

Installation, Maintenance & Parts Manual

7200/7300 Series Top Mount Drive Package for Standard Load Parallel Shaft Sanitary Gearmotors





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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.





DANGER

Hazardous voltage will cause severe injury or death.

LOCKOUT POWER BEFORE WIRING.





WARNING

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





WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.



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 POTENTIAL PINCH POINTS and other mechanical hazards before system start-up.

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 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 🖾.

Dorner 7200 and 7300 Series conveyors are covered by patent number 5174435, 6109427 and corresponding patents and patent applications in other countries.

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

Product Description

Refer to Figure 1 for typical components.

| | Typical Components | | | | | |
|---|-----------------------|--|--|--|--|--|
| Α | Conveyor | | | | | |
| В | Mounting Bracket | | | | | |
| С | Gearmotor | | | | | |
| D | Timing Belt Tensioner | | | | | |
| E | Cover | | | | | |
| F | Timing Belt | | | | | |
| G | Drive Pulley | | | | | |
| Н | Driven Pulley | | | | | |
| I | Motor Control | | | | | |

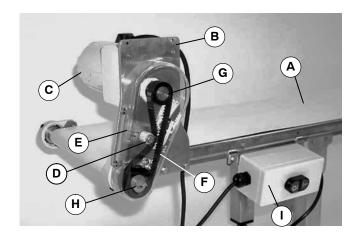
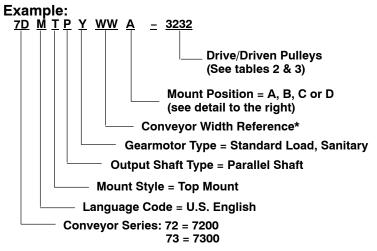
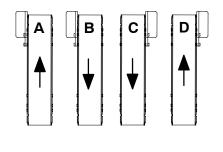


Figure 1

Specifications

Gearmotor Mounting Package Models:





* See "Ordering and Specifications" Catalog for details.

Table 1: Gearmotor Specifications

| | Single-Phase | Three-Phase | VFD Variable Speed | | |
|--------------------|--|-------------------|--------------------|--|--|
| Output Power | | 0.12 hp (0.09 kw) | | | |
| Input Voltage | 115 Volts A.C. | 230 Volts A.C. | 230 Volts A.C. | | |
| Input Frequency | 60 Hz | 50/60 Hz | 25 to 63 Hz | | |
| Full Load Amperes | 1.5 Amperes | 0.5 Amperes | | | |
| Gearmotor Ratios | 9:1 and 30:1 | | | | |
| Protection Ratings | IP65 for Gearmotor, IP55 for Motor Starter | | | | |

Specifications

Table 2: Standard Load Fixed Speed Parallel Shaft 60 Hz Gearmotors

| Gearmotor | | | | Conveyor Belt Speed | | ning elt | Timing Chain | | |
|-----------------|-----|-------|-----|------------------------|-------|-----------------|------------------|-----------------|------------------|
| Part Number | RPM | In-lb | N-m | ft/min | M/min | Drive Pulley | Driven Pulley | Drive Pulley | Driven Pulley |
| 62M030PY4(vp)FN | 50 | 77 | 8.7 | 12 | 3.7 | 22 | 32 | - | - |
| 62M030PY4(vp)FN | 50 | 77 | 8.7 | 21 | 6.4 | - | - | 12 | 10 |
| 62M030PY4(vp)FN | 50 | 77 | 8.7 | 26 | 7.9 | 32 | 22 | - | - |
| 62M030PY4(vp)FN | 50 | 77 | 8.7 | 32 | 9.8 | - | - | 18 | 10 |
| 62M030PY4(vp)FN | 50 | 77 | 8.7 | 38 | 11.6 | 48 | 22 | - | - |
| 62M009PY4(vp)FN | 167 | 26 | 2.8 | 58 | 17.7 | 32 | 32 | - | - |
| 62M009PY4(vp)FN | 167 | 26 | 2.8 | 70 | 21.3 | - | - | 12 | 10 |
| 62M009PY4(vp)FN | 167 | 26 | 2.8 | 94 | 28.7 | - | - | 16 | 10 |
| 62M009PY4(vp)FN | 167 | 26 | 2.8 | 100 | 30.5 | 48 | 28 | - | - |
| 62M009PY4(vp)FN | 167 | 26 | 2.8 | 117 | 35.7 | - | - | 20 | 10 |
| 62M009PY4(vp)FN | 167 | 26 | 2.8 | 148 | 45.1 | 48 | 19 | - | _ |

(vp) = voltage and phase

11 = 115 V, Single-phase

23 = 230 V, Three-phase

Table 3: Standard Load Variable Speed Parallel Shaft VFD Gearmotors

| Ge | Gearmotor | | | | veyor Speed | | ing elt | | ing ain |
|---------------|-----------|-------|------|------------|----------------|-----------------|------------------|-----------------|------------------|
| Part Number | RPM | In-lb | N-m | ft/min | M/min | Drive Pulley | Driven Pulley | Drive Pulley | Driven Pulley |
| 62M030PY423EN | 50 | 109 | 12.3 | 2.0 – 12 | 0.6 – 3.7 | 22 | 32 | - | - |
| 62M030PY423EN | 50 | 109 | 12.3 | 4.3 – 26 | 1.3 – 7.9 | 32 | 22 | - | - |
| 62M030PY423EN | 50 | 109 | 12.3 | 3.5 – 21 | 1.1 – 6.4 | - | - | 12 | 10 |
| 62M030PY423EN | 50 | 109 | 12.3 | 5.3 – 32 | 1.6 – 9.8 | - | - | 18 | 10 |
| 62M030PY423EN | 50 | 109 | 12.3 | 6.3 – 38 | 1.9 – 11.6 | 48 | 22 | - | _ |
| 62M009PY423EN | 167 | 37 | 4.2 | 9.7 – 58 | 2.9 – 17.7 | 32 | 32 | - | - |
| 62M009PY423EN | 167 | 37 | 4.2 | 11.7 – 70 | 3.6 – 21.3 | - | - | 12 | 10 |
| 62M009PY423EN | 167 | 37 | 4.2 | 13.3 – 80 | 4.1 – 24.4 | 44 | 32 | - | - |
| 62M009PY423EN | 167 | 37 | 4.2 | 15.7 – 94 | 4.8 – 28.7 | _ | _ | 16 | 10 |
| 62M009PY423EN | 167 | 37 | 4.2 | 16.7 – 100 | 5.1 – 30.5 | 48 | 28 | - | _ |
| 62M009PY423EN | 167 | 37 | 4.2 | 19.5 – 117 | 5.9 – 35.7 | - | _ | 20 | 10 |
| 62M009PY423EN | 167 | 37 | 4.2 | 24.7 – 148 | 7.5 – 45.1 | 48 | 19 | - | - |

^{*} At 60 Hz

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





Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

Required Tools

- Wrenches (for hexagon head fasteners) 7 mm and 10 mm
- Hex key wrenches (for set screws) 2 mm, 2.5 mm and 3 mm
- Straight edge
- Torque wrench

Drive Package Mounting

Install drive mounting package following instructions:

- A Mounting a Timing Belt Drive Package
- B Mounting a Timing Chain Drive Package

A - Mounting a Timing Belt Drive Package

1. Typical components (Figure 2)

NOTE: Single-phase Motor Starter shown, Threephase Starter or VFD Controller similar. 7300 Series drive package shown, 7200 Series similar.

Typical Components

- J Mounting Plate/Gearmotor Assembly
- K Drive Pulley
- L Driven Pulley
- M Key (from conveyor assembly)
- N M6 x 30 mm, Hexagon Head Screws (2 x) (7200) M6 x 65 mm, Hexagon Head Screws (2 x) (7300)
- O Timing Belt
- P Cover
- Q Accessory Mounting Clips (2x)
- R M6 x 20 mm, Hexagon Head Screws (2x)
- S Typical Motor Starter
- T Spacer (2x) (7300)

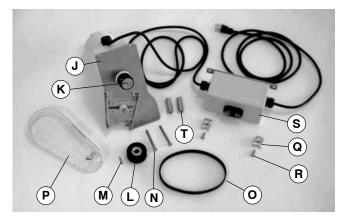
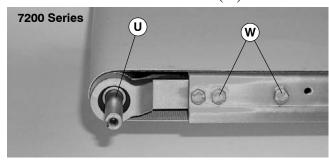


Figure 2

2. Locate conveyor input shaft (U of Figure 3) and remove and discard two screws (W).



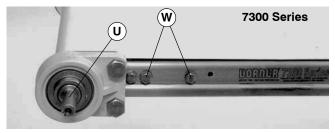


Figure 3

NOTE: For a 7300 Series mounting package (shown in Figure 4), install two spacers (T) (shipped loose) between the mounting plate/gearmotor assembly (J) and the conveyor. On a 7200 Series, the two spacers are attached to the mounting plate/gearmotor assembly.

3. Attach mounting plate/gearmotor assembly (J) and two spacers (see Note) with screws (N). Tighten screws to 92 in-lb (10.4 Nm).

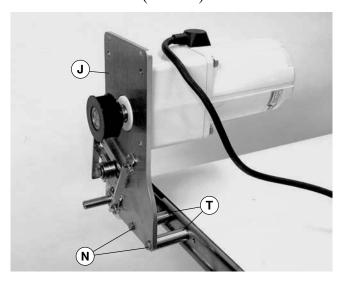


Figure 4



4. Install key (M of Figure 5) on conveyor input shaft (U).

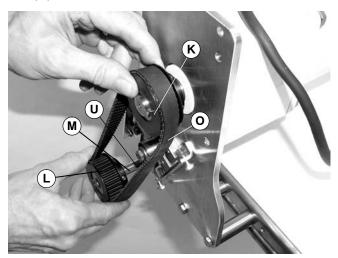


Figure 5

5. Depending on conveyor belt travel (direction 1 or 2 of Figure 6), locate timing belt tensioner (Z) as shown. Do not tighten tensioner screw.

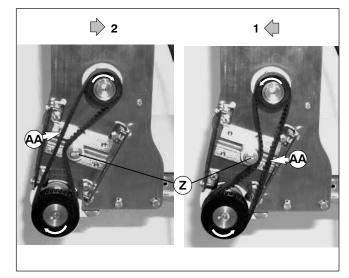


Figure 6

- **6.** Wrap timing belt (O of Figure 5) around driven pulley (L) and drive pulley (K). Install driven pulley (L) on conveyor input shaft (U).
- 7. Using a straight edge (X of Figure 7), align driven pulley (L) with drive pulley (K). Tighten driven pulley set screws (Y).

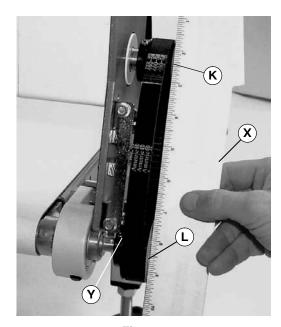


Figure 7

8. Tension timing belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at timing belt mid-point (AA of Figure 6). Tighten tensioner screw to 92 in-lb (10.4 Nm).

NOTE: Do not over-tighten screws (AB of Figure 8).

9. Install cover (P of Figure 8) and tighten four (4) screws (AB) to 35 in-lb (4 Nm).

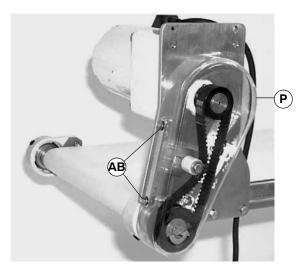


Figure 8

B - Mounting a Timing Chain Drive Package

1. Typical components (Figure 9)

NOTE: Single-phase Motor Starter shown, Three-phase Starter or VFD Controller similar. 7200 Series drive package shown, 7300 Series similar.

Typical Components

- J Mounting Plate/Gearmotor Assembly
- M Key (from conveyor assembly)
- N M6 x 30 mm, Hexagon Head Screws (2 x) (7200) M6 x 65 mm, Hexagon Head Screws (2 x) (7300)
- P Cover
- Q Accessory Mounting Clips (2x)
- R M6 x 20 mm, Hexagon Head Screws (2x)
- S Typical Motor Starter
- AE Drive Sprocket
- AF Driven Sprocket
- AG Timing Chain

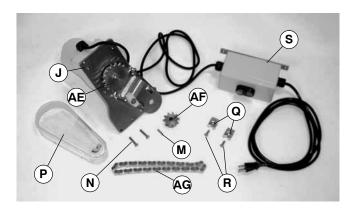


Figure 9

2. Locate conveyor input shaft (U of Figure 3). Remove and discard two screws (W).

NOTE: For a 7300 Series mounting package, install two spacers (T of Figure 2) (shipped loose) between mounting plate/gearmotor assembly (J) and conveyor. On a 7200 Series (shown), the two spacers (T of Figure 10) are attached to the mounting plate/gearmotor assembly.

3. Attach mounting plate/gearmotor assembly (J of Figure 10) and two spacers (see Note) with screws (N). Tighten screws to 92 in-lb (10.4 Nm).

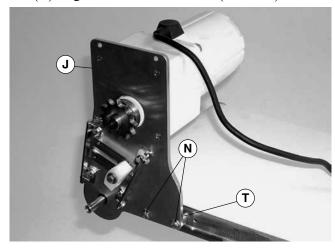


Figure 10



NOTE: Depending on sprocket sizes, it may be necessary to remove drive sprocket (AE of Figure 11) by loosen two set screws (AH) to install chain and sprockets.

4. Install key (M) on conveyor input shaft (U).

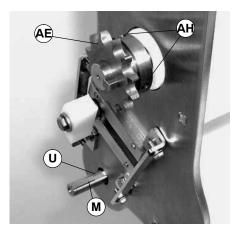


Figure 11

5. Depending on conveyor belt travel (direction 1 or 2 of Figure 12), locate timing chain tensioner (AI) as shown. Do not tighten tensioner screw.

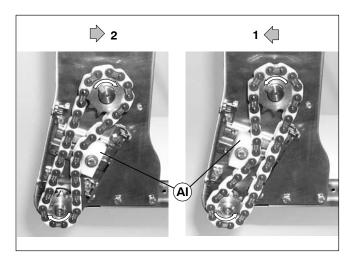


Figure 12

6. Install timing chain (AG of Figure 13) over sprockets (AE and AF). Install timing chain and sprockets on conveyor input shaft (U) and gearmotor output shaft (AJ). Do not tighten sprocket set screws.

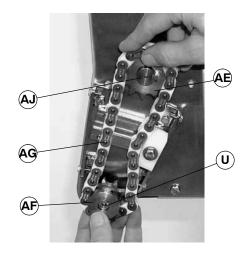


Figure 13

NOTE: Make sure center of timing chain (AG) aligns with center of chain tensioner (AI). If necessary, loosen two set screws (AH) to move drive sprocket (AE) in or out. Tighten set screws. Also, if necessary, loosen two set screws (AK) to move driven sprocket (AF) in or out. Tighten set screws.

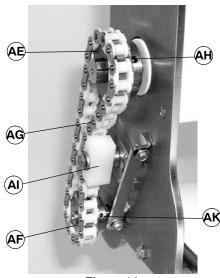


Figure 14

NOTE: Do not over-tension chain (Al). Only tension chain until slack is removed.

7. Slide chain tensioner (AI) to take up chain slack. Tighten chain tensioner screw to 92 in-lb (10.4 Nm).

NOTE: Do not over-tighten screws (AB of Figure 15).

8. Install cover (P of Figure 15) and tighten four screws (AB) to 35 in-lb (4 Nm).

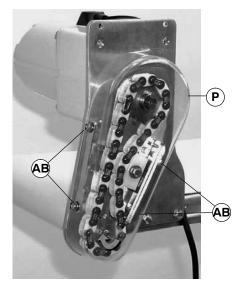


Figure 15

Motor Starter Mounting

NOTE: Single-phase Motor Starter shown, Three-phase Starter similar. For VFD controller mounting, see accessory instructions.

1. Attach two accessory mounting clips (Q of Figure 16) to motor starter (S) with two M6 x 20mm hex head cap screws (R). Do not tighten screws.

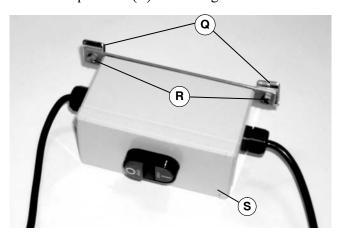


Figure 16

2. Attach motor starter (S of Figure 17) with clips to conveyor. Tighten screws (R) to 92 in-lb (10.4 Nm).

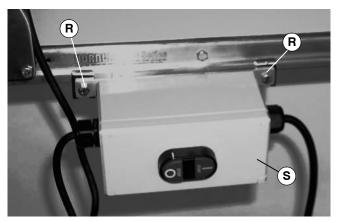


Figure 17

Wiring

Single-phase Motor Starter

NOTE: Power cord must be plugged into a GFI outlet. No additional wiring is required.

Three-phase Motor Starter





Hazardous voltage will cause severe injury or death.

LOCKOUT POWER BEFORE WIRING.

NOTE: 230 volt three-phase manual motor starters must be wired in accordance with applicable electrical codes.

1. Loosen cover screws (AL of Figure 18). Remove cover.

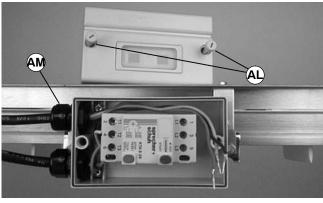


Figure 18

NOTE: Line cord must be 0.28" (7 mm) minimum to 0.47" (12 mm) maximum in diameter.

- 2. Insert line cord through grip (AM) and tighten nut.
- **3.** For correct three-phase motor shaft rotation, connect line phase sequence L1, L2 & L3 to terminals as shown (Figure 19).

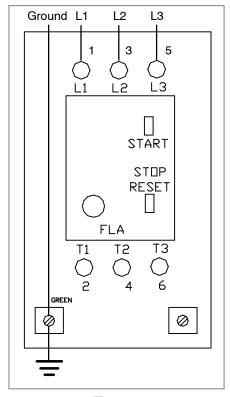


Figure 19



WARNING



Controller must be properly grounded. Failure to properly ground control box may cause injury to personnel.

NOTE: The motor ground wire is also attached to left terminal marked $\frac{1}{2}$ (Figure 19).

- **4.** Attach ground wire to lower left terminal marked $\stackrel{\perp}{=}$ (see Figure 19).
- 5. Install cover and tighten screws (AL of Figure 18).

VFD Controllers

NOTE: Refer to VFD Controller Set-up, Operation & Maintenance Manual.

Preventive Maintenance & Adjustment

Required Tools

- Wrenches (for hexagon head fasteners)
 7 mm and 10 mm
- Hex key wrenches (for set screws)2.5 mm and 3 mm
- Straight edge
- Torque wrench

Timing Belt or Chain Replacement



Replace timing belt or chain following instructions:

- A Timing Belt Replacement
- B Timing Chain Replacement

A - Timing Belt Replacement

1. Loosen four (4) screws (AB of Figure 20) and remove cover (P).

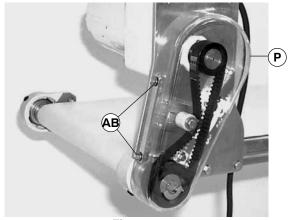
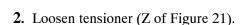


Figure 20



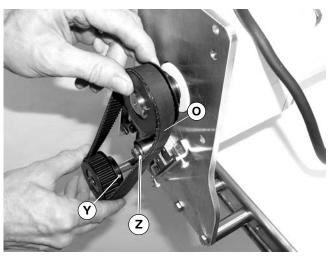


Figure 21

3. Remove timing belt (O).

NOTE: If timing belt does not slide over pulley flange, loosen two driven pulley set screws (Y of Figure 21) and remove pulley with belt. For installation, see steps 6 and 7 on page 6.

- **4.** Install new timing belt.
- 5. Depending on conveyor belt travel (direction 1 or 2 of Figure 22), locate timing belt tensioner (Z) as shown. Tension timing belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at timing belt mid-point (AA). Tighten tensioner screw to 92 in-lb (10.4 Nm).

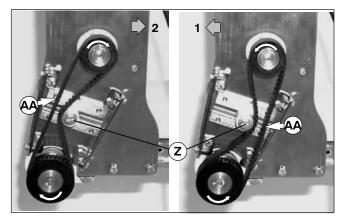


Figure 22

NOTE: Do not over-tighten screws (AB of Figure 20).

6. Install cover (P of Figure 20) and tighten four screws (AB) to 35 in-lb (4 Nm).

Preventive Maintenance & Adjustment

B - Timing Chain Replacement

1. Loosen four screws (AB of Figure 23) and remove cover (P).

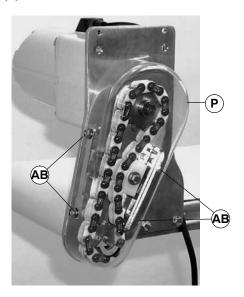
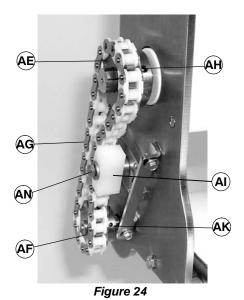


Figure 23

2. Loosen timing chain tensioner screw (AN of Figure 24).



3. Loosen four set screws (AH) and (AK).

4. Remove timing chain (AG) and sprockets (AE and AF) from conveyor input shaft (U) and gearmotor output shaft (AJ). Make sure to retain sprocket keys.

5. Depending on conveyor belt travel (direction 1 or 2 of Figure 25), locate timing chain tensioner (AI) as shown. Do not tighten tensioner screw.

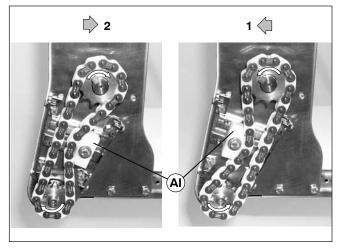


Figure 25

NOTE: Make sure sprocket keys are installed on conveyor input shaft (U) and gearmotor output shaft (AJ).

6. Install new timing chain (AG of Figure 26) over sprockets (AE and AF). Install timing chain and sprockets on conveyor input shaft (U) and gearmotor output shaft (AJ). Do not tighten sprocket set screws.

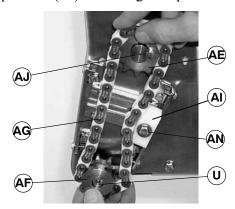


Figure 26

NOTE: Make sure center of timing chain (AG of Figure 24) aligns with center of chain tensioner (AI). If necessary, move drive sprocket (AE) in or out. Tighten set screws (AH). Also, if necessary, move driven sprocket (AF) in or out. Tighten set screws (AK).

Preventive Maintenance & Adjustment

NOTE: Do not over-tension chain (AG). Only tension chain until slack is removed.

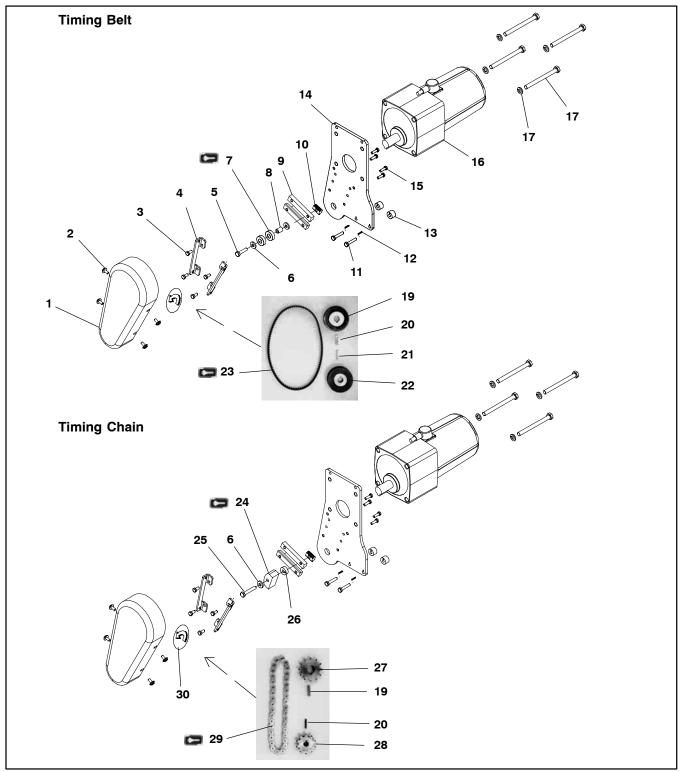
7. Slide chain tensioner (AI) to take up chain slack. Tighten chain tensioner screw (AN) to 92 in-lb (10.4 Nm).

NOTE: Do not over-tighten screws (AB of Figure 23).

8. Install cover (P of Figure 23) and tighten four screws (AB) to 35 in-lb (4 Nm).

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.

7200 Series Drive Mounting Components



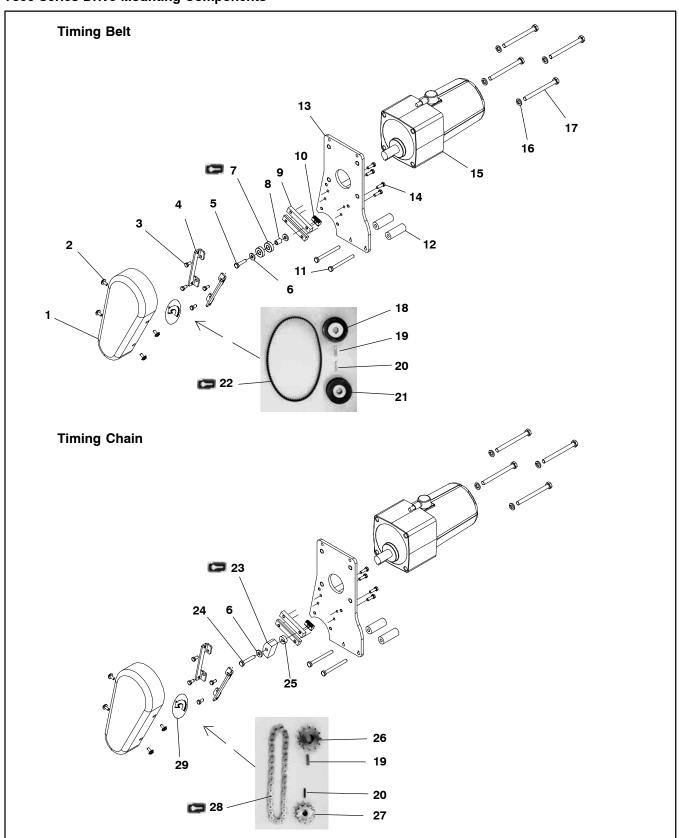
| Item | Part Number | Description |
|------|--------------------------|---------------------------------------|
| 1 | 450028P | Cover, Clear |
| 2 | 807-968 | Hex Flange Head Screw M58x10mm |
| 3 | 960510MSS | Hex Head Cap Screw M58x10mm |
| 4 | 450181MSS | Cover Mounting Bracket SS |
| 5 | 960625MSS | Hex Head Cap Screw M6-1.0x25mm |
| 6 | 911-201 | Flat Washer 1/4" SS |
| 7 | 802-123 | Bearing |
| 8 | 801-116 | Nylon Bearing |
| 9 | 450178MSS | Slide Bar, Tensioner |
| 10 | 639971MSS | Drop-In T-Bar |
| 11 | 960630MSS | Hex Head Cap Screw M6-1.0x30mm |
| 12 | 807-998 | Grooved Pin SS |
| 13 | 456029 | Drive Mounting Plate Spacer SS |
| 14 | 450179MSS | Drive Mounting Plate |
| 15 | 960516MSS | Hex Head Cap Screw M58x16mm |
| 16 | 62M009PY411 | Gearmotor, 115V Single Phase, 167 RPM |
| | 62M030PY411 | Gearmotor, 115V Single Phase, 50 RPM |
| | 62M009PY423 | Gearmotor, 230V Three Phase, 167 RPM |
| | 62M030PY423 | Gearmotor, 230V Three Phase, 50 RPM |
| 17 | 911–120 | Lock Washer, 5/16" |
| 18 | 960890MSS | Hex Head Cap Screw M8-1.25x90mm |
| 19 | 450391M | Drive Pulley, 22 Tooth, 18mm Bore |
| | 450393M | Drive Pulley, 32 Tooth, 18mm Bore |
| | 450394M | Drive Pulley, 44 Tooth, 18mm Bore |
| | 450395M | Drive Pulley, 48 Tooth, 18mm Bore |
| 20 | 826-318 | Square Key, 6x25mm |
| 21 | 980422MSS | Square Key, 4x22mm |
| 22 | 450101 | Driven Pulley, 19 Tooth, 12mm Bore |
| | 450102 | Driven Pulley, 22 Tooth, 12mm Bore |
| | 450103 | Driven Pulley, 28 Tooth, 12mm Bore |
| | 450104 | Driven Pulley, 32 Tooth, 12mm Bore |
| 23 | See Timing Belt Table | Timing Belt, 15mm |
| 24 | 456048 | Chain Tensioner |

| 25 | 960635MSS | Hex Head Cap Screw M6-1.0x35mm |
|----|---------------------------|--------------------------------------|
| 26 | 450182SS | Drive Spacer SS |
| 27 | 811-302 | Drive Sprocket, 12 Tooth, 18mm Bore |
| | 811–304 | Drive Sprocket, 16 Tooth, 18mm Bore |
| | 811–305 | Drive Sprocket, 18 Tooth, 18mm Bore |
| | 811–306 | Drive Sprocket, 20 Tooth, 18mm Bore |
| 28 | 811–296 | Driven Sprocket, 10 Tooth, 12mm Bore |
| 29 | See Timing Chain Table | Timing Chain, #40 |
| 30 | 450272P | Rotation Label CW |
| | 450273P | Rotation Label CCW |

| Item 23: Standard Timing Belts | | | | | | |
|--------------------------------|---------------|--------|---------|--|--|--|
| Pulley | Teeth | Belt | Part | | | |
| Drive Pulley | Driven Pulley | Length | Number | | | |
| 22 | 32 | 460 mm | 814–105 | | | |
| 32 | 22 | 450 mm | 814–104 | | | |
| 32 | 32 | 475 mm | 814–065 | | | |
| 44 | 32 | 520 mm | 814–108 | | | |
| 48 | 19 | 500 mm | 814–101 | | | |
| 48 | 22 | 500 mm | 814–101 | | | |
| 48 | 28 | 535 mm | 814-064 | | | |

| 3 | Item 29: Standard Timing Chains | | | | | | | |
|---|---------------------------------|--------------------|--------|--------|--|--|--|--|
| | Sprocke | et Teeth | Pitch | Part | | | | |
| | Drive Sprocket | Driven Sprocket | Length | Number | | | | |
| | 22 | 32 | 35 | 456050 | | | | |
| | 32 | 22 | 37 | 456052 | | | | |
| | 32 | 32 | 39 | 456053 | | | | |
| | 44 | 32 | 39 | 456053 | | | | |

7300 Series Drive Mounting Components



| | Item | Part Number | Description |
|--|---------------|--------------------------|---------------------------------------|
| | 1 | 450028P | Cover, Clear |
| | 2 | 807-968 | Hex Flange Head Screw M58x10mm |
| | 3 | 960510MSS | Hex Head Cap Screw M58x10mm |
| | 5 960625MSS I | | Cover Mounting Bracket SS |
| | | | Hex Head Cap Screw M6-1.0x25mm |
| | 6 | 911–201 | Flat Washer 1/4" SS |
| | 7 | 802-123 | Bearing |
| | 8 | 801-116 | Nylon Bearing |
| | 9 | 450178MSS | Slide Bar, Tensioner |
| | 10 | 639971MSS | Drop-In T-Bar |
| | 11 | 960665MSS | Hex Head Cap Screw M6-1.0x65mm |
| | 12 | 457850 | Drive Mounting Plate Spacer SS |
| | 13 | 701472 | Drive Mounting Plate |
| | 14 | 960516MSS | Hex Head Cap Screw M58x16mm |
| | 15 | 62M009PY411 | Gearmotor, 115V Single Phase, 167 RPM |
| | | 62M030PY411 | Gearmotor, 115V Single Phase, 50 RPM |
| | | 62M009PY423 | Gearmotor, 230V Three Phase, 167 RPM |
| | | 62M030PY423 | Gearmotor, 230V Three Phase, 50 RPM |
| | 16 | 911–120 | Lock Washer, 5/16" |
| | 17 | 960890MSS | Hex Head Cap Screw M8-1.25x90mm |
| | 18 | 450391M | Drive Pulley, 22 Tooth, 18mm Bore |
| | | 450393M | Drive Pulley, 32 Tooth, 18mm Bore |
| | | 450394M | Drive Pulley, 44 Tooth, 18mm Bore |
| | | 450395M | Drive Pulley, 48 Tooth, 18mm Bore |
| | 19 | 826-318 | Square Key, 6x25mm |
| | 20 | 980422MSS | Square Key, 4x22mm |
| | 21 | 450101 | Driven Pulley, 19 Tooth, 12mm Bore |
| | | 450102 | Driven Pulley, 22 Tooth, 12mm Bore |
| | | 450103 | Driven Pulley, 28 Tooth, 12mm Bore |
| | | 450104 | Driven Pulley, 32 Tooth, 12mm Bore |
| | 22 | See Timing Belt Table | Timing Belt, 15mm |
| | 23 | 456048 | Chain Tensioner |
| | 24 | 960635MSS | Hex Head Cap Screw M6-1.0x35mm |
| | 25 | 450182SS | Drive Spacer SS |

| | 26 | 811-302 | Drive Sprocket, 12 Tooth, 18mm Bore |
|---|----|---------------------------|--------------------------------------|
| | | 811–304 | Drive Sprocket, 16 Tooth, 18mm Bore |
| | | 811–305 | Drive Sprocket, 18 Tooth, 18mm Bore |
| | | 811-306 | Drive Sprocket, 20 Tooth, 18mm Bore |
| | 27 | 811–296 | Driven Sprocket, 10 Tooth, 12mm Bore |
| 3 | 28 | See Timing Chain Table | Timing Chain, #40 |
| | 29 | 450272P | Rotation Label CW |
| | | 450273P | Rotation Label CCW |

| Item 22: Standard Timing Belts | | | | | | |
|--------------------------------|---------------|--------|---------|--|--|--|
| Pulley | Teeth | Belt | Part | | | |
| Drive Pulley | Driven Pulley | Length | Number | | | |
| 22 | 32 | 460 mm | 814–105 | | | |
| 32 | 22 | 450 mm | 814–104 | | | |
| 32 | 32 | 475 mm | 814–065 | | | |
| 44 | 32 | 520 mm | 814–108 | | | |
| 48 | 19 | 500 mm | 814–101 | | | |
| 48 | 22 | 500 mm | 814–101 | | | |
| 48 | 28 | 535 mm | 814-064 | | | |

| 3 | Item 28: Standard Timing Chains | | | |
|---|---------------------------------|--------------------|--------|--------|
| | Sprocket Teeth | | Pitch | Part |
| | Drive Sprocket | Driven Sprocket | Length | Number |
| | 22 | 32 | 35 | 456050 |
| | 32 | 22 | 37 | 456052 |
| | 32 | 32 | 39 | 456053 |
| | 44 | 32 | 39 | 456053 |

Return Policy

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.
- 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 @ www.dorner.com

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



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