



7600 Series and 7600 Ultimate Series End Drive Packages

Installation, Maintenance and Parts Manual



Horizontal Mount



Vertical Mount

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Introduction

 CAUTION
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.

The Dorner Limited Warranty applies.

Dorner 7600 Series conveyors have patents pending.

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 .

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Warnings – General Safety

⚠ DANGER



SEVERE HAZARD!
KEEP OFF CONVEYORS. Climbing, sitting, walking or riding on conveyor will result in death or serious injury.


⚠ DANGER



EXPLOSION HAZARD!

- **DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT.** The electric gearmotor generates heat and could ignite combustible vapors.
- Failure to comply will result in death or serious injury.


⚠ WARNING



CRUSH HAZARD!

- **DO NOT** place hands or fingers inside the conveyor while it is running.
- **DO NOT** wear loose garments while operating the conveyor. Loose garments can become caught up in the conveyor.
- Failure to comply could result in serious injury.

⚠ WARNING



CRUSH HAZARD!

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

⚠ WARNING




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

⚠ WARNING




BURN HAZARD!
DO NOT TOUCH the motor while operating or shortly after being turned off. Motors may be **HOT** and can cause serious burn injuries.

⚠ WARNING



PUNCTURE HAZARD!
Handle drive shaft keyway with care. It may be sharp and could puncture the skin, causing serious injury.

⚠ WARNING



SEVERE HAZARD!

- 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.
- Failure to comply could result in serious injury.

Product Description

Refer to **(Figure 1)** for typical gearmotor assembly components (vertical drive shown).

1	Conveyor
2	Mounting bar
3	Motor
4	Gear reducer
5	Gear reducer mounting bracket

NOTE

The vertical drive package is shown above, but the horizontal and nose bar drive packages contain similar components.

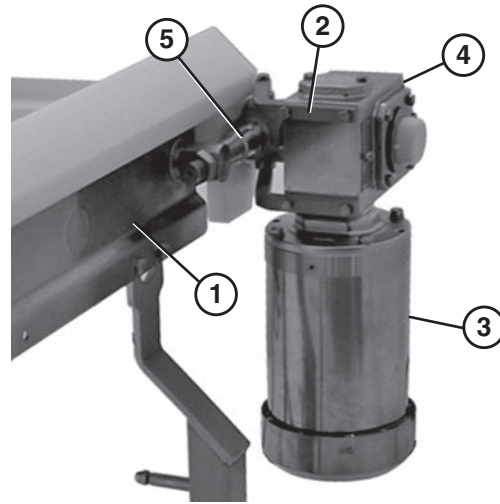
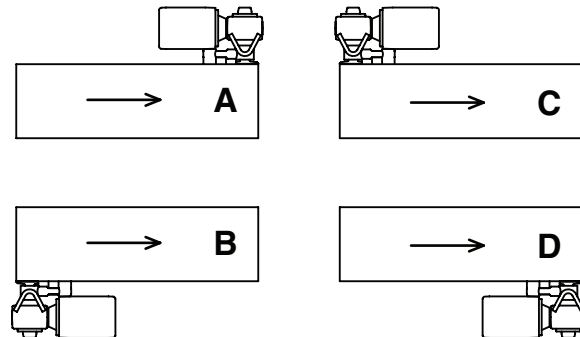
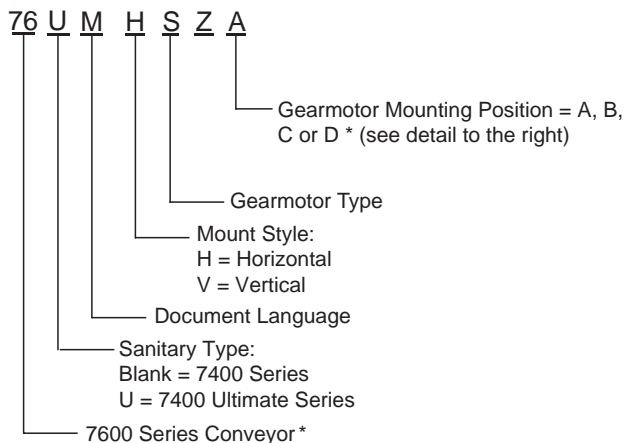


Figure 1

Specifications

7600 Series Gearmotor Mounting Package Models

Example:



* Refer to "Ordering and Specifications" Catalog for details.

Specifications

7600 Series Gearmotor Specifications

	Single Phase	Three Phase
Output Power	0.50 hp (0.37 kW)	.50 hp (.37 kW) / 1 hp (.74 kW) / 1.5 hp (1.11 kW)
Input Voltage	115 V A.C.	208 - 230 / 460 V.A.C.
Input Frequency	60 Hz	6 - 60 Hz
Motor RPM	22 - 44	22 - 233
Gearmotor Ratios	5:1, 7:1, 10:1, 15:1, 20:1, 30:1, 40:1, 60:1, 80:1	
Frame Size	NEMA 56 C	
Motor Type	Totally Enclosed, Non-ventilated (Except 1.5 hp Stainless Steel Gearmotor = Totally Enclosed, Fan Cooled)	

* Refer to "Ordering and Specifications" Catalog for details.

Fixed Speed Gearmotor

Part Number	ft / min	m / min	RPM	in • lb	N • m
74M080H(x)4(vp)FN	20	6.1	22	356	40.2
74M060H(x)4(vp)FN	27	8.2	29	442	49.9
74M040H(x)4(vp)FN	41	12.5	44	486	54.9
74M030H(x)4(vp)FN	54	16.5	58	487	55.0
74M020H(x)4(vp)FN	81	24.7	87	407	46.0
74M015H(x)4(vp)FN	109	33.2	117	470	53.1
74M010H(x)4(vp)FN	164	50.0	175	442	49.9
74M007H(x)4(vp)FN	218	66.4	233	360	40.7
74M005H(x)4(vp)FN	325	100.0	350	337	38.1

Variable Speed Gearmotor

Part Number	ft / min	m / min	RPM	in • lb	N • m
74M080H(x)4(vp)EN	2 - 20	0.6 - 6.1	22	356	40.2
74M060H(x)4(vp)EN	3 - 27	0.9 - 8.2	29	442	49.9
74M040H(x)4(vp)EN	5 - 41	1.3 - 12.5	44	486	54.9
74M030H(x)4(vp)EN	6 - 54	2.0 - 16.5	58	487	55.0
74M020H(x)4(vp)EN	9 - 81	2.6 - 24.7	87	407	46.0
74M015H(x)4(vp)EN	11 - 109	3.4 - 33.2	117	470	53.1
74M010H(x)4(vp)EN	17 - 164	5.2 - 50.0	175	442	49.9
74M007H(x)4(vp)EN	22 - 218	6.7 - 66.4	233	360	40.7
74M005H(x)4(vp)EN	34 - 328	10.4 - 100.0	350	337	38.1

NOTE

Contact the factory for details about belt speeds other than those listed.

Installation

Required Tools

- 5 / 16" wrench (or adjustable wrench)
- 4 mm or 5 / 32" hex wrench (for bearing shaft assembly fasteners)
- Torque wrench

Drive Package Installation


Horizontal Drive Package

⚠ WARNING



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

⚠ WARNING



PUNCTURE HAZARD!
Handle drive shaft keyway with care. It may be sharp and could puncture the skin, causing serious injury.

Typical Horizontal Drive Package Components (Figure 2)

1	Cover
2	Cover bracket
3	Hex head cap screw 5 / 16 - 18 x .50 (x4)
4	Gearmotor assembly
5	Gear head mounting bent bars (x2)
6	Horizon drive spacer
7	Motor mounting bracket
8	Hex head cap screw 5 / 16 - 18 x .75 (x4)
9	Hex head cap screw 5 / 16 - 18 x 1.12
10	Hex head cap screw 5 / 16 - 18 x 2.50
11	Nut

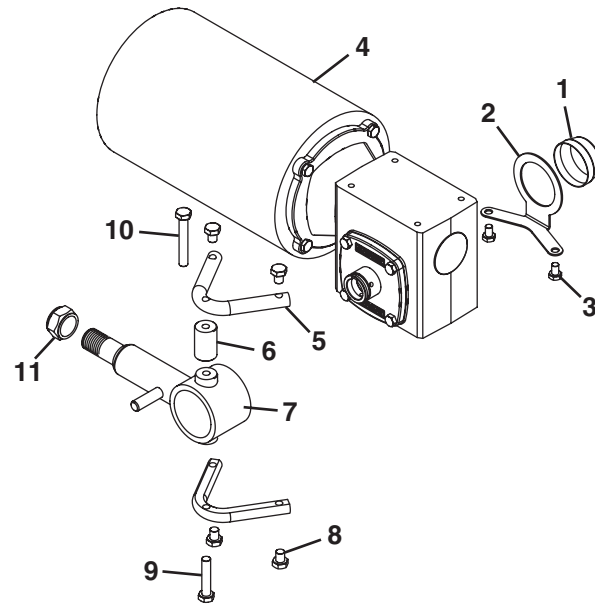


Figure 2

Installation

1. Insert the drive spindle key (**Figure 3, item 1**) into the drive spindle keyway (**Figure 3, item 2**).

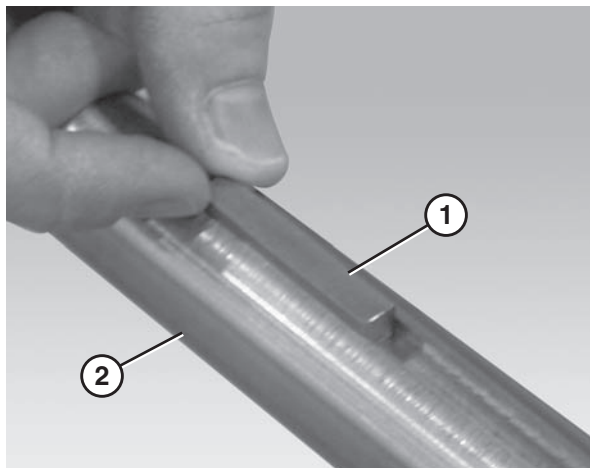


Figure 3

2. Slide the gear reducer (**Figure 4, item 1**) onto the drive spindle (**Figure 4, item 2**).

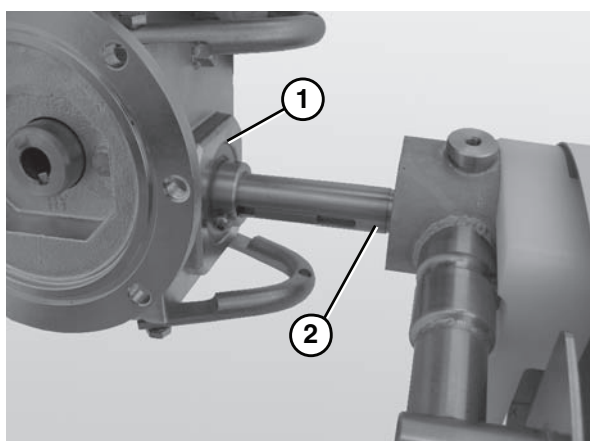


Figure 4

3. Attach the upper gearhead mounting bar (**Figure 5, item 1**) and the horizontal drive spacer (**Figure 5, item 2**) to the motor mounting bracket (**Figure 5, item 3**).

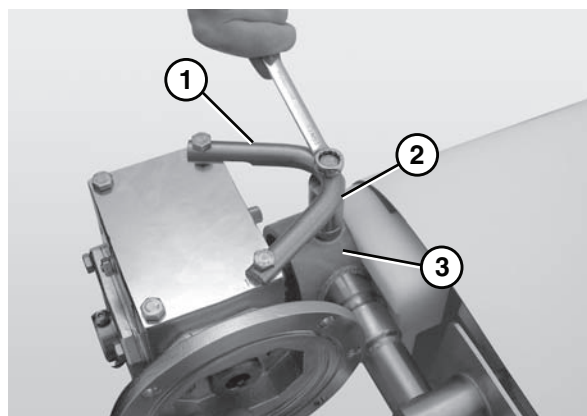


Figure 5

4. Attach the lower gearhead mounting bar (**Figure 6, item 1**) to the motor mounting bracket (**Figure 6, item 2**).

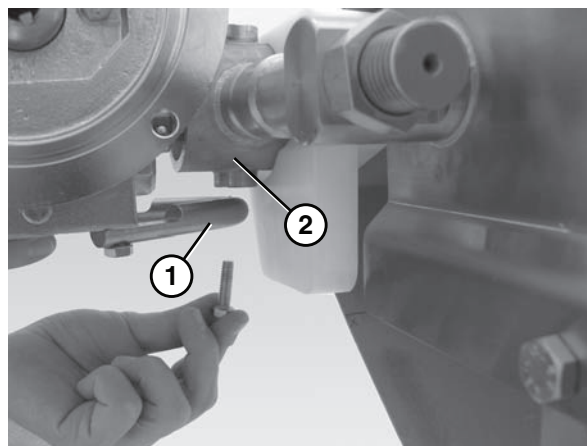


Figure 6

Installation

⚠ CAUTION

Ensure the gearmotor output shaft key (Figure 7, item 1) is situated properly before attaching the motor to the gear reducer.

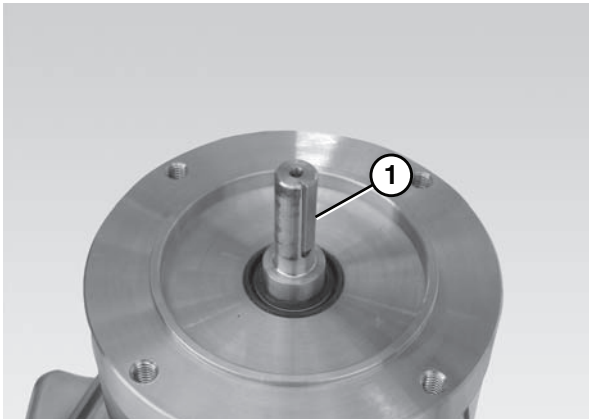


Figure 7

5. Attach the motor (Figure 8, item 1) to the gear reducer (Figure 8, item 2).

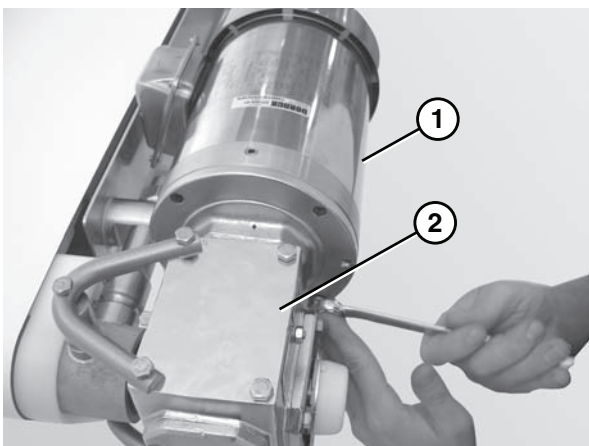


Figure 8

6. Use a 4 mm hex wrench to tighten the outside button head screws (Figure 9, item 1) and the inside button head screws (Figure 9, item 2) that connect the gearmotor to the drive spindle.

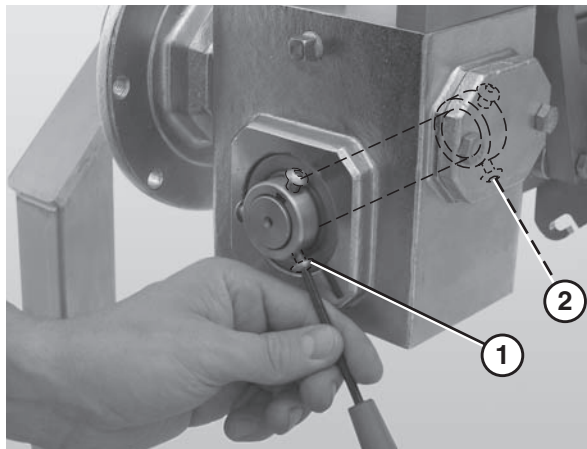


Figure 9

7. Attach the drive spindle cover (Figure 10, item 1).

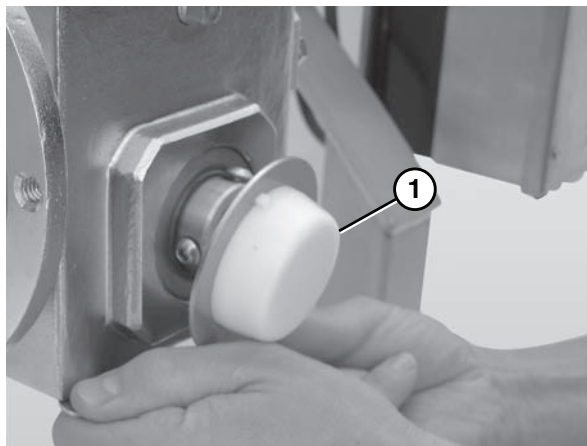


Figure 10

8. Remove the drainage plugs (Figure 11, item 1) on the bottom side of the motor.

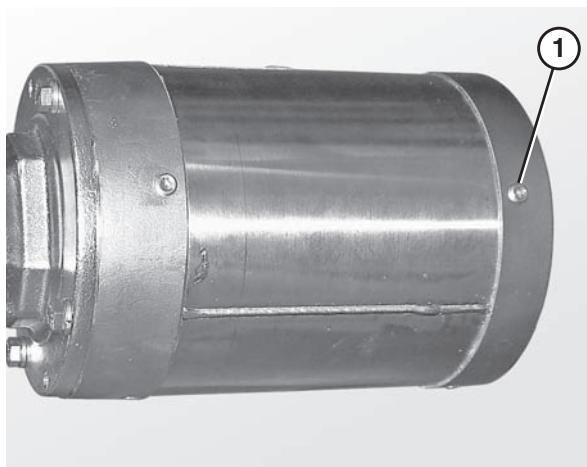



Figure 11

Vertical Drive Package

⚠ WARNING

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

⚠ WARNING

PUNCTURE HAZARD! Handle drive shaft keyway with care. It may be sharp and could puncture the skin, causing serious injury.

Typical Vertical Drive Package Components (Figure 12)

1	Bearing cover
2	Cover bracket
3	Hex head cap screws 5/16 - 18 x .50 (x4)
4	Gearmotor assembly
5	Vertical drive bent bar (x2)
6	Hex head cap screws 5/16 - 18 x 1.12 (x4)
7	Motor mounting bracket
8	Nut

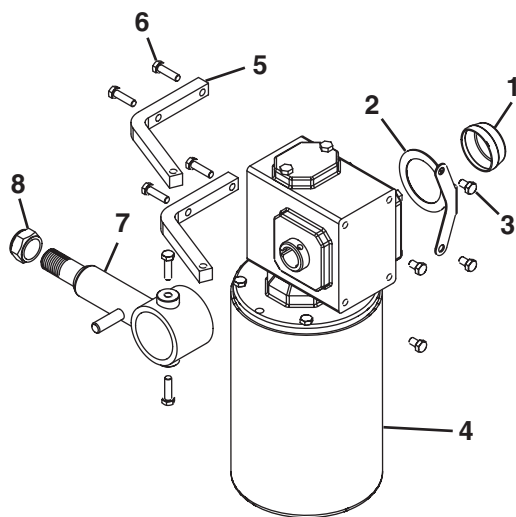


Figure 12

1. Insert the drive spindle key (Figure 13, item 1) into the drive spindle keyway (Figure 13, item 2).

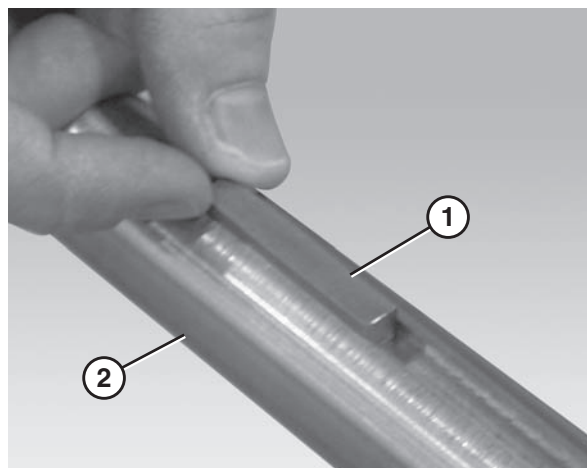


Figure 13

2. Slide the gear reducer (Figure 14, item 1) onto the drive spindle (Figure 14, item 2).

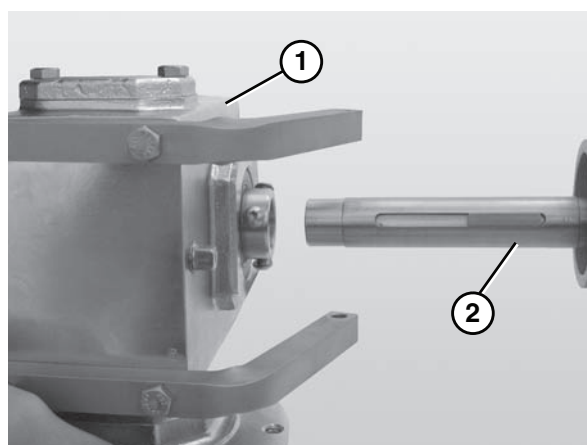


Figure 14

3. Attach the vertical drive bent bars (Figure 15, item 1) to the motor mounting bracket (Figure 15, item 2).

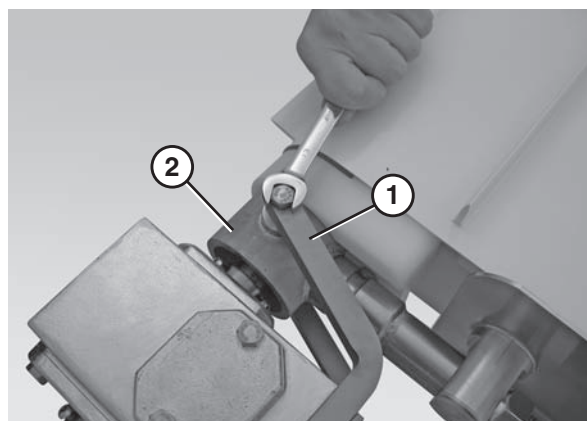


Figure 15

Installation

⚠ CAUTION

Ensure the gearmotor output shaft key (Figure 16, item 1) is situated properly before attaching the motor to the gear reducer.

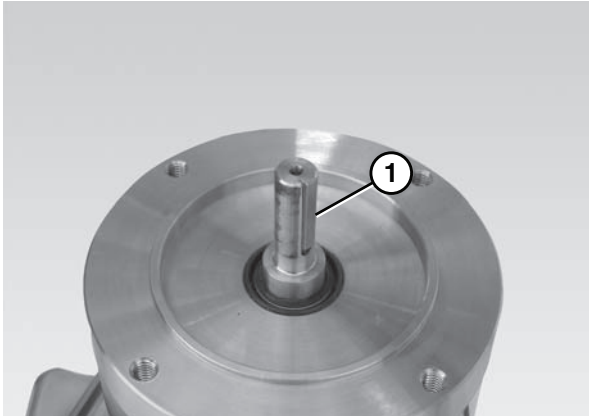


Figure 16

4. Attach the motor (Figure 17, item 1) to the gear reducer (Figure 17, item 2).

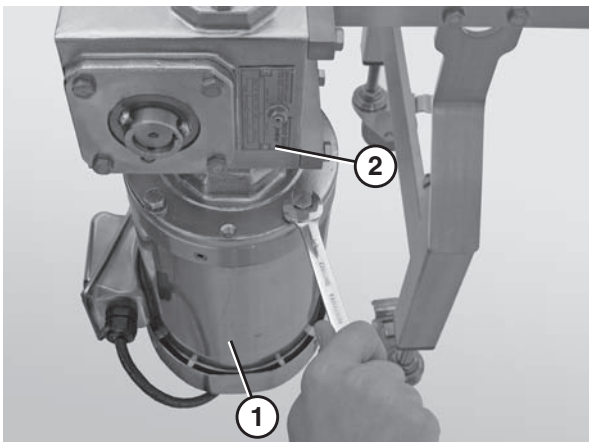


Figure 17

5. Use a 4 mm hex wrench to tighten the outside button head screws (Figure 18, item 1) and the inside button head screws (Figure 18, item 2) that connect the gearmotor to the drive spindle.

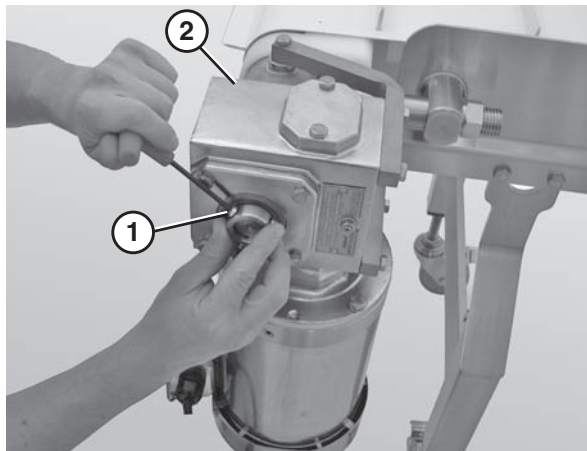


Figure 18

6. Attach the drive spindle cover (Figure 19, item 1).

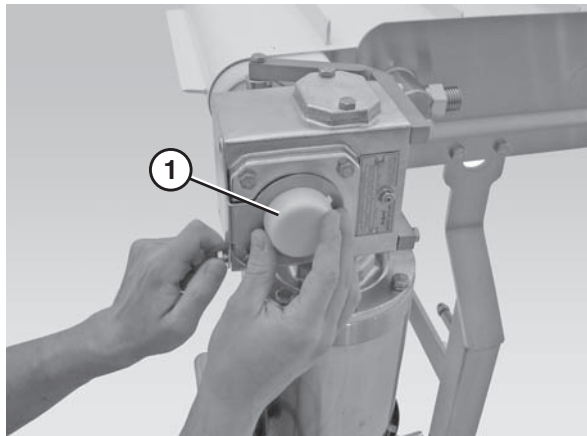


Figure 19

7. Remove the drainage plugs (Figure 20, item 1) on the bottom side of the motor.

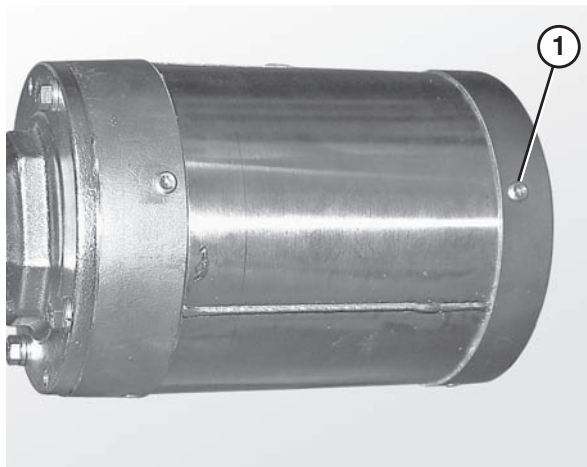


Figure 20

Preventive Maintenance and Adjustment

Required Tools

- 5 / 16" wrench
- 4 mm hex wrench
- Large flat-head screwdriver

Checklist

- Keep service parts on hand. Refer to the "Service Parts" section starting on page 16 for recommendations.
- Replace any worn or damaged parts.



Gear Reducer Replacement

 WARNING

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

 WARNING

BURN HAZARD! DO NOT TOUCH the motor while operating or shortly after being turned off. Motors may be HOT and can cause serious burn injuries.

 WARNING

CRUSH HAZARD! <ul style="list-style-type: none">• SUPPORT MOTOR PRIOR TO LOOSENING THE BOLTS.• Loosening motor bolts may cause it to drop down, causing serious injury.

1. Remove the bolts (Figure 21, item 1) that connect the motor (Figure 21, item 2) to the gear reducer (Figure 21, item 3) (vertical drive shown in figures).

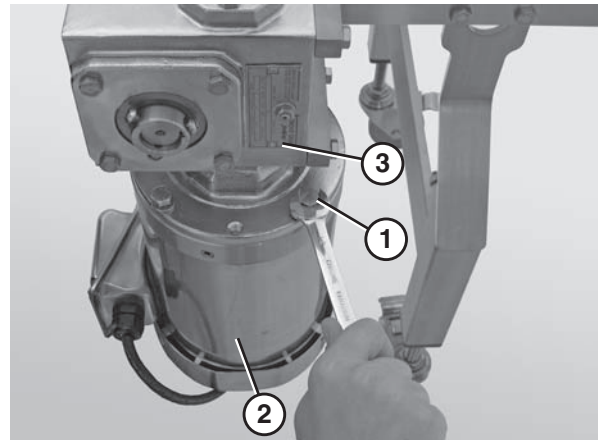


Figure 21

2. Disconnect the motor (Figure 22, item 1) from the gear reducer (Figure 22, item 2) and set the motor aside.

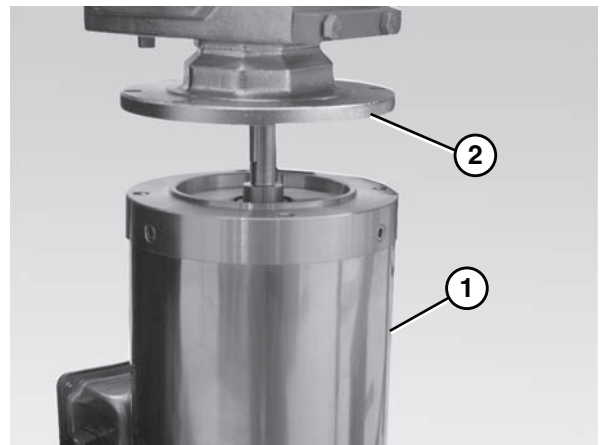


Figure 22

NOTE
<i>Be sure to retain the motor output shaft key.</i>

3. Remove the gearmotor cover (Figure 23, item 1).

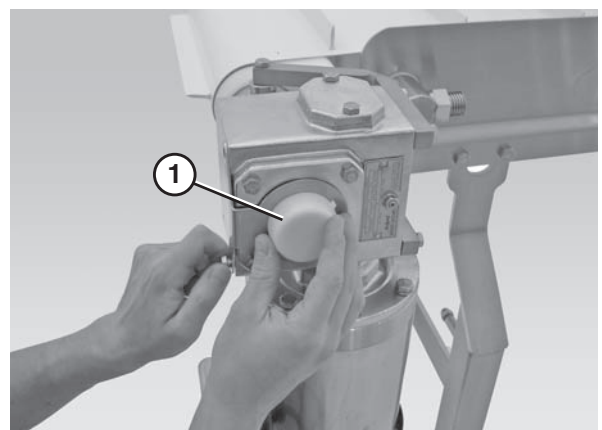


Figure 23

Preventive Maintenance and Adjustment

- Loosen the drive spindle fasteners (**Figure 24, item 1**) located on the inside and outside of the gearmotor assembly using a 4 mm hex wrench (**Figure 24, item 2**).

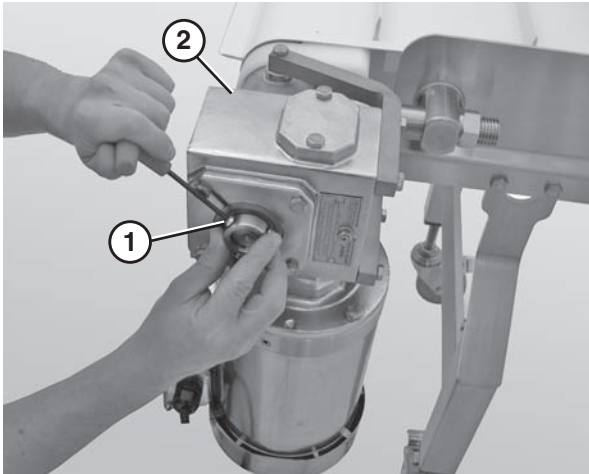




Figure 24

 WARNING

<p>PUNCTURE HAZARD! Handle drive shaft keyway with care. It may be sharp and could puncture the skin, causing serious injury.</p>

- Slide the gearmotor assembly (**Figure 25, item 1**) off the drive spindle (**Figure 25, item 2**).

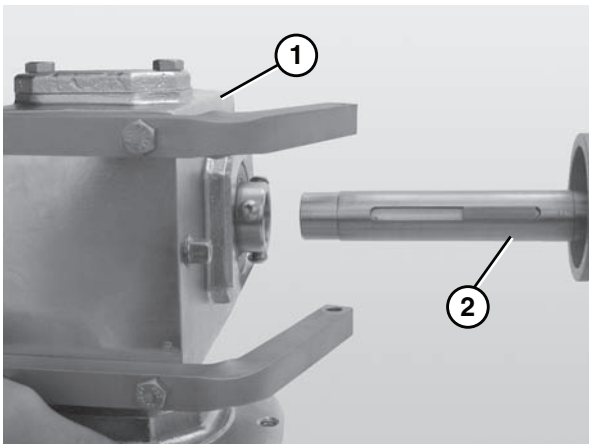


Figure 25

<p>NOTE</p>
<p><i>Be sure to retain the drive spindle key.</i></p>

- Replace the gear reducer.

- Insert the gearmotor output shaft key (**Figure 26, item 1**) into the gearmotor output shaft keyway (**Figure 26, item 2**).

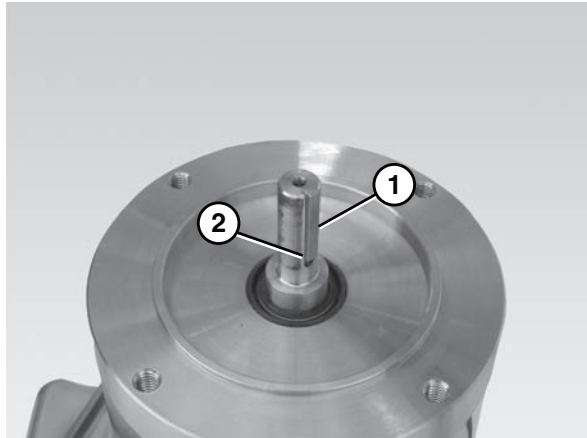



Figure 26



 CAUTION
<p>Ensure the gearmotor output shaft key (Figure 26, item 1) is situated properly before attaching the motor to the gear reducer.</p>

- Connect the new gear reducer to the motor.
- Reinstall the gearmotor assembly. Refer to "Drive Package Installation" starting on page 6.

Motor Replacement

 WARNING

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

 WARNING

<p>BURN HAZARD! DO NOT TOUCH the motor while operating or shortly after being turned off. Motors may be HOT and can cause serious burn injuries.</p>

Preventive Maintenance and Adjustment

⚠ DANGER



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

1. Loosen the screws and remove the cover (Figure 27, item 1) from the junction box located on the side of the motor (Figure 27, item 2).

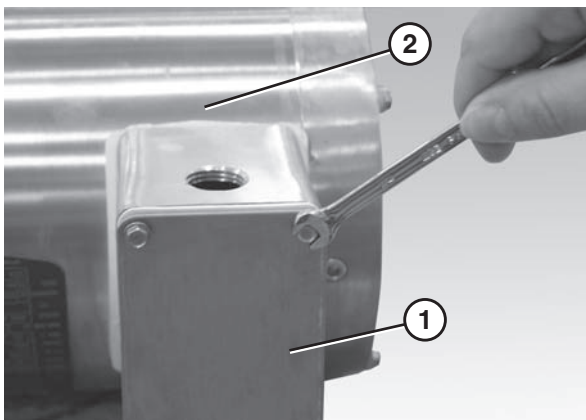


Figure 27

2. Refer to the wiring diagram (Figure 28, item 1) on the inside of the junction box cover.

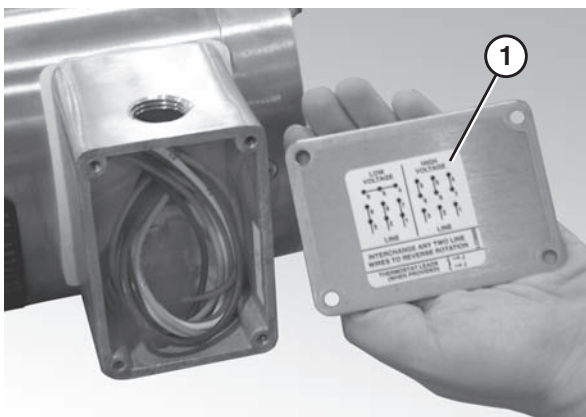



Figure 28

3. Loosen the wire nuts and disconnect the wires.
4. Loosen the cord grip and remove the cord.

⚠ WARNING



CRUSH HAZARD!

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

5. Remove the bolts (Figure 29, item 1) that connect the motor (Figure 29, item 2) to the gear reducer (Figure 29, item 3) (horizontal drive shown in figures).

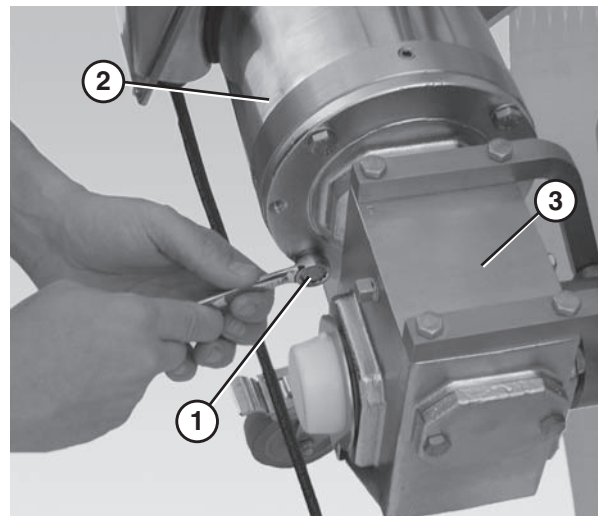


Figure 29

6. Detach the motor (Figure 30, item 1) from the gear reducer (Figure 30, item 2).

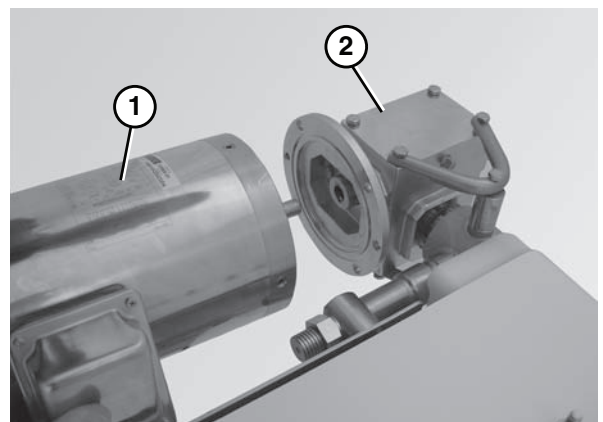


Figure 30

NOTE

Be sure to retain the motor output shaft key.

Preventive Maintenance and Adjustment

7. Insert the motor output shaft key (**Figure 31, item 1**) into the motor output shaft keyway (**Figure 31, item 2**).

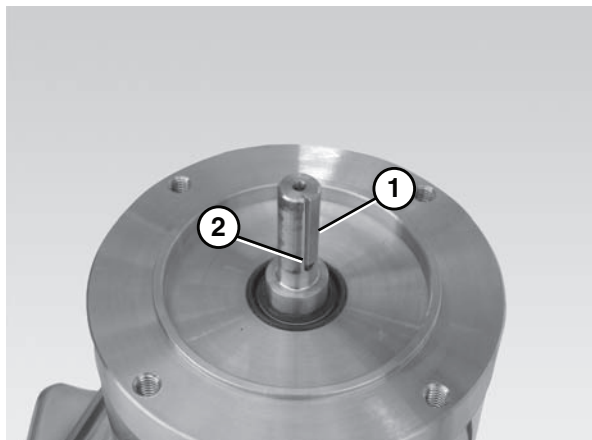


Figure 31

8. Align the motor output shaft key with the access hole in the gear reducer and connect the new motor to the gear reducer.


⚠ CAUTION

Ensure the gearmotor output shaft key (Figure 31, item 1) is situated properly before attaching the motor to the gear reducer.

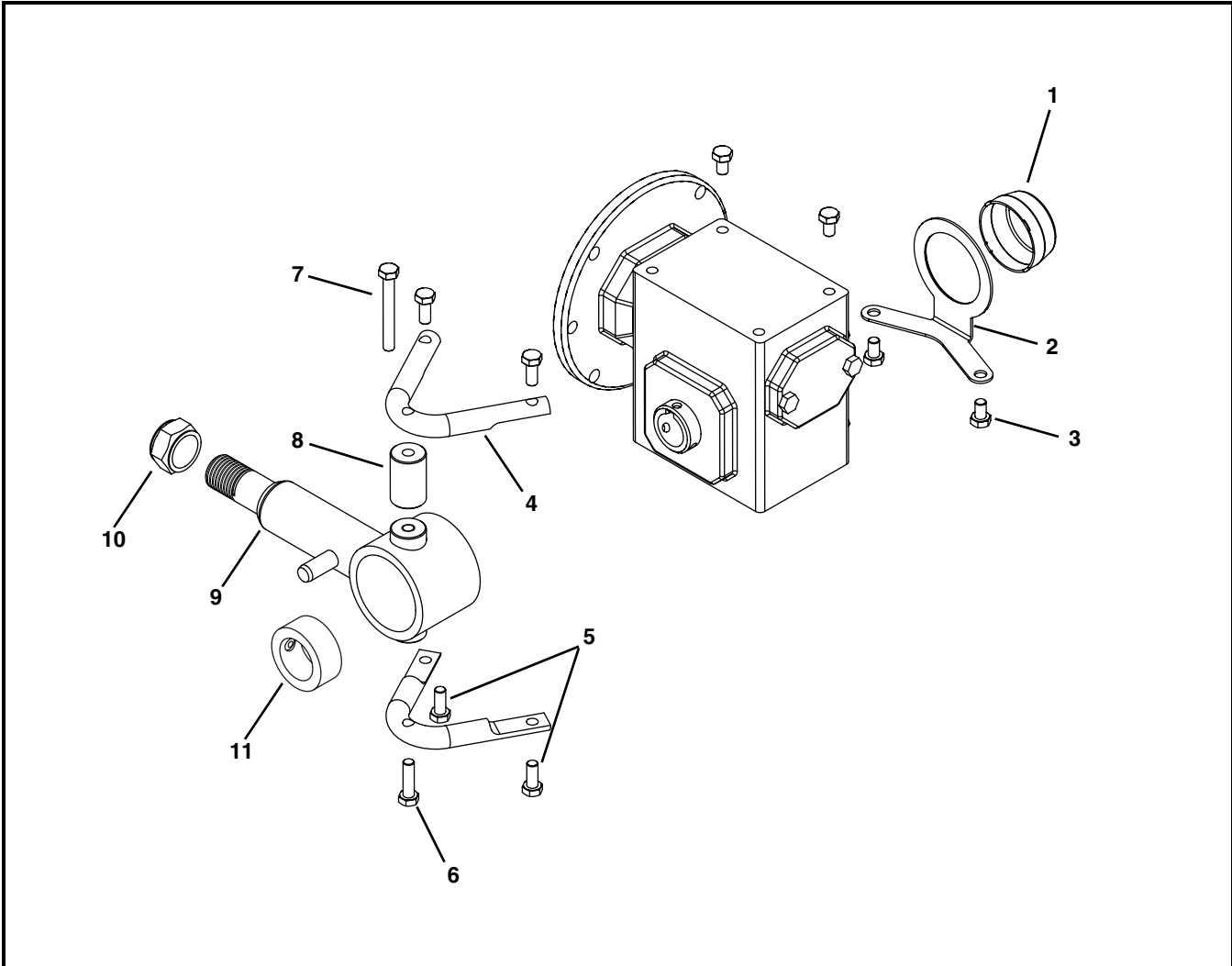
9. Rewire the motor and attach the junction box cover.

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.

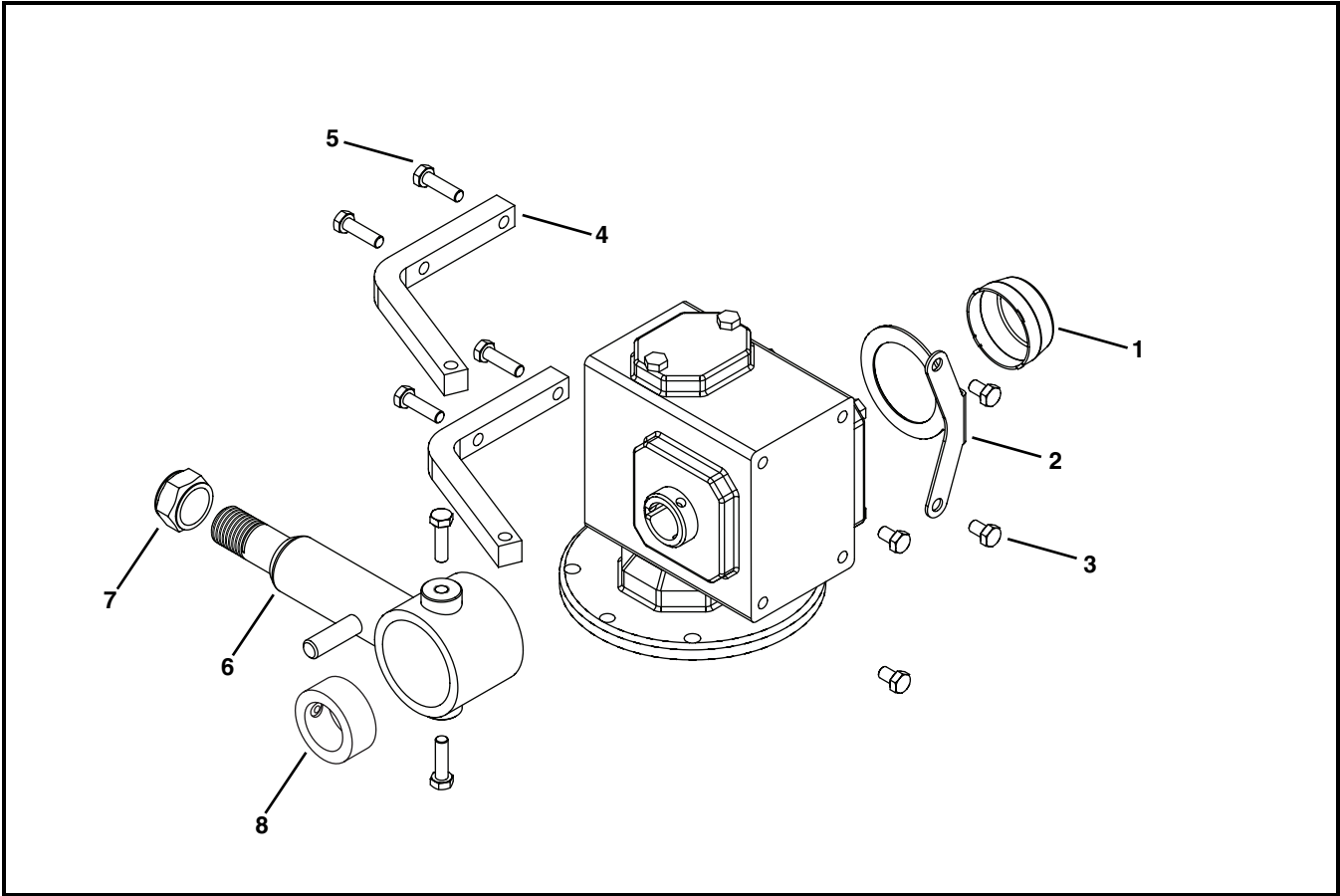
Horizontal Drive



Item	Part Number	Description
1	807-1454	Cover
2	500492	Cover Bracket
3	906-067SS	Hex Head Cap Screw, 5/16-18 x .50
4	500380	Gear Reducer Mounting Bent Bar
5	906-061SS	Hex Head Cap Screw, 5/16-18 x .75
6	906-070SS	Hex Head Cap Screw, 5/16-18 x 1.12

Item	Part Number	Description
7	906-072SS	Hex Head Cap Screw, 5/16-18 x 2.50
8	500375	Horizontal Drive Spacer
9	500776	Motor Mounting Bracket (7600 Series)
	501193	Motor Mounting Bracket (7600 Ultimate Series)
10	500791	Nut (7600 Series Only)
11	807-1458	Set Screw Collar (7600 Ultimate Series Only)

Vertical Drive

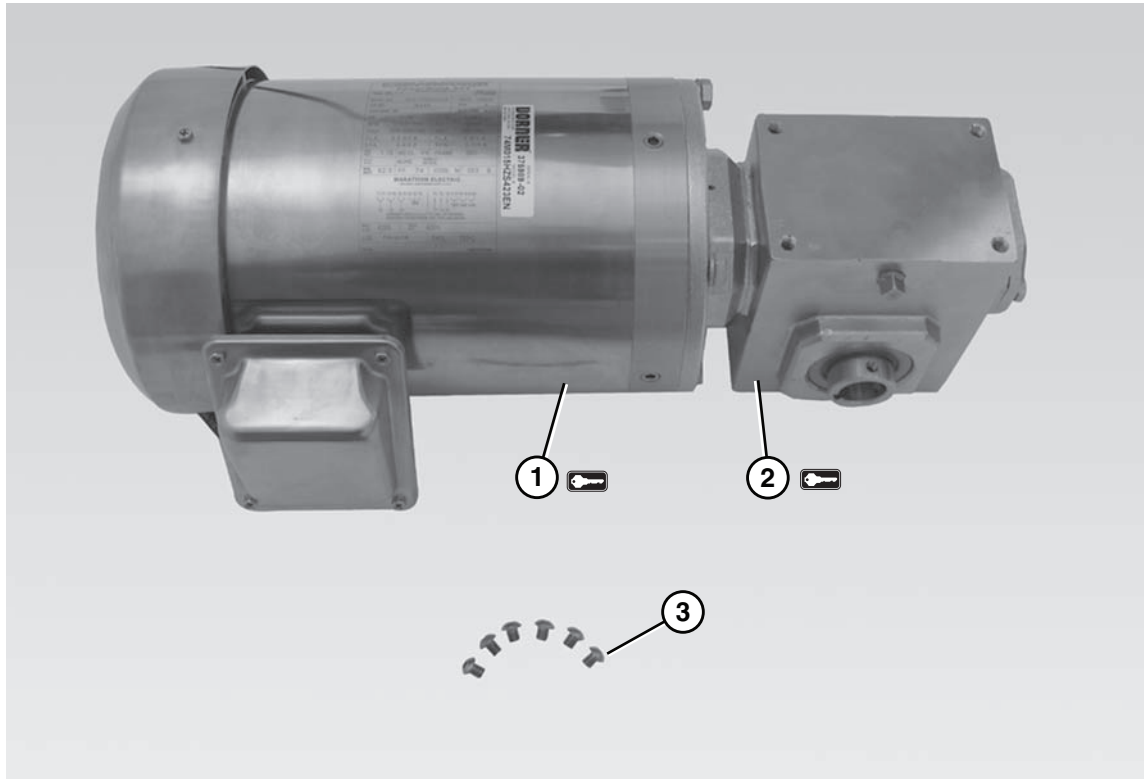


Item	Part Number	Description
1	807-1454	Cover
2	500492	Cover Bracket
3	906-067SS	Hex Head Cap Screw 5/16-18 x .50
4	500381	Vertical Drive Bent Bar
5	906-070SS	Hex Head Cap Screw 5/16-18 x 1.12

Item	Part Number	Description
6	500776	Drive Shaft Assembly (7600 Series)
	501193	Motor Mounting Bracket (7600 Ultimate Series)
7	500791	Nut (7600 Series Only)
8	807-1458	Set Screw Collar (7600 Ultimate Series Only)

Service Parts

Gearmotor Assembly



Item	Part Number	Description
1	62MZ411	Painted Motor, 0.50 Hp (0.37Kw) 115 Volts, 60Hz, 1 Phase
	62MZ423	Painted Motor, 0.50 Hp (0.37Kw) 208-230/460 Volts, 6 to 60Hz, 3 Phase
	74MHS423-10	Painted Motor, 1.00 Hp (0.74Kw) 208-230/460 Volts, 6 to 60Hz, 3 Phase
	74MHS423-15	Painted Motor, 1.50 Hp (1.11Kw) 208-230/460 Volts, 6 to 60Hz, 3 Phase
	62MZS423	Stainless Steel Motor, 0.50 Hp (0.37Kw) 208-230/460 Volts, 6 to 60Hz, 3 Phase
	74MZS423-10	Stainless Steel Motor, 1.00 Hp (0.74Kw) 208-230/460 Volts, 6 to 60Hz, 3 Phase
	74MZS423-15	Stainless Steel Motor, 1.50 Hp (1.11Kw) 208-230/460 Volts, 6 to 60Hz, 3 Phase

Item	Part Number	Description
2	74M005HS	Painted Gear Reducer, 5:1, 56C
	74M007HS	Painted Gear Reducer, 7:1, 56C
	74M010HS	Painted Gear Reducer, 10:1, 56C
	74M015HS	Painted Gear Reducer, 15:1, 56C
	74M020HS	Painted Gear Reducer, 20:1, 56C
	74M030HS	Painted Gear Reducer, 30:1, 56C
	74M040HS	Painted Gear Reducer, 40:1, 56C
	74M060HS	Painted Gear Reducer, 60:1, 56C
	74M080HS	Painted Gear Reducer, 80:1, 56C
	74M005HZ	Stainless Steel Gear Reducer, 5:1, 56C
	74M007HZ	Stainless Steel Gear Reducer, 7:1, 56C
	74M010HZ	Stainless Steel Gear Reducer, 10:1, 56C
	74M015HZ	Stainless Steel Gear Reducer, 15:1, 56C
	74M020HZ	Stainless Steel Gear Reducer, 20:1, 56C
74M030HZ	Stainless Steel Gear Reducer, 30:1, 56C	
74M040HZ	Stainless Steel Gear Reducer, 40:1, 56C	
74M060HZ	Stainless Steel Gear Reducer, 60:1, 56C	
74M080HZ	Stainless Steel Gear Reducer, 80:1, 56C	
3	917-104	Stainless Steel Socket Head Cap Screw 10-32 x .25 for Painted Gearmotor
	916-126	Stainless Steel Button Head Cap Screw 1/4-20 x .31 for Stainless Steel Gearmotor

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.

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

There will be a return charge on all new undamaged items returned for credit where Dorner was not at fault. Dorner is not responsible for return freight on such items.

Conveyors and conveyor accessories

Standard catalog conveyors	30%
MPB Series, cleated and specialty belt conveyors	50%
7400 & 7600 Series conveyors	non-returnable items
Engineered special products	case by case
Drives and accessories	30%
Sanitary stand supports	non-returnable items

Parts

Standard stock parts	30%
MPB, 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 Technical Sales, Catalog Sales and Service Teams will gladly help with your questions on Dorner products.

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

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



Dorner Mfg. Corp. reserves the right to change or discontinue products without notice. All products and services are covered in accordance with our standard warranty. All rights reserved. © Dorner Mfg. Corp. 2008

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