nexen™

AIR CHAMP® PRODUCTS

User Manual

Modular Units: MDU, MOU, MBU, and MIU
Modular Combinations: MDO, MDB, MIDO, MIDB, and MIB

Models: 1125 & 1375

FORM NO. L-21087-A-0301

In accordance with Nexen's established policy of constant product improvement, the specifications contained in this manual are subject to change without notice. Technical data listed in this manual are based on the latest information available at the time of printing and are also subject to change without notice.

Technical Support: 800-843-7445
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www.nexengroup.com

DANGER

Read this manual carefully before installation and operation.

Follow Nexen's instructions and integrate this unit into your system with care.

This unit should be installed, operated and maintained by qualified personnel ONLY.

Improper installation can damage your system or cause injury or death.

Comply with all applicable codes.

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ISO 9001 Certified

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MODULAR CLUTCH (MDO)

Refer to Figure 1.

NOTE

The Modular Drive Unit (MDU) Ball Bearing (Item 27) is loose fitting by design. Do not allow this Ball Bearing to fall off the MDU.

1. Place the Modular Drive Unit (MDU) on a table with the Ball Bearing (Item 27) facing up and properly seated against the Retaining Ring on Model 1375 or the Hub on Model 1125.
2. Set the Modular Output Unit (MOU) onto the MDU, making sure the Ball Bearing (Item 27) is fully seated into the bore of the MOU.
3. Rotate the MOU until the four clearance holes are aligned with the four MDU tapped holes.
4. Press the MOU down against the Compression Spring (Item 14) until faces of both units are flush.

WARNING

Never substitute Hex. Head Cap Screws for the Socket Head Cap Screws (Item 31).

NOTE

Make sure the air inlet ports are properly aligned for your mounting requirements.

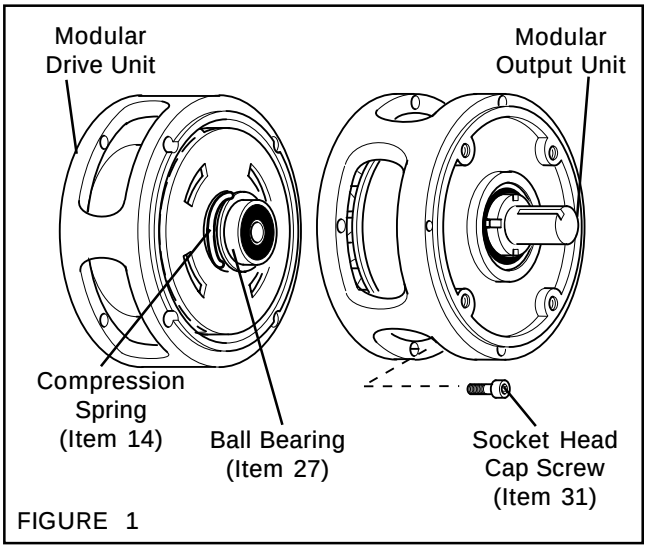

FIGURE 1

5. Using the four Socket Head Cap Screws (Item 31), secure the MOU to the MDU.
6. Alternately and evenly tighten the four Socket Head Cap Screws (Item 31) to 50 ft-lb [69 Nm] torque.

MODULAR CLUTCH-BRAKE (MDB)

Refer to Figure 2.

NOTE

The Modular Drive Unit (MDU) Ball Bearing (Item 27) is loose fitting by design. Do not allow this Ball Bearing to fall off the MDU.

1. Place the Modular Drive Unit (MDU) on a table with the Ball Bearing (Item 27) facing up and properly seated against the Retaining Ring on Model 1375 or against the Hub on Model 1125.
2. Set the Modular Brake Unit (MBU) onto the MDU, making sure the Ball Bearing (Item 27) is fully seated into the bore of the MBU.
3. Rotate the MBU until the four clearance holes are aligned with the four tapped holes in the MDU.
4. Press the MBU down against the Compression Spring (Item 14) until the faces of both units are flush.

WARNING

Never substitute Hex. Head Cap Screws for the Socket Head Cap Screws (Item 31).

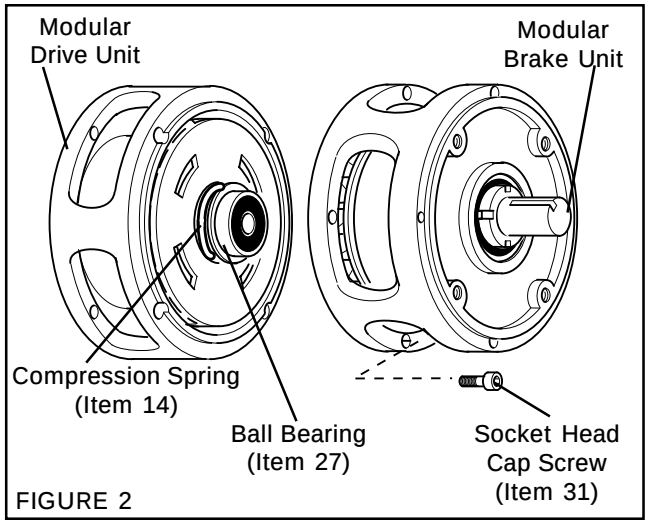

FIGURE 2

NOTE

Make sure the air inlet ports are properly aligned for your MBU mounting requirements.

5. Using the four Socket Head Cap Screws (Item 31), secure the MBU to the MDU.
6. Alternately and evenly tighten the four Socket Head Cap Screws (Item 31) to 50 ft-lb [69 Nm] torque.

MODULAR INPUT CLUTCH (MIDO)

Refer to Figure 3.

NOTE

The Modular Drive Unit (MDU) Ball Bearing (Item 27) is loose fitting by design. Do not allow this Ball Bearing to fall off the MDU.

1. Place the Modular Drive Unit (MDU) on a table with the Ball Bearing (Item 27) facing up and properly seated against the Retaining Ring on Model 1375 or against the Hub on Model 1125.

2. Set the Modular Output Unit (MOU) onto the MDU, making sure the Ball Bearing (Item 27) is fully seated into the bore of the MOU.

3. Rotate the MOU until the four clearance holes are aligned with the four MDU tapped holes.

4. Press the MOU down against the Compression Spring (Item 14) until the faces of both units are flush.

WARNING

Never substitute Hex. Head Cap Screws for the Socket Head Cap Screws (Item 31).

NOTE

Make sure the air inlet ports are properly aligned for your mounting requirements.

5. Using the four Socket Head Cap Screws (Item 31), secure the MOU to the MDU.

6. Alternately and evenly tighten the four Socket Head Cap Screws (Item 31) to 50 ft-lb [69 Nm] torque.

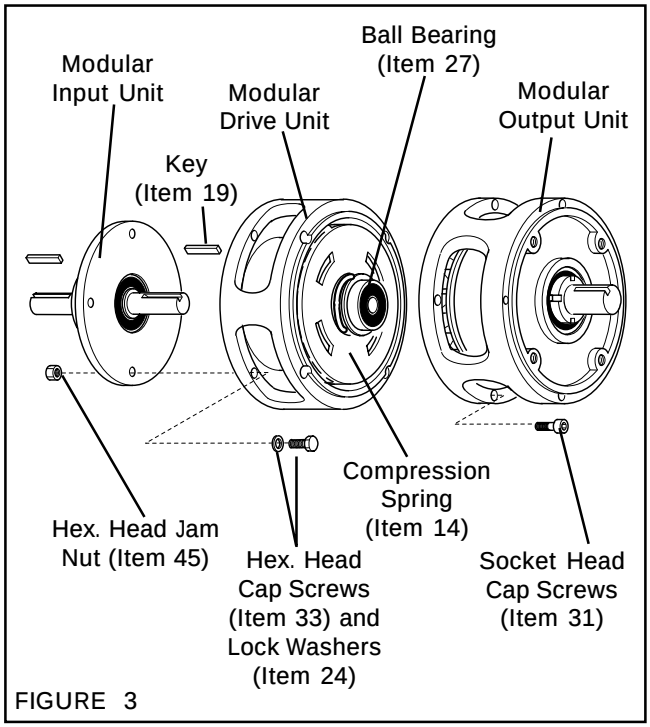

FIGURE 3

7. Place the Key (Item 19) into the shaft of the Modular Input Unit (MIU); then, slide the MIU shaft into the MDU.

8. Using the four Hex. Head Jam Nuts (Item 45), Hex. Head Cap Screws (Item 33), and Lock Washers (Item 24), secure the MIU to the MDU.

9. Alternately and evenly tighten the four Hex. Head Jam Nuts (Item 45) to 20 ft-lb [27 Nm] torque.

MODULAR INPUT CLUTCH-BRAKE (MIDB)

Refer to Figure 4.

NOTE

The Modular Drive Unit (MDU) Ball Bearing (Item 27) is loose fitting by design. Do not allow this Ball Bearing to fall off the MDU.

1. Place the Modular Drive Unit (MDU) on a table with the Ball Bearing (Item 27) facing up and properly seated against the Retaining Ring on Model 1375 or against the Hub on Model 1125.

2. Set the Modular Brake Unit (MBU) onto the MDU, making sure the Ball Bearing (Item 27) is fully seated into the bore of the MBU.

3. Rotate the MBU until the four clearance holes are aligned with the four MDU tapped holes.

4. Press the MBU down against the Compression Spring (Item 14) until the faces of both units are flush.

WARNING

Never substitute Hex. Head Cap Screws for the Socket Head Cap Screws (Item 31).

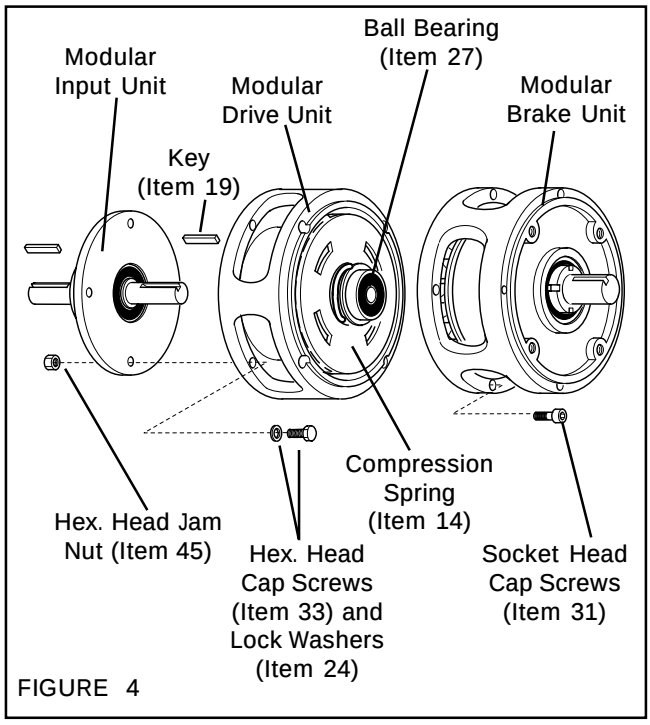

FIGURE 4

(continued...)

NOTE

Make sure the air inlet ports are properly aligned for your mounting requirements.

5. Using the four Socket Head Cap Screws (Item 31), secure the MBU to the MDU (See Figure 4).

6. Alternately and evenly tighten the four Socket Head Cap Screws (Item 31) to 50 ft-lb [69 Nm] torque (See Figure 4).

7. Place the Key (Item 19) into the shaft of the Modular Input Unit (MIU). Slide the MIU shaft into MDU (See Figure 4).

8. Using the four Hex. Head Jam Nuts (Item 45), Hex. Head Cap Screws (Item 33), and Lock Washers (Item 24), secure the MIU to the MDU (See Figure 4).

9. Alternately and evenly tighten the four Hex. Head Jam Nuts (Item 45) to 20 ft-lb [27 Nm] torque (See Figure 4).

MODULAR INPUT BRAKE (MIB)

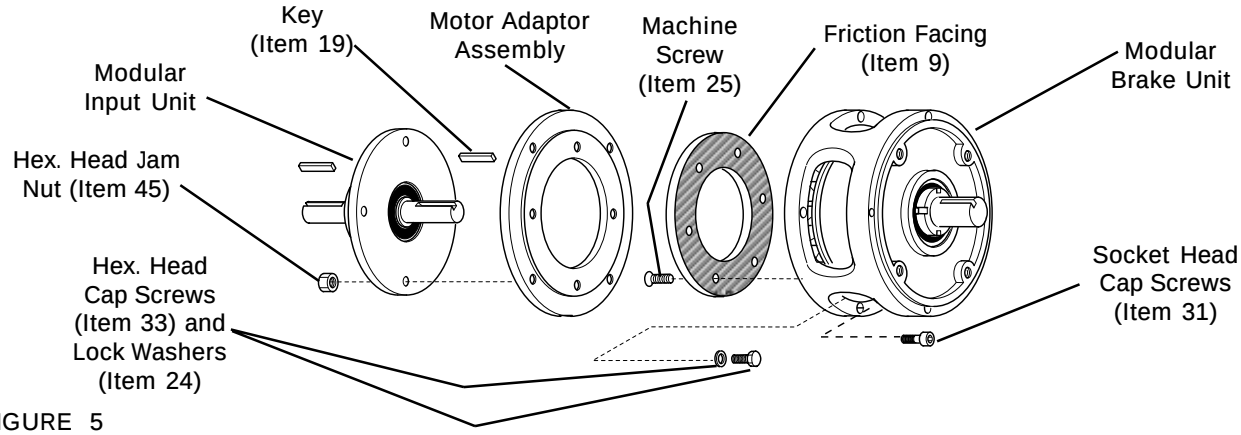

FIGURE 5

Models 1125 and 1375

Refer to Figure 5.

1. Remove the six Machine Screws (Item 25) that secure the Friction Facing (Item 9) to the Disc Journal (Item 8) and save the Machine Screws and Friction Facing as spare parts.

2. Place the Motor Adaptor Assembly (Product No. 937000) on the mounting surface of the Modular Brake Unit (MBU).

3. Using the four Socket Head Cap Screws (Item 31), secure the (MBU) to the Motor Adaptor Assembly.

4. Alternately and evenly tighten the four Socket Head Cap Screws (Item 31) and to 50 ft-lb [69 Nm] torque.

5. Place the Key (Item 19) into the shaft of the Modular Input Unit (MIU); then, slide the MIU shaft into the MBU and Motor Adaptor Assembly.

6. Using the four Hex. Head Jam Nuts (Item 45), Hex. Head Cap Screws (Item 33), and Lock Washers (Item 24), secure the MIU to the Motor Adaptor Assembly.

7. Alternately and evenly tighten the four Hex. Head Jam Nuts (Item 45) to 20 ft-lb [27 Nm] torque.

(continued...)

MODELS 1125 AND 1375 TO A MOTOR

1. Remove the six Machine Screws (Item 25) that secure the Friction Facing (Item 9) to the Disc Journal (Item 8) and save the Machine Screws and Friction Facing as spare parts (See Figure 5).

2. Place the Motor Adaptor Assembly (Product No. 937000) on the mounting surface of the Modular Unit (See Figure 6).

3. Using the four Socket Head Cap Screws (Item 31), secure Motor Adaptor Assembly to the Modular Unit (See Figure 6).

4. Alternately and evenly tighten the four Socket Head Cap Screws (Item 31) to 50 ft-lb [69 Nm] torque (See Figure 6).

5. Place the Key (Item 19) into the motor shaft; then, slide the motor shaft into the Modular Unit (See Figure 6).

6. Rotate the Modular Unit until the holes in the Modular Unit are aligned with the tapped holes in the motor; then, using the four Hex. Head Cap Screws (Item 33) and Lock Washers (Item 24), secure the motor to the Modular Unit (See Figure 6).

7. Alternately and evenly tighten the four Hex. Head Cap Screws to 20 ft-lb [27 Nm] torque.

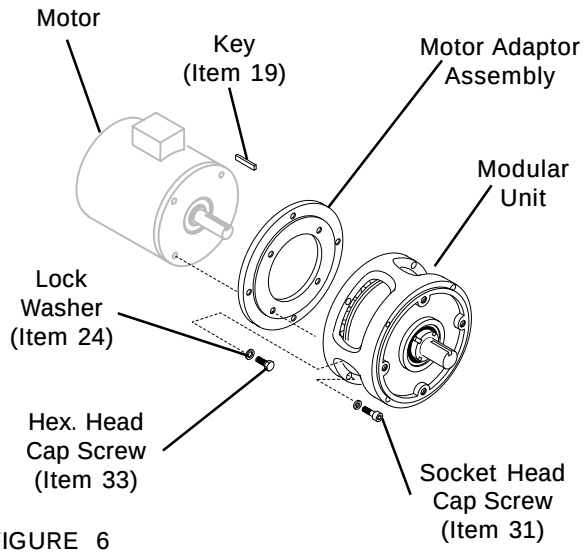

FIGURE 6

ALL MODELS AND MOTOR TO A REDUCER

CAUTION

When mounting sheaves or sprockets, refer to Table 1 for overhung load data. Exceeding the data in Table 1 will result in premature failure to the Modular Unit.

1. Place the Key (Item 19) into the output shaft of the Modular Unit and slide the output shaft of the Modular Unit and motor into the reducer.

2. Rotate the Modular Unit and motor until the holes in the Modular Unit are aligned with the holes in the reducer flange, and the air inlet ports of the Modular Unit are facing down.

3. Using four Hex. Head Cap Screws, secure the Modular Unit and motor to the reducer.

4. Alternately and evenly tighten the four Hex. Head Cap Screws, making sure the Modular Unit and reducer faces are flush with each other.

TABLE 1

OVERHUNG LOAD DATA			
MODEL	**RPM**	*** Load 1" [25.4 mm] from Pilot Face**	
		1125	**1375**
MBU	1200 1800	544 Lbs. 636 Lbs.	610 Lbs. 700 Lbs.
MOU	1200 1800	544 Lbs. 636 Lbs.	610 Lbs. 700 Lbs.
MIU	1200 1800	570 Lbs. 655 Lbs.	570 Lbs. 655 Lbs.
*** Based on 10,000 hrs. average life and using 50 psi air.**			

(continued...)

HOUSING GUARD INSTALLATION

WARNING

Always have the Housing Guard in place when operating Modular Units (See Figure 7).

Each Modular Unit is provided with a Housing Guard. After combining the Modular Units, install the Housing Guard so one of the ribs of the Modular Unit housing is directly beneath the clamp on the Housing Guard.

Waterproof guards are also available. Purchase waterproof guards from your local Nexen Distributor.

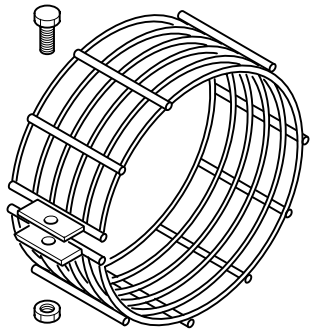

FIGURE 7
HOUSING GUARD

MOUNTING MODULAR UNITS ONTO MOUNTING FEET

U-SHAPED MOUNTING FOOT

1. Depending upon the desired air inlet orientation, remove two Hex. Head Jam Nuts, Bolts, and Lock Washers from the Modular Input Unit.

2. Set the Modular Unit onto the U-Shaped Mounting Foot (See Figure 8).

3. Secure the Modular Input Unit to the U-Shaped Mounting Foot using the Hex. Head Bolts supplied with the Mounting Foot (See Figure 8).

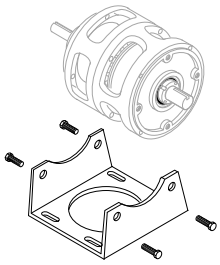

FIGURE 8
U-SHAPED FOOT MOUNT

LUBRICATION

NOTE

Pneumatically actuated devices require clean, pressure regulated, and lubricated air for maximum performance and long life. The most effective and economical way to lubricate Nexen Clutches and Brakes is with an Air Line Lubricator, which injects oil into the pressurized air, forcing an oil mist into the air chamber.

Locate the lubricator above and within ten feet of the Clutch or Brake, and use a low viscosity oil such as SAE-10.

Synthetic lubricants are not recommended.

LUBRICATOR DRIP RATE SETTINGS

NOTE

These settings are for Nexen supplied lubricators. If you are not using a Horton lubricator, calibration must replicate the following procedure.

1. Close and disconnect the air line from the unit.
2. Turn the Lubricator Adjustment Knob counterclockwise three complete turns.
3. Open the air line.
4. Close the air line to the unit when a drop of oil forms in the Lubricator Sight Gage.
5. Connect the air line to the unit.
6. Turn the Lubricator Adjustment Knob clockwise until closed.
7. Turn the Lubricator Adjustment Knob counterclockwise one-third turn.
8. Open the air line to the unit.

AIR CONNECTIONS

NOTE

For quick response, Nexen recommends a quick exhaust valve and short air lines between the Control Valves and the Modular Units. Align the air inlet ports to a down position to allow condensation to drain out of the the air chambers of the Modular Units.

Adjust the air pressure to approximately 50 psi [3.45 bar] when the Modular Unit is installed between a motor and gear reducer.

When the Modular Unit is mounted using sheaves or sprockets, the air pressure may be regulated between 10 psi [0.7 bar] to 80 psi [5.5 bar] to ensure air pressure is adequate for torque requirements.

CAUTION

Low air pressure will cause slippage and overheating. Excessive air pressure will cause abrupt starts and stops, reducing Modular Unit life.

TROUBLESHOOTING

MODEL	SYMPTOM	PROBABLE CAUSE	SOLUTION
MIU (Modular Input Unit)	Bearing noise.	Damaged Ball Bearings.	Replace the Ball Bearings.
MDU (Modular Drive Unit)	Failure to engage.	Leaking O-ring Seals.	Replace the O-ring Seals.
		Lack of lubrication on the Hub spline.	Lubricate the Hub spline with Never-Seez®.
		Damaged Ball Bearings.	Replace the Ball Bearings.
		Improper air pressure settings or faulty controls.	Adjust the air pressure setting or replace the controls.
	Failure to disengage.	Lack of lubrication on the Hub spline.	Lubricate the Hub spline with Never-Seez®.
		Damaged Ball Bearings.	Replace the Ball Bearings.
		Broken or damaged Spring.	Replace the Spring.
MBU (Modular Brake Unit)	Failure to engage.	Leaking O-ring Seals.	Replace the O-ring Seals.
		Damaged Ball Bearings.	Replace the Ball Bearings.
		Improper air pressure settings or faulty controls.	Adjust the air pressure setting or replace the controls.
		Worn or contaminated Friction Facings.	Replace the Friction Facings.
	Failure to disengage.	Lack of lubrication on the Hub spline.	Lubricate the Hub spline with Never-Seez®.
		Damaged Ball Bearings.	Replace the Ball Bearings.
		Broken or damaged Springs.	Replace the Springs.
MOU (Modular Output Unit)	Failure to engage.	Damaged Ball Bearings.	Replace the Ball Bearings.
		Worn or contaminated Friction Facings.	Replace the Friction Facings.

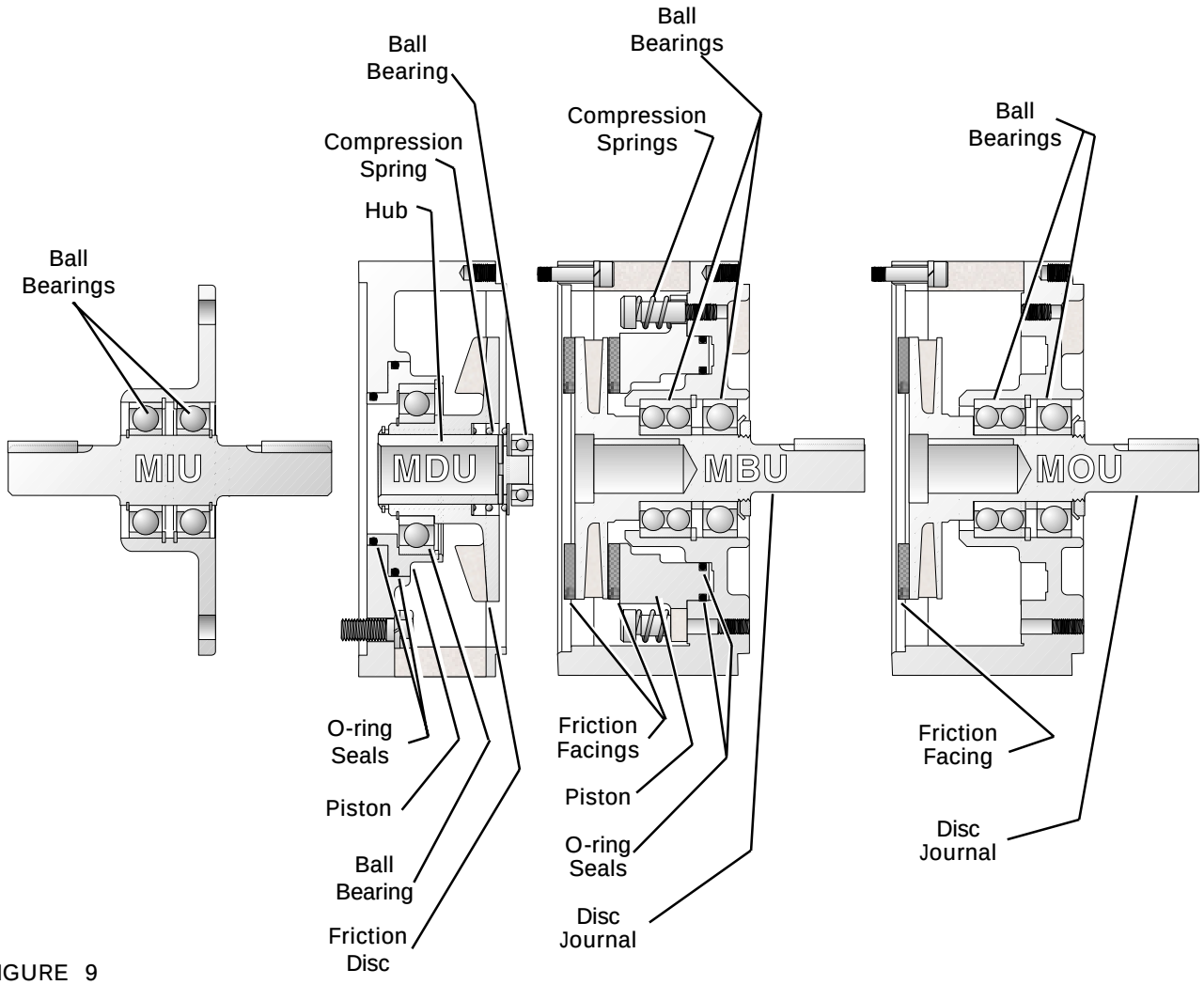

FIGURE 9

NOTE

Modular Units must be unmounted and separated into individual components prior to maintenance or repair. Make sure you are in the correct section for the size and model of the Modular Unit you are repairing.

MODULAR INPUT UNIT (MIU)

Models 1125 and 1375

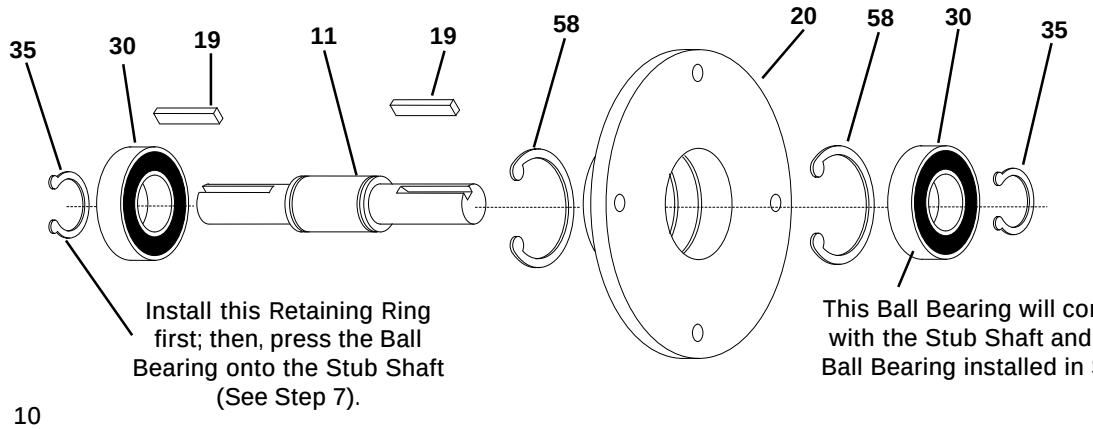

FIGURE 10

Refer to Figure 10.

WARNING

Special attention should be exercised when working with retaining rings. Always wear safety goggles when working with spring or tension loaded fasteners or devices.

1. Remove both Retaining Rings (Item 35).

2. With face of Bearing Flange (the side without ribs) (Item 20) facing down and fully supported, press Stub Shaft (Item 11) down and out of the Bearing Flange.

NOTE

One Ball Bearing (Item 30) will come out with the Stub Shaft (Item 11).

3. Remove the first old Ball Bearing (Item 30) from Stub Shaft (Item 11).

NOTE

Do not remove the two Retaining Rings (Item 58) from the Bearing Flange (Item 20) (See Figure 10).

4. Press the second old Ball Bearing (Item 30) out of the Bearing Flange (Item 20).

5. Clean the bore of the Bearing Flange (Item 20) with fresh solvent, making sure all old Loctite® residue is removed.

6. Apply an adequate amount of Loctite® 680 to evenly coat the outer race of the first new Ball Bearing (Item 30); then, press this Ball Bearing into the Bearing Flange (Item 20) until it is seated against the Retaining Ring (Item 58).

7. Reinstall the first Retaining Ring (Item 35) on Stub Shaft (Item 11).

8. Fully support the inner bearing race of the second new Ball Bearing (Item 30) and press it onto the Stub Shaft (Item 11) until it is seated against the Retaining Ring (Item 35).

9. Apply an adequate amount of Loctite 680 to evenly coat the outer race of the second new Ball Bearing (Item 30).

10. Supporting the inner race of the Ball Bearing located in the Bearing Flange (Item 20), press the second new Ball Bearing (Item 30) and Stub Shaft (Item 11) into the Bearing Flange and Ball Bearing until the second new Ball Bearing is seated against the Retaining Ring (Item 58).

11. Reinstall the second Retaining Ring (Item 35).

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MODULAR DRIVE UNIT (MDU)

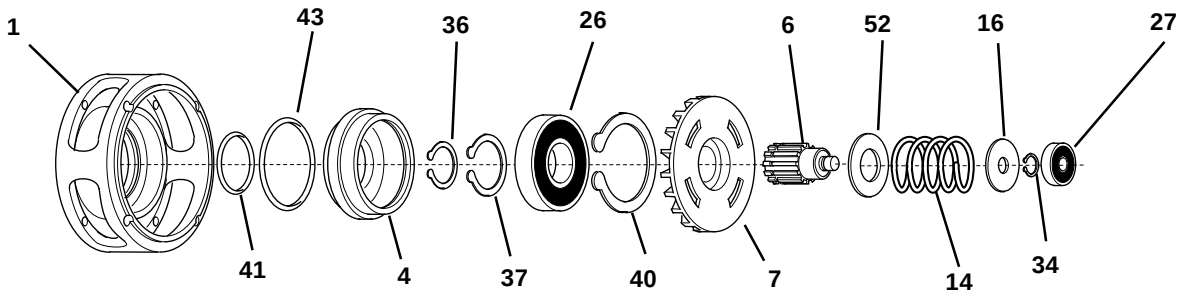

FIGURE 11

Model 1125

Refer to Figure 11.

1. Remove the old Ball Bearing (Item 27).

WARNING

Special attention should be exercised when working with retaining rings. Always wear safety goggles when working with spring or tension loaded fasteners or devices.

2. Remove the Retaining Ring (Item 36) from the Hub.
3. Slide the Hub (Item 6), Compression Spring (Item 14), Spring Back-Up Washer (Item 52), Spring Retainer Washer (Item 16), and Retaining Ring (Item 34) out of the Friction Disc (Item 7).
4. Press the Piston (Item 4), Friction Disc (Item 7), and Ball Bearing (Item 26) out of the Housing (Item 1).
5. Remove the old O-ring Seals (Items 41 and 43) from the Piston (Item 4) and Housing (Item 1).
6. Remove the Retaining Ring (Item 37) from the Friction Disc (Item 7); then, using a bearing puller, remove the Piston (Item 4) and old Ball Bearing (Item 26) from the Friction Disc (Item 7).
7. Remove the Retaining Ring (Item 40) from the Piston (Item 4) and press the old Ball Bearing (Item 26) out of the Piston.
8. Clean the bearing bore of the Piston (Item 4) with fresh solvent, making sure all old Loctite® residue is removed.
9. Apply an adequate amount of Loctite® 680 to evenly coat the outer race of the new Ball Bearing (Item 26) and press the new Ball Bearing into the Piston (Item 4).
10. Reinstall the Retaining Ring (Item 40).
11. Support the inner race of the new Ball Bearing (Item 26); then, press the Friction Disc (Item 7) into the Piston (Item 4) and new Ball Bearing (Item 26).
12. Reinstall the Retaining Ring (Item 37).
13. Lubricate the new O-ring Seals (Items 41 and 43) and the o-ring contact surfaces of the Piston (Item 4) and Housing (Item 1) with a thin film of fresh o-ring lubricant.
14. Install the new O-ring Seals (Items 41 and 43); then slide the Piston (Item 4) and Friction Disc (Item 7) into the Housing (Item 1).
15. Remove the Retaining Ring (Item 34), Spring Retainer Washer (Item 16) and the Compression Spring (Item 14) from the Hub (Item 6).
16. Inspect the Compression Spring (Item 14) for signs of fatigue and replace it if necessary.
17. Slide the Compression Spring (Item 14), and Spring Retainer Washer (Item 16) onto the Hub (Item 6); then, reinstall the Retaining Ring (Item 34).
18. Apply a thin film of Never-Seez® to the splines of the Hub (Item 6); then, slide the Hub and Compression Spring (Item 14) into the Friction Disc (Item 7).
19. Reinstall the Retaining Ring (Item 36).
20. Slide a new Ball Bearing (Item 27) onto the Hub (Item 6).

(continued...)

MODULAR DRIVE UNIT (MDU)

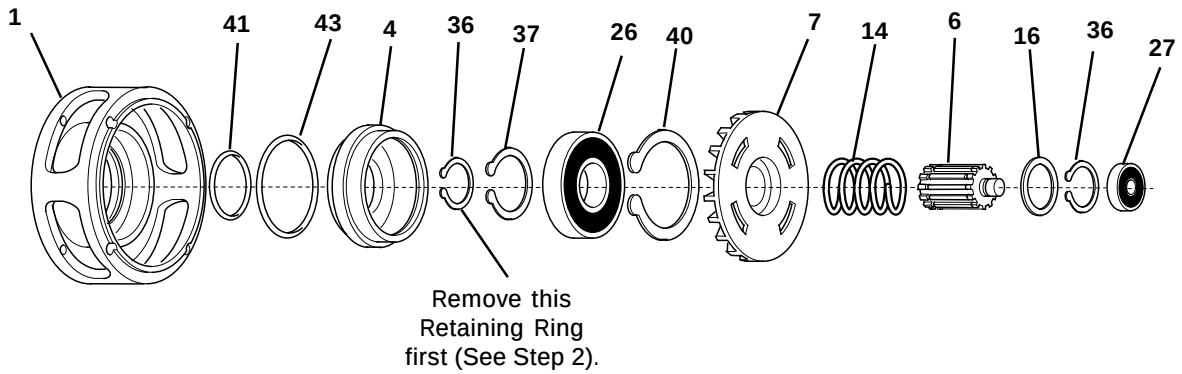

FIGURE 12

Model 1375

Refer to Figure 12.

1. Remove the old Ball Bearing (Item 27).

WARNING

Special attention should be exercised when working with retaining rings. Always wear safety goggles when working with spring or tension loaded fasteners or devices.

2. Remove the Retaining Ring (Item 36) from the Hub (Item6).

3. Slide the Hub (Item 6), Compression Spring (Item 14), Spring Retainer Washer (Item 16), and second Retaining Ring (Item 36) out of the Friction Disc (Item 7).

4. Press the Piston (Item 4), Friction Disc (Item 7), Retaining Ring (Item 40), and Ball Bearing (Item 26) out of the Housing (Item 1).

5. Remove the old O-ring Seals (Items 41 and 43) from the Piston (Item 4) and Housing (Item 1).

6. Remove the Retaining Ring (Item 37) from the Friction Disc (Item 7); then, using a bearing puller, remove the Piston (Item 4) and old Ball Bearing (Item 26) from the Friction Disc (Item 7).

7. Remove the Retaining Ring (Item 40) from the Piston (Item 4) and press the old Ball Bearing (Item 26) out of the Piston.

8. Clean the bearing bore of the Piston (Item 4) with fresh solvent, making sure all old Loctite® residue is removed.

9. Apply an adequate amount of Loctite® 680 to evenly coat the outer race of the new Ball Bearing (Item 26) and press the new Ball Bearing into the Piston (Item 4).

10. Reinstall the Retaining Ring (Item 40).

11. Support the inner race of the new Ball Bearing (Item 26); then, press the Friction Disc (Item 7) into the Piston (Item 4) and new Ball Bearing (Item 26).

12. Reinstall the Retaining Ring (Item 37).

13. Lubricate the new O-ring Seals (Items 41 and 43) and the o-ring contact surfaces of the Piston (Item 4) and Housing (Item 1) with a thin film of fresh o-ring lubricant.

14. Install the new O-ring Seals (Items 41 and 43); then, slide the Piston (Item 4) and Friction Disc (Item 7) into the Housing (Item 1).

15. Inspect the Compression Spring (Item 14) for signs of fatigue and replace it if necessary.

16. Apply a thin film of Never-Seez® to the splines of the Hub (Item 6); then, slide the Hub, Compression Spring (Item 14), and Retaining Ring (Item 36) into the Friction Disc (Item 7).

17. Reinstall the Retaining Ring (Item 36) removed from the Hub (Item 6) in Step 2.

18. Slide a new Ball Bearing (Item 27) onto the Hub (Item 6).

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MODULAR BRAKE UNIT (MBU)

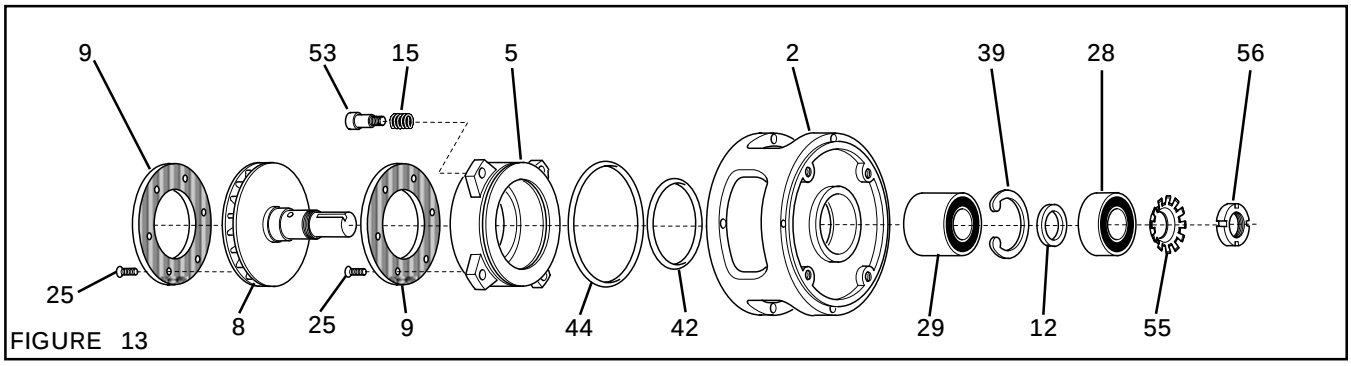

FIGURE 13

Models 1125 and 1375

Refer to Figure 13.

1. Bend back the tabs on the old Keyed Washer (Item 55) and remove the Lock Nut (Item 56) and Keyed Washer.
2. Fully support the Housing (Item 2) and press the Disc Journal (Item 8) out of the Housing.

WARNING

The four Socket Head Shoulder Screws (Item 53) are spring loaded. Always wear safety goggles when working on spring or tension loaded fasteners or devices.

3. Alternately and evenly remove the four Socket Head Shoulder Screws (Item 53) and Compression Springs (Item 15).
4. Slide the Piston (Item 5) out of the Housing (Item 2).
5. Remove the old O-ring Seals (Items 42 and 44) from the Piston (Item 5).
6. Remove the six old Flat Head Screws (Item 25) securing the old Friction Facing (Item 9) to the Piston (Item 5) and remove the old Friction Facing (See Figure 18).
7. Using six new Flat Head Screws (Item 25), secure a new Friction Facing (Item 9) to the Piston (Item 5).
8. Tighten the six flat Head Screws to 22 in-lb [2.50 Nm] torque.
9. Remove the six old Flat Head Screws (Item 25) securing the old Friction Facing (Item 9) to the Disc Journal (Item 8) and remove the old Friction Facing.
10. Using six new Flat Head Screws (Item 25), secure a new Friction Facing (Item 9) to the Disc Journal (Item 8).
11. Tighten the six Flat Head Screws to 22 in-lb [2.50 Nm] torque.
12. Using a bearing puller, remove the old Ball Bearing (Item 28) from the Housing (Item 2).

WARNING

Special attention should be exercised when working with retaining rings. Always wear safety goggles when working with spring or tension loaded fasteners or devices.

13. Remove the Spacer (Item 12) and Retaining Ring (Item 39) from the Housing (Item 2).
14. Press the old Ball Bearing (Item 29) out of the Housing (Item 2).
15. Clean the Bearing Bore of the Housing (Item 2) with fresh solvent, making sure all old Loctite residue is removed.
16. Apply an adequate amount of Loctite® 680 to evenly coat the outer race of the new Ball Bearing (Item 29) and press the new Ball Bearing into the Housing (Item 2).
17. Reinstall the Spacer (Item 12) and the Retaining Ring (Item 39).
18. Apply an adequate amount of Loctite® 680 to evenly coat the outer race of the new Ball Bearing (Item 28) and press the new Ball Bearing into the Housing (Item 2).
19. Lubricate the new O-ring Seals (Items 42 and 44) and the o-ring contact surfaces of the Housing (Item 2) and Piston (Item 5) with a thin film of fresh o-ring lubricant.
20. Reinstall the new O-ring Seals (Items 42 and 44) onto the Piston (Item 5) and slide the Piston into the Housing.
21. Slide a Compression Spring (Item 15) onto each of the four Socket Head Shoulder Screws (Item 53) and secure the Piston (Item 5) to the Housing (Item 2).
22. Alternately and evenly tighten the Socket Head Shoulder Screws (Item 53) to 23 ft-lb [31 Nm] torque.
23. Supporting the inner race of the new Ball Bearing (Item 28 and press the Disc Journal (Item 8) into the Ball Bearings (Items 28 and 29) and Housing (Item 2).
24. Slide a new Keyed Washer (Item 55) onto the Disc Journal (Item 8) and reinstall the Lock Nut (Item 56).
25. Bend down the tabs of the new Keyed Washer (Item 55) to lock the Lock Nut (Item 56).

(continued...)

MODULAR OUTPUT UNIT (MOU)

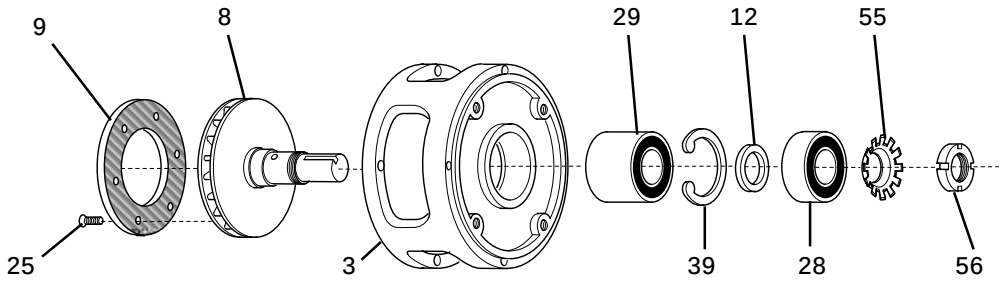

FIGURE 14

Models 1125 and 1375

Refer to Figure 14.

1. Bend back the tabs on the old Keyed Washer (Item 55) and remove the Lock Nut (Item 56) and Keyed Washer.
2. Fully support the Housing (Item 3) and press the Disc Journal (Item 8) out of the Housing.
3. Using a bearing puller, remove the old Ball Bearing (Item 28) from the Housing (Item 3).

WARNING

Special attention should be exercised when working with retaining rings. Always wear safety goggles when working with spring or tension loaded fasteners or devices.

4. Remove the Spacer (Item 12) and Retaining Ring (Item 39) from the Housing (Item 3).
5. Press the old Ball Bearing (Item 29) out of the Housing (Item 3).
6. Remove the six old Flat Head Screws (Item 25) securing the old Friction Facing (Item 9) to the Disc Journal (Item 8) and remove the old Friction Facing.
7. Using six new Flat Head Screws (Item 25), secure a new Friction Facing (Item 9) to the Disc Journal (Item 8).
8. Tighten the six flat Head Screws to 22 in-lb [2.50 Nm] torque.
9. Clean the Bearing Bore of the Housing (Item 3) with fresh solvent, making sure all old Loctite® residue is removed.
10. Apply an adequate amount of Loctite® 680 to evenly coat the outer race of the new Ball Bearing (Item 29) and press the new Ball Bearing into the Housing (Item 3).
11. Reinstall the Spacer (Item 12) and the Retaining Ring (Item 39).
12. Apply an adequate amount of Loctite® 680 to evenly coat the outer race of the new Ball Bearing (Item 28) and press the new Ball Bearing into the Housing (Item 3).
13. Support the inner race of the new Ball Bearing (Item 28) and press the Disc Journal (Item 8) into the Ball Bearings (Items 28 and 29) and Housing (Item 3).
14. Slide a new Keyed Washer (Item 55) onto the Disc Journal (Item 8) and reinstall the Lock Nut (Item 56).
15. Bend down the tabs of the Keyed Washer (Item 55) to lock the Lock Nut (Item 56).

REPLACEMENT PARTS

The item or balloon number for all Nexen products is used for part identification on all product parts lists, product price lists, unit assembly drawings, bills of materials, and instruction manuals.

When ordering replacement parts, specify model designation, item number, part description, and quantity. Purchase replacement parts through your local Nexen Distributor.

NOTE

Make sure you are in the correct section for the size and model of your Modular Unit.

MODULAR INPUT UNIT (MIU)

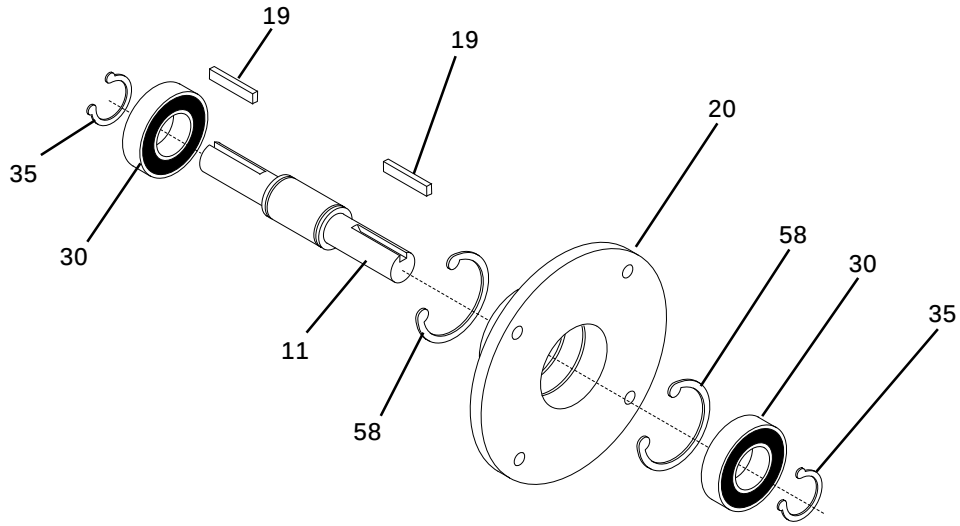

FIGURE 15
MODELS 1125 & 1375

ITEM	DESCRIPTION	QTY
11	Stub Shaft	1
19	Key	2
20	Bearing Flange	1
30[1]	Ball Bearing	2

ITEM	DESCRIPTION	QTY
35	Retaining Ring (Ext.)	2
45	Hex. Head Jam Nut (Not Shown)	4
58	Retaining Ring (Int.)	2

[1] Denotes Repair Kit item.
MIU 1125 and 1375 Repair Kit No. 937100.

(continued...)

MODULAR DRIVE UNIT (MDU)

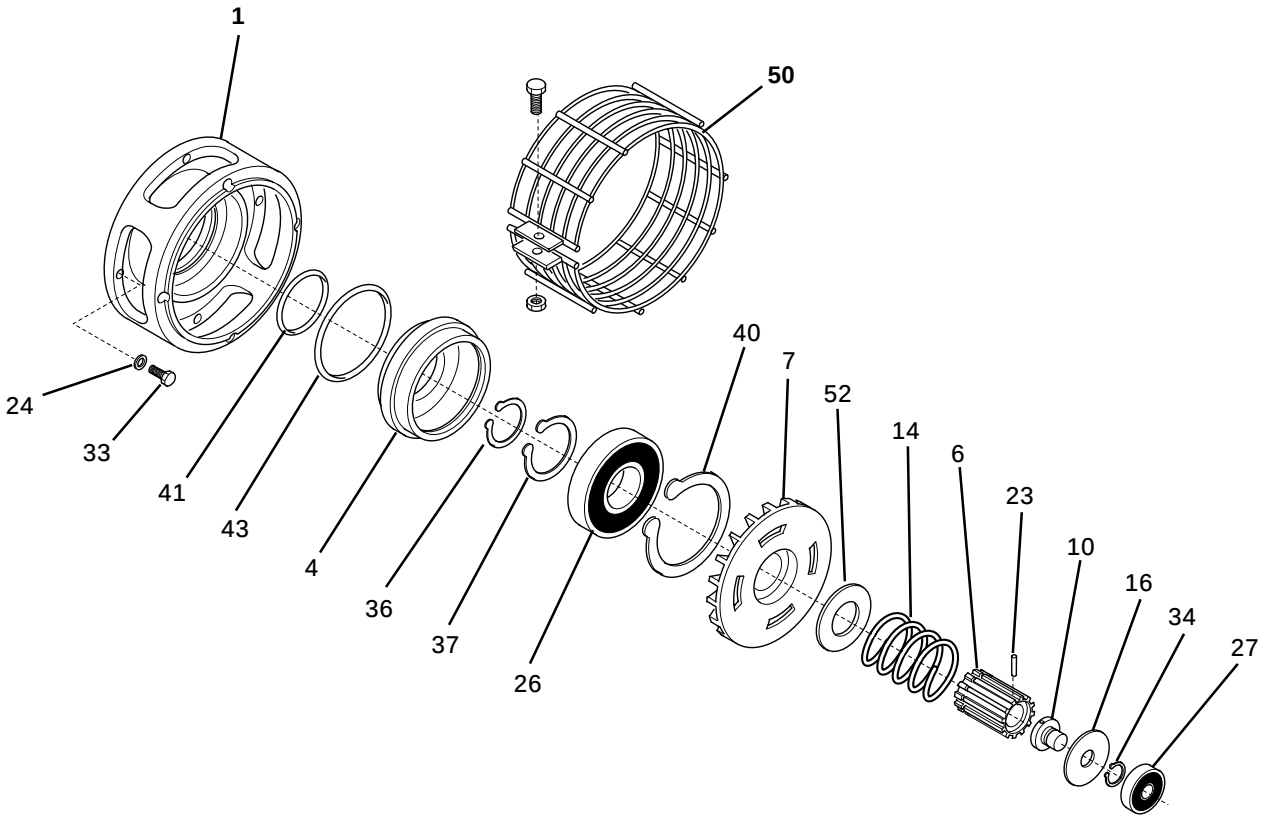

FIGURE 16
MODEL 1125

ITEM	DESCRIPTION	QTY
1	Housing	1
4	Piston	1
6	Hub	1
7	Friction Disc	1
10	Pilot Shaft	1
14[1]	Compression Spring	1
16	Spring Retainer Washer	1
19	Key (Not Shown)	1
23	Slotted Spring Pin	1
24	Lock Washer	4
26[1]	Ball Bearing	1

ITEM	DESCRIPTION	QTY
27[1]	Ball Bearing	1
33	Hex. Head Cap Screw	4
34	Retaining Ring (Ext.)	1
36	Retaining Ring (Ext.)	1
37	Retaining Ring (Ext.)	1
40	Retaining Ring (Int.)	1
41[1]	O-ring Seal	1
43[1]	O-ring Seal	1
50	Housing Guard	1
52	Back-Up Washer	1

[1] Denotes Repair Kit item.
MDU 1125 Repair Kit No. 937200.

(continued...)

MODULAR DRIVE UNIT (MDU)

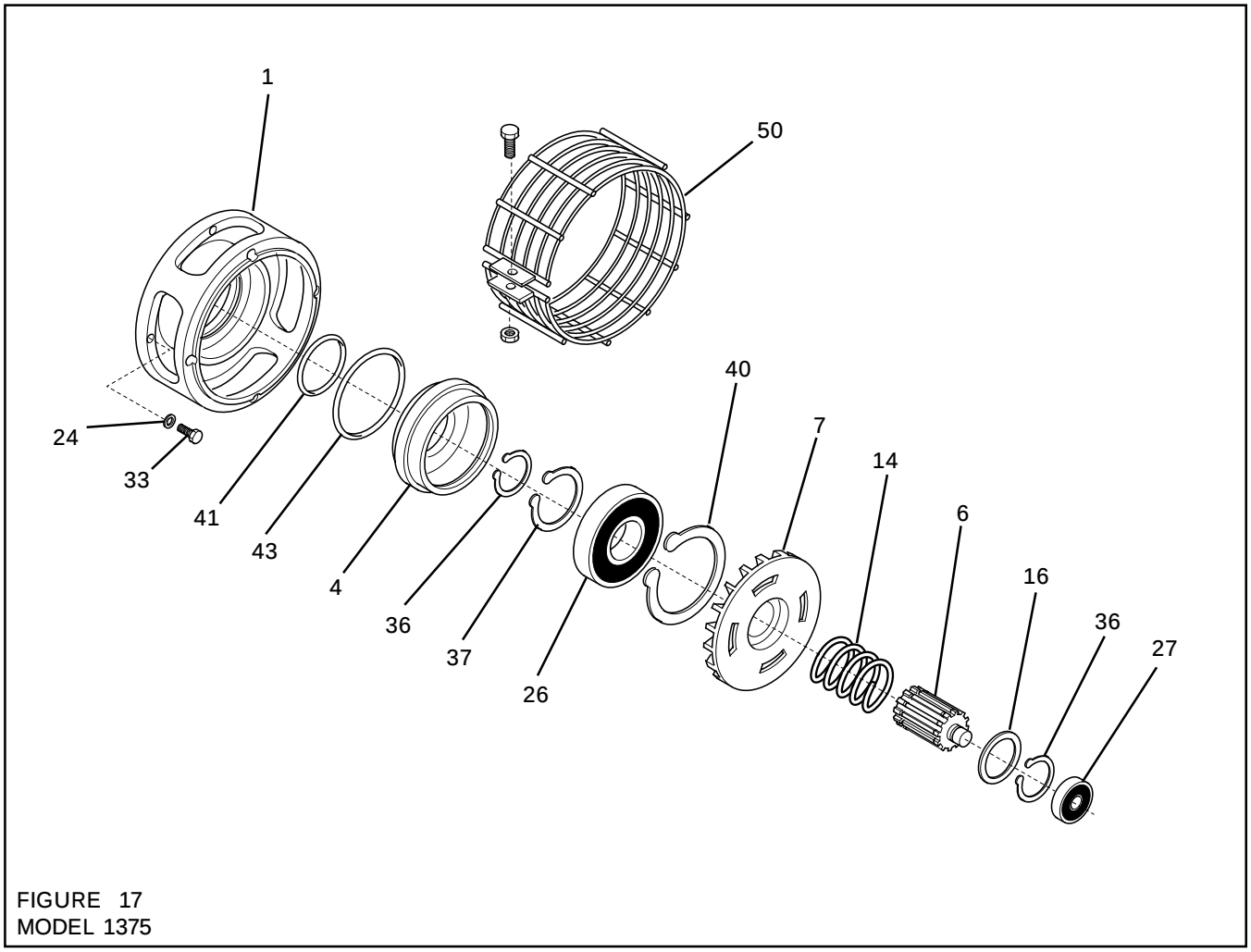

FIGURE 17
MODEL 1375

ITEM	DESCRIPTION	QTY
1	Housing	1
4	Piston	1
6	Hub	1
7	Friction Disc	1
10	Pilot Shaft	1
14[1]	Compression Spring	1
16	Spring Retainer Washer	1
19	Key (Not Shown)	1
24	Lock Washer	4
26[1]	Ball Bearing	1

ITEM	DESCRIPTION	QTY
27[1]	Ball Bearing	1
33	Hex. Head Cap Screw	4
34	Retaining Ring (Ext.)	1
36	Retaining Ring (Ext.)	1
37	Retaining Ring (Ext.)	1
40	Retaining Ring (Int.)	1
41[1]	O-ring Seal	1
43[1]	O-ring Seal	1
50	Housing Guard	1

[1] Denotes Repair Kit item.
MDU 1375 Repair Kit No. 937500.

(continued...)

MODULAR BRAKE UNIT (MBU)

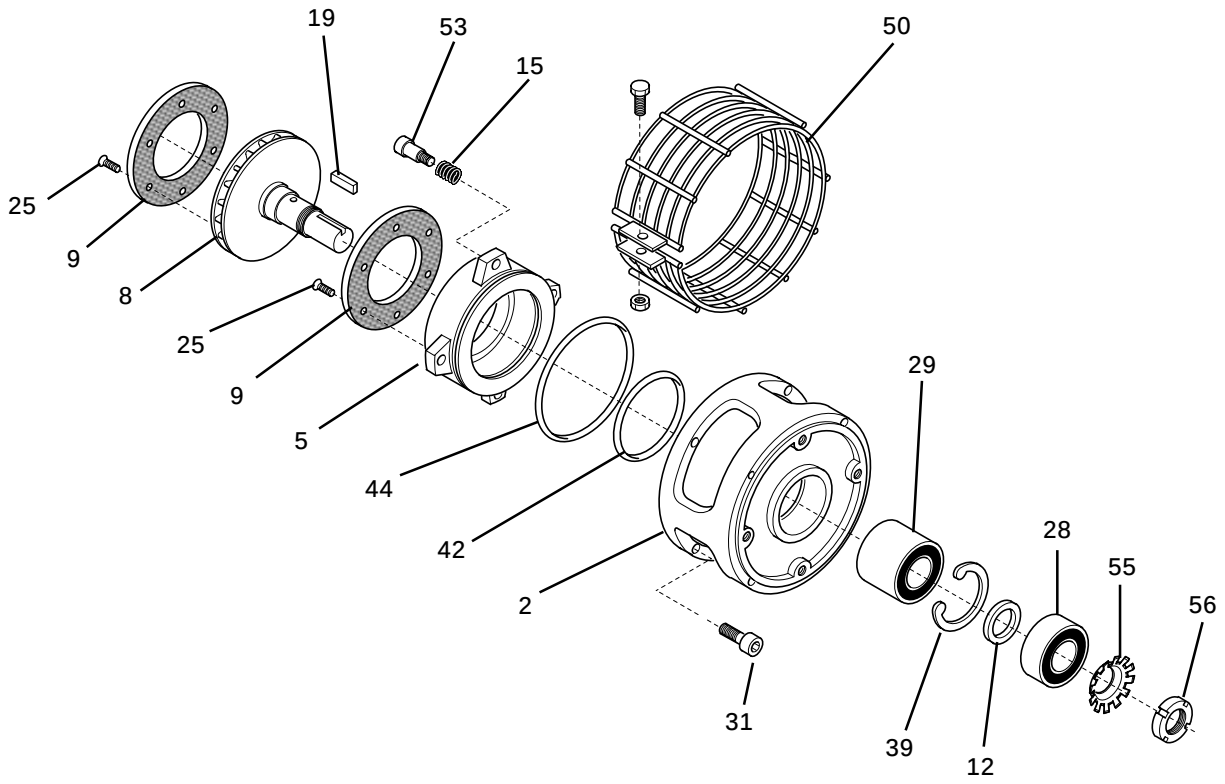

FIGURE 18
MODELS 1125 AND 1375

ITEM	DESCRIPTION	QTY
2	Housing	1
5	Piston	1
8	Disc Journal	1
9[1,2]	Friction Facing	2
12	Spacer	1
15	Compression Spring	4
19	Key	1
25[1,2]	Flat Head Screw	12
28[1]	Ball Bearing	1

ITEM	DESCRIPTION	QTY
31	Socket Head Cap Screw	4
39	Retaining Ring	1
42[1]	O-ring Seal	1
44[1]	O-ring Seal	1
50	Housing Guard	1
53	Socket Head Shoulder Screw	4
55	Keyed Washer	1
56	Lock Nut	1
29[1]	Ball Bearing	1

[1] Denotes Repair Kit item.
MBU 1125 Repair Kit No. 937300.
MBU 1375 Repair Kit. No. 937600.

[2] Denotes Friction Facing Kit item.
MBU 1125 Friction Facing Kit No. 930277.
MBU 1375 Friction Facing Kit No. 930278.

(continued...)

MODULAR OUTPUT UNIT (MOU)

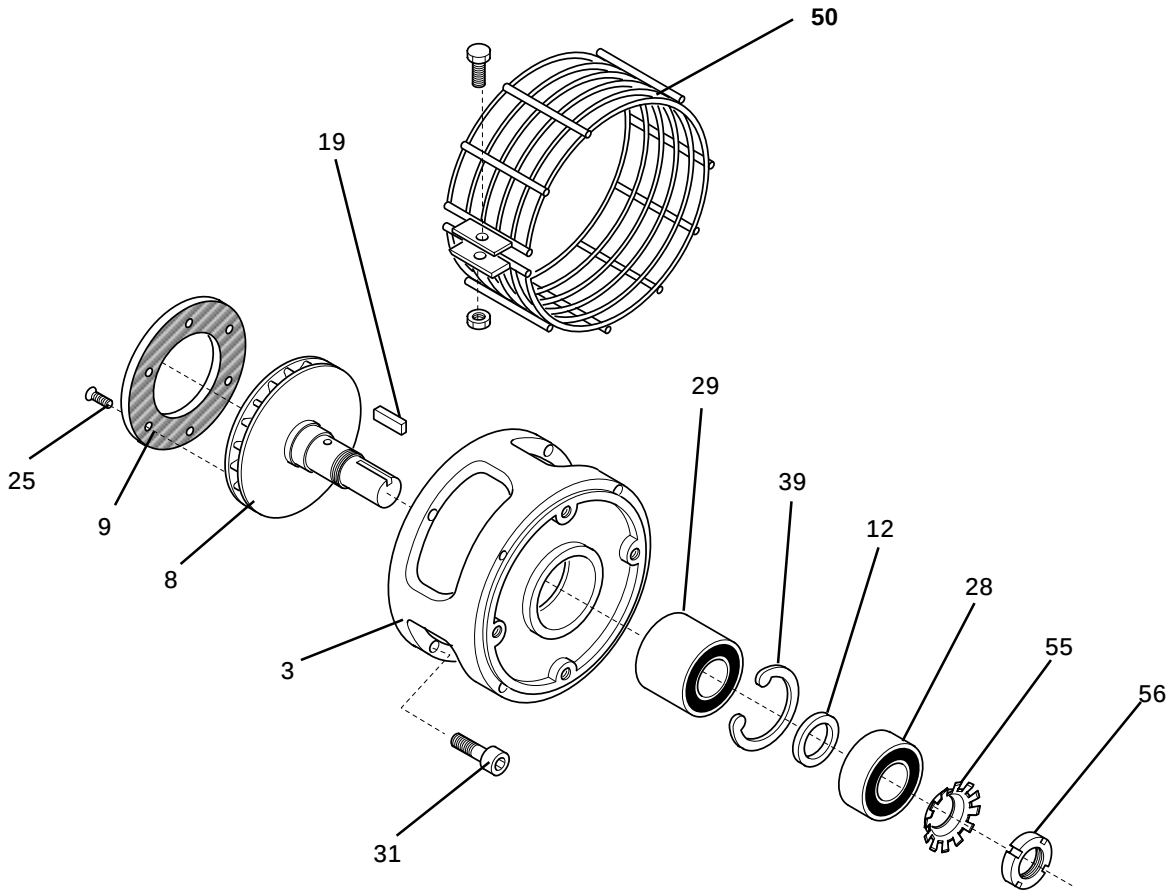

FIGURE 19
MODEL 1125 AND 1375

ITEM	DESCRIPTION	QTY
3	Housing	1
8	Disc Journal	1
9[1,2]	Friction Facing	1
12[1]	Spacer	1
19	Key	1
25[1,2]	Flat Head Screw	6
28[1]	Ball Bearing	1

ITEM	DESCRIPTION	QTY
29[1]	Ball Bearing	1
31	Socket Head Cap Screw	4
39	Retaining Ring (Int.)	1
50	Housing Guard	1
55	Keyed Washer	1
56	Lock Nut	1

[1] Denotes Repair Kit item.
MOU 1125 and 1375 Repair Kit No. 937400.

[2] Denotes Friction Facing Kit item.
MBU 1125 and 1375 Friction Facing Kit No. 930277.

ACCESSORIES

MODULAR HOUSING GUARDS		
TYPE	**MODELS**	**PRODUCT NUMBER**
Ring Guard	All 1125 and 1375	935900
Waterproof Guard (Not Shown)	MBU 1125 and 1375	935902
	MDU 1125 and 1375	935901

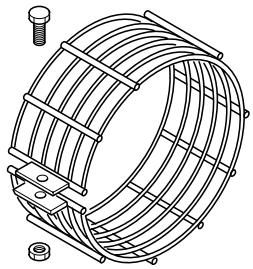

FIGURE 20
HOUSING GUARD

MODULAR FOOT MOUNTS		
TYPE	**MODELS**	**PRODUCT NUMBER**
U-Shaped Foot Mount	All 1125 and 1375	936900

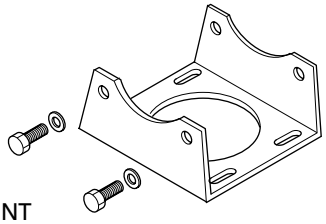

FIGURE 21
U-SHAPED FOOT MOUNT

Warranties

Nexen warrants that the Products will be free from any defects in material or workmanship for a period of 12 months from the date of shipment. NEXEN MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. This warranty applies only if (a) the Product has been installed, used and maintained in accordance with any applicable Nexen installation or maintenance manual for the Product; (b) the alleged defect is not attributable to normal wear and tear; (c) the Product has not been altered, misused or used for purposes other than those for which it was intended; and (d) Buyer has given written notice of the alleged defect to Nexen, and delivered the allegedly defective Product to Nexen, within one year of the date of shipment.

Exclusive Remedy

The exclusive remedy of the Buyer for any breach of the warranties set out above will be, at the sole discretion of Nexen, a repair or replacement with new, serviceably used or reconditioned Product, or issuance of credit in the amount of the purchase price paid to Nexen by the Buyer for the Products.

Limitation of Nexen's Liability

TO THE EXTENT PERMITTED BY LAW NEXEN SHALL HAVE NO LIABILITY TO BUYER OR ANY OTHER PERSON FOR INCIDENTAL DAMAGES, SPECIAL DAMAGES, CONSEQUENTIAL DAMAGES OR OTHER DAMAGES OF ANY KIND OR NATURE WHATSOEVER, WHETHER ARISING OUT OF BREACH OF WARRANTY OR OTHER BREACH OF CONTRACT, NEGLIGENCE OR OTHER TORT, OR OTHERWISE, EVEN IF NEXEN SHALL HAVE BEEN ADVISED OF THE POSSIBILITY OR LIKELIHOOD OF SUCH POTENTIAL LOSS OR DAMAGE. For all of the purposes hereof, the term "consequential damages" shall include lost profits, penalties, delay images, liquidated damages or other damages and liabilities which Buyer shall be obligated to pay or which Buyer may incur based upon, related to or arising out of its contracts with its customers or other third parties. In no event shall Nexen be liable for any amount of damages in excess of amounts paid by Buyer for Products or services as to which a breach of contract has been determined to exist. The parties expressly agree that the price for the Products and the services was determined in consideration of the limitation on damages set forth herein and such limitation has been specifically bargained for and constitutes an agreed allocation of risk which shall survive the determination of any court of competent jurisdiction that any remedy herein fails of its essential purpose.

Limitation of Damages

In no event shall Nexen be liable for any consequential, indirect, incidental, or special damages of any nature whatsoever, including without limitation, lost profits arising from the sale or use of the Products.

Warranty Claim Procedures

To make a claim under this warranty, the claimant must give written notice of the alleged defect to whom the Product was purchased from and deliver the Product to same within one year of the date on which the alleged defect first became apparent.

nexen

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