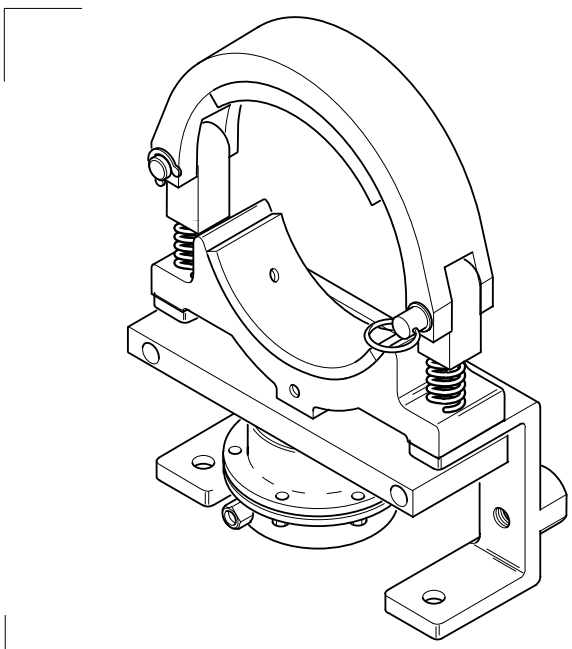
nexen®

AIR CHAMP® PRODUCTS

User Manual



Diaphragm Brake

4", 8" and 12" Hinge Top Diaphram Brake

INDUSTRIAL MAGZA DIST. AUTORIZADO
MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com

FORM NO. L-20014-K-0702

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

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.

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

ISO 9001 Certified

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INSTALLATION

BRAKE WITH OPTIONAL DRUM

1. Insert a customer supplied Key onto the shaft (See Figure 1).

2. Slide the optional Drum over the customer supplied Key and onto the shaft (See Figure 1).

3. Secure the optional Drum to the shaft using two customer supplied Set Screws (See Figure 1).

4. Pull the Detent Pin (Item 29) and lift the hinged Fixed Shoe (Item 1) to the open position (See Figure 1).

NOTE

For maximum wear of the hinged Fixed Shoe Friction Facing (Item 3), the Self Centering Bracket (Item 14) should be touching the Base Bar (Item 4) when mounting the Diaphragm Brake.

NOTE

Allow sufficient clearance between the Friction Facings (Item 3) and the optional Drum to allow free rotation of the Drum (See Figure 1).

5. Position the Diaphragm Brake on the optional Drum with the Fixed Shoe (Item 1) riding on the Drum and the Self Centering Bracket (Item 14) mounted as low as possible (See Figure 1).

6. Secure the Self Centering Bracket (Item 14) (See Figure 1).

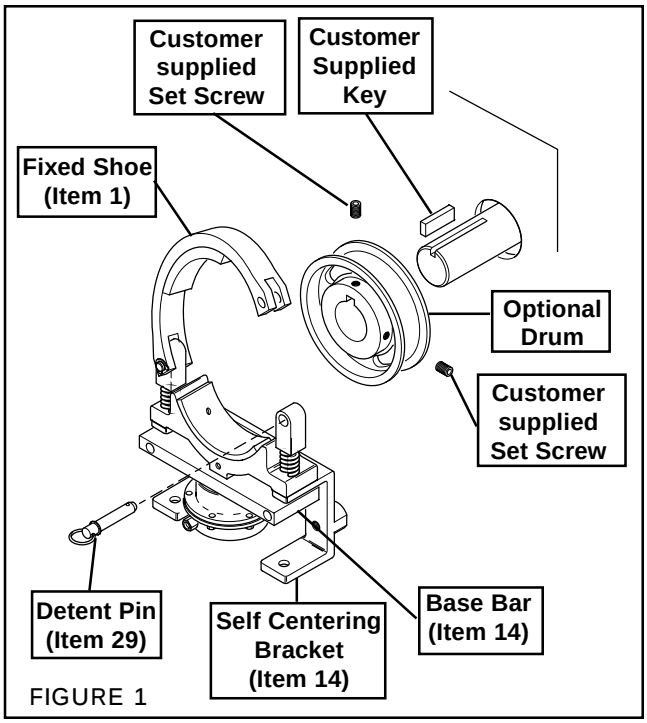

FIGURE 1

BRAKE WITHOUT OPTIONAL DRUM

1. Pull the Detent Pin (Item 29) and lift the hinged Fixed Shoe (Item 1) to the open position (See Figure 2).

NOTE

For maximum wear of the hinged Fixed Shoe Friction Facing (Item 3), the Self Centering Bracket (Item 14) should be touching the Base Bar (Item 4) when mounting the Diaphragm Brake.

NOTE

Allow sufficient clearance between the Friction Facings (Item 3) and the shaft to allow free rotation of the shaft (See Figure 2).

2. Position the Diaphragm Brake on the shaft with the Fixed Shoe (Item 1) riding on the shaft and the Self Centering Bracket (Item 14) mounted as low as possible (See Figure 2).

3. Secure the Self Centering Bracket (Item 14) (See Figure 2).

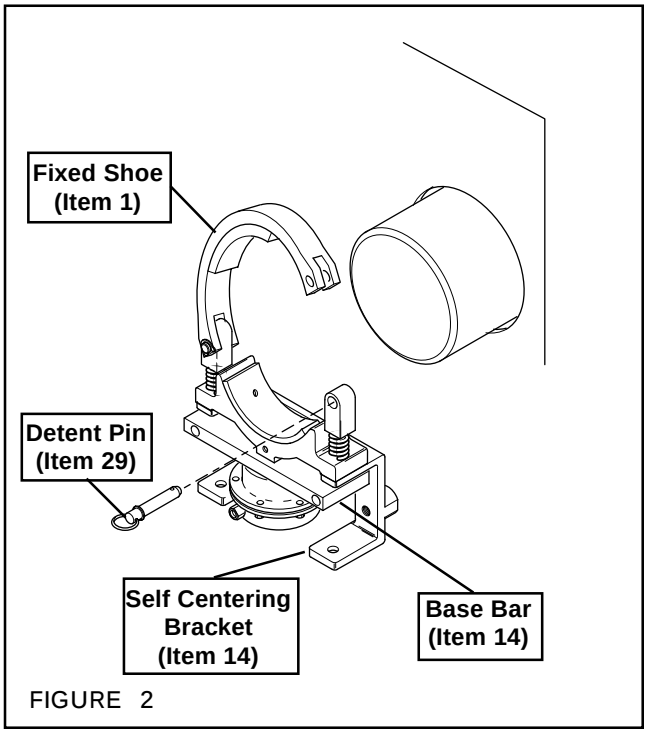

FIGURE 2

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AIR CONNECTIONS

Pneumatically actuated devices require clean, pressure regulated air for maximum performance and long life. Your Nexen distributor carries filters and regulators specifically designed to operate with the Nexen 4K, 8K and 12K Diaphragm Brake.

For quick response, a short air line between the control valve and the 4K, 8K or 12K Diaphragm Brake is recommended. The 4K, 8K and 12K Diaphragm Brakes have a 1/8" NPT female pipe fitting for connection to the air controls. The volume of air required is less than five cubic inches. For optimal control, 1/4" air controls are recommended.

The 4K, 8K and 12K Diaphragm Brakes work on static air pressure (See Chart 1).

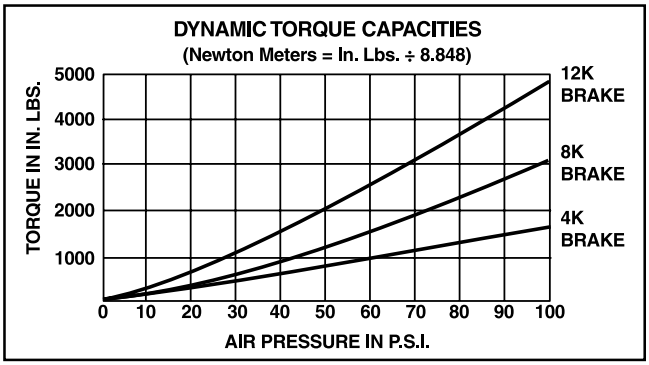

CHART 1

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
Failure to engage.	Ruptured Diaphragm.	Replace the Diaphragm.
	Faulty air controls.	Check the air controls for proper operation.
Failure to disengage.	Faulty or damaged Guide Rod Compression Springs.	Replace the Guide Rod Compression Springs.
	Faulty or damaged Push Plate Spring.	Replace the Push Plate Spring.
	Faulty air controls.	Check the air controls for proper operation.
Diaphragm Brake slippage.	Foreign material on the Optional Brake Drum or on the shaft.	Clean the Optional Brake Drum or shaft.
	Foreign material on the Friction Facings.	Replace the Friction Facings.
	Diaphragm Brake working outside its torque and heat dissipating range.	Check the application.

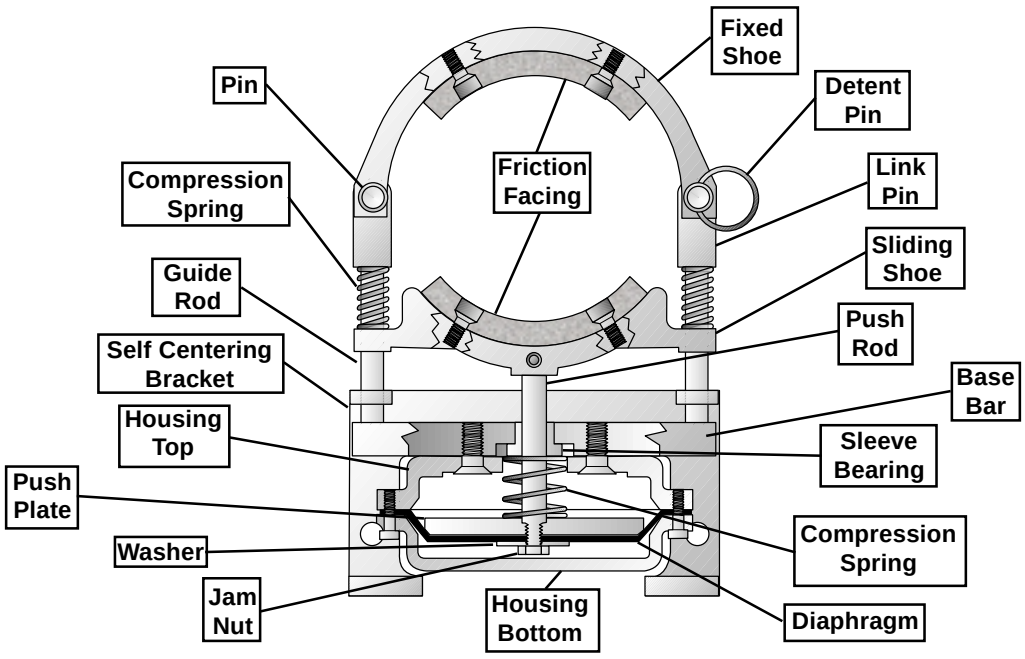

FIGURE 3

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PARTS REPLACEMENT

FRICTION FACINGS (ALL MODELS)

1. Pull the Detent Pin (Item 29) and lift the hinged Fixed Shoe (Item 1) to the open position (See Figure 4).

NOTE

The Flat Head Machine Screws (Item 20) are assembled with an anaerobic locking compound. Inserting a properly fitting screwdriver into the head of the Flat Head Machine Screw and striking the end of the screwdriver with a hammer will break the crystalline structure of the locking compound and allow removal of the Flat Head Machine Screw. Never use an impact wrench to remove the Flat Head Machine Screws.

2. Remove the Flat Head Machine Screws (Item 20) from the hinged Fixed Shoe (Item 1) and the Sliding Shoe (Item 2); then, remove the Friction Facings (Item 3) from the hinged Fixed Shoe and Sliding Shoe (See Figure 4).

3. Using new Flat Head Machine Screws (Item 20), secure the new Friction Facings (Item 3) to the hinged Fixed Shoe (Item 1) and the Sliding Shoe (Item 2) (See Figure 4).

4. Tighten the Flat Head Machine Screws (Item 20) to 26 In. Lbs. [2.9 N•m] torque (See Figure 4).

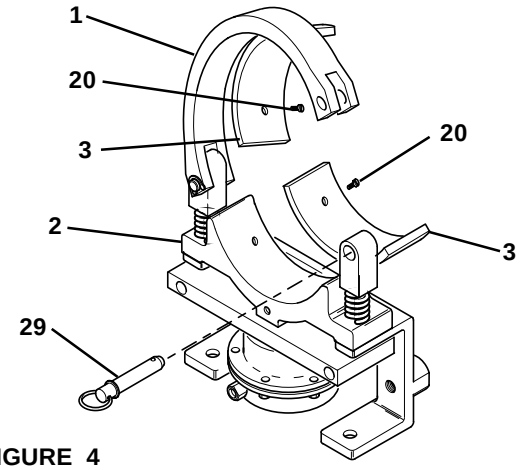

FIGURE 4

COMPRESSION SPRINGS (8K AND 12K BRAKE)

1. Pull the Detent Pin (Item 29) (See Figure 5).

2. Remove one Cotter Key (Item 28); then, remove the Pin (Item 27) (See Figure 5).

3. Lift the hinged Fixed Shoe (Item 1) off the Link Pins (Items 23 and 24); then remove the Link Pins (See Figure 5).

4. Remove the old Compression Springs (Item 22) and install the new Compression Springs (See Figure 5).

5. Reinstall the Link Pins (Items 23 and 24) and position the hinged Fixed Shoe (Item 1) in place on the Link Pins (See Figure 5).

6. Slide the Pin (Item 27) through the hinged Fixed Shoe (Item 1) and one Link Pin (Item 24); then, reinstall the Cotter Key (Item 28) removed in Step 2) (See Figure 5).

7. Close the hinged Fixed Shoe (Item 1) and install the Detent Pin (Item 29) (See Figure 5).

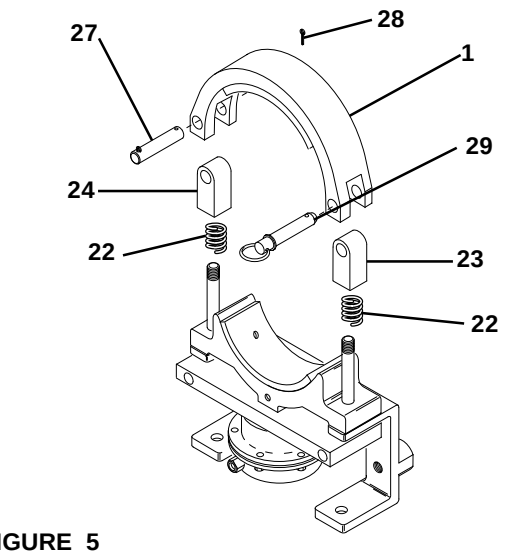

FIGURE 5

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COMPRESSION SPRINGS (4K BRAKE)

1. Pull the Detent Pin (Item 29) (See Figure 6).

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 one Retaining Ring (Item 28); then, remove the Pin (Item 27) (See Figure 6).

3. Lift the hinged Fixed Shoe (Item 1) off the Link Pins (Item 23); then remove the Link Pins (See Figure 6).

4. Remove the old Compression Springs (Item 22) and install the new Compression Springs (See Figure 6).

5. Reinstall the Link Pins (Item 23) and position the hinged Fixed Shoe (Item 1) in place on the Link Pins (See Figure 6).

6. Slide the Pin (Item 27) through the hinged Fixed Shoe (Item 1) and one Link Pin (Item 23); then, reinstall the Retaining Ring (Item 28) removed in Step 2) (See Figure 6).

7. Close the hinged Fixed Shoe (Item 1) and install the Detent Pin (Item 29) (See Figure 6).

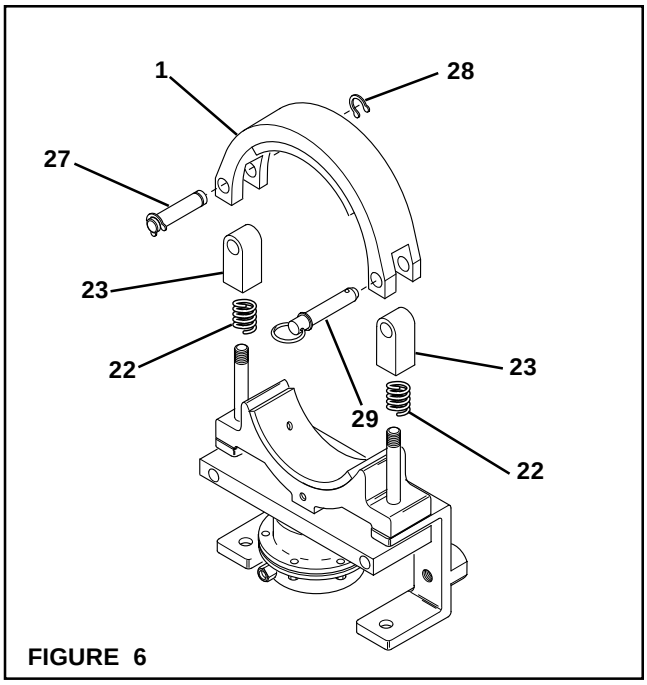

FIGURE 6

DIAPHRAGM AND COMPRESSION SPRING (ALL MODELS)

1. Remove the Socket Head Cap Screws (Item 18) and Hex. Nuts (Item 19) securing the Top Housing (Item 15) to the Bottom Housing (Item 5) (See Figure 7).

2. Remove the Bottom Housing (Item 5); then, remove the Hex. Head Jam Nut (Item 11), Washer (Item 10), Diaphragm (Item 9), Push Plate (Item 7), and Compression Spring (Item 8) (See Figure 7).

NOTE

Inspect the Compression Spring (Item 8) for signs of fatigue or cracking. If the Compression Spring shows signs of fatigue or cracking it must be replaced (See Figure 6).

3. Reinstall the Compression Spring (Item 8) (See Figure 7).

4. Reinstall the Push Plate (Item 7) and Diaphragm (Item 9) (See Figure 7).

5. Reinstall the Washer (Item 10) and Hex. Head Jam Nut (Item 11); then, seal the Hex. Head Jam Nut (Item 11) to the Push Rod (Item 6), using an anaerobic single-compound adhesive (See Figure 7).

6. Using the Socket Head Cap Screws (Item 18), secure the Bottom Housing (Item 5) to the Top Housing (Item 15); then, tighten them to 75 In. Lbs. [8.5 N•m] torque (See Figure 7).

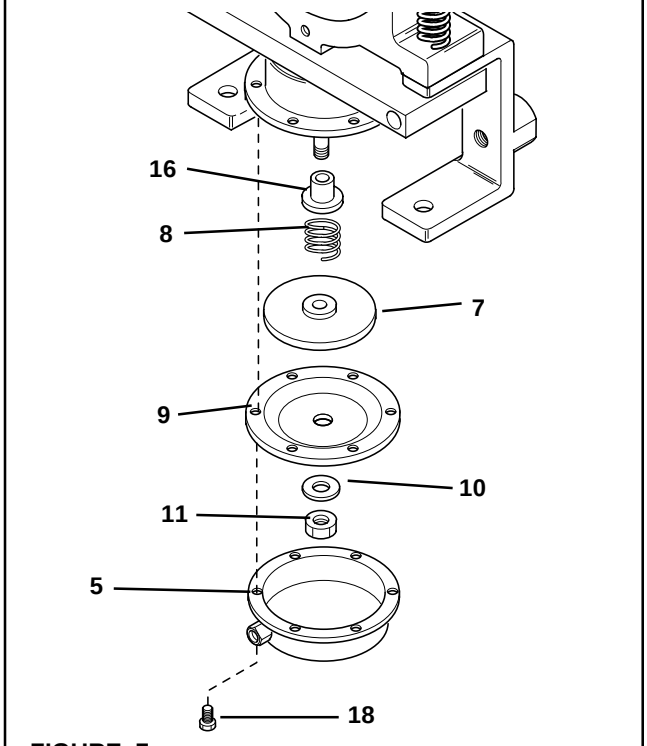

FIGURE 7

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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

8K AND 12K BRAKES

ITEM	DESCRIPTION	QTY
1	Fixed Shoe	1
2	Sliding Shoe	1
3	Friction Facing (8K Brake)	4
3	Friction Facing (12K Brake)	6
4	Base Bar	1
5	Housing Assembly (Bottom)	1
6	Push Rod	1
7	Push Plate	1
8	Compression Spring	1
9	Diaphragm	1
10	Flat Washer	1
11	Hex Head Jam Nut	1
13	Set Screw	1
14	Self Centering Bracket	1
15	Housing (Top)	1
16	Sleeve Bearing	1
18	Socket Head Cap Screw	6
20	Flat Head Machine Screw (8K Brake)	8
20	Flat Head Machine Screw (12K Brake)	12
21	Guide Rod	2
22	Compression Spring	2
23	Link Pin	1
24	Link Pin	1
26	Hex. Head Bolt	2
27	Pin	1
28	Cotter Pin	2
29	Detent Pin	1
30	Flat Head Screw	2

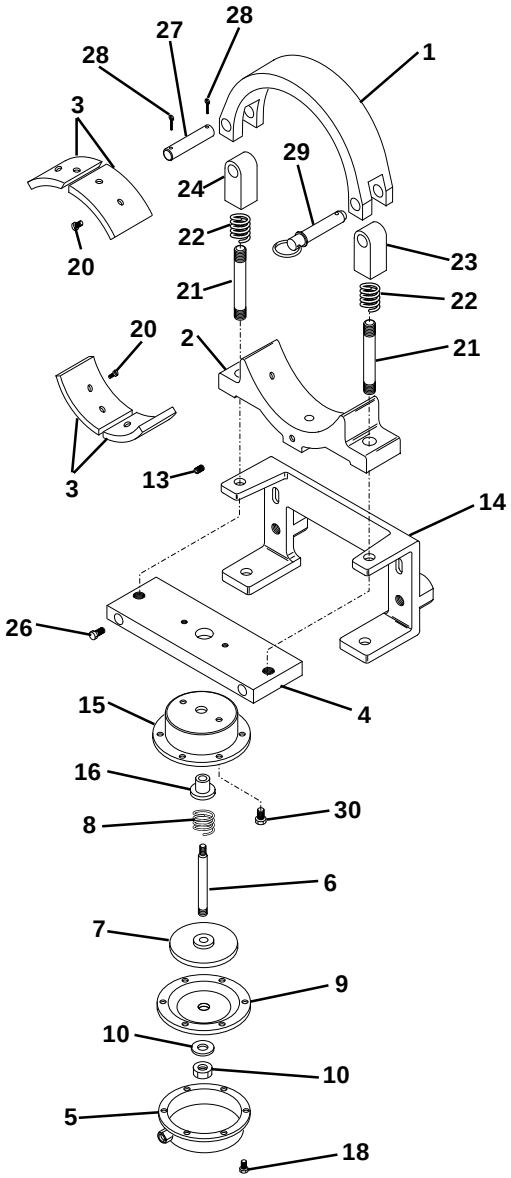

FIGURE 8

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4K BRAKE

ITEM	DESCRIPTION	QTY
1	Fixed Shoe	1
2	Sliding Shoe	1
3	Friction Facing (4K Brake)	2
4	Base Bar	1
5	Housing Assembly (Bottom)	1
6	Push Rod	1
7	Push Plate	1
8	Compression Spring	1
9	Diaphragm	1
10	Flat Washer	1
11	Hex Head Jam Nut	1
13	Set Screw	1
14	Self Centering Bracket	1
15	Housing (Top)	1
16	Sleeve Bearing	1
18	Socket Head Cap Screw	6
20	Flat Head Machine Screw 4K Brake)	4
21	Guide Rod	2
22	Compression Spring	2
23	Link Pin	2
26	Hex. Head Bolt	2
27	Pin	1
28	Retaining Ring	2
29	Detent Pin	1
30	Flat Head Screw	2

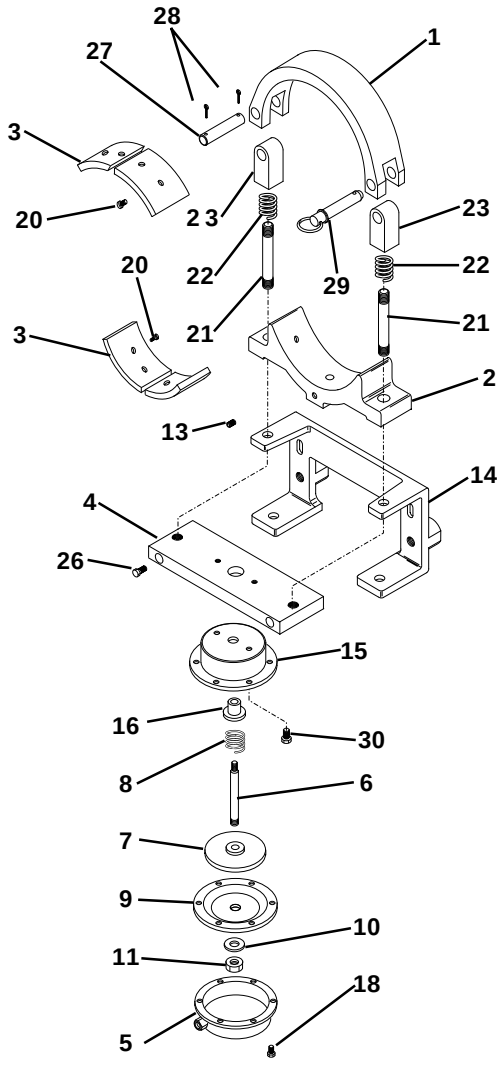

FIGURE 9

ACCESSORIES

BRAKE DRUMS

DESCRIPTION	BORE	PROD. NO.
Drum 4 In. [101.6 mm]	no bore	843600
Drum 4 In. [101.6 mm]	1 In. [25.4 mm]	844000
Drum 8 In. [203.20 mm]	no bore	845300
Drum 12 In. [304.80 mm]	no bore	845600

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WARRANTY

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.

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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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560 Oak Grove Parkway
Vadnais Heights, MN 55127

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Fax: 651.286.1099
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