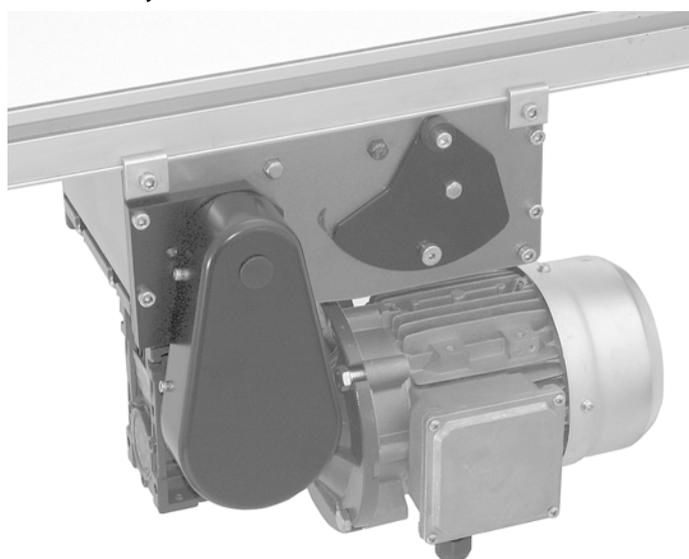




# 2100, 2200, 2300 & 6200 Series Center Mount Drive Package for 90° Standard & Heavy Load Gearmotors

Installation, Maintenance & Parts Manual



Featuring: **eDrive™** Technology

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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 2100 Series conveyors are covered by the following patent numbers: 5,131,529, 5,174,435, and corresponding patents and patent applications in other countries.

Dorner 2200 Series conveyors are covered by patent number 5,174,435, 6,422,382 and corresponding patents and patent applications in other countries.

Dorner 6200 Series conveyors are covered by patent number 6,109,427, 6,298,981, 6,685,009 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 .

## 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



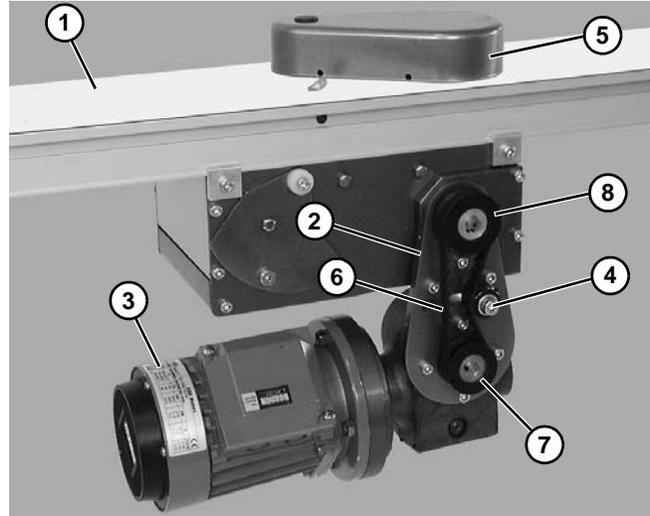
Dorner cannot control the physical installation and application of conveyors. Taking protective measures is the responsibility of the user.

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

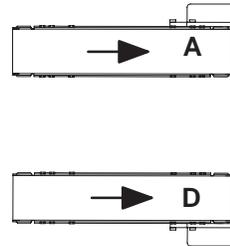
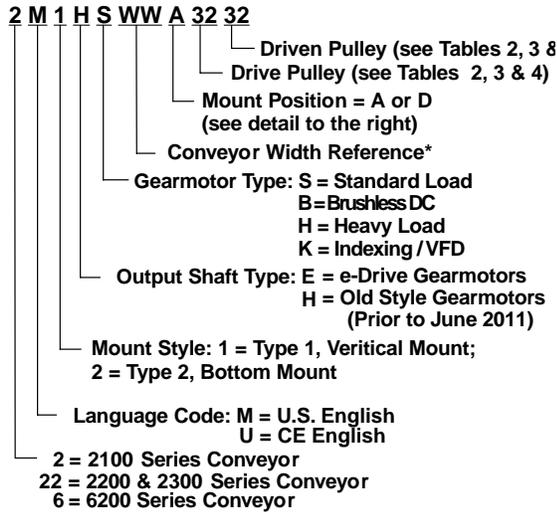


**Figure 1**

# Specifications

## Gearmotor Mounting Package Models:

Example:



\* See "Ordering and Specifications" Catalog for details.

# Specifications

## Table 1: Gearmotor Specifications

### U.S. Version

	Standard Load Gearmotor				Heavy Load Gearmotor			
	Single-Phase	Three Phase	DC Variable Speed	Brushless DC	Single-Phase	Three Phase	VFD Variable Speed	DC Variable Speed
Output Power	0.25 hp (0.19 kw)				0.5 hp (0.37 kw)			
Input Voltage	115VA C	208 – 230/460 VAC	130VDC	*115/230 Volts D.C.	115VA C	208 – 230/460 VAC	230 VAC	90VDC
Input Frequency	60Hz		N/A	60 Hz	60Hz		10 – 60Hz	N/A
Input Current (Amperes)	5.0	1.2/0.6	2.2	8.8 / 3.4	7.4	2.1 – 2/1	1.6	5.0
Gearmotor Ratios	5:1, 10:1, 20:1, 40:1, 60:1							
Frame Size	NEMA 42CZ				NEMA 56C			
Motor Type	Totally enclosed, Fan cooled			Totally enclosed, Non-ventilated	Totally enclosed, Fan cooled			

\* Controller Inputs

### CE Version

	Single Phase	Three Phase	VFD Variable Speed
Output Power	0.18 kw		
Input Voltage	230 VAC	230/400 VAC	230 VAC
Input Frequency	50Hz		25 to 63 Hz
Input Current	1.6 Amperes	1.4/0.8 Amperes	1.4 Amperes
Gearmotor Ratios	5:1, 10:1, 20:1, 40:1, 60:1		5:1, 10:1, 20:1
Protection Rating	IP55		
Frame Size	IEC 63 B5		IEC 71 B5

## Table 2: RPM/Torque for Standard & Heavy Load Fixed Speed 90° Gearmotors

### U.S. Version (60 Hz Gearmotors)

Standard Load Gearmotors				Heavy Load Gearmotors			
Part Number	RPM	In-lb	N-m	Part Number	RPM	In-lb	N-m
32M060EL4(vp)F(n)	29	226	25.5	32M060HS4(vp)F(n)	29	226	25.5
32M040EL4(vp)F(n)	43	237	26.8	32M040HS4(vp)F(n)	43	247	27.9
32M020EL4(vp)F(n)	86	142	16	32M020HS4(vp)F(n)	86	248	27.9
32M010EL4(vp)F(n)	173	78	8.8	32M010HS4(vp)F(n)	173	156	17.6
32M005EL4(vp)F(n)	345	41	4.6	32M005HS4(vp)F(n)	345	81	9.1

(vp) = voltage and phase

11 = 115 V, 1-phase

23 = 208 – 230/460 V, 3-phase

# Specifications

## CE Version (50 Hz Gearmotors)

Gearmotors		
Part Number	RPM	N-m
62Z060ES4(vp)FN	23	26.4
62Z040ES4(vp)FN	35	28.9
62Z020ES4(vp)FN	70	19.4
62Z010ES4(vp)FN	140	10.7
62Z005ES4(vp)FN	280	5.6

(vp) = voltage and phase

21 = 230 V, 1-phase

23 = 230 V, 3-phase

43 = 400 V, 3-phase

**Table 3: RPM/Torque for Standard & Heavy Load Variable Speed 90° DC Gearmotors**

## U.S. Version

Standard Load Gearmotors				Heavy Load Gearmotors			
Part Number	RPM	In-lb	N-m	Part Number	RPM	In-lb	N-m
32M060ELD3DEN	5-42	198	22.4	32M060HSD9DEN	5-42	198	22.4
32M040ELD3DEN	8-63	163	18.4	32M040HSD9DEN	8-63	215	24.3
32M020ELD3DEN	15-125	98	11.1	32M020HSD9DEN	15-125	196	22.1
32M010ELD3DEN	30-250	54	6.1	32M010HSD9DEN	30-250	108	12.2
32M005ELD3DEN	60-500	28	3.2	32M005HSD9DEN	60-500	56	6.3

## CE Version

Gearmotors		
Part Number	RPM	N-m
62Z060ES423EN	9-23	26.4
62Z040ES423EN	14-35	28.9
62Z020ES423EN	28-70	19.4
62Z010ES423EN	56-140	10.7
62Z005ES423EN	111-280	5.6

**Table 4: RPM/Torque for Heavy Load Variable Speed 90° VFD Gearmotors**

Heavy Load Gearmotors			
Part Number	RPM	In-lb	N-m
32M060ES423EN	3-29	226	25.5
32M040ES423EN	4-43	247	27.9
32M020ES423EN	9-86	248	27.9
32M010ES423EN	17-173	156	17.6
32M005ES423EN	35-345	81	9.1

**Table 5: Belt Speeds for Brushless 90° Gearmotors**

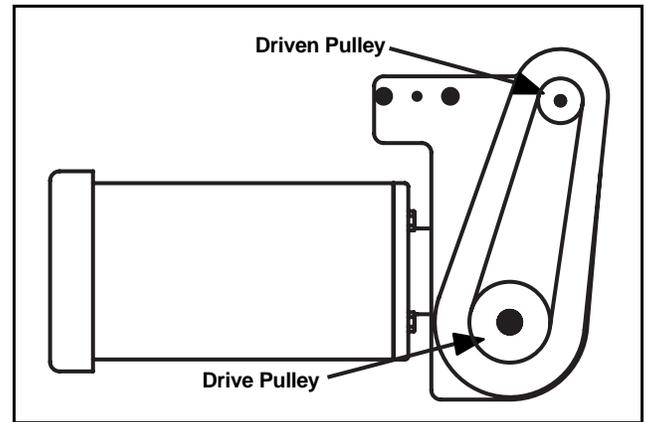
Heavy Load Gearmotors			
Part Number	RPM	In-lb	N-m
62M060ESBDDEN	2-50	106	12.4
62M040ESBDDEN	3-75	123	14.3
62M020ESBDDEN	5-150	89	10.4
62M010ESBDDEN	10-300	49	5.7
62M005ESBDDEN	20-600	25	2.9

## NOTE

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

**Table 6: Pulley Ratio / Timing Belt Number**

Motor	Conveyor	Pulley	Timing Belt
19	32	0.59	814-103
22	28	0.79	814-103
22	32	0.69	814-100
28	22	1.27	814-103
28	32	0.88	814-096
32	19	1.68	814-103
32	22	1.45	814-100
32	28	1.14	814-096
32	32	1.00	814-096
44	19	2.32	814-096
44	22	2.00	814-096
44	28	1.57	814-105
44	32	1.38	814-105
48	19	2.53	814-104
48	22	2.18	814-105
48	28	1.71	814-105
48	32	1.50	814-105



**Figure 2**

**Table 7: Conveyor Belt Speed Factor**

Series	Ft/revolution	M/revolution
2200 / 2300	0.350	0.107
2100 / 4100 / 6100 / 6200	0.278	0.085
2200 MPB	0.590	0.180
2200 Precision Move	0.394	0.120
2200 / 2300 Modular Belt	0.394	0.120

## Belt Speed Calculation:

### How to Calculate Belt Speed

1. Determine gearmotor RPM from tables 2-5.
2. Determine the pulley kit ratio. Count the number of teeth on the drive and driven pulleys following figure 2. Using table 6, look up pulley ratio based on pulley combinations.
3. Determine conveyor speed factor using table 7. Based on your conveyor type, select the appropriate factor.
4. Calculate belt speed:

Example: Belt Speed = Gearmotor RPM (tables 2-5) x Pulley Kit Ratio (table 6) x Conveyor Speed Factor (table 7)

2200 Series standard load DC variable speed 20:1 gearmotor with 44 tooth sprocket on gearmotor (Drive) and 28 tooth sprocket on the conveyor output shaft (Driven).

Gearmotor =	62M020ELD3DEN	= 15 - 125 RPM
Pulley Kit =	44 t mtr. - 28 t conv.	= 1.57
Speed Factor =	2200 Series	= 0.350 ft/min per RPM
Minimum Belt Speed =	15 x 1.57 x 0.350	= 8.2 Ft/min
Maximum Belt Speed =	125 x 1.57 x 0.350	= 68.7 Ft/min

# Installation

## Required Tools

- Hex key wrenches:  
2 mm, 2.5 mm, 3 mm, 5 mm
- Straight edge
- Torque wrench

## 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 3). Type 2 mounting package shown below right (Figure 3).

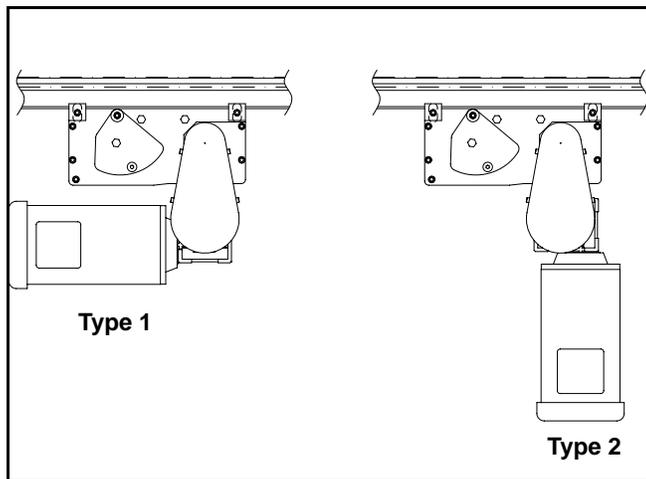


Figure 3

### NOTE

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

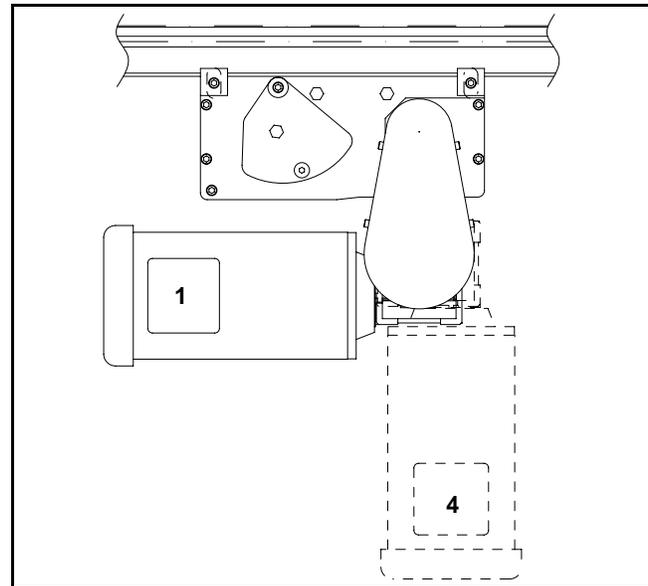


Figure 4

### Installation Component List:

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

1. Gather installation components (Figure 5)

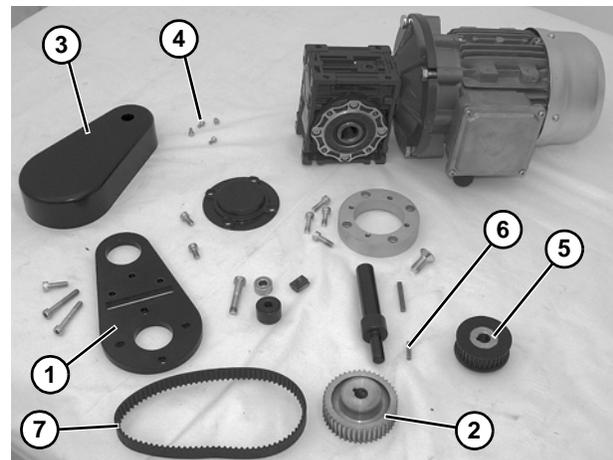
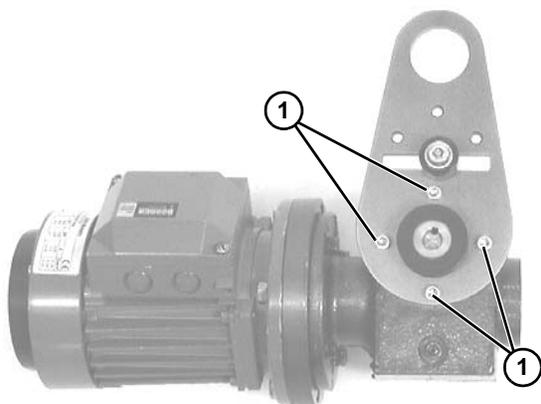


Figure 5

### NOTE

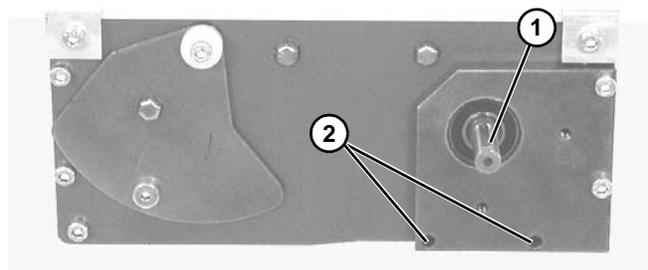
Type 1 mounting package shown (Figure 5), Type 2 mounting package similar.

- If required, change gearmotor position by removing four (4) screws (**Figure 6, item 1**). Rotate gearmotor to other position and replace screws. Tighten to 103 in-lb (12 Nm).



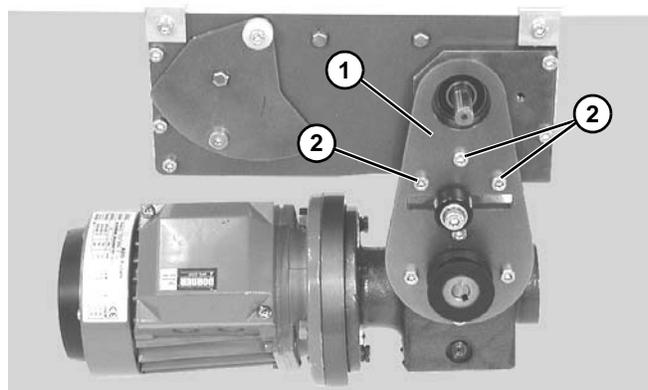
**Figure 6**

- Locate drive output shaft (**Figure 7, item 1**) and remove two (2) screws (**Figure 7, item 2**).



**Figure 7**

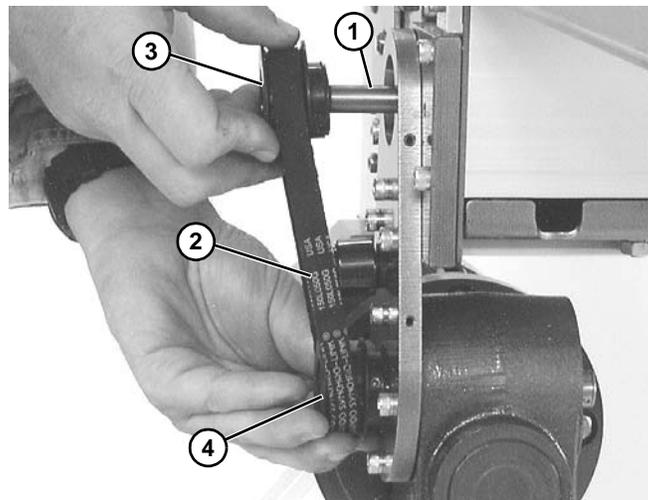
- Attach mount assembly (**Figure 8, item 1**) with mounting screws (**Figure 8, item 2**). Install long screws on bottom. Tighten screws to 80 in-lb (9 Nm).



**Figure 8**

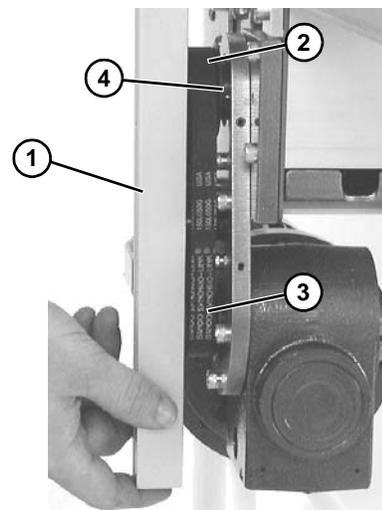
<b>⚠ WARNING</b>
<b>Drive shaft keyway may be sharp. HANDLE WITH CARE.</b>

- Install key (**Figure 9, item 1**).



**Figure 9**

- Wrap timing belt (**Figure 9, item 2**) around driven pulley (**Figure 9, item 3**) and drive pulley (**Figure 9, item 4**). Install driven pulley (**Figure 9, item 3**) onto conveyor shaft.
- Using a straight edge (**Figure 10, item 1**), align driven pulley (**Figure 10, item 2**) with drive pulley (**Figure 10, item 3**). Tighten driven pulley set screws (**Figure 10, item 4**).



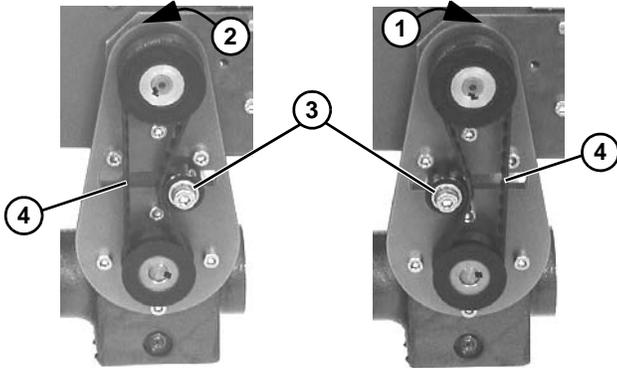
**Figure 10**

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# Installation

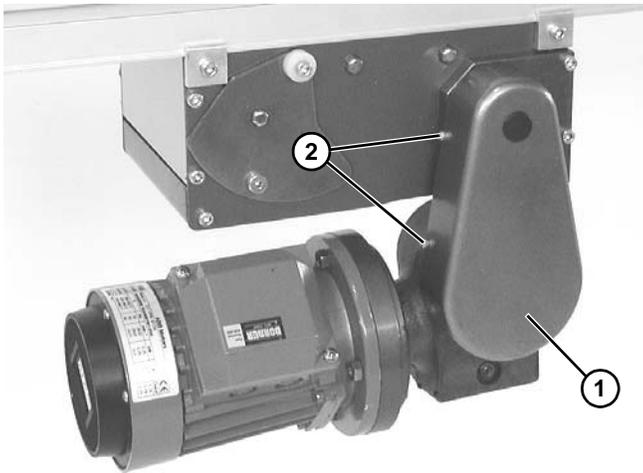
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8. Depending on direction of conveyor belt travel (**Figure 11, item 1 or 2**), position belt tensioner (**Figure 11, item 3**) as shown. Tension belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at belt mid-point (**Figure 11, item 4**). Tighten tensioner screw to 103 in-lb (12 Nm).



**Figure 11**

9. Install cover (**Figure 12, item 1**) with four (4) screws (**Figure 12, item 2**). Tighten screws to 35 in-lb (4 Nm).



**Figure 12**

# Preventive Maintenance and Adjustment

## Required Tools

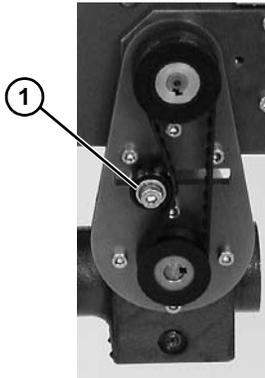
- Hex key wrenches:  
2 mm, 2.5 mm, 3 mm, 5 mm
- Adjustable wrench (for hexagon head screws)
- Straight edge
- Torque wrench

## Timing Belt Tensioning

<b>⚠ WARNING</b>

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

1. Remove four (4) screws (**Figure 12, item 2**) and remove cover (**Figure 12, item 1**).
2. Loosen tensioner (**Figure 13, item 1**).



**Figure 13**

3. Depending direction of conveyor belt travel (**Figure 11, item 1 or 2**), position belt tensioner (**Figure 11, item 3**) as shown. Tension belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at belt mid-point (**Figure 11, item 4**). Tighten tensioner screw to 103 in-lb (12 Nm).
4. Install cover (**Figure 12, item 1**) with four (4) screws (**Figure 12, item 2**). Tighten screws to 35 in-lb (4 Nm).

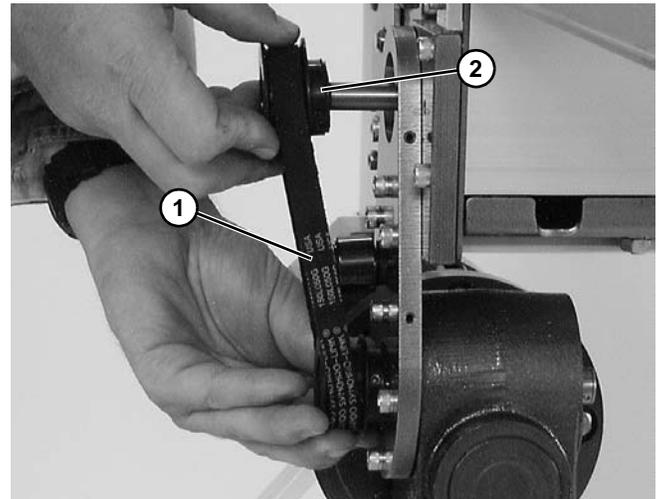
## Timing Belt Replacement

<b>⚠ WARNING</b>

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

1. Remove four (4) screws (**Figure 12, item 2**) and remove cover (**Figure 12, item 1**).
2. Loosen tensioner (**Figure 13, item 1**).
3. Remove timing belt (**Figure 14, item 1**).

<b>NOTE</b>
<i>If timing belt does not slide over pulley flange, loosen driven pulley set screws (<b>Figure 14, item 2</b>) and remove pulley with belt (<b>Figure 14, item 1</b>). For re-installation, see steps 6 and 7 on page 9.</i>



**Figure 14**

4. Install new timing belt.
5. Depending direction of conveyor belt travel (**Figure 11, item 1 or 2**), position belt tensioner (**Figure 11, item 3**) as shown. Tension belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at belt mid-point (**Figure 11, item 4**). Tighten tensioner screw to 103 in-lb (12 Nm).
6. Install cover (**Figure 12, item 1**) with four (4) screws (**Figure 12, item 2**). Tighten screws to 35 in-lb (4 Nm).

# Preventive Maintenance and Adjustment

## 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 17, item 1**) is replaced, wrap timing belt around drive pulley and complete step 3.

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

## Gear Reducer Replacement

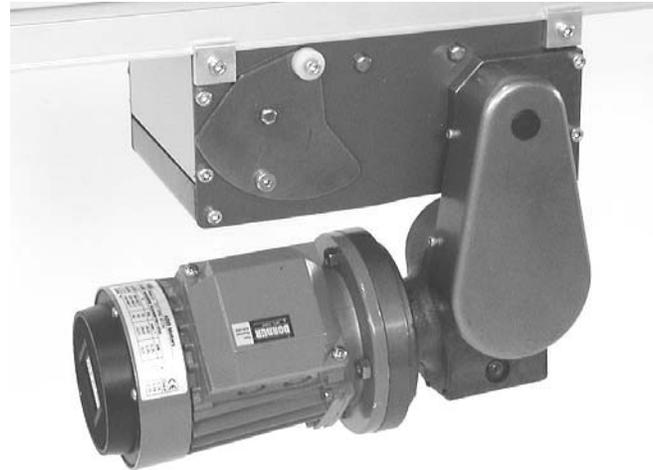
### ⚠ WARNING



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

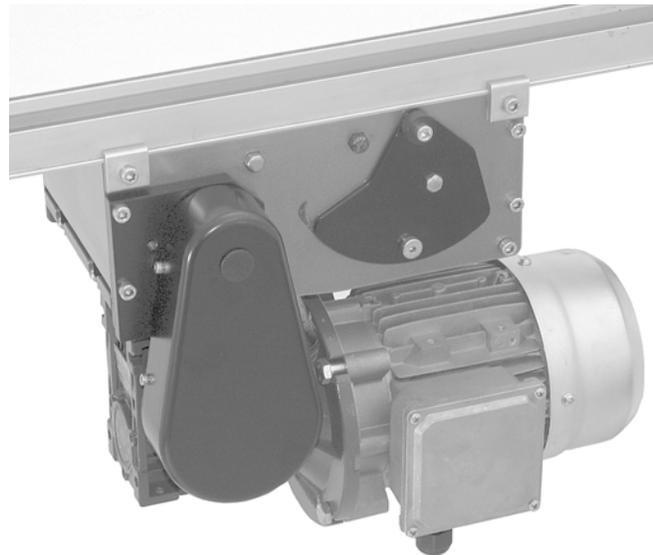
### NOTE

The center mount drive package changed configuration in 2011. See below for configuration details. See Service Parts section to ensure proper replacement parts are installed.



**Old Style Gearmotor prior to June 2011**

**Figure 15**



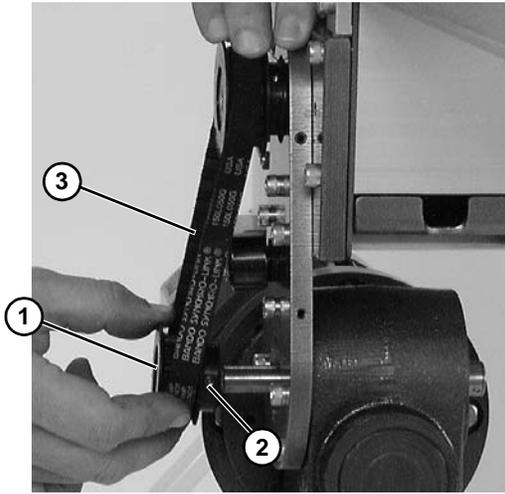
**e-Drive Gearmotor**

**Figure 16**

1. Remove four (4) screws (**Figure 12, item 2**) and remove cover (**Figure 12, item 1**).
2. Loosen tensioner (**Figure 13, item 1**).

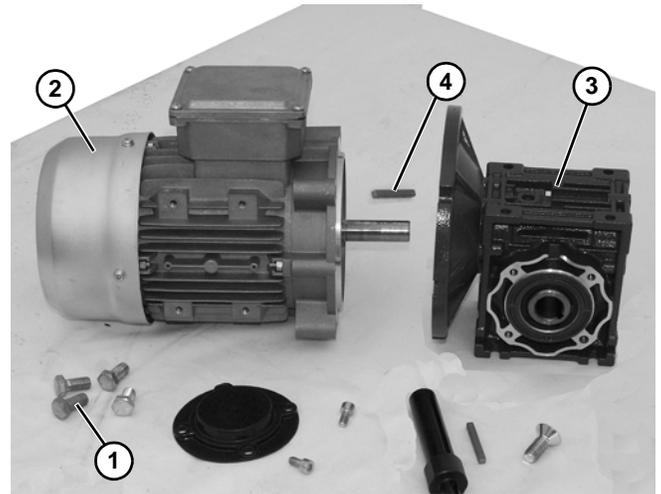
# Preventive Maintenance and Adjustment

- Loosen drive pulley set screws (**Figure 17, item 2**). Remove drive pulley (**Figure 17, item 1**) and timing belt (**Figure 17, item 3**).



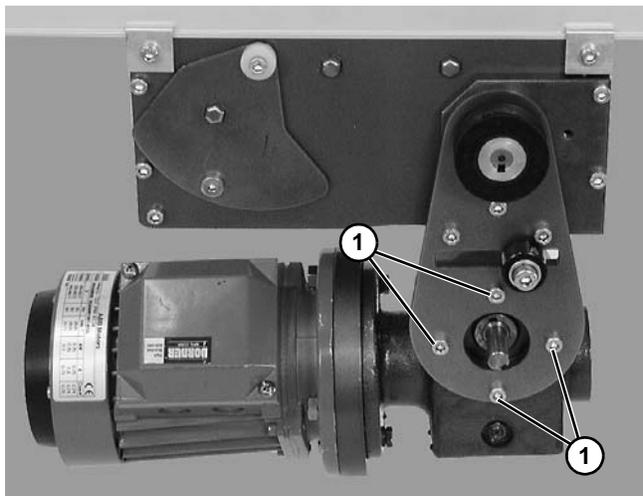
**Figure 17**

- Remove four screws (**Figure 19, item 1**). Detach motor (**Figure 19, item 2**) from gear reducer (**Figure 19, item 3**). Retain shaft key (**Figure 19, item 4**).



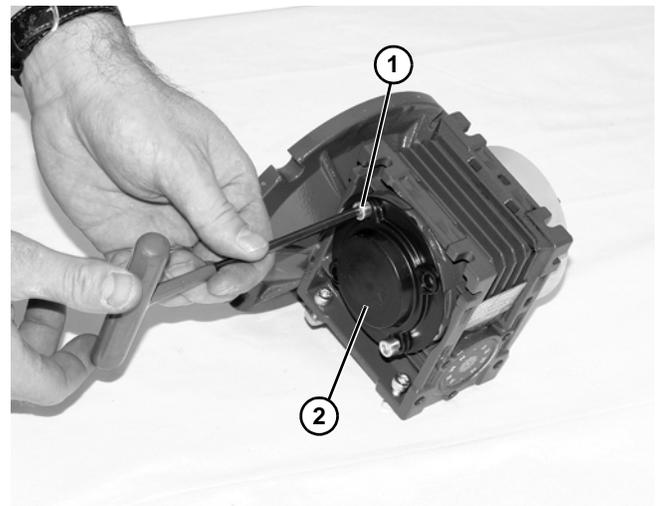
**Figure 19**

- Remove four (4) gear reducer mounting screws (**Figure 18, item 1**). Remove gearmotor.



**Figure 18**

- Remove two (2) screws (**Figure 20, item 1**) and detach output shaft cover (**Figure 20, item 2**).



**Figure 20**

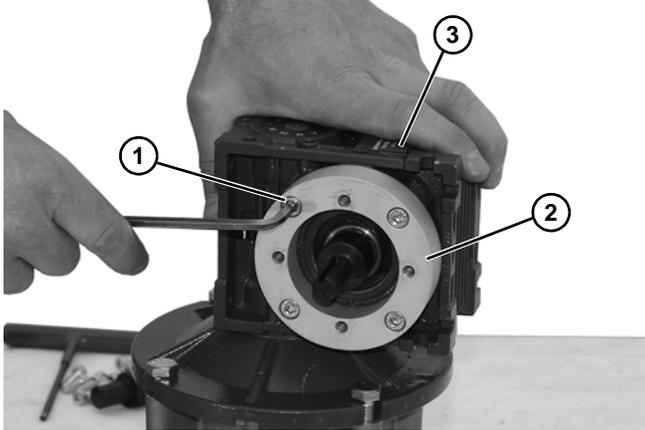
## NOTE

*Follow proper procedure below depending upon old or new style gearmotor assembly.*

# Preventive Maintenance and Adjustment

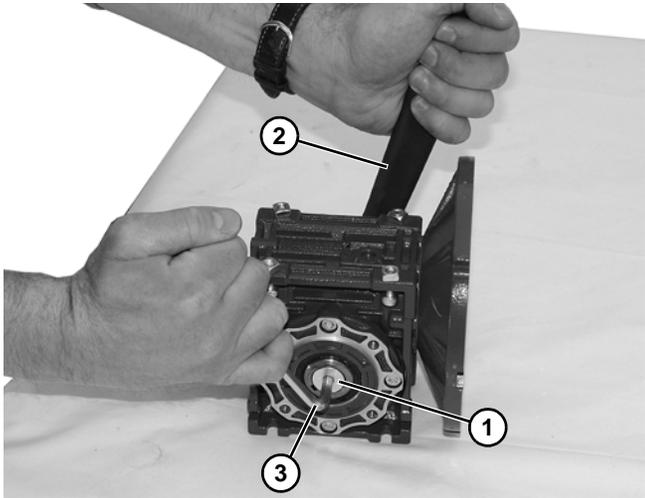
## For e-Drive style gearmotor

1. Loosen four (4) socket head screws (**Figure 21, item 1**) and detach spacer (**Figure 21, item 2**) from gear reducer (**Figure 21, item 3**).



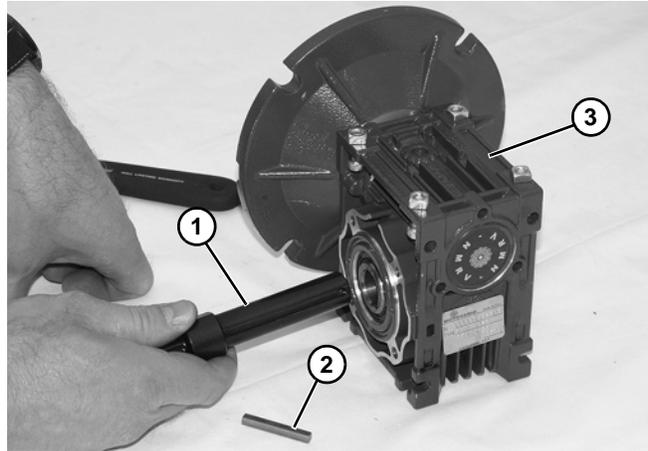
**Figure 21**

2. Loosen driveshaft bolt (**Figure 22, item 1**).



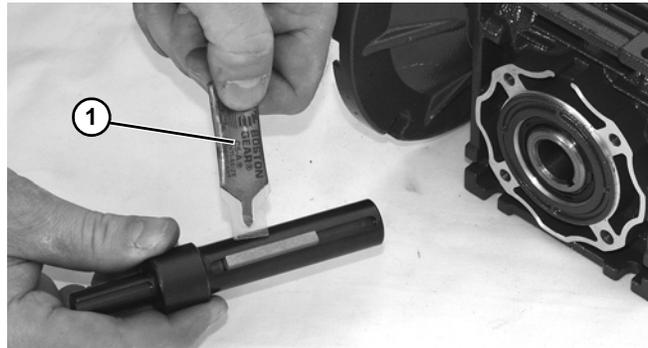
**Figure 22**

3. Hold the driveshaft with a wrench (**Figure 22, item 2**) as shown to keep shaft from turning, while removing screw with hex wrench (**Figure 22, item 3**).
4. Remove driveshaft (**Figure 23, item 1**) and key (**Figure 23, item 2**).



**Figure 23**

5. Replace gear reducer (**Figure 23, item 3**).
6. Apply anti-seize (**Figure 24, item 1**) to shaft.



**Figure 24**

7. Replace the original shaft components into new gear reducer (**Figure 23**).

### IMPORTANT

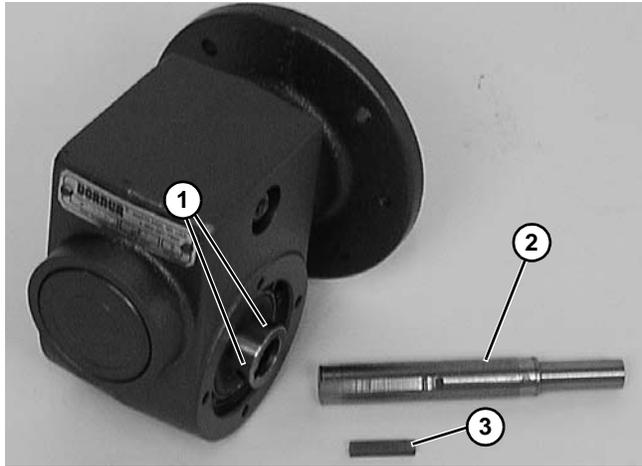
*Be extremely careful when coupling motor to gear reducer. Avoid misalignment and forcing the connection causing possible permanent gear reducer seal damage.*

8. Hold the driveshaft with a wrench (**Figure 22, item 2**) as shown to keep shaft from turning, while installing screw with hex wrench (**Figure 22, item 3**). Tighten capscrew to 100 in-lb (11.5 Nm) for 42CZ or 350 in-lb (39.5 Nm) for 52C, 63B5 and 71B5.
9. Apply anti-seize to motor shaft before assembling to gearbox. With key (**Figure 19, item 4**) in keyway, slide motor (**Figure 19, item 2**) and gear reducer (**Figure 19, item 3**) together. Install screws (**Figure 19, item 1**) and tighten.
10. Install spacer (**Figure 21, item 2**) onto gear reducer (**Figure 21, item 3**) with four (4) socket head screws (**Figure 21, item 1**).
11. Complete steps 4 through 9 of "Installation" section beginning on page 9.

# Preventive Maintenance and Adjustment

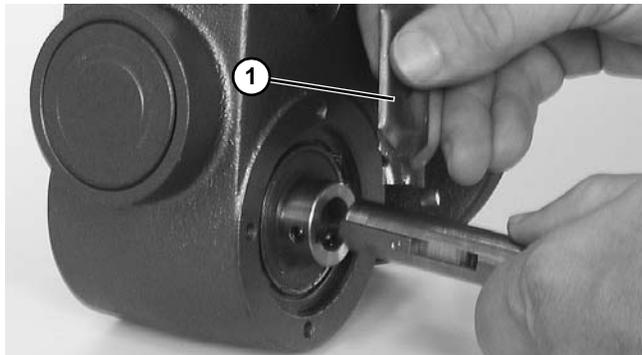
## For old style gearmotor prior to June 2011

1. Loosen six (6) set screws (**Figure 25, item 1**). Remove drive shaft (**Figure 25, item 2**) and key (**Figure 25, item 3**).



**Figure 25**

2. Apply anti-seize (**Figure 26, item 1**) to shaft.



**Figure 26**

3. Replace the original shaft components into new gear reducer see (**Figure 25**).

### IMPORTANT

*Be extremely careful when coupling motor to gear reducer. Avoid misalignment and forcing the connection causing possible permanent gear reducer seal damage.*

4. Apply anti-seize to motor shaft before assembling to gearbox. With key (**Figure 19, item 4**) in keyway, slide motor (**Figure 19, item 2**) and gear reducer (**Figure 19, item 3**) together. Install screws (**Figure 19, item 1**) and tighten.
5. Complete steps 4 through 9 of “Installation” section beginning on page 9.

# Preventive Maintenance and Adjustment

## Motor Replacement

<b>⚠ WARNING</b>

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

<b>⚠ DANGER</b>

Hazardous voltage will cause severe injury or death. LOCK OUT POWER BEFORE WIRING.

## Single Phase Motor

1. For single phase motor, unplug power cord from outlet.

## Three Phase Motor

1. Loosen terminal box screws (Figure 27, item 1) and remove cover (Figure 27, item 2).

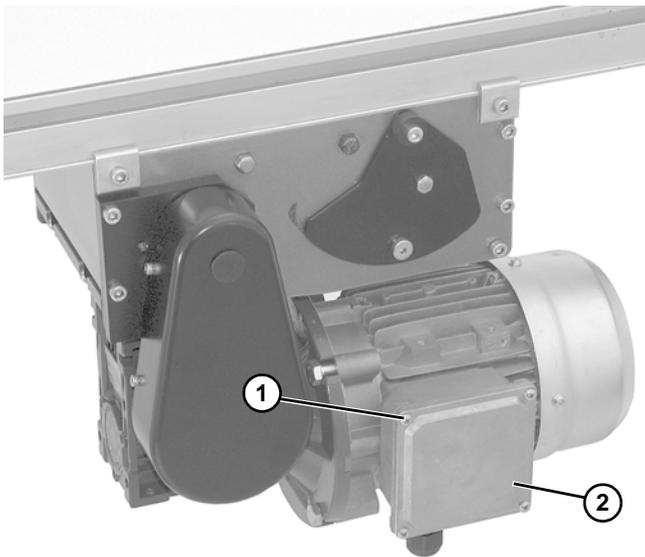


Figure 27

2. Record wire colors on terminals 1, 2 and 3. Loosen wire nuts and remove wires 1, 2 and 3.
3. Loosen cord grip and remove cord.

## DC Variable Speed Motor

1. For DC variable speed motor, unplug motor cord at disconnect (Figure 28, item 1).

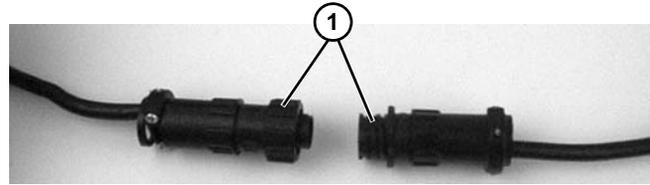


Figure 28

## Brushless Motor

1. Twist covers (Figure 29, item 1) apart.

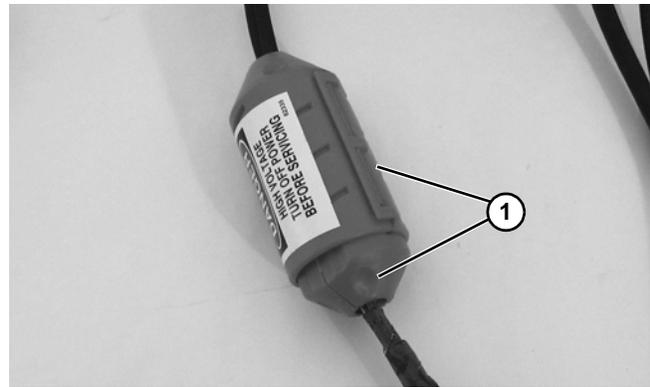


Figure 29

2. Remove outer cord cover (Figure 30, item 1) from inner cord cover (Figure 30, item 2).

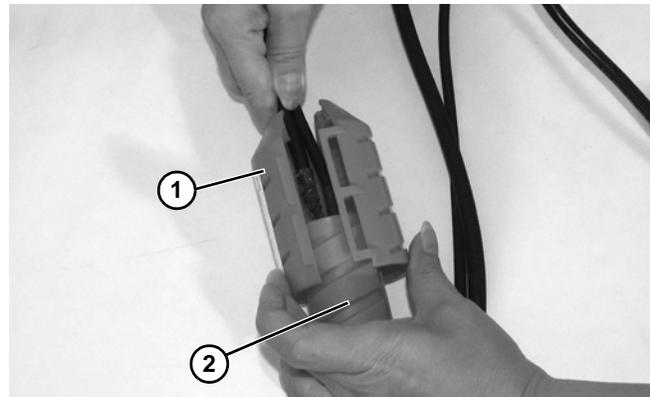


Figure 30

# Preventive Maintenance and Adjustment

3. Open inner cord cover (Figure 31, item 1).

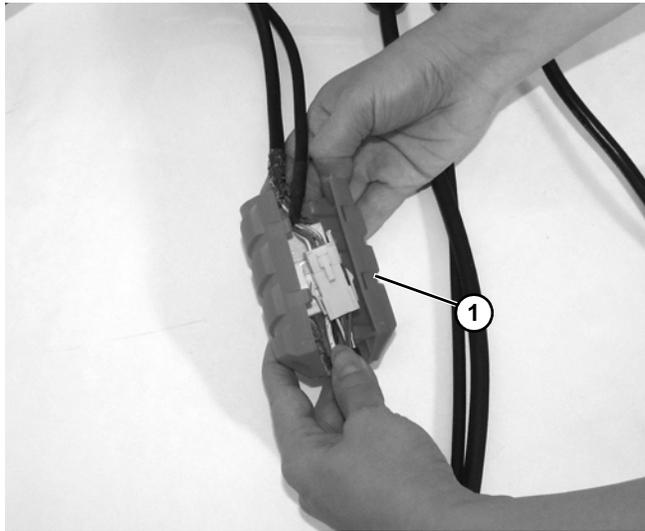


Figure 31

4. Unplug motor cord connectors (Figure 32, item 1) and signal cable connectors (Figure 32, item 2).

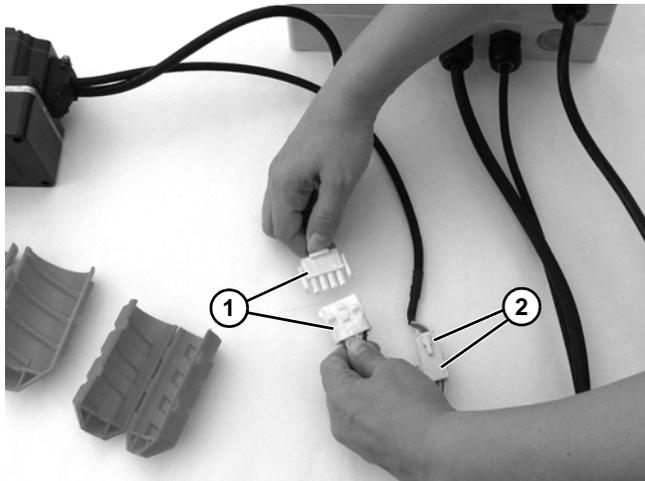


Figure 32

## All Models

1. Remove four screws (Figure 33, item 1). Detach motor (Figure 33, item 2) from gear reducer (Figure 33, item 3). Retain motor output shaft key.

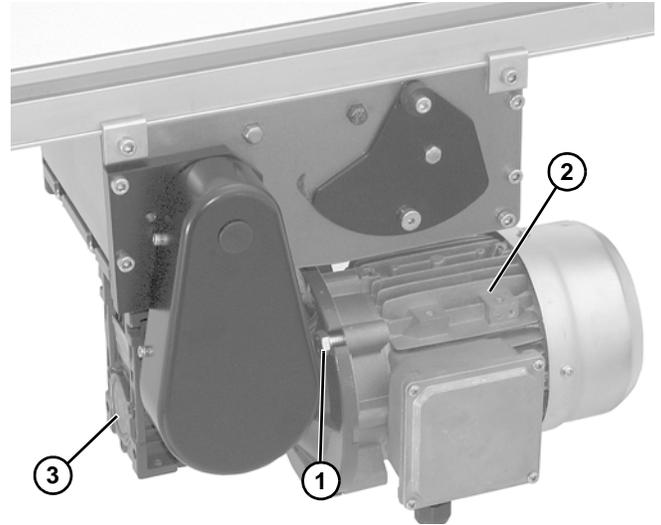


Figure 33

### IMPORTANT

*Be extremely careful when coupling motor to gear reducer. Avoid misalignment and forcing the connection causing possible permanent gear reducer seal damage.*

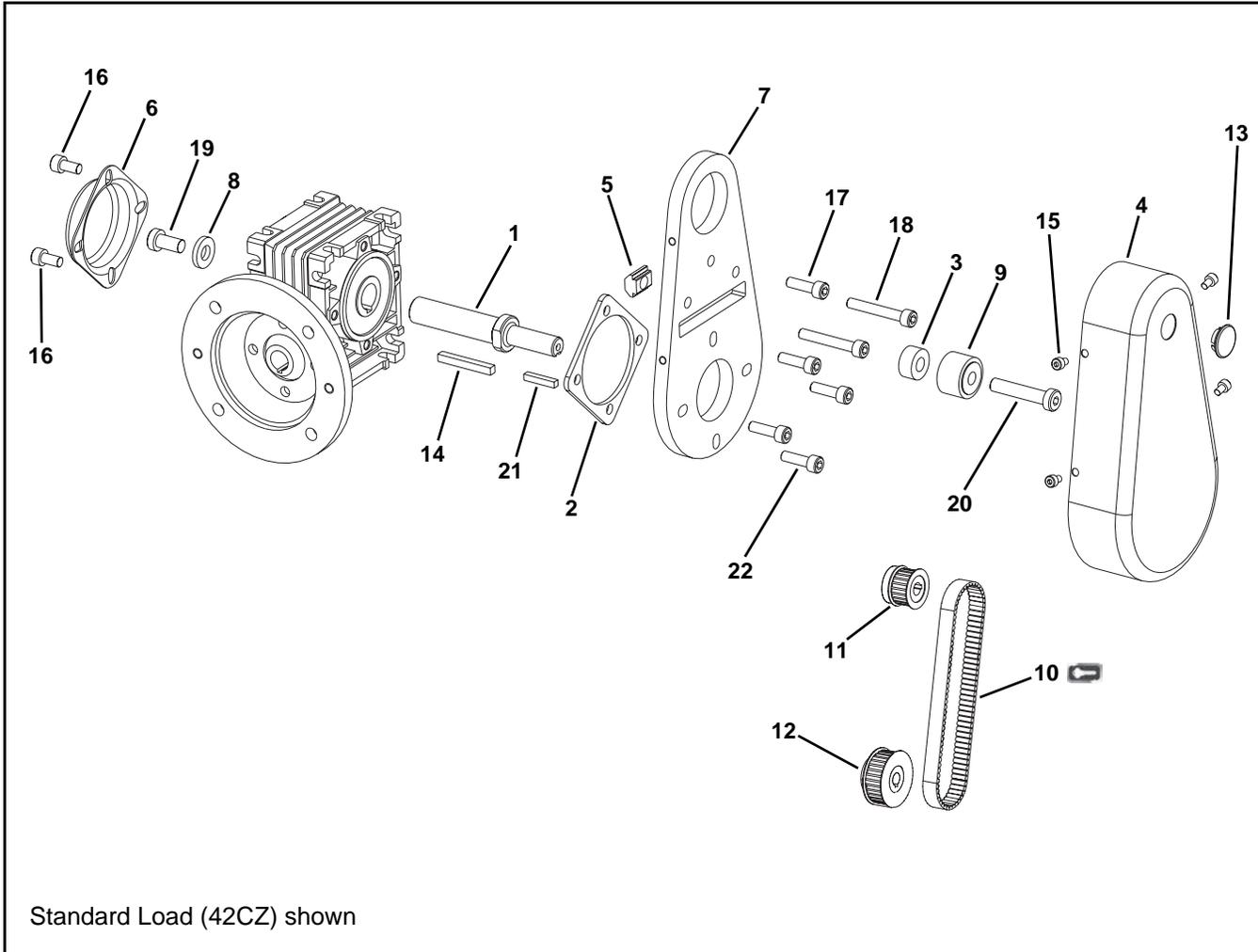
2. Apply anti-seize to motor shaft before assembling to gearbox. With key in keyway, slide motor (Figure 33, item 2) and gear reducer (Figure 33, item 3) together. Install screws (Figure 33, item 1) and tighten.
3. Replace wiring:
  - For a single phase motor, reverse step 1 in “Single Phase Motor” on page 16.
  - For a three phase motor, reverse steps 1-3, in “Three Phase Motor” on page 16.
  - For a DC variable speed motor, reverse step 1 on “DC Variable Speed Motor” on page 16.
  - For a brushless motor, reverse steps 1-2 on “Brushless Motor” on page 16.

# 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 90° Gearmotors



# Service Parts

Item	Part Number	Description
1	202274	Drive Shaft (for E-Drive 42CZ C Face Gearmotors)
	350122	Drive Shaft (for E-Drive 56 C Face Gearmotors)
	350136	Drive Shaft (for E-Drive IEC 63B5 and IEC 71B5 Gearmotors)
2	400026	Spacer Ring (for E-Drive 42CZ C Face Gearmotors)
	350115	Adapter (for E-Drive 56 C Face, IEC 63B5 and IEC 71B5 Gearmotors)
3	450195	Spacer
4	200376M	Drive Guard
5	202390M	Nut
6	300139	Drive-Bearing Shaft Cover (for E-Drive 42CZ C Face Gearmotors)
	807-2016	Drive-Bearing Shaft Cover (for E-Drive 56 C Face, IEC 63B5 and IEC 71B5 Gearmotors)
	300139	Drive-Bearing Shaft Cover (for Old Style Gearmotors, Prior to June 2011)
7	460026M	Mounting Plate
8	605280P	Washer (for 42CZ Face Gearmotors)
9	802-046	Bearing
10	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
11	450365MP	Driven Pulley, 19 Tooth
	450366MP	Driven Pulley, 22 Tooth
	450367MP	Driven Pulley, 28 Tooth
	450368MP	Driven Pulley, 32 Tooth

Item	Part Number	Description
12	450365MP	Drive Pulley, 22 Tooth
	450366MP	Drive Pulley, 28 Tooth
	450367MP	Drive Pulley, 32 Tooth
	450368MP	Drive Pulley, 44 Tooth
	450370MP	Drive Pulley, 48 Tooth
13	807-226	Snap-out Plastic Plug
14	912-084	Square Key, 0.188" x 1.50"
	980636M	Square Key, 6 mm x 36 mm (for E-Drive IEC 63B5 and IEC 71B5 Gearmotors)
15	920406M	Socket Head Screw, M4-.70 x 6 mm
16	920612M	Socket Head Screw, M6-1.00 x 12 mm
17	920616M	Socket Head Screw, M6-1.00 x 16 mm
18	920640M	Socket Head Screw, M8-1.25 x 40 mm
19	920893M	Low Head Cap Screw, M8-1.25 x 16 mm (for E-Drive 42CZ C Face Gearmotors)
	931020M	Flat Head Screw M10-1.50 x 20 mm (for E-Drive 56 C Face, IEC 63B5 and IEC 71B5 Gearmotors)
20	920898M	Low Head Cap Screw, M8-1.25 x 40 mm
21	980422M	Square Key, 4 mm x 22 mm
22	920620M	Low Head Cap Screw, M6-1.00 x 20 mm (for E-Drive 56 C Face, IEC 63B5 and IEC 71B5 Gearmotors)
	920618M	Socket Head Screw, M6-1.00 x 18 mm

## Pulley Ratio / Timing Belt Combinations

Motor	Conveyor	Pulley	Timing Belt
19	32	0.59	814-103
22	28	0.79	814-103
22	32	0.69	814-100
28	22	1.27	814-103
28	32	0.88	814-096
32	19	1.68	814-103
32	22	1.45	814-100
32	28	1.14	814-096
32	32	1.00	814-096
44	19	2.32	814-096
44	22	2.00	814-096
44	28	1.57	814-105
44	32	1.38	814-105
48	19	2.53	814-104
48	22	2.18	814-105
48	28	1.71	814-105
48	32	1.50	814-105

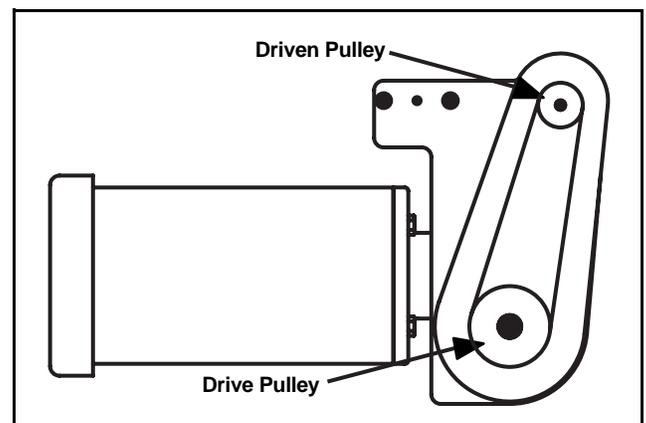
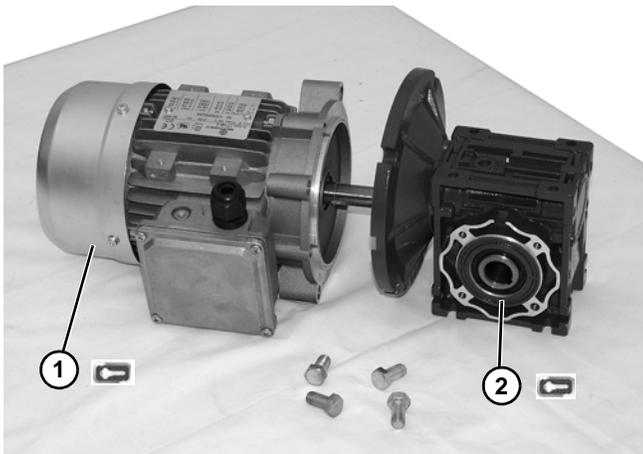


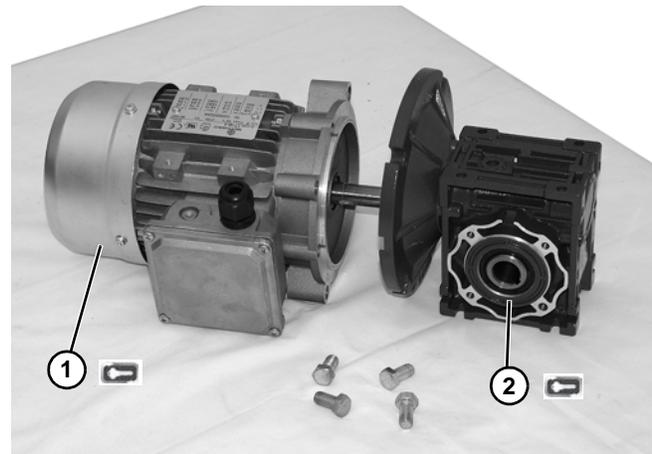
Figure 34

# Service Parts

## U.S. Version Gearmotors



## CE Version Gearmotors



Item	Part Number	Description
1	62MES411FN	Motor, 0.25HP, (0.19 Kw), 115/230 Volts, 60 Hz, 1-Phase
	62MES423FN	Motor, 0.25HP, (0.19 Kw), 208-230/460 Volts, 60 Hz, 3-Phase
	62MSD3DEN	Motor, 0.25HP, (0.19 Kw), 130 VDC
	62MEH423FN	Motor, 0.50HP, (0.37 Kw), 115/230 Volts, 60 Hz, 1-Phase
	32MEH423FN	Motor, 0.50HP, (0.37 Kw), 208-230/460 Volts, 60 Hz, 3-Phase
	62MHD9DEN	Motor, 0.50HP, (0.37 Kw), 90 VDC
	32MES423EN	Motor, 0.50HP, (0.37 Kw), 230 Volts, 3-Phase Inverter Duty
	62M060ESBDDEN	Motor, 0.25HP, (0.19 Kw), 50 RPM, Brushless DC
	62M040ESBDDEN	Motor, 0.25HP, (0.19 Kw), 75 RPM, Brushless DC
	62M020ESBDDEN	Motor, 0.25HP, (0.19 Kw), 150 RPM, Brushless DC
	62M010ESBDDEN	Motor, 0.25HP, (0.19 Kw), 300 RPM, Brushless DC
	62M005ESBDDEN	Motor, 0.25HP, (0.19 Kw), 600 RPM, Brushless DC
	2	32M005EL
32M010EL		Gear Reducer, 10:1, NEMA 42 CZ
32M020EL		Gear Reducer, 20:1, NEMA 42 CZ
32M040EL		Gear Reducer, 40:1, NEMA 42 CZ
32M060EL		Gear Reducer, 60:1, NEMA 42 CZ
32M005ES		Gear Reducer, 5:1, 56C
32M010ES		Gear Reducer, 10:1, 56C
32M020ES		Gear Reducer, 20:1, 56C
32M040ES		Gear Reducer, 40:1, 56C
32M060ES		Gear Reducer, 60:1, 56C

Item	Part Number	Description
1	826-284	Motor, 0.19 Kw 230 Volts, 1400 RPM 50 Hz, 3-Phase
	826-285	Motor, 0.19 Kw 230/400 Volts, 1400 RPM 50 Hz, 3-Phase
2	62Z005ES	Gear Reducer, 5:1, 63 B5
	62Z010ES	Gear Reducer, 10:1, 63 B5
	62Z020ES	Gear Reducer, 20:1, 63 B5
	62Z040ES	Gear Reducer, 40:1, 63 B5
	62Z060ES	Gear Reducer, 60:1, 63 B5



# 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.

Product Type									
Standard Products									Engineered to order parts
Product Line	Conveyors	Gearmotors & Mounting Packages	Support Stands	Accessories	Spare Parts (non-belt)	Spare Belts - Standard Flat Fabric	Spare Belts - Cleated & Specialty Fabric	Spare Belts - Plastic Chain	All equipment and parts
1100	30% return fee for all products except: 50% return fee for conveyors with modular belt, cleated belt or specialty belts						non-returnable		case-by-case
2200									
2200 Modular Belt									
2200 Precision Move									
2300									
2300 Modular Belt									
3200									
3200 LPZ									
3200 Precision Move									
4100									
5200									
5300									
6200									
Controls									
7200 / 7300	50% return fee for all products								
7350	non-returnable								
7360									
7400									
7600									

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](http://www.dorner.com).

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

 <p>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. 2012</p>	<p><b>DORNER MFG. CORP.</b>            975 Cottonwood Ave., PO Box 20            Hartland, WI 53029-0020 USA            TEL 1-800-397-8664 (USA)            FAX 1-800-369-2440 (USA)            Internet: <a href="http://www.dorner.com">www.dorner.com</a></p>	<p>Outside the USA:            TEL 1-262-367-7600            FAX 1-262-367-5827</p>
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