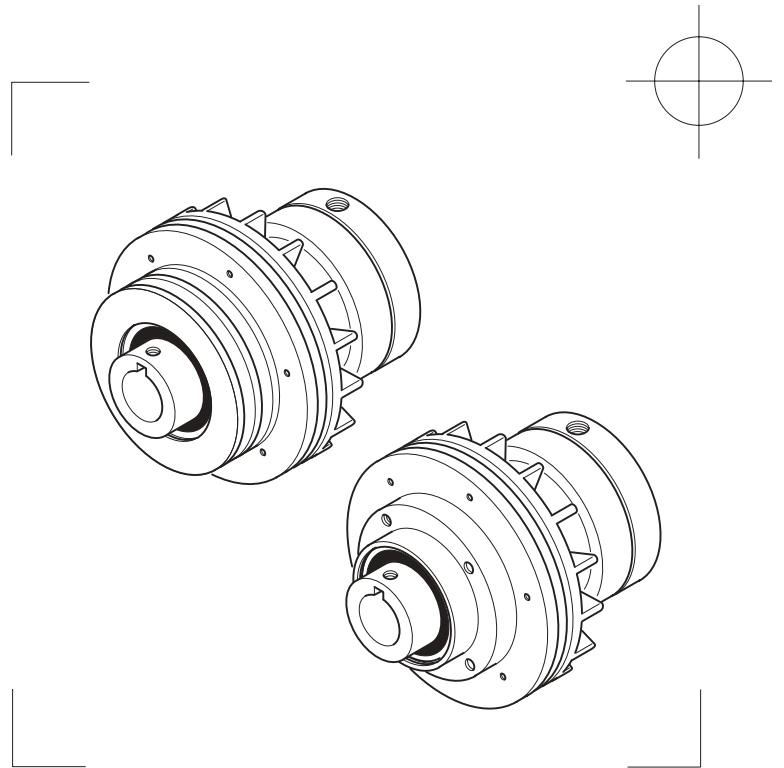


AIR CHAMP® PRODUCTS

User Manual



PILOT & SHEAVE MOUNT CLUTCHES MODELS FW, LW, MW, AND HW

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
(651) 484-5900

www.nexengroup.com



WARNING

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.

Nexen Group, Inc.
560 Oak Grove Parkway
Vadnais Heights, Minnesota 55127

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WARNING

This unit has rotating parts. A guard that will not restrict the flow of cooling air around the unit must be used if the unit is installed where injury to an operator could occur, as stated in the Occupational Safety and Health Act (OSHA), Standard (29 CFR 1910) Section 1910.219K.

INSTALLATION

PILOT MOUNT CLUTCH

1. Secure a customer supplied sheave or sprocket to the Clutch (See Figure 1).
2. Insert the Key (Item 18) into the shaft (See Figure 1).

NOTE: Align the air inlet port to a down position to allow condensation to drain out of the port.

3. Slide the Clutch onto the shaft as far as possible with the Key (Item 18) fully seated into the Hub (Item 1) keyway (See Figure 1 and Table 1).
4. Install and tighten the Set Screws (Item 17) to the recommended torque (See Figure 1 and Table 2).

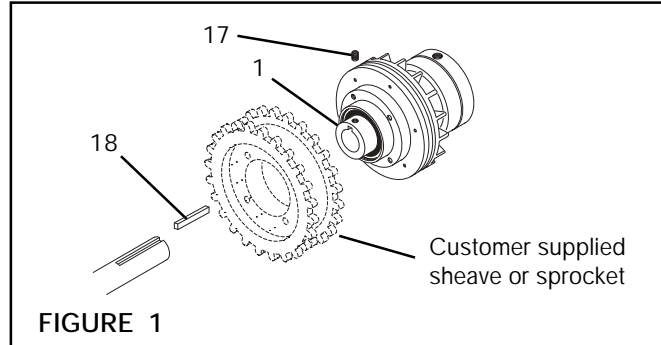


TABLE 1

MODEL	MINIMUM SHAFT INSERTATION
FW	2.0 In. [50.80 mm]
LW	2.5 In. [63.50 mm]
MW	3.75 In. [95.25 mm]
HW	4.0 In. [101.60 mm]

TABLE 2

MODEL	SET SCREW TIGHTENING TORQUE
FW	80 In. Lbs. [9 N•m]
LW	142 In. Lbs. [15.9 N•m]
MW	236 In. Lbs. [26.4 N•m]
HW	236 In. Lbs. [26.4 N•m]

SHEAVE MOUNT CLUTCH

1. Insert the Key (Item 18) into the shaft (See Figure 2).

NOTE: Align the air inlet port to a down position to allow condensation to drain out of the port.

2. Slide the Clutch onto the shaft as far as possible with the Key (Item 18) fully seated into the Hub (Item 1) keyway (See Figure 2 and Table 3).
3. Install and tighten the Set Screws (Item 17) to the recommended torque (See Figure 2 and Table 4).

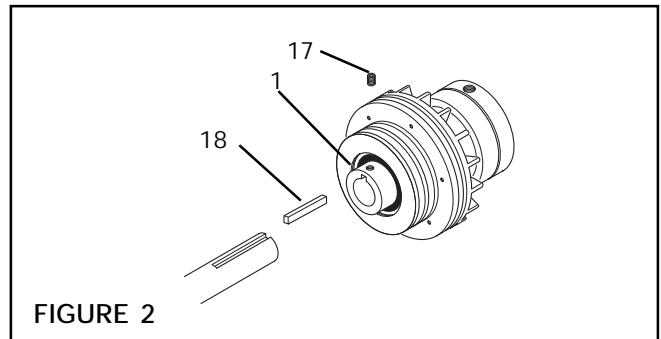


TABLE 3

MODEL	MINIMUM SHAFT INSERTATION
FW	2.0 In. [50.80 mm]
LW	2.5 In. [63.50 mm]
MW	3.75 In. [95.25 mm]
HW	4.0 In. [101.60 mm]

TABLE 4

MODEL	SET SCREW TIGHTENING TORQUE
FW	80 In. Lbs. [9 N•m]
LW	142 In. Lbs. [15.9 N•m]
MW	236 In. Lbs. [26.4 N•m]
HW	236 In. Lbs. [26.4 N•m]

COUPLING MOUNT CLUTCH

1. Determine the parallel misalignment of the shafts to be coupled by placing a straight edge across the shafts and measuring the maximum offset at various points around the periphery of the shafts. Make the necessary corrections to keep the shafts within the parallel misalignment limits of the clutch coupling (See Figure 3 and Table 5).

NOTE: Before installation, the driving shaft can be fixed, but the driven shaft must be allowed to float (See Figure 3).

Align the air inlet port to the six o'clock down position to allow condensation to drain out of the port.

2. Slide the Clutch onto the driving shaft until the end of the Clutch is flush with the end of the shaft (See Figure 3).
3. Insert the Key (Item 18) into the driving shaft and Clutch (See Figure 3).
4. Install and tighten the Set Screws (Item 17) to the recommended torque (See Figure 3 and Table 6).
5. Attach the Coupling Adapter Plate (Item 24) to the Clutch pilot using Cap Screws (Item 33) and Lock Washers (Item 34); then, tighten the Cap Screws to the recommended torque (See Figure 3 and Table 6).
6. Place the Coupling's Flexible Disc (Item 25) over the pins in the Coupling Adapter Plate (Item 24) (See Figure 3).
7. Insert the customer supplied Dodge™ Taper-Lock Bushing into the Coupling Hub (Item 26) (See Figure 3).
8. Align the holes (not the threads) and slide the Dodge™ Taper-Lock Bushing/Coupling Hub Assembly onto the driving shaft until it is flush with the shaft (See Figure 3).
9. Thread the screws supplied with the Dodge™ Taper-Lock Bushing into the threaded holes of the Coupling Hub (Item 26); then, alternately and evenly tighten the screws to the bushing manufacturer's specifications.
10. Align the pins in the Coupling Hub (Item 26) with the holes in the Flexible Disc (Item 25) (See Figure 3).
11. Push the entire assembly together. Automatic spacing is accomplished by spacers molded into the Flexible Disc.

TABLE 5

MODEL	DODGE™ TAPER-LOCK POLY-DISC COUPLING SIZE	MEASURED VARIATION AT POINTS 180° APART		AXIAL FLOAT (MINIMUM VALUE FROM RECOMMENDED INITIAL SPACING)
		PARALLEL MAXIMUM	ANGULAR MAXIMUM	
FW	2-5/8 in. [66.75 mm]	0.015 in. [0.381 mm]	0.040 in. [1.016 mm]	+1/8 in. [+1.375 mm]
LW	4 in. [101.6 mm]	0.015 in. [0.381 mm]	0.064 in. [1.625 mm]	+1/8 in. [+1.375 mm]
MW	7 in. [177.8 mm]	0.015 in. [0.381 mm]	0.112 in. [2.845 mm]	+1/8 in. [+1.375 mm]
HW	8 in. [203.2 mm]	0.015 in. [0.381 mm]	0.128 in. [3.251 mm]	+1/8 in. [+1.375 mm]

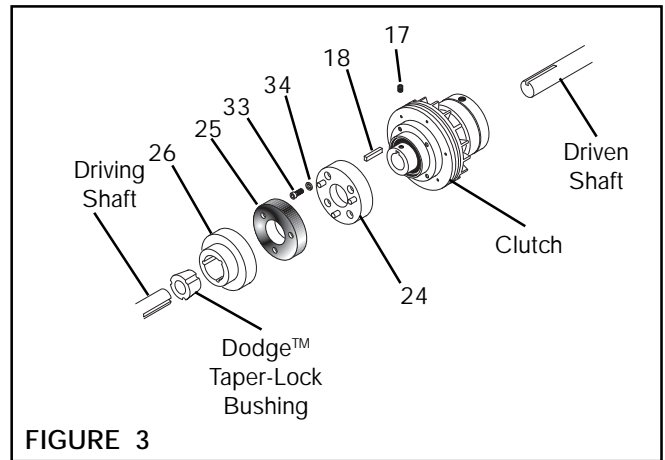


FIGURE 3

TABLE 6
RECOMMENDED TIGHTENING TORQUES

MODEL	FW	LW	MW	HW
SET SCREW (ITEM 17)	80 IN. LBS. [9 Nm]	142 IN. LBS. [15.9 Nm]	236 IN. LBS. [26.4 Nm]	236 IN. LBS. [26.4 Nm]
CAP SCREW (ITEM 33)	21 FT. LBS. [28.5 Nm]	21 FT. LBS. [28.5 Nm]	23 FT. LBS. [31.2 Nm]	78 FT. LBS. [105.8 Nm]

FRICITION FACING ADJUSTMENT

1. With a 0.020 In. [0.508 mm] to 0.060 In. [1.524 mm] feeler gauge, check the gap between the Friction Disc (Item 11) and the Friction Facing (Item 12) (See Figure 4).
2. If the gap is less than 0.020 In. [0.508 mm] loosen the Set Screw (Item 19) and rotate the Adjustment Nut (Item 2) counterclockwise until one of the Set Screw's holes is over the flat in the Hub (Item 1) and the feeler gauge can be inserted between the Friction Facing (Item 12) and the Friction Disc (Item 11) (See Figure 4).
3. If the gap is greater than 0.060 In. [1.524 mm] loosen the Set Screw (Item 19) and rotate the Adjustment Nut (Item 2) clockwise until one of the Set Screw's holes is over the flat in the Hub (Item 1) and the feeler gauge can be inserted between the Friction Facing (Item 12) and the Friction Disc (Item 11) (See Figure 4).
4. Tighten the Set Screw (Item 19) to the recommended torque (See Table 7).

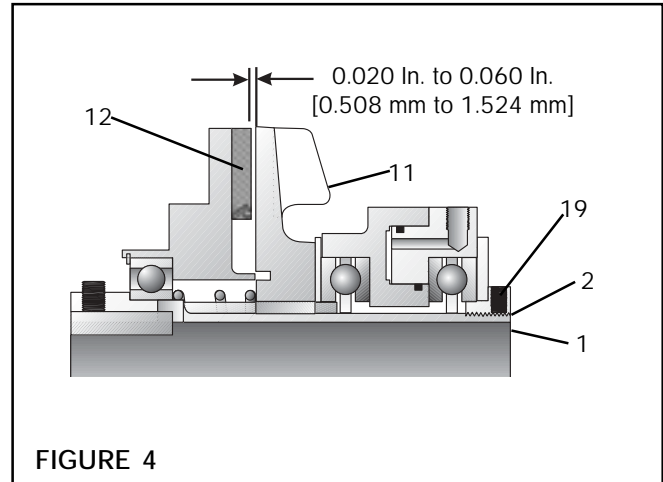


FIGURE 4

NOTE: Do not adjust the gap between the Friction Facing (Item 12) and the Friction Disc (Item 11) to less than 0.020 In. [0.508 mm]. The Clutch will not disengage if the gap between the Friction Disc and Friction Facing is closed.

TABLE 7

MODEL	SET SCREW (ITEM 19)	
	DESCRIPTION	TIGHTENING TORQUE
FW	8-32	20 In. Lbs. [2.24 N•m]
LW	8-32	20 In. Lbs. [2.24 N•m]
MW	1/4-20	80 In. Lbs. [8.96 N•m]
HW	1/4-20	80 In. Lbs. [8.96 N•m]

AIR CONNECTIONS

NOTE: For quick response, Nexen recommends a quick exhaust valve and short air lines between the Control Valve and the Clutch. Align the inlet port to a down position to allow condensation to drain out of the Air Chamber.

An Air Line (Item 21) is furnished and air controls with 1/8 NPT ports are recommended. Where long air lines are required, a Quick Exhaust Valve (Nexen Product No. 945100) is recommended to ensure rapid disengagement.

NOTE: Because of the necessary movement of the Air Chamber and Air Line upon engagement, flexible tubing or air lines must be used on the Clutch.

Due to bearing seal drag, the outer portion of the Clutch will rotate when it is engaged. Rest the Air Line against a support that is parallel to the centerline of the Clutch to stop this rotation.



LUBRICATION

All Nexen pneumatic product air seals are lubricated at the factory. The seals require re-lubrication at normal service intervals, typically when the product is rebuilt (ie, new seals, bearings, and friction facings).

Oil lubrication of the air lines leading to the pneumatic product is not required for Nexen products. However, some pneumatic valves used to operate Nexen products require lubrication. If water and/or condensation are present in the air lines, Nexen recommends using a filter regulator at one drop of oil per 20 SCFM. This clean, lubricated air will not harm the pneumatic seals. Typically seal compounds used in Nexen products are nitrile or fluorocarbon, which are chemically compatible with most standard lubricating oils.

LUBRICATOR DRIP RATE SETTINGS

The most effective and economical way to lubricate Nexen products 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 product, and use a low viscosity oil such as SAE-10.

Synthetic lubricants are not recommended.

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

1. Close and disconnect the air line from the unit.
2. Turn the lubricator Adjustment Knob clockwise 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 counterclockwise until closed.
7. Turn the Lubricator Adjustment Knob clockwise one-third turn.
8. Open the air line to the unit.

BALL BEARING LUBRICATION

The Thrust Bearings (Item 5) have been packed with H-130 Lubricant, which has been specially selected for use in the FW, LW, MW, and HW series clutches. When lubricating the Thrust Bearings, use H-130 or Chevron SRI (2). All other ball bearings are prelubricated, sealed, and require no further lubrication.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	SOLUTION
Failure to engage.	Air not getting to the clutch.	Check for a control valve malfunction or low air pressure to the clutch.
	Air leaks around the O-ring Seals.	Replace the O-ring Seals.
	Lack of lubrication on the Hub spline.	Lubricate the Hub spline.
	Rigid pipe or tubing on the air line connections.	Replace all rigid pipe or tubing on the air line connections with flexible tubing.
Failure to disengage.	Friction lock due to a lack of lubrication on the Hub spline or in the air chamber.	Lubricate the Hub spline and check that the air line lubricator is properly set and working.
	Broken Return Spring.	Replace the Return Spring.
	Unexhausted air.	Check for a control valve malfunction and replace the control valve if it is defective.
	The Friction Facing gap is less than 0.020 In. [0.508 mm].	Set the Friction Facing gap to the correct gap (0.020 In. [0.508 mm]).
Excessive drag load on the Air Line.	Defective Ball or Thrust Bearings.	Replace the Ball or Thrust Bearings.
	The Air Line is not properly supported resulting in bearing seal drag.	Rest the Air Line against a support mounted parallel to the clutch center line.
Bearing failure.	The clutch is out of its proper angular and parallel misalignment specifications.	Stay within the proper angular and parallel misalignment specifications as given in Table 5.

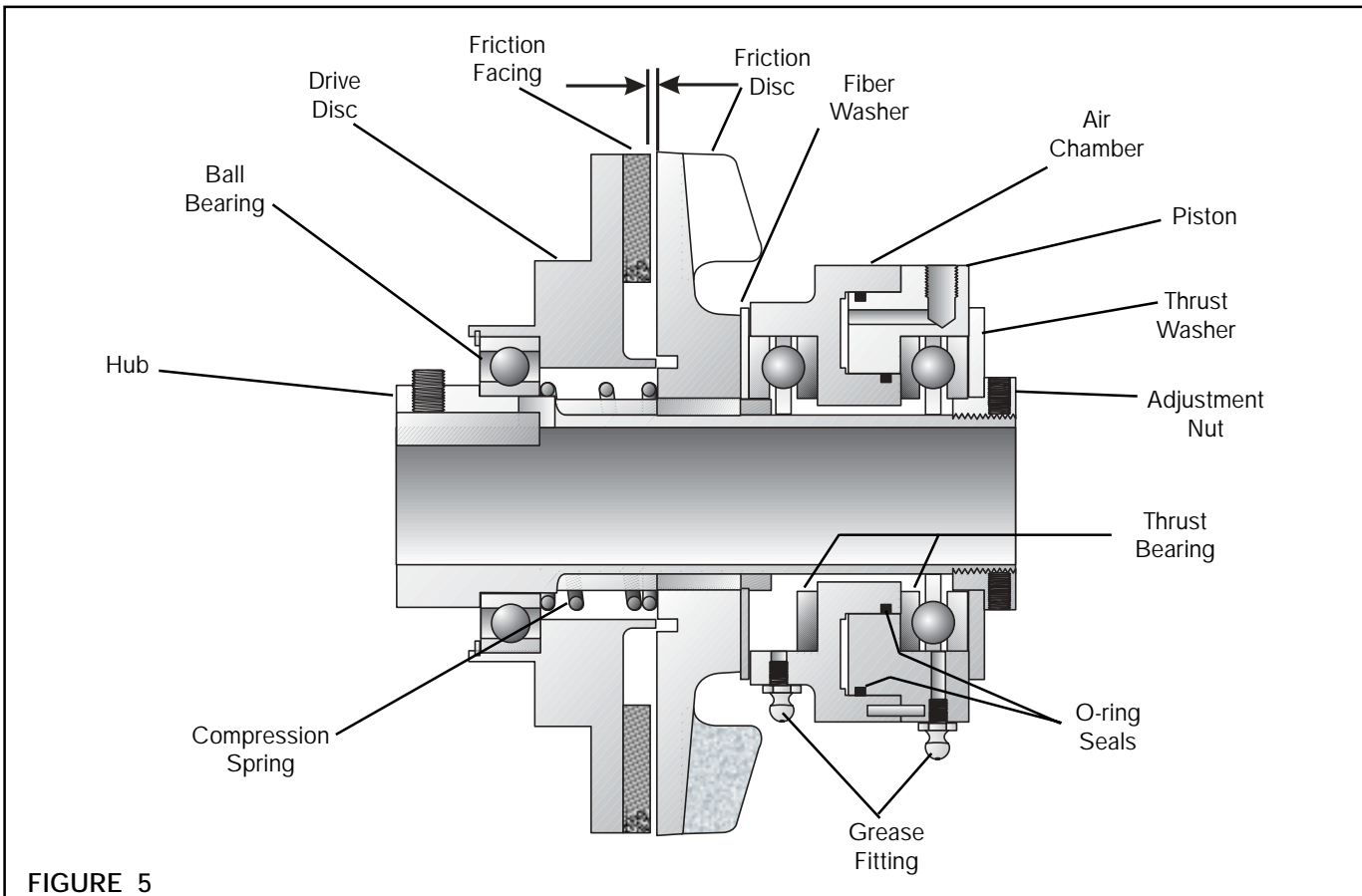


FIGURE 5


PARTS REPLACEMENT

1. Remove the Set Screw (Item 19), Adjustment Nut (Item 2), and the Thrust Washer (Item 3) (See Figure 6).

NOTE: The FW Clutch has a Key (Item 20) in the Hub (Item 1). Do not remove this Key.

The FW Clutch does not have a Fiber Washer (Item 10).

2. Slide the Air Chamber (Item 8), Piston (Item 4), Fiber Washer (Item 10), and Friction Disc (Item 11) off the Hub (Item 1) (See Figure 7).
3. Separate the Piston (Item 4) from the Air Chamber (Item 8); then, remove the old O-ring Seals (Items 6 and 7) from the Piston and Air Chamber (See Figure 8).
4. Slide the Thrust Bearings (Item 5) out of the Piston (Item 4) and Air Chamber (Item 8) (See Figure 8).
5. Clean the o-ring contact surfaces of the Piston (Item 4) and Air Chamber (Item 8) with fresh safety solvent.
6. Lubricate the new O-ring Seals (Items 6 and 7) with fresh o-ring lubricant and install the new O-ring Seals onto the Piston (Item 4) and Air Chamber (Item 8) (See Figure 8).
7. Align the Spring Pin (Item 28) on the Piston (Item 4) with the hole in the Air Chamber (Item 8); then, slide the Piston into the Air Chamber (See Figure 8).
8. Remove the Compression Spring (Item 14) from the Hub (Item 1); then, press the Ball Bearing (Item 23 or 15) and Sheave (Item 16) or Drive Disc (Item 22) off the Hub (Item 1) (See Figure 9).

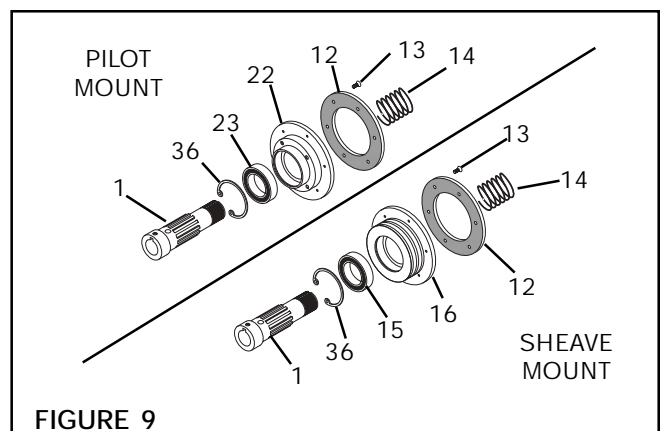
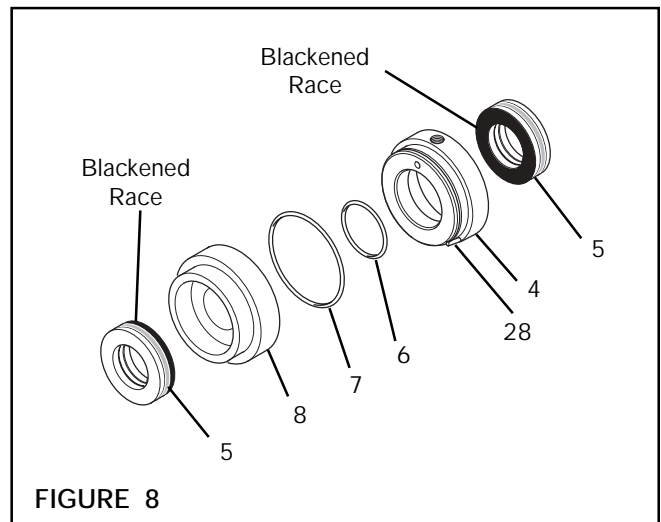
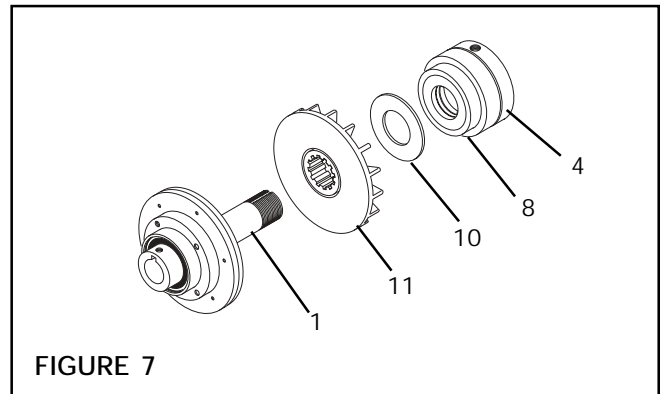
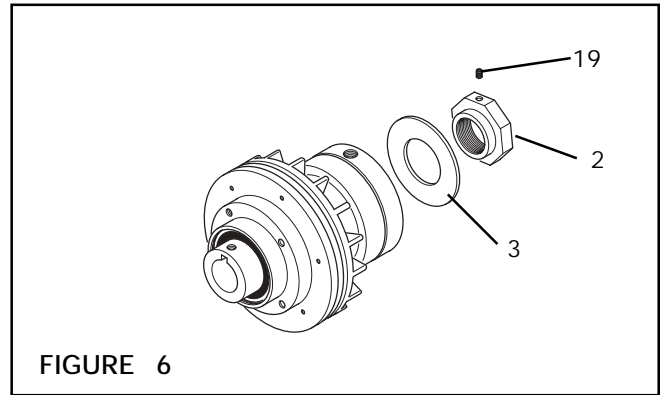

WARNING

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

9. Remove the Retaining Ring (Item 36) (See Figure 9).

NOTE: Sheave Mount Clutch Ball Bearings are Item 15. Pilot Mount Clutch Ball Bearings are Item 23.

The HW Clutch has two Ball Bearings (Item 15) in the Sheave (Item 16) and Drive Disc (Item 22).



10. Press the old Ball Bearing(s) (Item 15 or 23) out of the Sheave (Item 16) or Drive Disc (Item 22) (See Figure 9).
11. Clean the bearing bore of the Sheave (Item 16) or Drive Disc (Item 22) with fresh safety solvent, making sure all old Loctite® residue is removed (See Figure 9).
12. Apply an adequate amount of Loctite® 680 to evenly coat the outer race of the new Ball Bearing(s) (Item 15 or 23); then, press the new Ball Bearing(s) into the Sheave (Item 16) or Drive Disc (Item 22) (See Figure 9).
13. Reinstall the Retaining Ring (Item 36) (See Figure 9).

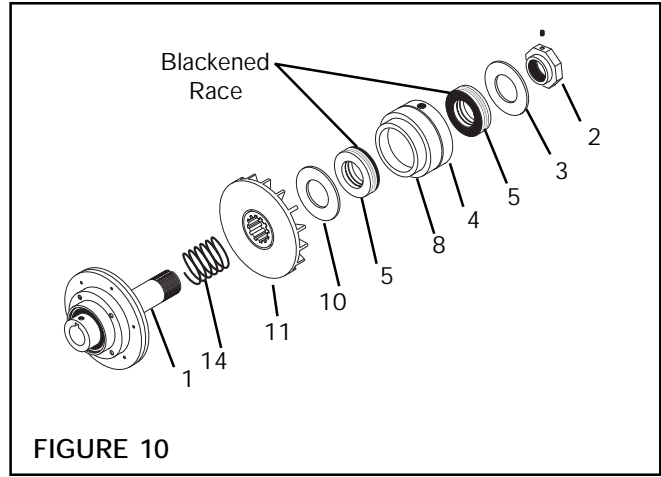


FIGURE 10

NOTE: The Machine Screws are installed with an anaerobic thread locking compound. Inserting a properly fitting screwdriver into the head of the Machine Screw and striking the end of the screwdriver with a hammer will break the crystalline structure of this locking compound and allow removal of the Machine Screws. Never use an impact wrench to remove the Machine Screws.

14. Remove the old Machine Screws (Item 13) and Friction Facing (Item 12) (See Figure 9).
15. Install the new Friction Facing (Item 12) and secure it with the new Machine Screws (Item 13) (See Figure 9).
16. Tighten the new Machine Screws (Item 13) to the recommended torque (See Table 8).
17. Support the inner race of the new Ball Bearing (Item 15 or 23); then press the Hub (Item 1) into the new Ball Bearing and Sheave (Item 16) or Drive Disc (Item 22) (See Figure 9).
18. Slide the Compression Spring (Item 14) onto the Hub (Item 1) (See Figure 10).

NOTE: The FW Clutch has a Key (Item 20) in the Hub (Item 1). Do not remove this Key.

The FW Clutch does not have a Fiber Washer (Item 10).

19. Lubricate the Hub (Item 1) spline with a thin coating of Never-Seez®; then, slide the Friction Disc (Item 11) onto the Hub (See Figure 10).
20. Slide the new Fiber Washer (Item 10) onto the Hub (Item 1) (See Figure 10).

TABLE 8
 RECOMMENDED TIGHTENING TORQUES

MODEL	ITEM NO.	TORQUE
FW	13	26 In. Lbs [2.9 N•m]
LW	13	26 In. Lbs [2.9 N•m]
MW	13	40-45 In. Lbs. [4.5-5.0 N•m]
HW	13	40-45 In. Lbs. [4.5-5.0 N•m]

NOTE: If Thrust Bearings (Item 5) have blackened races, follow proper orientation procedures as indicated.

21. Slide the first new Thrust Bearing (Item 5) with the blackened race facing the Piston/Air Chamber Assembly into the Air Chamber (Item 8) (See Figure 10).
22. Slide the Air Chamber (Item 8) and Piston (Item 4) onto the Hub (Item 1) (See Figure 10).
23. Slide the second new Thrust Bearing (Item 5) with the blackened race facing the Piston/Air Chamber Assembly into the Piston (Item 4) (See Figure 10).
24. Slide the Thrust Washer (Item 3) onto the Hub (Item 1) (See Figure 10).
25. Screw the Adjustment Nut (Item 2) onto the Hub (Item 1) (See Figure 10).
26. Adjust the gap between the Friction Facing and the Friction Disc (See FRICTION FACING ADJUSTMENT).

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.

PARTS LIST

PILOT MOUNT FW CLUTCH

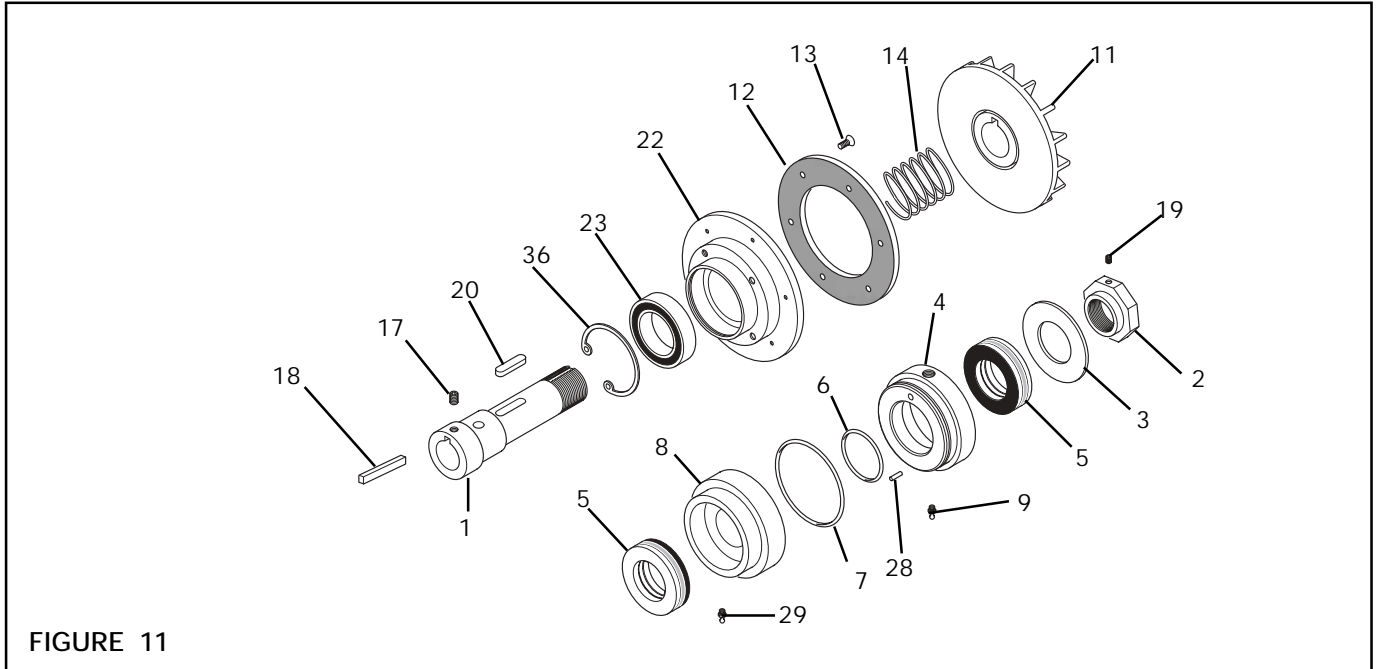


FIGURE 11

ITEM	DESCRIPTION	QTY
1	Hub	1
2	Adjustment Nut	1
3	Thrust Washer	1
4	Piston	1
5 ¹	Thrust Bearing	2
6 ¹	O-ring Seal	1
7 ¹	O-ring Seal	1
8	Air Chamber	1
9	Grease Fitting	1
11	Friction Disc	1
12 ¹	Friction Facing	1

ITEM	DESCRIPTION	QTY
13 ¹	Machine Screw	6
14 ¹	Compression Spring	1
17	Set Screw	2
18	Key	1
19	Set Screw	1
20	Key	1
21	Air Line (Not Shown)	1
22	Drive Disc	1
23	Ball Bearing	1
28	Spring Pin	1
29	Grease Fitting	1
36	Retaining Ring	1

¹ Denotes Repair Kit item.

FW Repair Kit Product No. 846900.

SHEAVE MOUNT FW CLUTCH

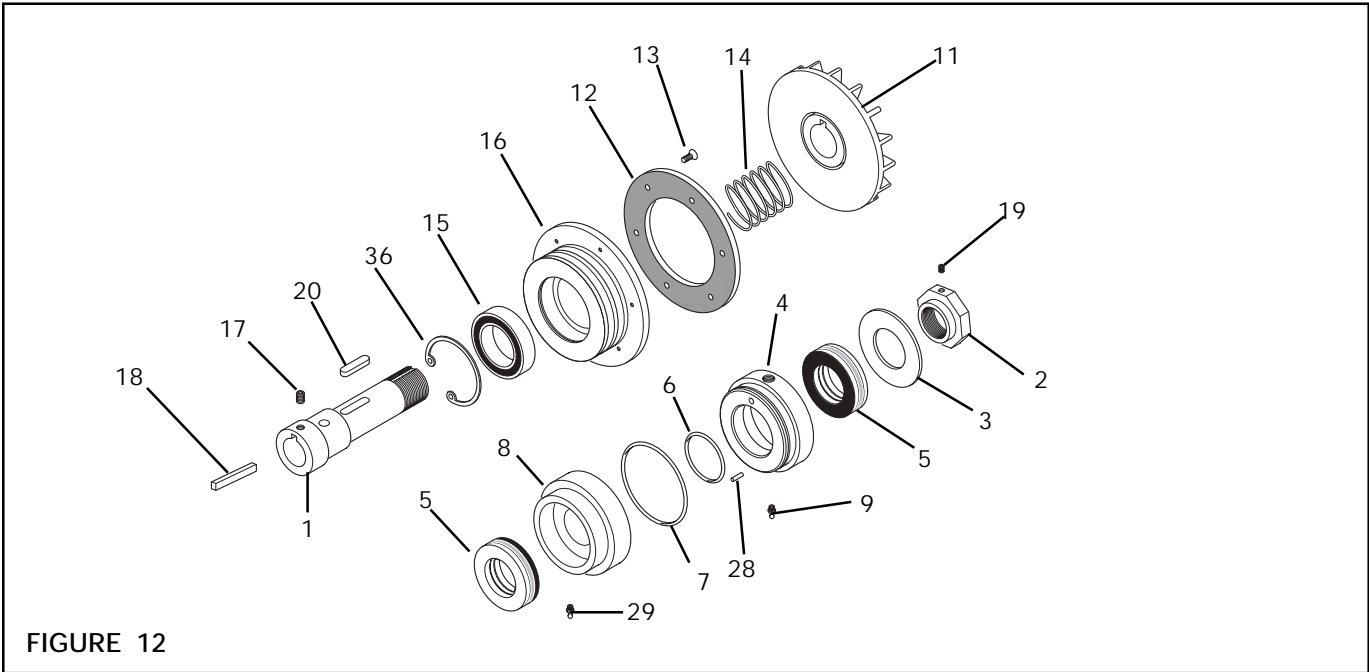


FIGURE 12

ITEM	DESCRIPTION	QTY
1	Hub	1
2	Adjustment Nut	1
3	Thrust Washer	1
4	Piston	1
5 ¹	Thrust Bearing	2
6 ¹	O-ring Seal	1
7 ¹	O-ring Seal	1
8	Air Chamber	1
9	Grease Fitting	1
11	Friction Disc	1
12 ¹	Friction Facing	1

ITEM	DESCRIPTION	QTY
13 ¹	Machine Screw	6
14 ¹	Compression Spring	1
15	Ball Bearing	1
16	Sheave	1
17	Set Screw	2
18	Key	1
19	Set Screw	1
20	Key	1
21	Air Line (Not Shown)	1
28	Spring Pin	1
29	Grease Fitting	1
36	Retaining Ring	1

¹ Denotes Repair Kit item.
 FW Repair Kit Product No. 846900.

PILOT MOUNT LW AND MW CLUTCHES

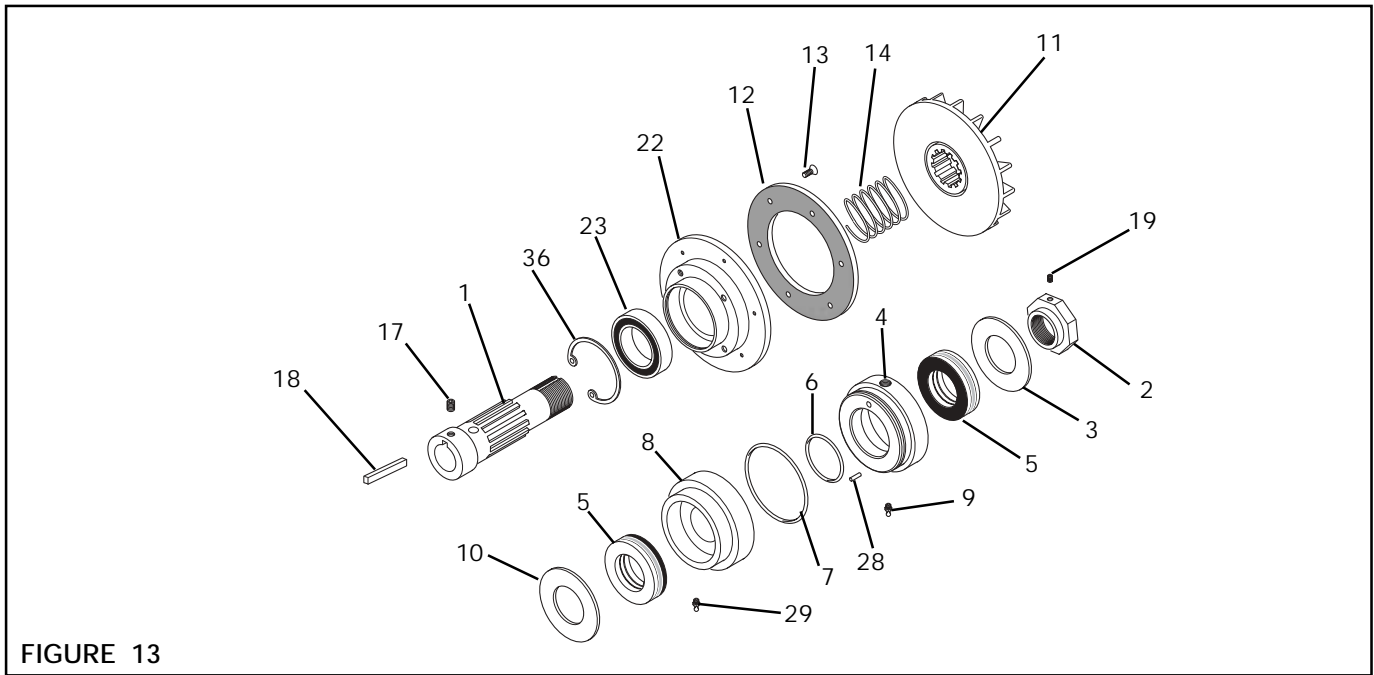


FIGURE 13

ITEM	DESCRIPTION	QTY
1	Hub	1
2	Adjustment Nut	1
3	Thrust Washer	1
4	Piston	1
5 ¹	Thrust Bearing	2
6 ¹	O-ring Seal	1
7 ¹	O-ring Seal	1
8	Air Chamber	1
9	Grease Fitting	2
10 ¹	Fiber Washer	1
11	Friction Disc	1

ITEM	DESCRIPTION	QTY
12 ¹	Friction Facing	1
13 ¹	Machine Screw	6
14 ¹	Compression Spring	1
17	Set Screw	2
18	Key	1
19	Set Screw	1
21	Air Line (Not Shown)	1
22	Drive Disc	1
23	Ball Bearing	1
28	Spring Pin	1
36	Retaining Ring	1

¹ Denotes Repair Kit item.

LW Repair Kit Product No. 847000.

MW Repair Kit Product No. 847100.

SHEAVE MOUNT LW AND MW CLUTCHES

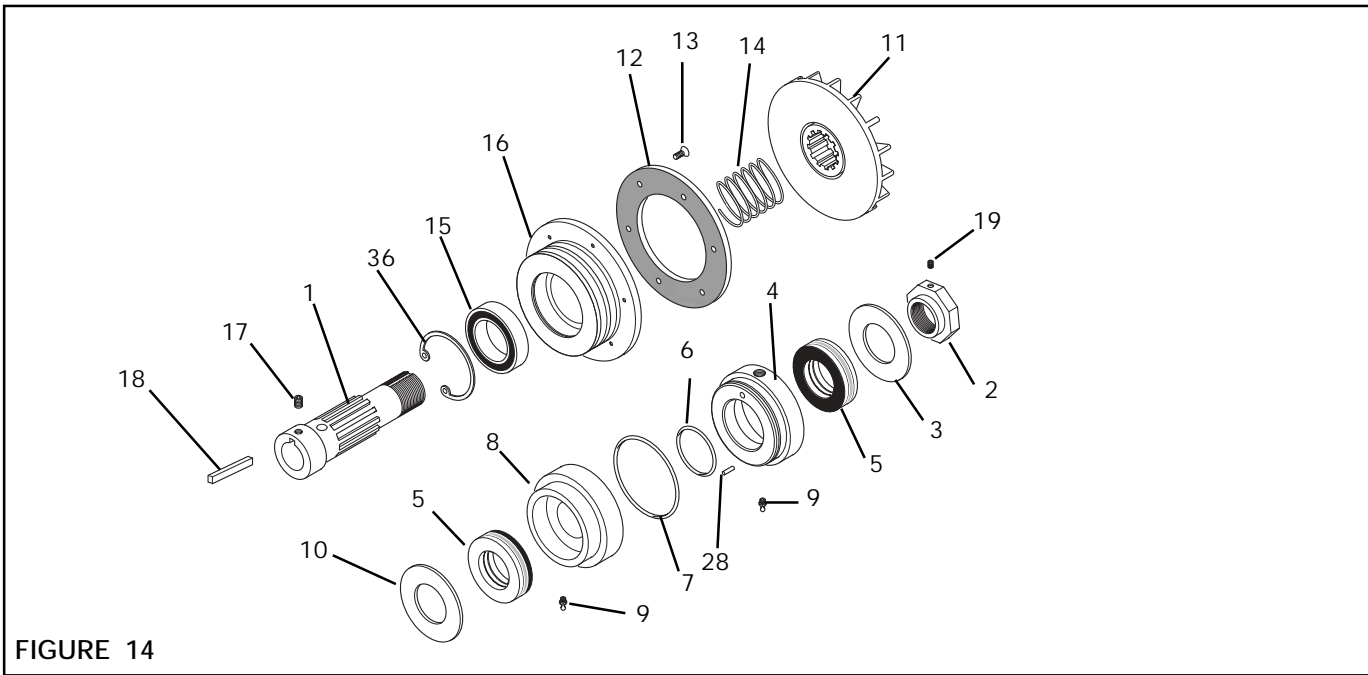


FIGURE 14

ITEM	DESCRIPTION	QTY
1	Hub	1
2	Adjustment Nut	1
3	Thrust Washer	1
4	Piston	1
5 ¹	Thrust Bearing	2
6 ¹	O-ring Seal	1
7 ¹	O-ring Seal	1
8	Air Chamber	1
9	Grease Fitting	2
10 ¹	Fiber Washer	1
11	Friction Disc	1

ITEM	DESCRIPTION	QTY
12 ¹	Friction Facing	1
13 ¹	Machine Screw	6
14 ¹	Compression Spring	1
15	Ball Bearing	1
16	Sheave	1
17	Set Screw	2
18	Key	1
19	Set Screw	1
21	Air Line (Not Shown)	1
28	Spring Pin	1
36	Retaining Ring	1

¹ Denotes Repair Kit item.

LW Repair Kit Product No. 847000.

MW Repair Kit Product No. 847100.

PILOT MOUNT HW CLUTCH

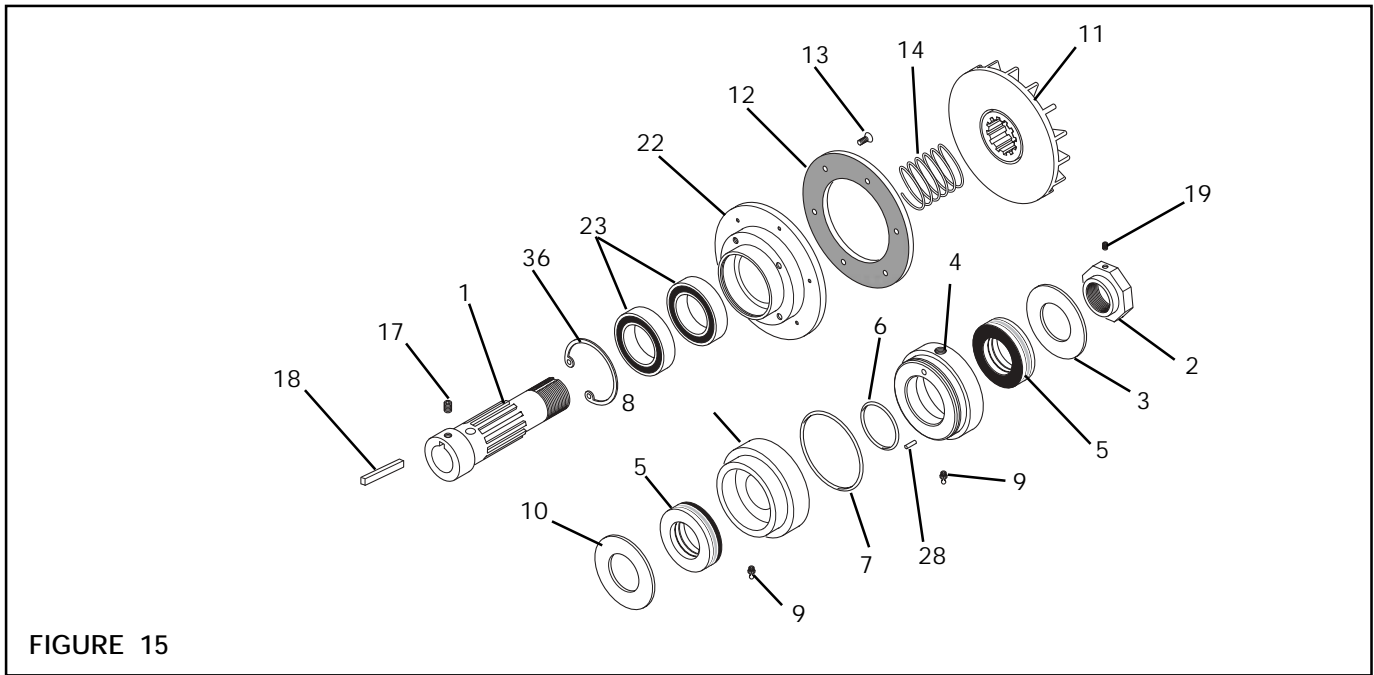


FIGURE 15

ITEM	DESCRIPTION	QTY
1	Hub	1
2	Adjustment Nut	1
3	Thrust Washer	1
4	Piston	1
5 ¹	Thrust Bearing	2
6 ¹	O-ring Seal	1
7 ¹	O-ring Seal	1
8	Air Chamber	1
9	Grease Fitting	2
10 ¹	Fiber Washer	1
11	Friction Disc	1

ITEM	DESCRIPTION	QTY
12 ¹	Friction Facing	1
13 ¹	Machine Screw	6
14 ¹	Compression Spring	1
17	Set Screw	2
18	Key	1
19	Set Screw	1
21	Air Line (Not Shown)	1
22	Drive Disc	1
23	Ball Bearing	2
28	Spring Pin	1
36	Retaining Ring	1

¹ Denotes Repair Kit item.
 HW Repair Kit Product No. 847200.

SHEAVE MOUNT HW CLUTCH

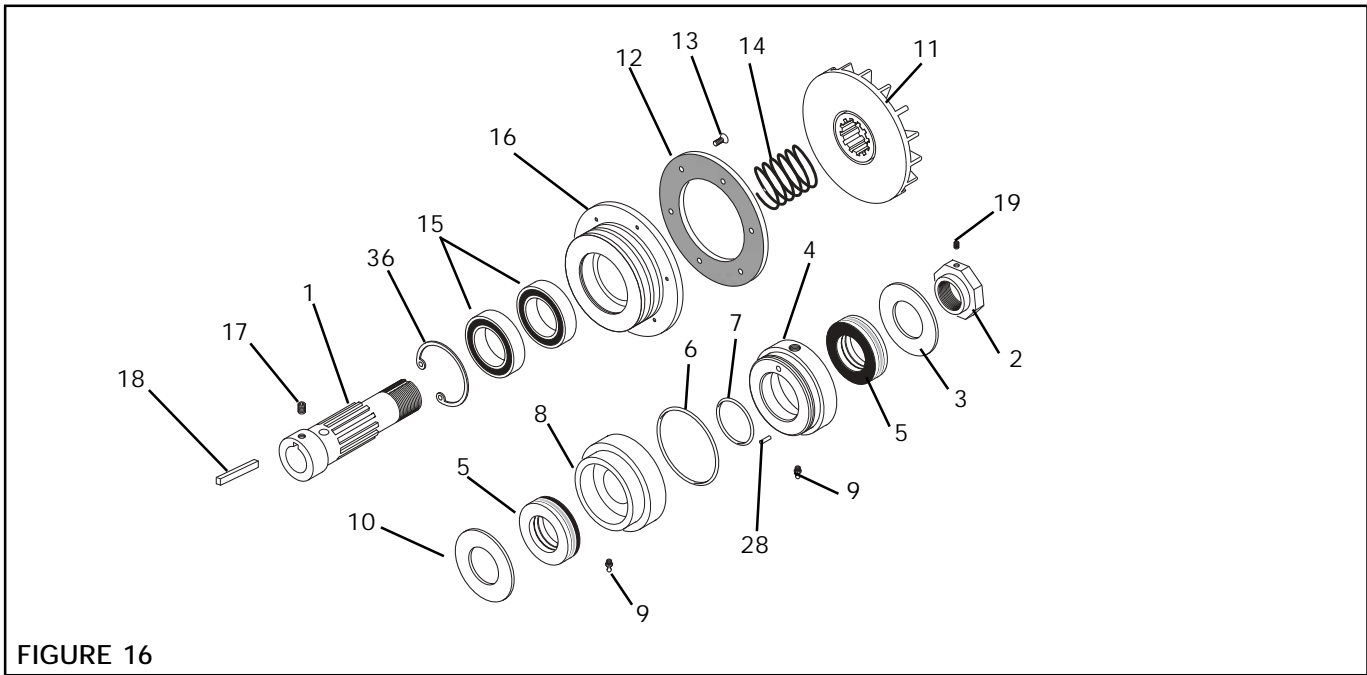


FIGURE 16

ITEM	DESCRIPTION	QTY
1	Hub	1
2	Adjustment Nut	1
3	Thrust Washer	1
4	Piston	1
5 ¹	Thrust Bearing	2
6 ¹	O-ring Seal	1
7 ¹	O-ring Seal	1
8	Air Chamber	1
9	Grease Fitting	2
10 ¹	Fiber Washer	1
11	Friction Disc	1

ITEM	DESCRIPTION	QTY
12 ¹	Friction Facing	1
13 ¹	Machine Screw	6
14 ¹	Compression Spring	1
15	Ball Bearing	2
16	Sheave	1
17	Set Screw	2
18	Key	1
19	Set Screw	1
21	Air Line (Not Shown)	1
28	Spring Pin	1
36	Retaining Ring	1

¹ Denotes Repair Kit item.
 LW Repair Kit Product No. 847200.

COUPLING

ITEM	DESCRIPTION	QTY
24	Adapter Plate	1
25	Flexible Disc	1
26	Coupling Hub	1
33	Cap Screw	4
34	Lock Washer	4

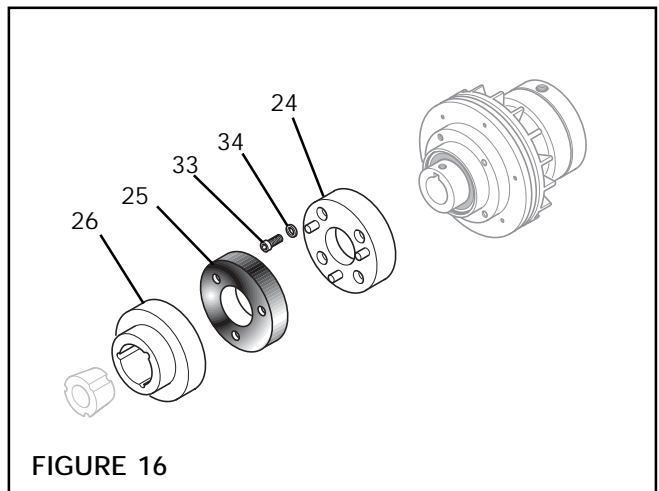


FIGURE 16



WARRANTIES

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.

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