

63U01 and 63U03 2100, 4100, 6100 Series Gang Drive Mounting Packages for Standard Load 90° Industrial 50 Hz Gearmotors

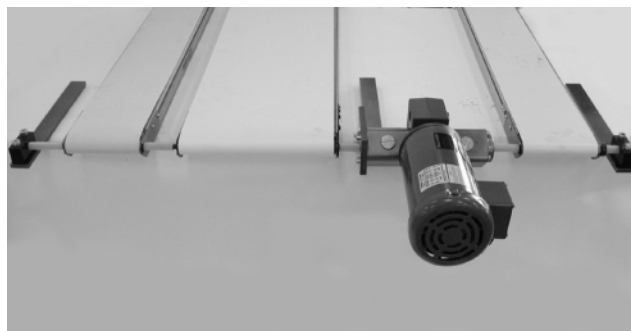
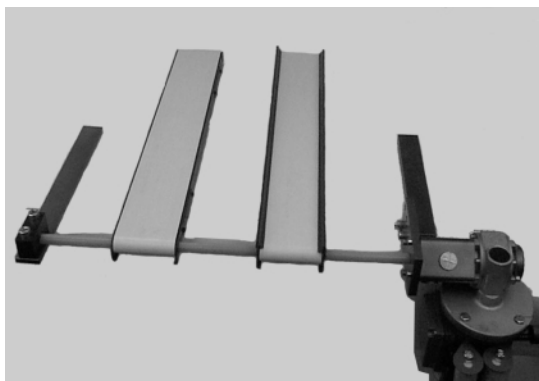




Table of Contents



Warnings – General Safety	2	Preventive Maintenance & Adjustment	9
Introduction	2	Required Tools	9
Product Description	3	Gear Reducer Replacement	9
Specifications	3	63U01 Gang Drive Mounting	9
Installation	4	63U03 Dual Output Gang Drive Mounting ..	11
Required Tools	4	Motor Replacement	13
Mounting	4	Service Parts	14
63U01 Gang Drive Mounting	4	63U01 Gang Drive Package	14
63U03 Dual Output Gang Drive Mounting ...	6	63U03 Dual Output Gang Drive Package	15
		Return Policy	16

Warnings – General Safety



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

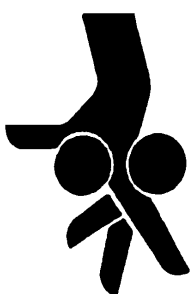

		WARNING
Gearmotors may be HOT. DO NOT TOUCH Gearmotors.		

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

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

		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
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.		

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: 5131529, 5174435, and corresponding patents and patent applications in other countries.

Dorner 4100 Series conveyors are covered by patent number 3923148 and corresponding patents and patent applications in other countries.

Dorner 6100 Series conveyors are covered by patent number 5174435 and corresponding patents and patent applications in other countries.

Dorner's Limited Warranty applies.

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

Product Description

Refer to Figure 1 for typical components.

Typical Components	
A	Conveyor
B	Mounting Bracket
C	Gearmotor
D	Coupling
E	Inspection Plug

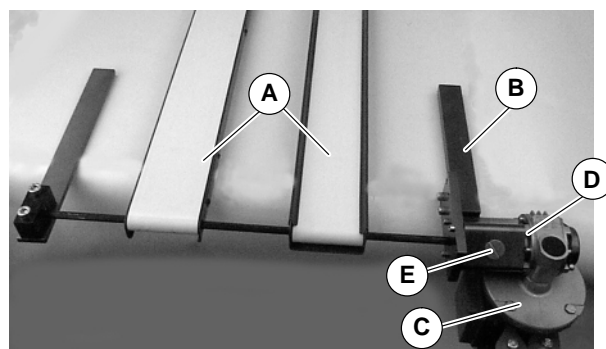


Figure 1

Specifications

Gang Drive Mounting Package Models:

63U01 = Gang Drive Mounting Package

63U03 = Dual Output Gang Drive Mounting Package

Table 1: Standard Load Gearmotor Specifications

	Single Phase	Three Phase	VFD Variable Speed
Output Power	0.18 Kw		
Input Voltage	230 Volts A.C.	230/400 Volts A.C.	230 Volts D.C.
Input Frequency	50 Hz		25 – 63 Hz
Input Current	1.6 Amperes	1.4 / 0.8 Amperes	1.4 Amperes
Protection Rating	IP 55		
Gearmotor Ratios	5:1, 10:1, 20:1, 40:1, 60:1		
Frame Size	IEC 63 B5		
Motor Type	Totally Enclosed, Fan-cooled		

Table 2: Belt Speeds for Standard Load Fixed Speed 90° 50 Hz Gearmotors

Gearmotors			Belt Speed M/min
Part Number	RPM	N-m	
62Z060HS4(vp)FN	23	26.4	2.0
62Z040HS4(vp)FN	35	28.9	3.0
62Z020HS4(vp)FN	70	19.4	6.1
62Z010HS4(vp)FN	140	10.7	12.2
62Z005HS4(vp)FN	280	5.6	24.4

(vp) = voltage and phase

21 = 230 V, 1-phase

23 = 230 V, 3-phase

43 = 400 V, 3-phase

Specifications

Table 3: Belt Speeds for Standard Load Variable Speed 90° 50 Hz Gearmotors

Gearmotors			Belt Speed M/min
Part Number	RPM	N-m	
62Z060HS423EN	23	26.4	1.0 – 2.6
62Z040HS423EN	35	28.9	1.5 – 3.8
62Z020HS423EN	70	19.4	3.0 – 7.7
62Z010HS423EN	140	10.7	6.1 – 15
62Z005HS423EN	280	5.6	12.2 – 30

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


Installation

Required Tools

- Hex key wrenches:
3 mm, 4 mm, 5 mm, 6mm, 8 mm
- Large flat-blade screwdriver
- Torque wrench

Mounting

63U01 Gang Drive Package



! WARNING

Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

Illustration References

- | | |
|---|--|
| F | Gearmotor Assembly |
| G | Guard Tube (with inspection plugs installed) |
| H | Flex Coupling (807-996) |
| I | Square Key, 5 mm (980540M) |
| J | Gearmotor Support Assembly |
| K | Guard Mounting Screws, (4x) M6 x 100 mm, Socket Head |
| L | Bearing Support Assembly |
| M | Hexagon Shaft - 1220 mm (23-24) |
| N | Shaft Cover - 1524 mm (807-967) |
| O | Bearing Block (450092) |

1. Gather components (Figure 2)

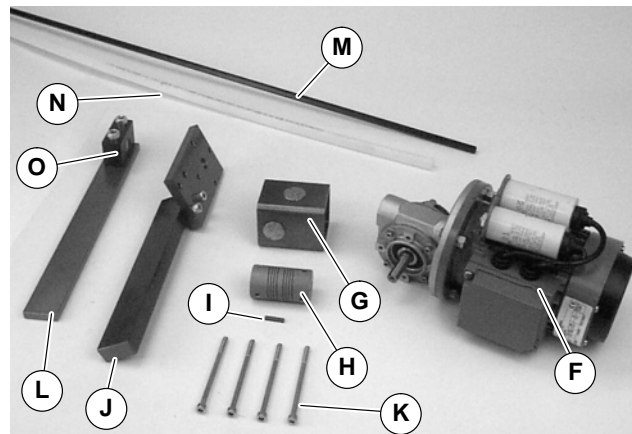


Figure 2

2. Check bearing support assembly (L of Figure 3) setup: 2100 (left) and 4100 or 6100 (right).

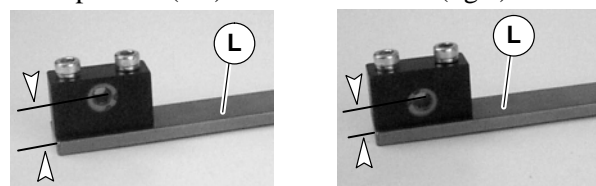


Figure 3

3. Check gearmotor support assembly (J of Figure 4) setup: 2100 (left) and 4100 or 6100 (right).

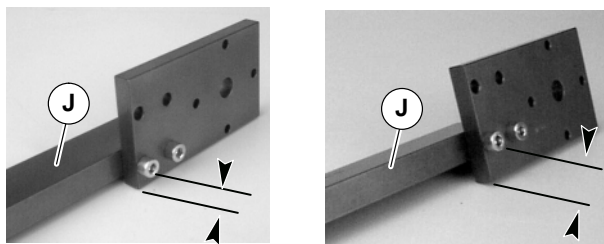
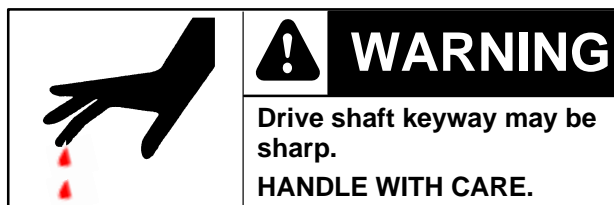


Figure 4



NOTE: Gearmotor may be operated in positions 1, 2, 3 or 4 (Figure 5). Position 4 may reduce gear reducer oil seal life.

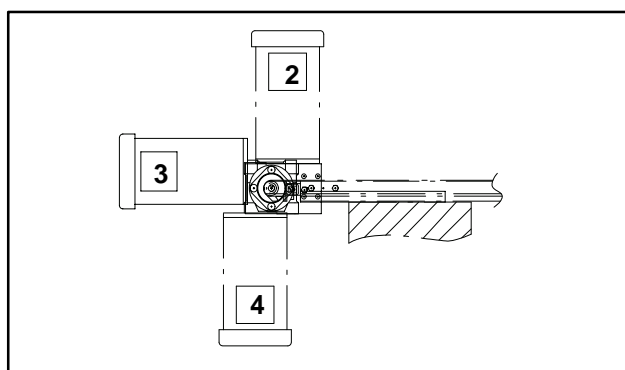


Figure 5

4. Attach flex coupling (H of Figure 6) to gearmotor shaft. Tighten set screws (U).

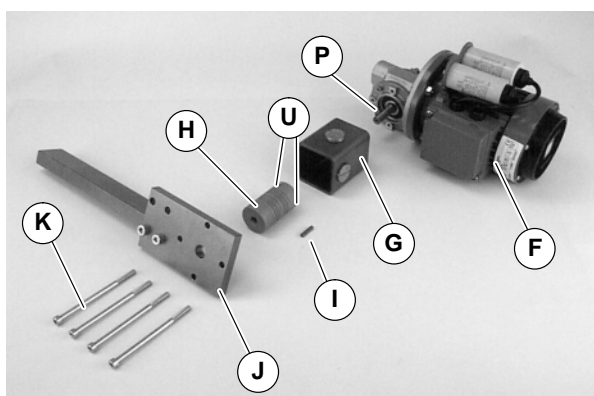
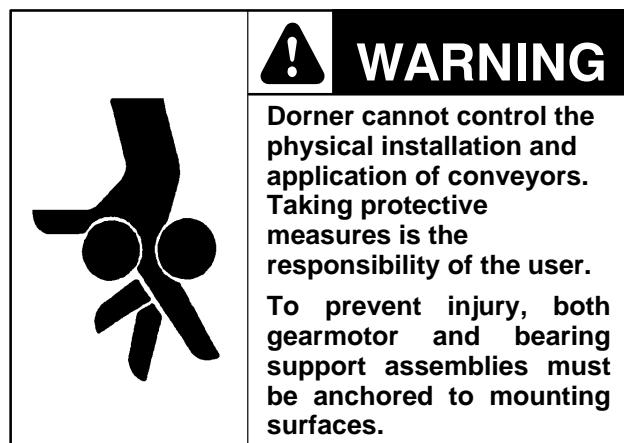


Figure 6

5. Install key (I of Figure 6) in gear reducer shaft (P).

6. Attach guard tube (G) and gearmotor support assembly (J) to gearmotor assembly (F) with screws (K). Tighten screws (K) to 5.6 Nm.



NOTE: Mounting holes are not provided. Ensure that gearmotor assembly (J of Figure 7) and bearing support assembly (L) are parallel and center-line of coupling matches center-line of bearing block (O).

7. Attach gearmotor assembly (J of Figure 7) and bearing support assembly (L) to mounting surface.

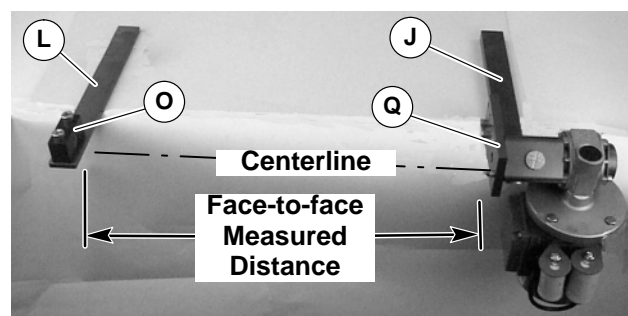


Figure 7

8. Measure distance between motor mounting plate (Q) and bearing block (O).
9. Cut hex shaft (M of Figure 2) to measured distance plus 54 mm.
10. Align conveyors between gearmotor support assembly (J of Figure 8) and bearing support assembly (L).

Installation

NOTE: Do not secure the conveyors (A of Figure 8) to mounting surface.

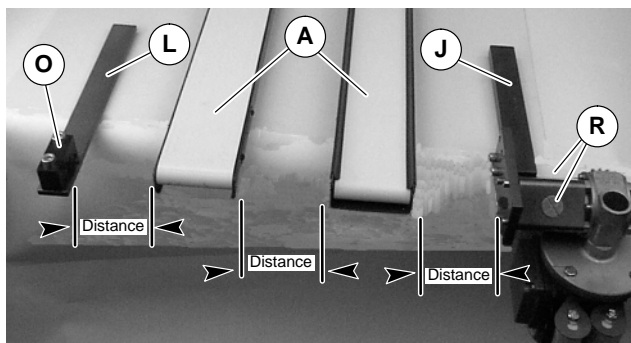


Figure 8

	<p>! WARNING</p> <p>Shaft covers must be installed to help prevent injury from accidental contact with rotating hex shaft. Purchase additional shaft cover (807-967) when reconfiguring conveyor setup.</p>
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11. Cut shaft cover (N of Figure 2) into pieces to match each distance (Figure 8) minus 1.5 mm.
12. Remove inspection plugs (R of Figure 8).
13. Remove screws (T of Figure 9) and remove bearing block (O).
14. Slide hex shaft through conveyors (A of Figure 9) and shaft cover pieces (N) and into flex coupling.

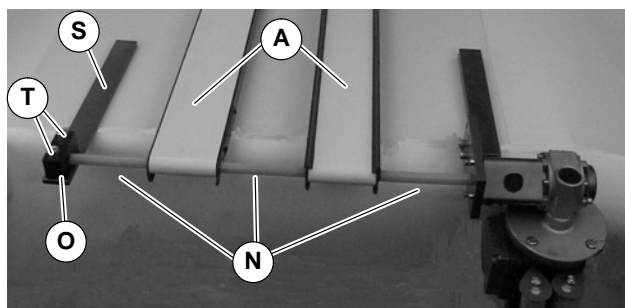


Figure 9

15. Attach bearing block (O of Figure 9) to bearing support bar (S) with screws (T). Tighten screws (T) to 45.5Nm.

16. Tighten coupling set screws (U of Figure 10). Replace inspection plugs (R).

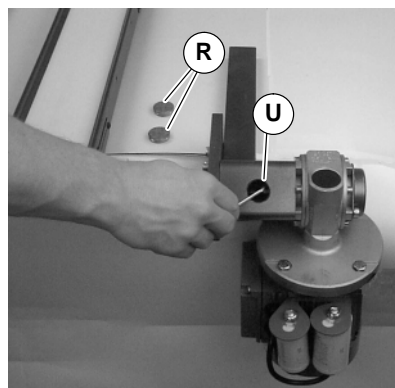


Figure 10

63U03 Dual Output Gang Drive Package

	<p>! WARNING</p> <p>Exposed moving parts can cause severe injury. LOCK OUT POWER before removing guards or performing maintenance.</p>
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Illustration References

- | | |
|---|--|
| F | Gearmotor Assembly |
| G | Guard Tube (2x) (with inspection plugs installed) |
| H | Flex Coupling (2x) (807-996) |
| I | Square Key, 5 mm (2x) (980540M) |
| J | Gearmotor Support Assembly |
| K | Guard Mounting Screws, (4x) M6 x 100 mm, Socket Head |
| L | Bearing Support Assembly (2x) |
| M | Hexagon Shaft - 1219mm (2x) (23-24) |
| N | Shaft Cover - 2438mm (807-967) |
| O | Bearing Block (2x) (450092) |
| V | Shaft Cover |
| W | Socket Head Screw M6 x 90mm (4x) |

1. Gather components (Figure 11).

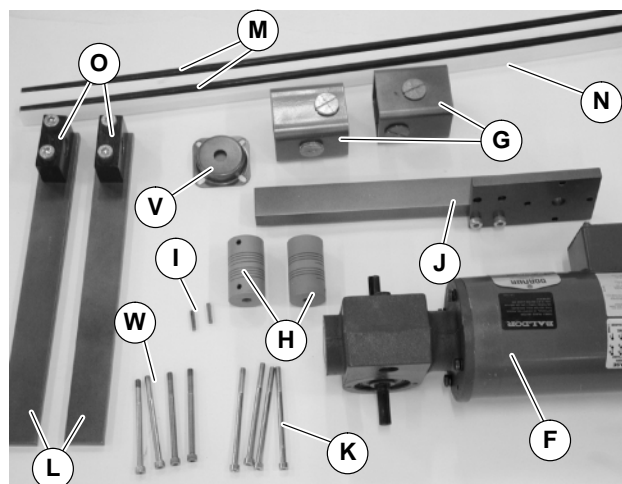


Figure 11

2. Check bearing support assembly (L of Figure 12) setup: 2100 (left) and 4100 or 6100 (right).

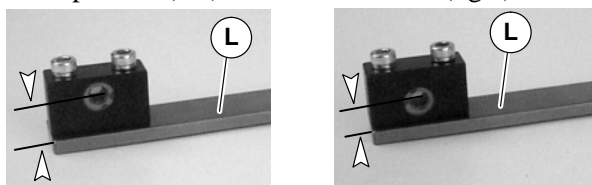


Figure 12

3. Check gearmotor support assembly (J of Figure 13) setup: 2100 (left) and 4100 or 6100 (right).

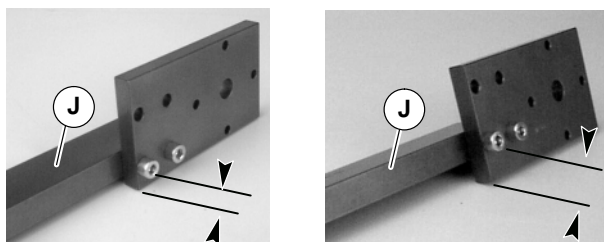
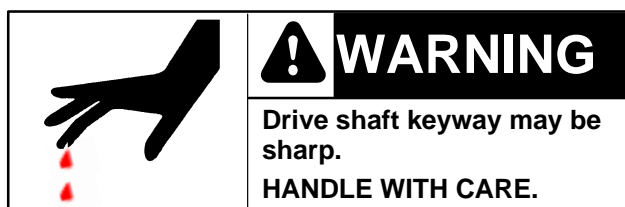


Figure 13



4. Install key (I of Figure 14) in gear reducer shaft (P).
5. Attach flex couplings (H of Figure 14) to gearmotor shaft (P). Tighten set screws (U).

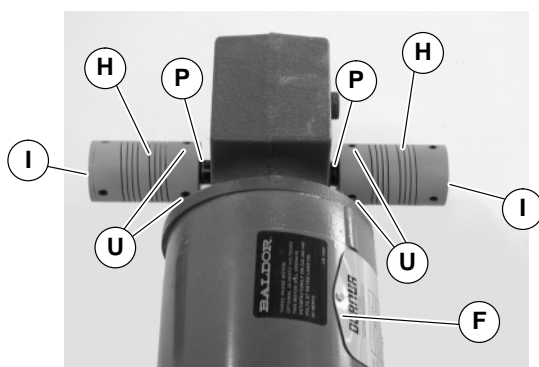


Figure 14

NOTE: Gearmotor may be operated in positions 1, 2, 3 or 4 (Figure 15). Position 4 may reduce gear reducer oil seal life.

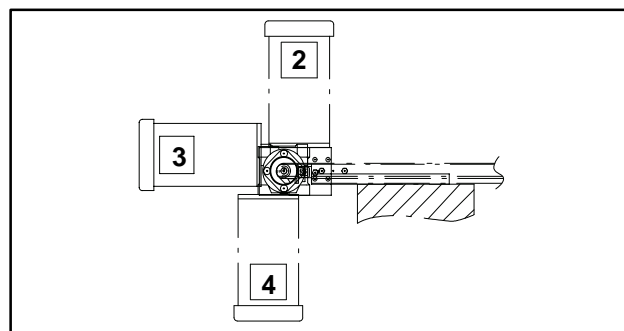


Figure 15

6. Attach guard tube (G of Figure 16) and gearmotor support assembly (J) to gearmotor assembly (F) with screws (K). Tighten screws (K) to 5.6 Nm.

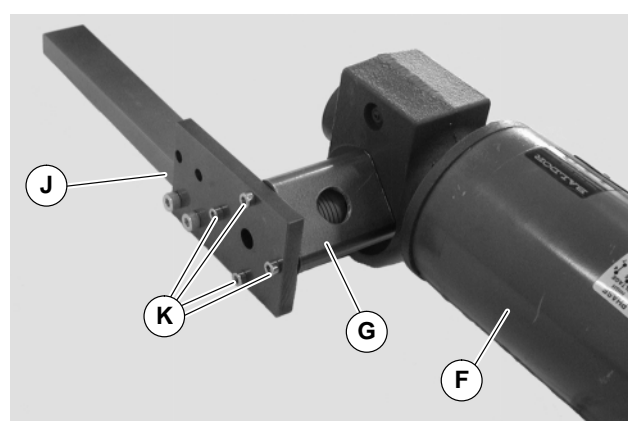


Figure 16

7. Attach shaft cover (V of Figure 17) and guard tube (G) with screws (W). Tighten screws (W) to 5.6Nm.

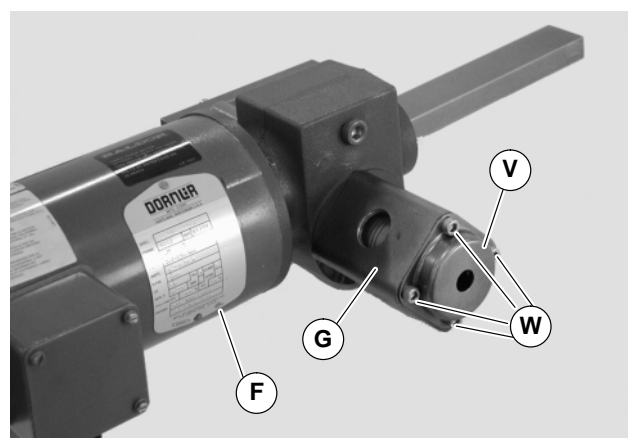
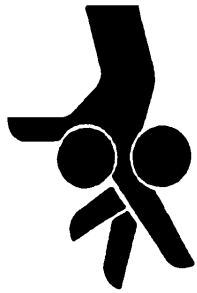


Figure 17

Installation



WARNING

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

To prevent injury, both gearmotor and bearing support assemblies must be anchored to mounting surfaces.

NOTE: Mounting holes are not provided. Ensure that gearmotor assembly (J of Figure 18) and bearing support assembly (L) are parallel and center-line of coupling matches center-line of bearing block (O).

8. Attach gearmotor assembly (J of Figure 18) and bearing support assemblies (L) to mounting surface.

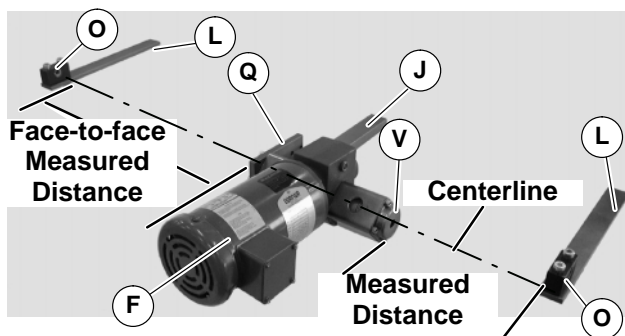


Figure 18

9. Measure distances between motor mounting plate (Q) and bearing block (O) and from shaft cover (V) to bearing block (O).
10. Cut hex shafts (M of Figure 11) to measured distances (Figure 18) plus 54 mm on both sides of gearmotor assembly.
11. Align conveyors between gearmotor support assembly (J of Figure 19) and bearing support assembly (L).

NOTE: Do not secure the conveyors (A of Figure 19) to the mounting surface.

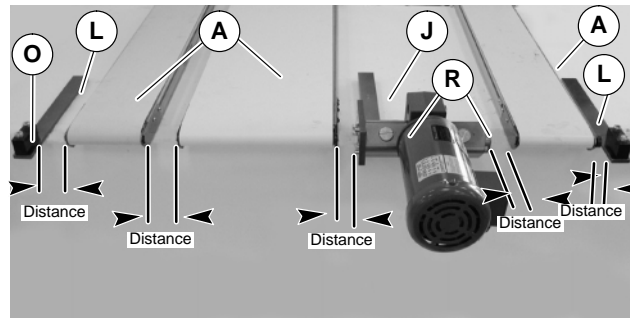


Figure 19



WARNING

Shaft covers must be installed to help prevent injury from accidental contact with rotating hex shaft.

Purchase additional shaft cover (807-967) when reconfiguring conveyor setup.

12. Cut shaft cover (N of Figure 21) into pieces to match each distance (Figure 19) minus 1.5mm.
13. Remove screws (T of Figure 20) and remove bearing blocks (O).

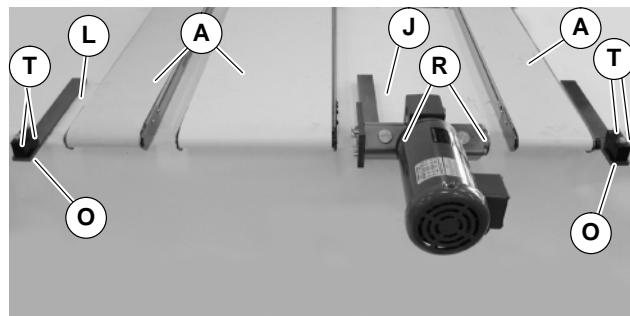


Figure 20

14. Remove four (4) inspection plugs (R of Figure 20).
15. Slide hex shafts (M of Figure 21) through conveyors and shaft cover pieces (N) on both sides of gearmotor assembly (F) and into flex couplings.

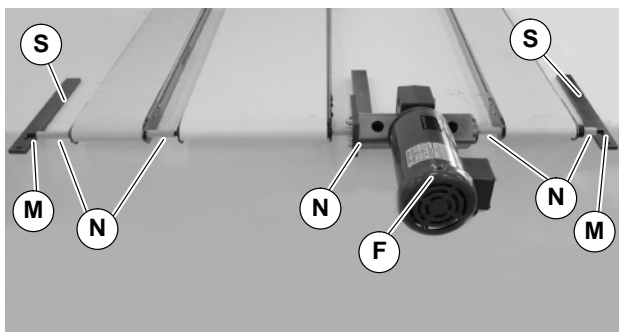


Figure 21

- 16.** Attach bearing blocks (O of Figure 22) to bearing support bars (S) with screws (T). Tighten screws (T) to 45.5Nm.

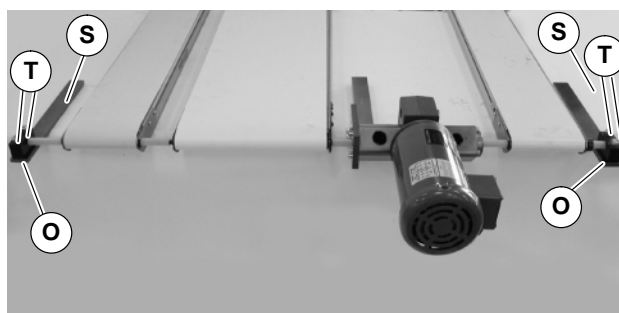


Figure 22

- 17.** Tighten coupling hex shaft set screws (U of Figure 23). Replace inspection plugs (R).

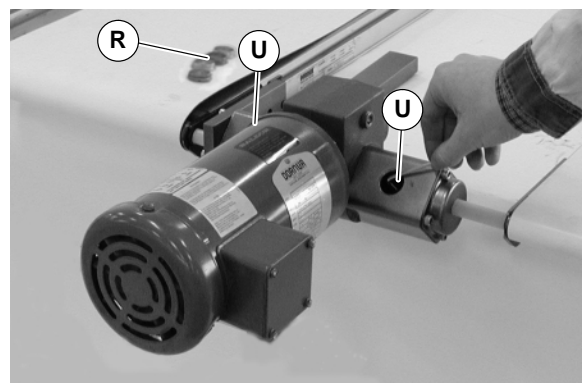


Figure 23

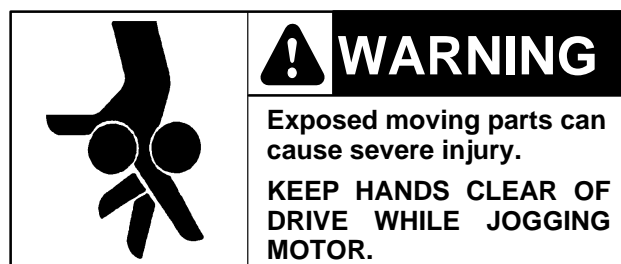
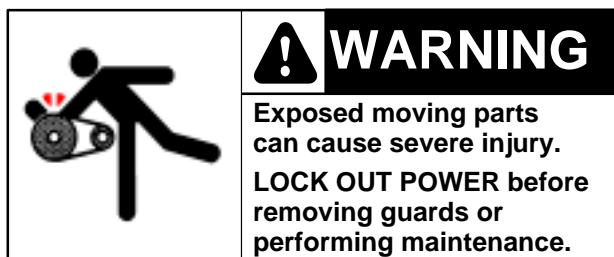
Preventive Maintenance and Adjustment

Required Tools

- Hex key wrenches:
2.5mm, 3mm, 5mm, 6mm, 8mm
- Large flat-blade screwdriver
- Adjustable wrench (for hexagon head screws)
- Torque wrench

Gear Reducer Replacement

63U01 Gang Drive Package



- 1.** Remove inspection plugs (R of Figure 24). Jog motor and rotate coupling to align set screws (U) with access hole (Z). Loosen set screw (U). Repeat for second set screw.

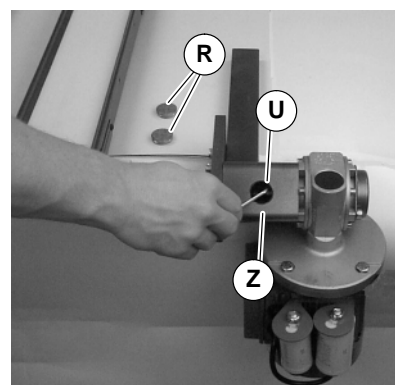


Figure 24

Preventive Maintenance and Adjustment

2. Remove four (4) screws (K of Figure 25) and remove gear motor assembly (F).

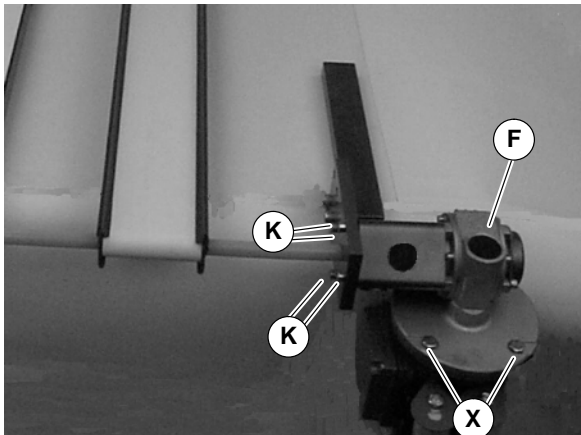


Figure 25

3. Remove four screws (X of Figure 26). Detach motor (AA) from gear reducer (AB). Retain shaft key (Y).

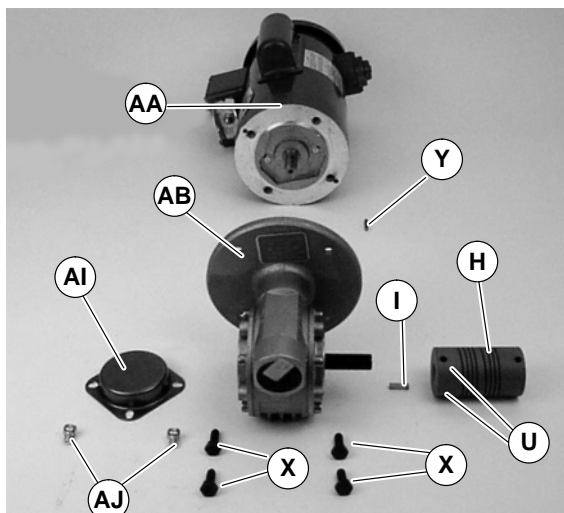


Figure 26

4. Remove two (2) screws (AJ) and detach output shaft cover (AI).
5. Remove gear reducer output shaft key (I).
6. Loosen six (6) set screws (AC of Figure 27). Remove drive shaft (P) and key (AD).

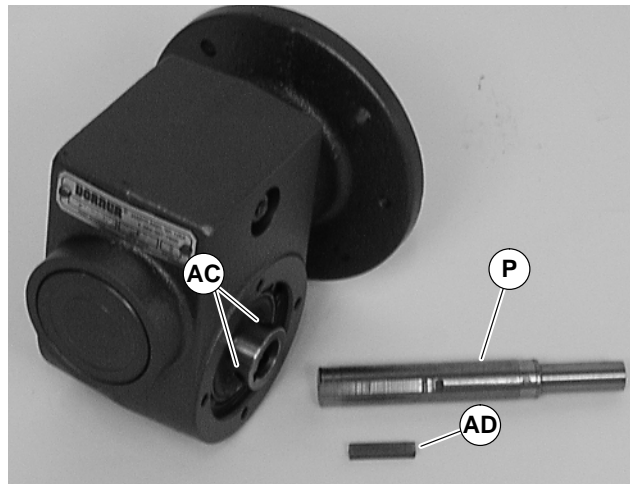


Figure 27

7. Apply grease (AE of Figure 28) to shaft.

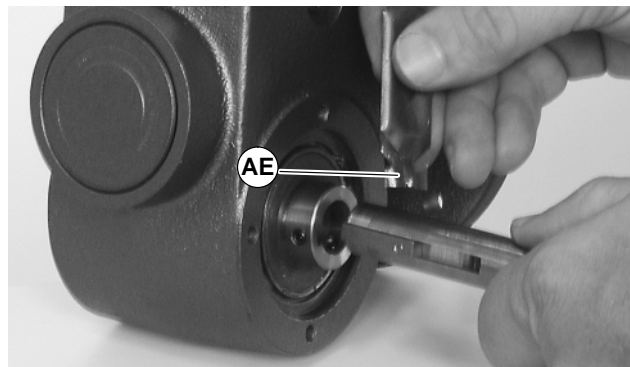


Figure 28

8. Replace the original shaft components into new gear reducer (see Figure 27).

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

9. With key (Y of Figure 26) in keyway, slide motor (AA) and gear reducer (AB) together. Install screws (X) and tighten.
10. Attach coupling (H of Figure 26) to gear reducer shaft. Tighten two set screws (U) to 4.7 Nm.

Preventive Maintenance and Adjustment

11. Attach gearmotor support assembly (J of Figure 29) and guard tube (G) to gearmotor assembly (F). Tighten screws (K) to 12 Nm.

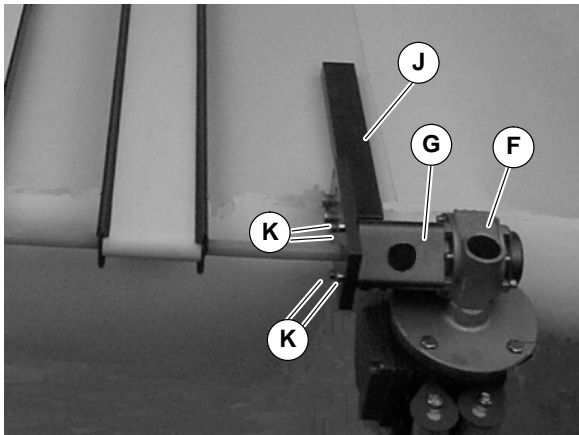


Figure 29

12. Tighten coupling set screws (U of Figure 30). Replace inspection plugs (R).

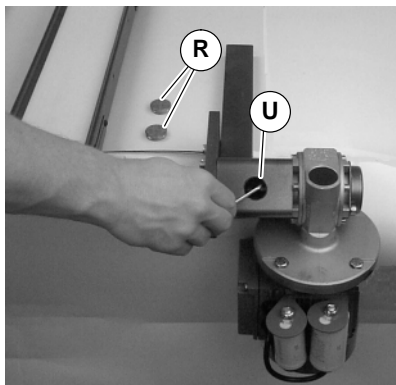


Figure 30

63U03 Dual Output Gang Drive Package

	<p>! WARNING</p> <p>Exposed moving parts can cause severe injury.</p> <p>LOCK OUT POWER before removing guards or performing maintenance.</p>
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1. Remove inspection plugs (R of Figure 31).

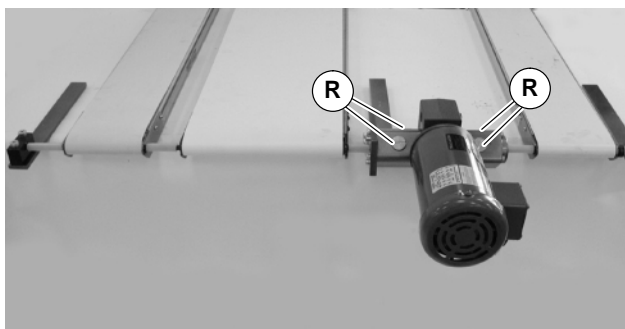


Figure 31

	<p>! WARNING</p> <p>Exposed moving parts can cause severe injury.</p> <p>KEEP HANDS CLEAR OF DRIVE WHILE JOGGING MOTOR.</p>
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2. Jog motor and rotate coupling to align set screws (U of Figure 32) with access hole (AH). Loosen set screws (U) on both sides of gearmotor assembly (F). Repeat for second set screws.

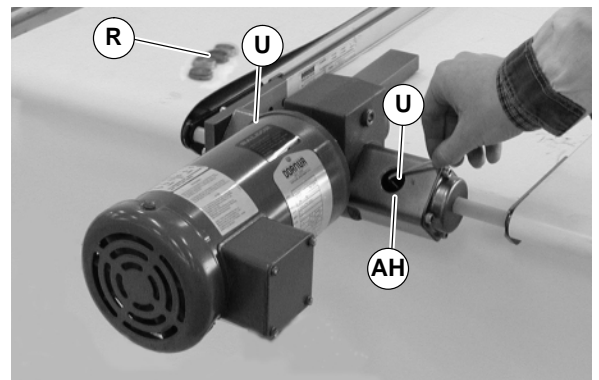


Figure 32

3. Remove four (4) screws (T of Figure 33). Remove bearing blocks (O).

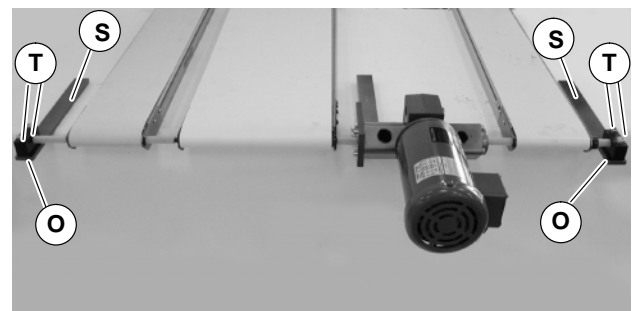


Figure 33

4. Remove hex shafts (M of Figure 34) and shaft cover pieces (N).

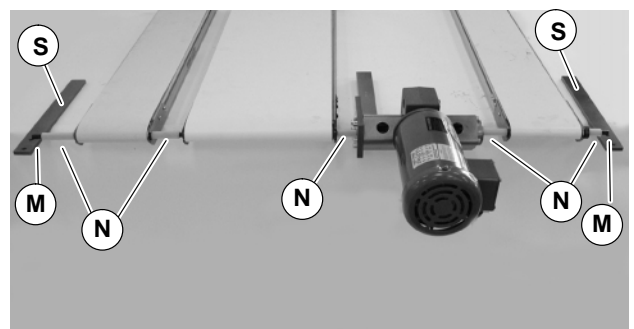


Figure 34

5. Remove four (4) screws (W of Figure 35) and remove guard tube (G). Loosen set screws (U) and remove flex coupling (H).

Preventive Maintenance and Adjustment

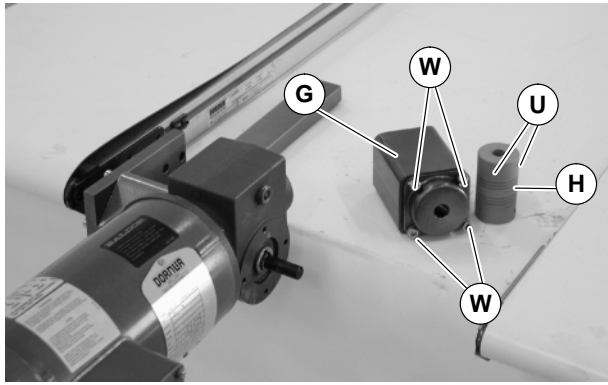


Figure 35

6. Remove four (4) screws (K of Figure 36) and remove guard tube (G) and flex coupling (H). Remove gearmotor assembly (F).

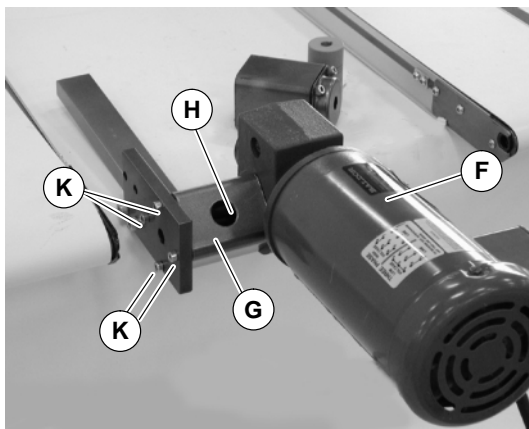


Figure 36

7. Remove four screws (X of Figure 37). Detach motor (AA) from gear reducer (AB). Retain shaft key (Y).

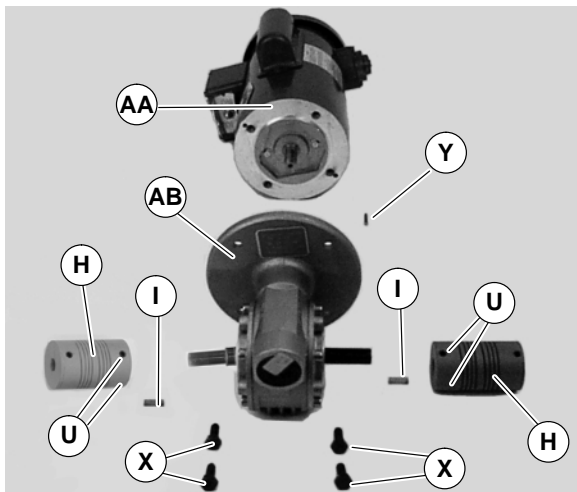


Figure 37

8. Remove gear reducer output shaft keys (I).

9. Loosen six (6) set screws (AC of Figure 38). Remove drive shaft (P) and key (AD).

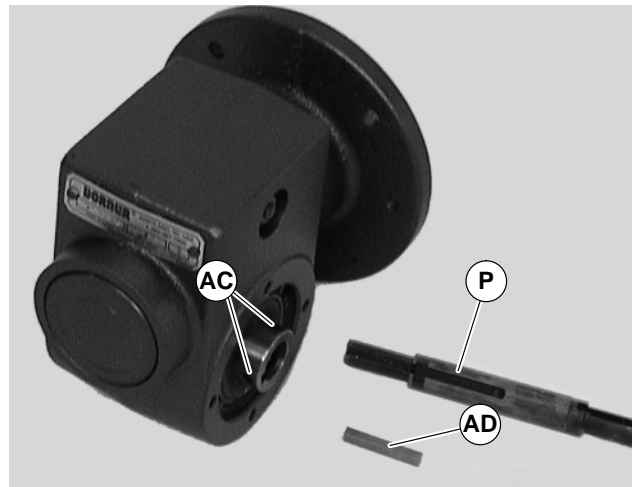


Figure 38

10. Apply grease (AE of Figure 39) to shaft.

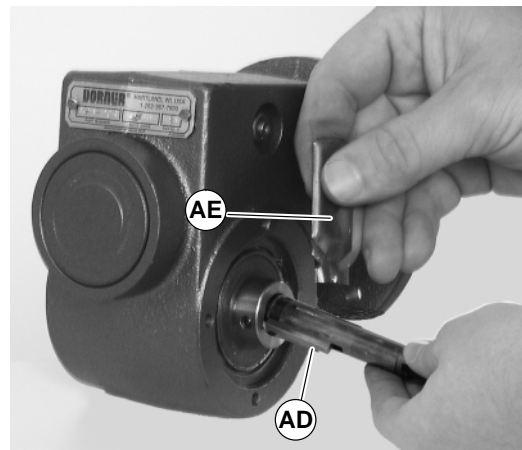


Figure 39

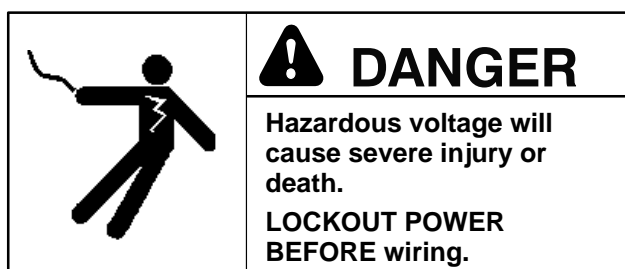
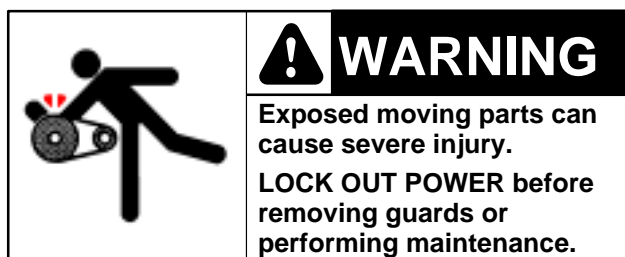
11. Replace the original shaft components into new gear reducer (see Figure 38).

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

12. With key (Y of Figure 37) in keyway, slide motor (AA) and gear reducer (AB) together. Install screws (X) and tighten.
13. Attach couplings (H of Figure 37) to gear reducer shaft. Tighten set screws (U) to 4.7 Nm.
14. Complete installation steps on page 7. See “63M03 Dual Output Gang Drive Package” section, steps 7 through 18.

Preventive Maintenance and Adjustment

Motor Replacement



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

- a. Loosen terminal box screws (AF of Figure 40) and remove cover (AG).

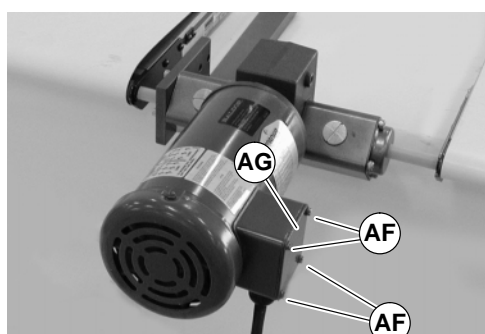


Figure 40

- b. Record wire colors on terminals 2, 6 and ground (\perp) (Figure 41). Loosen terminals 2, 6 and ground and remove wires.

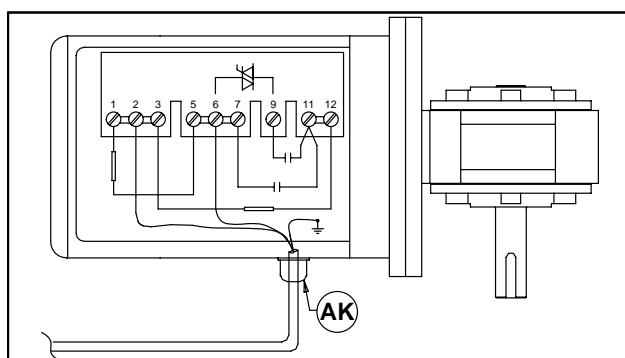


Figure 41

- c. Loosen cord grip (AK of Figure 41) and remove cord.

2. For three phase and VFD variable speed motor:
 - a. Loosen terminal box screws (AF of Figure 40) and remove cover (AG).
 - b. Record wire colors on terminals U1, V1, W1 & PE (Figure 42). Loosen terminals U1, V1, W1 & PE and remove wires.

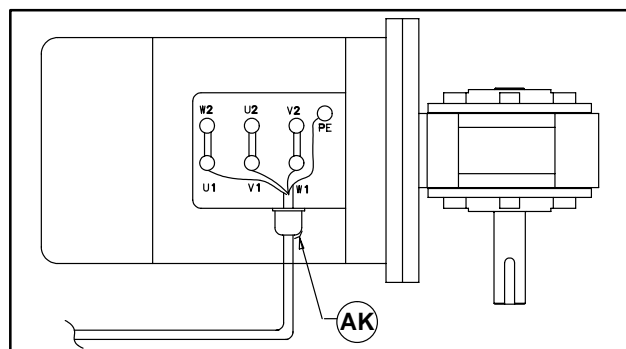


Figure 42

- c. Loosen cord grip (AK of Figure 42) and remove cord.

3. For DC variable speed motor, unplug motor cord at disconnect (AH of Figure 43).

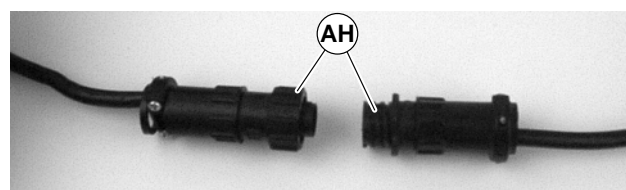


Figure 43

4. Remove four screws (X of Figure 44). Detach motor (AA) from gear reducer (AB). Retain motor output shaft key (Y of Figure 45).

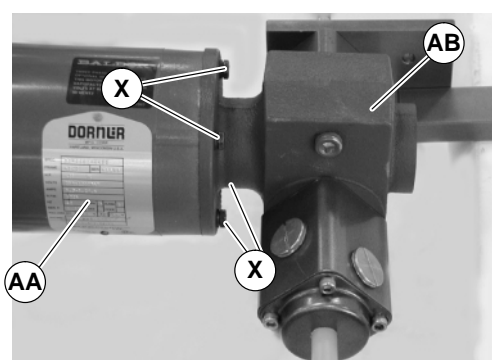


Figure 44

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

Preventive Maintenance and Adjustment

5. With key (Y of Figure 45) in keyway, slide new motor and gear reducer together. Install screws (X) and tighten.

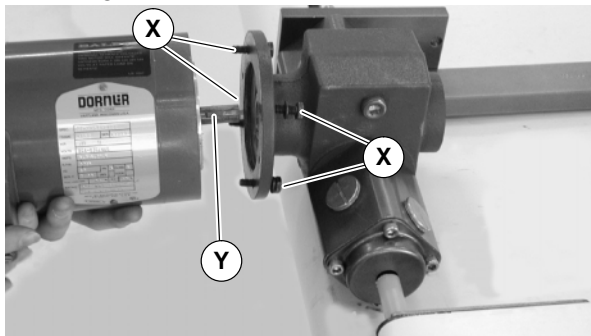


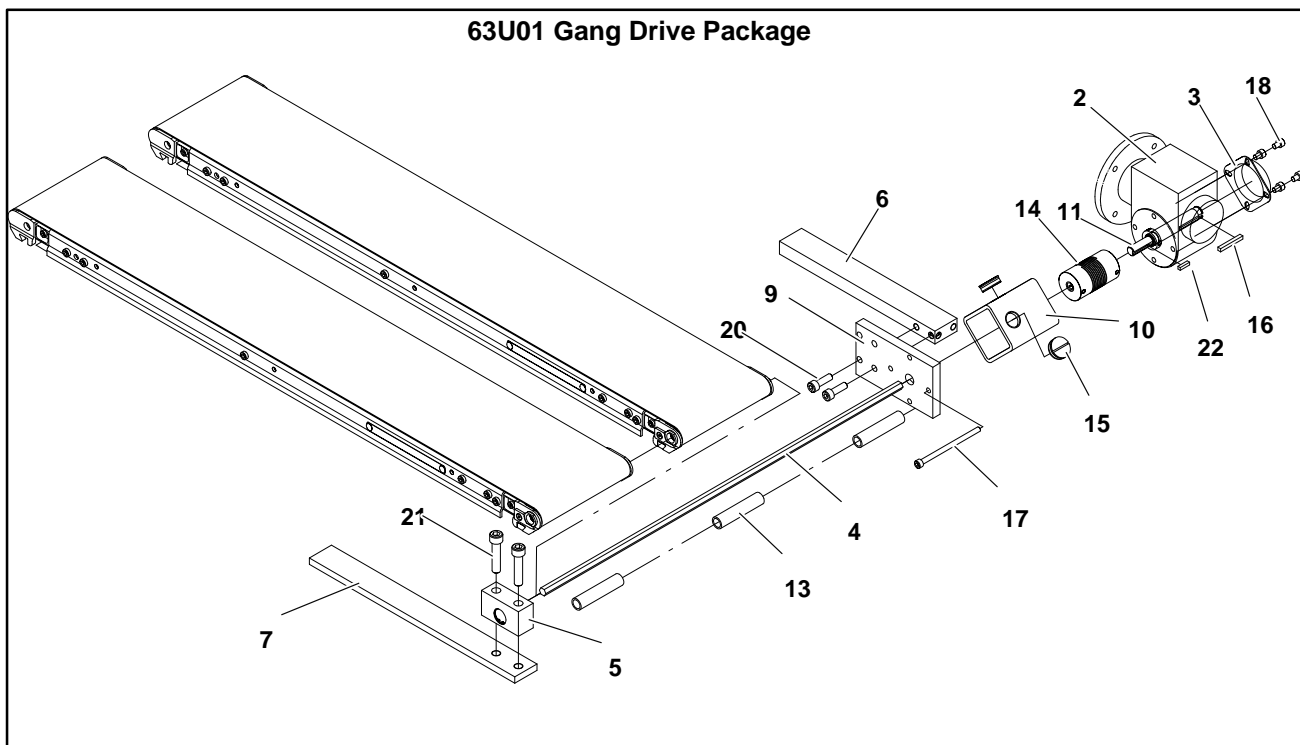
Figure 45

6. Replace wiring:

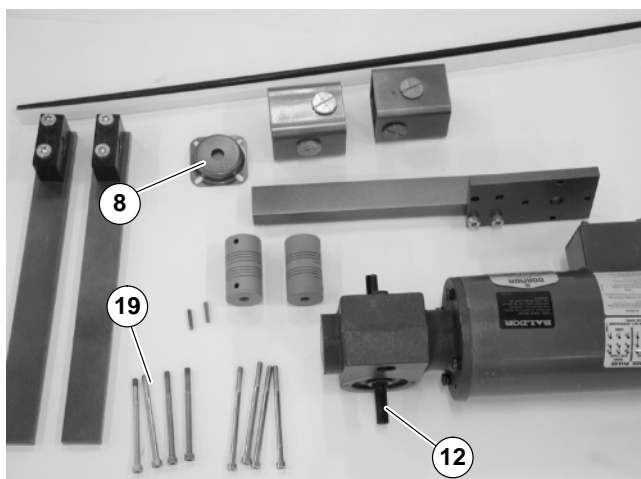
- For a single phase motor, reverse step 1 on page 13.
- For a three phase or VFD variable speed motor, reverse step 2 on page 13.

Service Parts

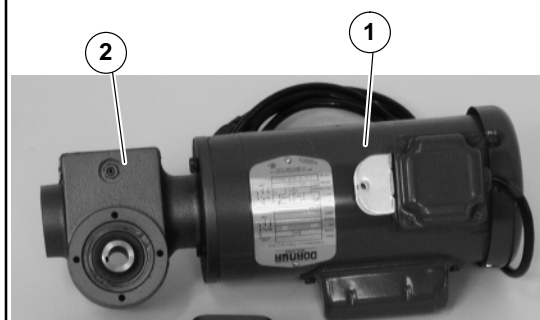
NOTE: For replacement parts other than those shown on this page, contact an authorized Dorner Service Center or the factory.



63U03 Dual Output Gang Drive Package



63U01 and 63U03 Motor and Gear Reducer Assembly



Item	Part Number	Part Description
1	826-281	Motor, 0.19 Kw 230 Volts, 1400 RPM 50 Hz, 1-Phase
	826-284	Motor, 0.19 Kw 230/400 Volts, 1400 RPM 50 Hz, 3-Phase
2	62Z005HS	Gear Reducer, 5:1, 63 B5
	62Z010HS	Gear Reducer, 10:1, 63 B5
	62Z020HS	Gear Reducer, 20:1, 63 B5
	62Z040HS	Gear Reducer, 40:1, 63 B5
	62Z060HS	Gear Reducer, 60:1, 63 B5
3	300139M	Shaft Cover, Drive Bearing
4	43-24	Hex Shaft, 1219mm
5	450092	Block Assembly
6	450093M	Drive Bar, Motor Mount
7	450094M	Drive Bar, Bearing Block
8	450095M	Shaft Cover Euro Bolster

9	450099M	Drive Plate
10	450267M	Spacer Tube, Side Drive
11	450444M	Output Shaft, Grove 12mm
12	450470M	Output Shaft, 12mm Double
13	807-967	Flexible Tubing
14	807-996	Flex Coupling 1.5 D x 12mm x 3/8 H
15	821-322	Plug
16	912-084	Square Key .188" x 1.50"
17	920600M	Socket Head Screw M6 x 100mm
18	920608M	Socket Head Screw M6 x 8mm
19	920690M	Socket Head Screw M6 x 90mm
20	920825M	Socket Head Screw M8 x 25mm
21	921045M	Socket Head Screw M10 x 45mm
22	980416M	Square Key 4mm x 16mm

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.
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 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 at www.dorner.com

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

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