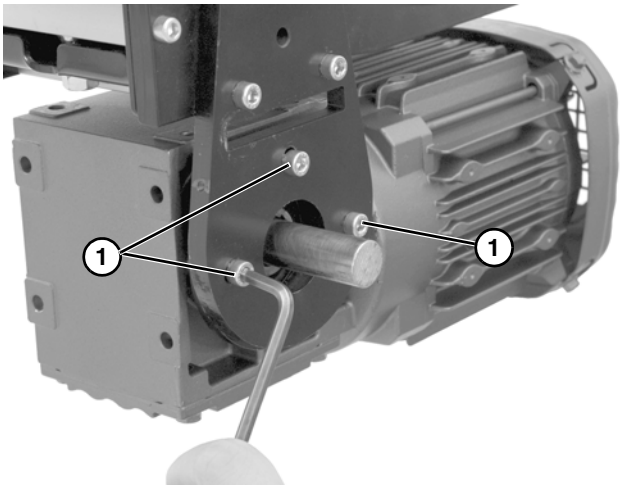



***Figure 26***

6. Remove shaft mounting bolt **(Figure 27, item 1)** and remove shaft.

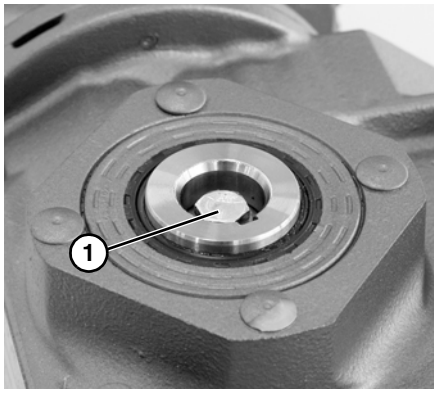


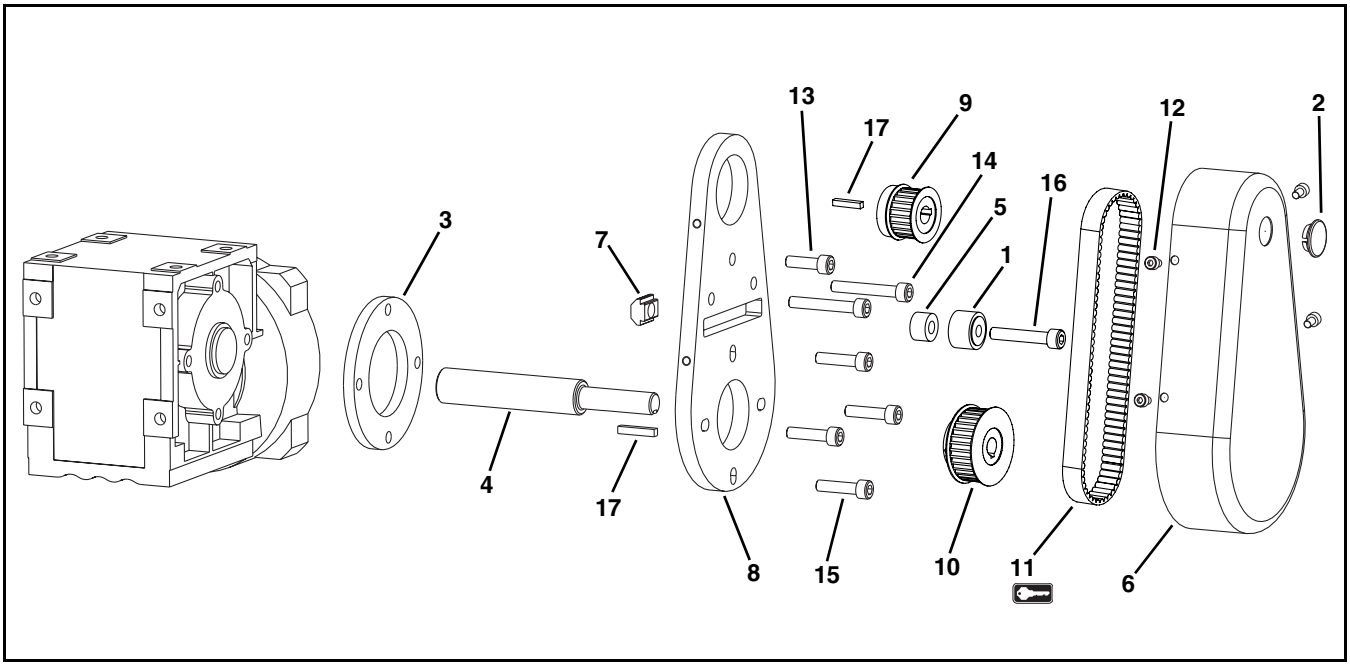

***Figure 27***

7. Repeat in reverse order to install new gearmotor.

# Service Parts

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

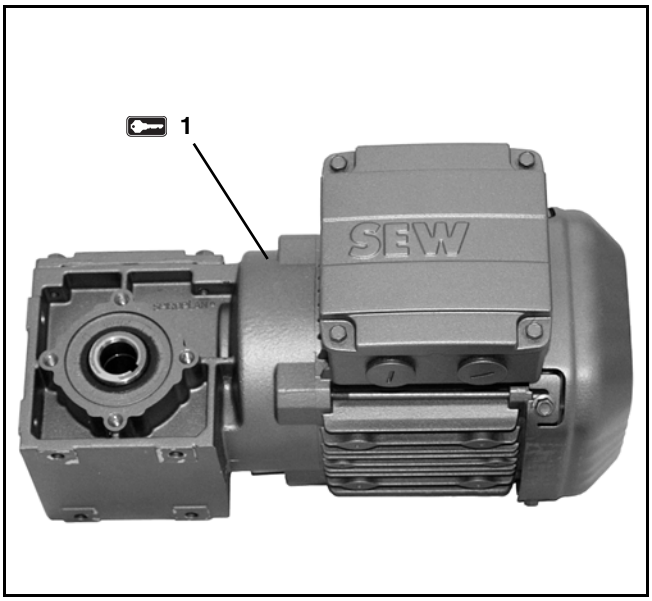
## Center Mount Drive Package for SEW Gearmotors




| Item | Part Number | Description |
|---|---|---|
| 1 | 802-046 | Bearing |
| 2 | 807-226 | Snap–out Plastic Plug |
| 3 | 201676 | Spacer Ring |
| 4 | 201677 | Output Shaft |
| 5 | 450195M | Spacer |
| 6 | 200376M | Drive Guard |
| 7 | 202390M | Nut Follower |
| 8 | 460026M | Mounting Plate |
| 9 | 450365MP | Driven Pulley, 19 Tooth |
| | 450366MP | Driven Pulley, 22 Tooth |
| | 450367MP | Driven Pulley, 28 Tooth |
| | 450368MP | Driven Pulley, 32 Tooth |
| 10 | 450365MP | Drive Pulley, 19 Tooth |
| | 450366MP | Drive Pulley, 22 Tooth |
| | 450367MP | Drive Pulley, 28 Tooth |
| | 450368MP | Drive Pulley, 32 Tooth |
| | 450369MP | Drive Pulley, 44 Tooth |
| | 450370MP | Drive Pulley, 48 Tooth |

| Item | Part Number | Description |
|---|---|---|
| 11 | 814-103 | Timing Belt, 15 mm W x 385 mm L |
| | 814-100 | Timing Belt, 15 mm W x 400 mm L |
| | 814-096 | Timing Belt, 15 mm W x 425 mm L |
| | 814-105 | Timing Belt, 15 mm W x 460 mm L |
| 12 | 920406M | Socket Head Screw M4 x 6 mm |
| 13 | 920620M | Socket Head Screw M6 - 1.00 x 20 mm |
| 14 | 920625M | Socket Head Screw M6 - 1.00 x 25 mm |
| 15 | 920640M | Socket Head Screw M6 - 1.00 x 40 mm |
| 16 | 920898M | Low Head Cap Screw M8 - 1.25 x 40 mm |
| 17 | 980422M | Square Key |

## Gearmotor




| Item | Part No. | Part Description |
|---|---|---|
| 1 | 22M039WS423EN | Gearmotor, 0.25 Hp (0.19 Kw), 230/460 Volts, 60 Hz, 39:1 |
| | 22M017WS423EN | Gearmotor, 0.33 Hp (0.25 Kw), 230/460 Volts, 60 Hz, 16.5:1 |
| | 22M008WS423EN | Gearmotor, 0.50 Hp (0.37 Kw), 230/460 Volts, 60 Hz, 8.2:1 |

# Return Policy

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

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

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

**Conveyors and conveyor accessories**

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

**Parts**

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

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

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

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

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



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