nexen®

AIR CHAMP® PRODUCTS

User Manual

Tapered Bore Brake

Models T-1200 and T-1400

FORM NO. L-21091-B-1103

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.

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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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INSTALLATION

NOTE: Refer to Figure 1.

CAUTION

Do not flange mount T Brakes. Bearing preload will result after bushing is installed and premature bearing failure will ensue.

1. Remove any dirt, grease, or foreign material from the Friction Disc Hub (Item 1) bore and the tapered surfaces of the Q.D. Bushing.

NOTE: Do not use lubricants when installing Q.D. Bushing.

Do not strike Q.D. Bushing to "set" it in the bore of the Friction Disc Hub.

2. Slide Q.D. Bushing into the bore of the Friction Disc Hub (Item 1).

WARNING: Do not install bolts into the threaded holes of the Q.D. Bushing. The threaded holes in the Q.D. Bushing are only used for removal of the Q.D. Bushing.

3. Insert cap screws into Q.D. Bushing, aligning them with the taped holes in the Friction Disc Hub (Item 1).

4. Position T Brake on the shaft.

NOTE: There should be an $^{1}/_{8}$-$^{1}/_{4}$ inch [3.2 -6.4mm] gap between the Q.D. Bushing flange and the Friction Disc Hub after the cap screws have been tightened to the recommended torque.

Runout is minimized if a Dial Indicator is used as the Q.D. Bushing cap screws are tightened. Place contact tip of Dial Indicator on smooth surface of the Friction Disc Hub (Item 1) to measure runout. Runout on this surface must not exceed 0.005 [0.13 mm] TIR when cap screws are tightened.

5. Alternately and evenly tighten Q.D. Bushing cap screws to torque recommended in Table 1.

NOTE: Keep torque pin as short as possible.

6. Secure the Air Chamber (Item 4) to prevent rotation and take up brake torque. A torque pin slot is provided in the Air Chamber.

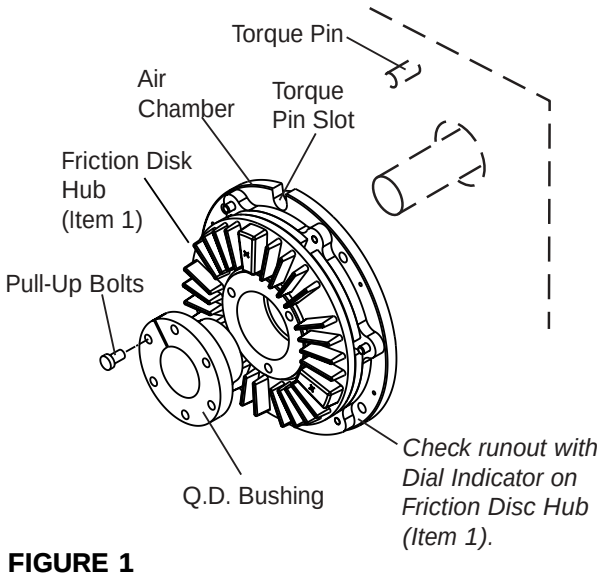

FIGURE 1

TABLE 1

Model	Bushing Type	Maximum Bore (Std. depth Keyway)	Pull-Up Bolt Tightening Torque
T 1200	E	2.750 in [69.85 mm]	60.0 ft-lb [81.0 Nm]
T 1400	F	3.50 in [82.55 mm]	75.0 ft-lb [101.7 Nm]

AIR CONNECTIONS

NOTE: Do not use rigid pipe or tubing when making air line connections. Align the air inlet port to the six o'clock down position to allow condensation in the air chamber to drain out of the air chamber.

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 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 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 Nexen 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.

TROUBLESHOOTING

Symptom	Probable Cause	Solution
Failure to engage.	Air not being exhausted due to a control valve malfunction.	Replace the control valve.
	Internal contamination or corrosion.	Align the exhaust port to the six o'clock down position to allow condensation to drain out of the exhaust port.
Failure to disengage.	Broken Compression Springs.	Replace the Compression Springs.
	Low or lack of air pressure.	Check for control valve malfunction and replace it if necessary.
		Check for air leaks in the air lines and around the O-rings Seals. Replace the air lines or O-ring Seals if necessary.
	Internal contamination or corrosion.	Align the exhaust port to the six o'clock down position to allow condensation to drain out of the exhaust port.
Loss of torque.	Worn or dirty Friction Facings.	Replace the Friction Facings.

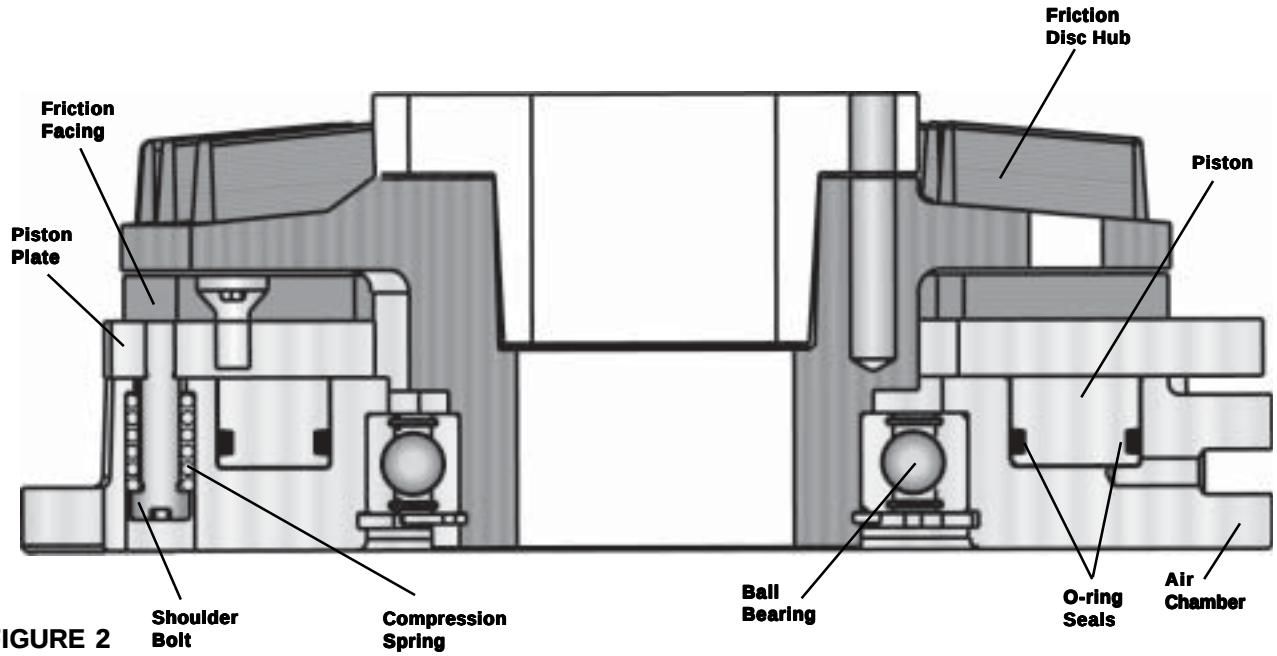

FIGURE 2

FRICTION FACINGS

NOTE: Refer to Figure 3.

1. Align the holes in the Friction Disc Hub (Item 1) with the Machine Screws (Item 14) holding the Friction Facing (Item 5).
2. Remove the old Machine Screws (Item 14).
3. Remove the old Friction Facings (Item 5).
4. Install the new Friction Facings.
5. Secure the new Friction Facings (Item 5) using the new Machine Screws with locking patch (Item 14).
6. Tighten the new Machine Screws to the recommended torque (See Table 2).

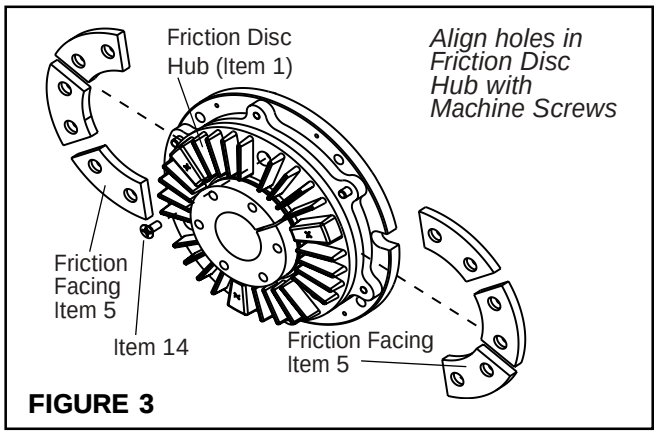

FIGURE 3

TABLE 2

Model	Tightening Torques
T 1200	72 in-lb [8.0 Nm]
T 1400	

BEARING AND 0-RING SEALS

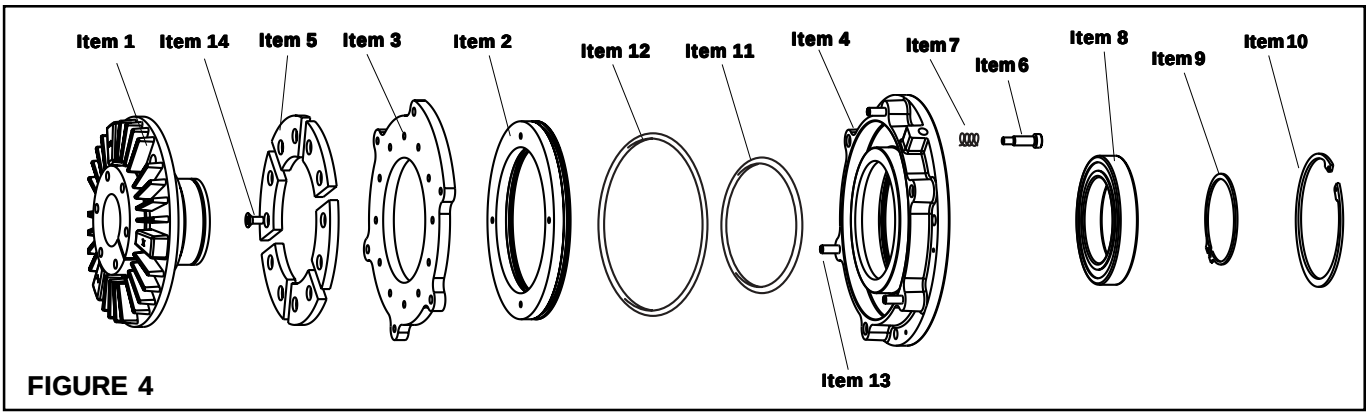

FIGURE 4

NOTE: Refer to Figure 4.

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 the Retaining Ring (Item 9).
2. Press the Friction Disc Hub (Item 1) out of the Ball Bearing (Item 8).
3. Remove the Retaining Ring (Item 10).
4. Press the old Ball Bearing (Item 8) out of the Air Chamber (Item 4).

WARNING: The Shoulder Bolts (Item 6) are spring loaded. Always wear safety goggles when working with spring or tension loaded fasteners or devices.

5. Alternately and evenly remove the three old Shoulder Bolts (Item 6) and Compression Springs (Item 7).
6. Separate the Piston Plate (Item 3) and split Friction Facing (Item 5) from the Air Chamber (Item 4).
7. Remove the Piston (Item 2) from the Air Chamber (Item 4).

(continued...)

PARTS REPLACEMENT (continued...)

8. Remove the old O-ring Seals (Items 11 and 12) from the Piston (Item 2).

9. Clean the bearing bore of the Air Chamber (Item 4) with solvent to remove all old Loctite® residue.

10. Apply an adequate amount of Loctite® 680 to evenly coat the O.D. of the new Ball Bearing (Item 8) and press the new Ball Bearing into the Air Chamber (Item 4).

11. Reinstall the Retaining Ring (Item 10).

12. Clean the o-ring grooves of the Piston (Item 2) and o-ring contact surfaces of the Air Chamber (Item 4); then, lubricate the new O-ring Seals (Item 11 and 12) and the o-ring grooves and contact surfaces of the Piston and Air Chamber with a thin film of fresh o-ring lubricant.

13. Install the new O-ring Seals (Items 11 and 12) onto the Piston (Item 2).

NOTE: Avoid pinching the O-ring Seals when assembling the Piston and Air Chamber.

14. Slide the Piston (Item 2) into the Air Chamber (Item 4).

15. Align the pins on the Air Chamber (Item 4) with the holes in the Piston Plate (Item 3) and slide the Piston Plate and split Friction Facing (Item 5) onto the Air Chamber.

16. Apply Loctite® 242 to the threads of the three new Shoulder Bolts (Item 6) and install the new Shoulder Bolts and new Compression Springs (Item 7).

17. Alternately and evenly tighten the three new Shoulder Bolts (Item 6) to the recom-mended torque (See Table 3).

18. Supporting the inner race of the Ball Bearing (Item 8), press the Friction Disc Hub (Item 1) into the Ball Bearing.

19. Reinstall the Retaining Ring (Item 9).

TABLE 3

Model	Bolt Size	Tightening Torques
T 1200	$^3/_8$ - 16	585 in-lb [66 Nm]
T 1400		

REPLACEMENT PARTS LIST

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.

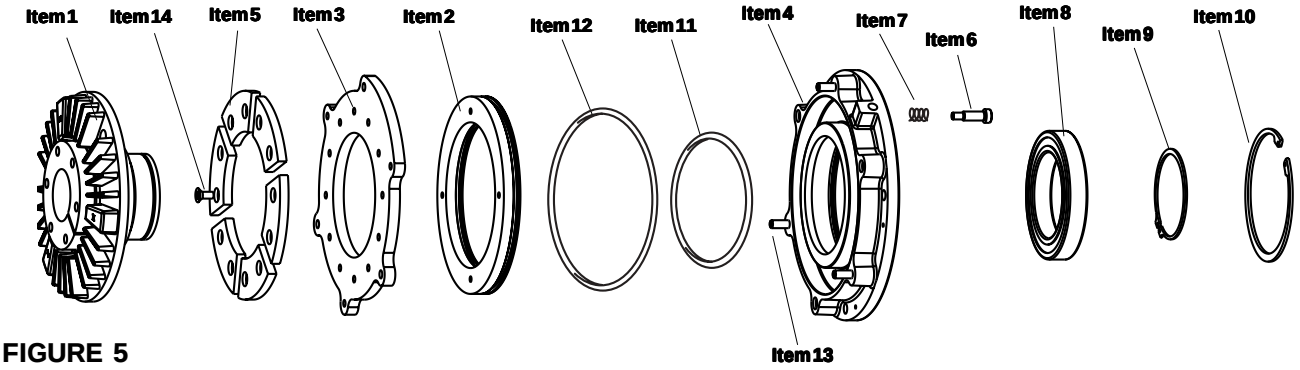

FIGURE 5

ITEM	DESCRIPTION	QTY
1	Friction Disc Hub	1
2	Piston	1
3	Piston Plate	1
4[3]	Air Chamber	1
5[2]	Friction Facing	1[4]
6[1]	Shoulder Bolt	3
7[1]	Compression Spring	3

ITEM	DESCRIPTION	QTY
8[1]	Ball Bearing	1
9	Retaining Ring	1
10	Retaining Ring	1
11[1]	O-ring Seal	1
12[1]	O-ring Seal	1
13[3]	Dowel Pin	3
14[2]	Machine Screw	6[5]

[1] Denotes Repair Kit items.
[2] Denotes Facing Kit items.
[3] Order Air Chamber Assembly in place of the Air Cham-ber (Item 4) and Dowel Pin (Item 13) (See Table 4).
[4] There are 6 Friction Facing pieces in the size 1200 models.
[5] There are 8 machine screws in the size1400 and 12 machine screws in the size 1200 models.

FACING AND REPAIR KITS

Product Numbers

Model	LoCo Facing Kit	Standard Facing Kit	HiCo Facing Kit	Repair Kit	Seal Kit
T-1200	822528	822511	822711	822512	822712
T-1400	822529	822521	822722	822522	822721

NOTE: Before ordering new friction facings, determine if your brake uses low coefficient (LoCo), standard or high coefficient (HiCo) friction facings (Consult the color code chart in Figure 3.) Do not change friction facing type without consulting Nexen.

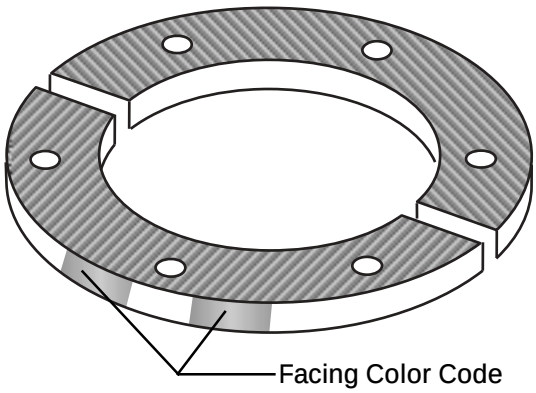

Figure 9
Facing Type

Green: Low Coeficient (LoCo)
Red: Standard
Purple: High Coeficient (HiCo)

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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