






FMCBE 625 and 875 Clutch-Brakes
BISSC Certified
With and Without Locking Key



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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	<div data-bbox="623 558 919 611"> DANGER</div> <p>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, cause injury or death. Comply with all applicable codes.</p>	
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This document is the original, non-translated, version.

Conformity Declaration: In accordance with Appendix II B of CE Machinery Directive (2006/42/EC):

A Declaration of Incorporation of Partly Completed Machinery evaluation for the applicable EU directives was carried out for this product in accordance with the Machinery Directive. The declaration of incorporation is set out in writing in a separate document and can be requested if required.

This machinery is incomplete and must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the applicable provisions of the Directive.

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ISO 9001 Certified

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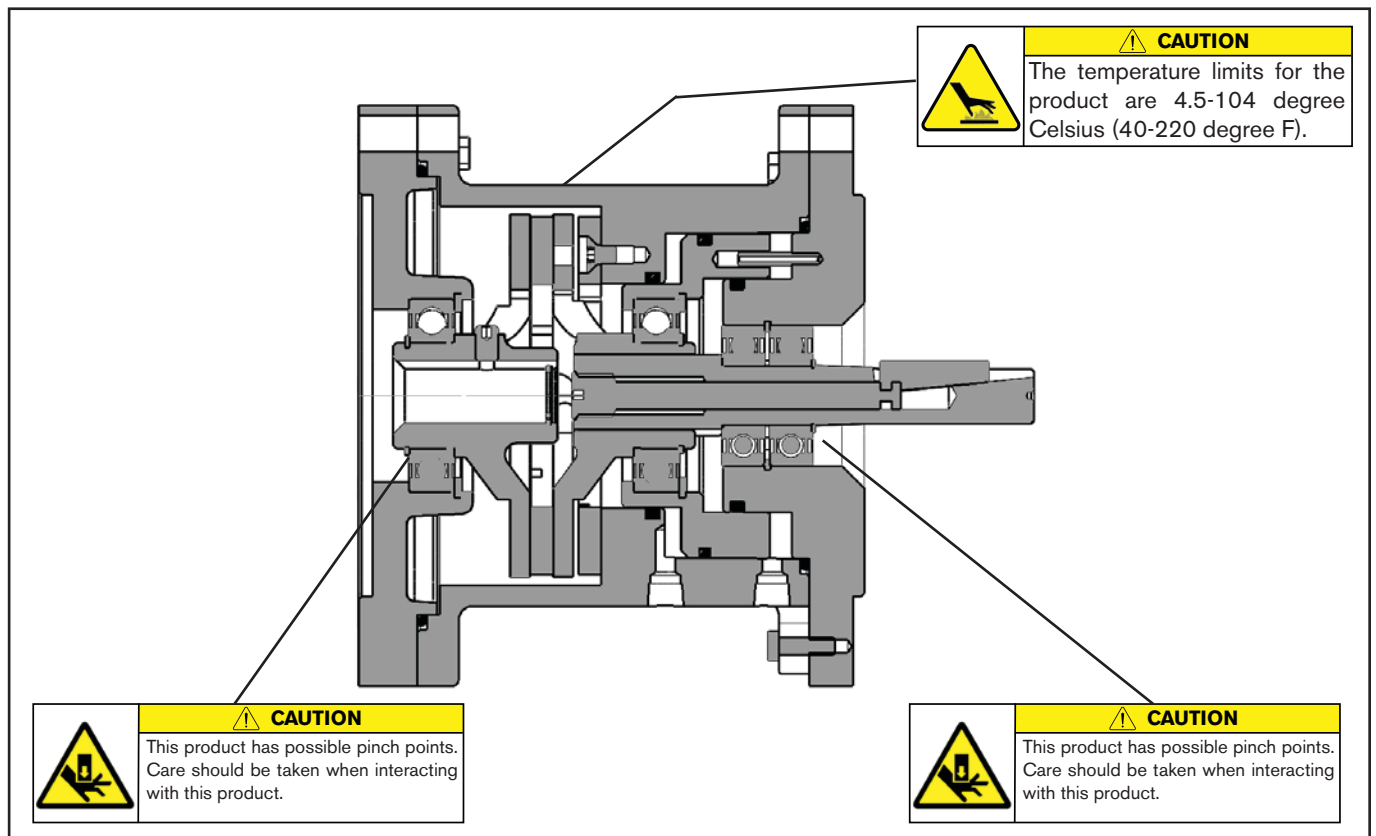
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GENERAL SPECIFICATIONS

Specifications	
Torque	Up to 124 Nm (1100 in-lbs)
Actuation Pressure	1 - 5.5 bar (14.5 - 80 psi)
Service Temperature	4.5 - 104 C (40 - 220 F)
Approximate Weight	Up to 18 kg (40 lbs)

GENERAL SAFETY PRECAUTIONS

	<p>CAUTION</p> <p>Use lifting aids and proper lifting techniques when installing, removing, or placing this product in service.</p>		<p>CAUTION</p> <p>Use appropriate guarding for moving components. Failure to guard could result in serious bodily injury.</p>
	<p>CAUTION</p> <p>Watch for sharp features when interacting with this product. The parts have complex shapes and machined edges.</p>		<p>CAUTION</p> <p>This product has possible pinch points. Care should be taken when interacting with this product.</p>
	<p>WARNING</p> <p>Ensure proper guarding of the product is used. Nexen recommends the machine builder design guarding in compliance with OSHA 29 CFR 1910 "Occupational Safety and Health Hazards".</p>		<p>WARNING</p> <p>This product is capable of emitting a spark if misused, therefore it is not recommended for use in any explosive environment.</p>



INSTALLATION

BISSC CERTIFIED FMCBE WITH LOCKING KEY



CAUTION

This unit is not intended for foot mounting. Flange mount the FMCBE with Locking Key only.

Refer to Figures 1 & 2.

1. Coat the threads of the Bar (Item 28) with Loctite® 242; then, thread the Bar into the Stub Shaft (Item 23) until the end of the Bar is visible in the keyway slot of the Stub Shaft.
2. Apply a thin film of Never-Seez® to Key (Item 25).
3. Place the Key (Item 25) into the keyway of the Stub Shaft (Item 23).

NOTE

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

4. Slide the FMCBE output shaft into the gear reducer.
5. Secure the FMCBE to the gear reducer, using customer supplied socket head cap screws, lock washers, and nuts.

6. Tighten the Bar (Item 28) to the recommended tightening torque (See Table 1).

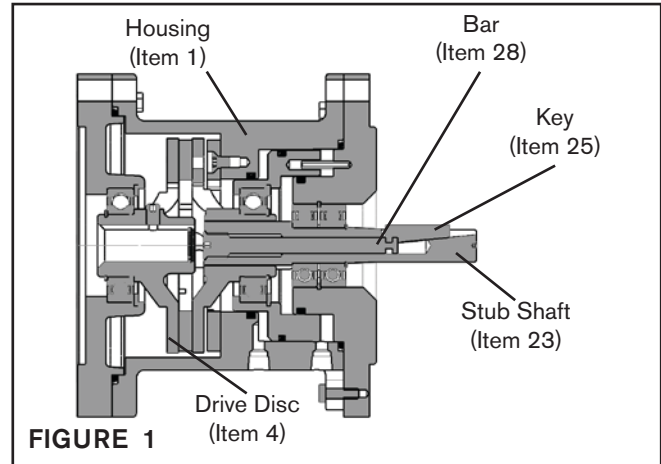


FIGURE 1

Model	Recommended Tightening Torque Item 28
FMCBE-625	6.8 Nm (5 ft-lb)
FMCBE-875	6.8 Nm (5 ft-lb)

TABLE 1

BISSC CERTIFIED FMCBE MOUNTED ON A C-FACED MOTOR

NOTE

Align the air inlet ports to a down position to allow condensation to drain out of the ports.

1. Insert customer supplied key into the motor shaft keyway.
2. Slide the Female Pilot (Item 34) and the Drive Disc (Item 4) onto the motor shaft.
3. Tighten the Set Screw (Item 26) to lock the Drive Disc (Item 4) onto the motor shaft.
4. Coat the O-Ring Seal (Item 33) and the seal contact surface with a film of O-Ring lubricant, then wipe off any excess lubricant.
5. Place the O-Ring Seal (Item 33) onto the Female Pilot O-Ring diameter (Item 34).
6. Slide the FMCBE Assembly onto the Female Pilot (Item 34) and the Drive Disc (Item 4).

NOTE

Use Loctite® 242 on all fasteners.

7. Using four Nexen supplied 0.375-16 x 1.500" Hex. Head Cap Screws (Item 29), secure the Female Pilot, Drive Disc, and Housing (Item 1) to the motor.

8. Tighten the Hex. Head Cap Screws (Item 29) to 15 Ft. Lbs. [20.3 Nm] torque.
9. Using eight Nexen supplied 10-24 x 0.750" Hex. Head Cap Screws (Item 27), secure the FMCBE to the Female Pilot and Drive Disc.
10. Alternately and evenly tighten the eight Hex. Head Cap Screws (Item 27) to 21 In. Lbs. [2.4 Nm] torque.

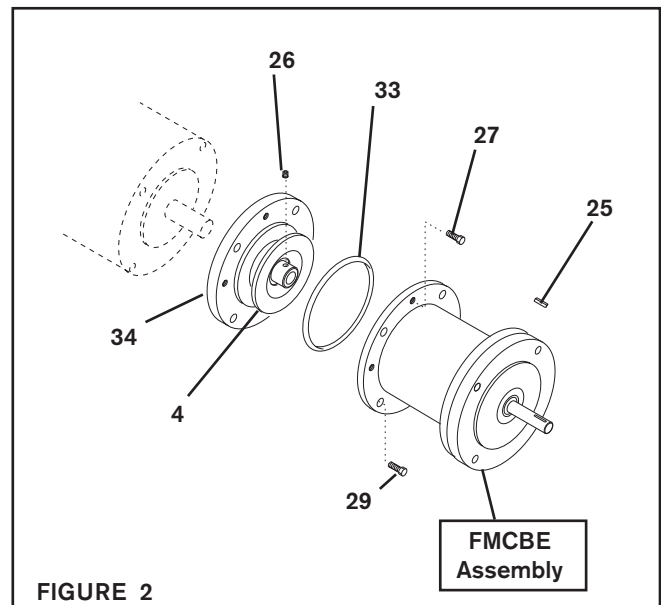


FIGURE 2

BISSC CERTIFIED FMCBE MOUNTED BETWEEN A C-FACED MOTOR AND GEAR REDUCER

Align the air inlet ports to a down position to allow condensation to drain out of the ports.

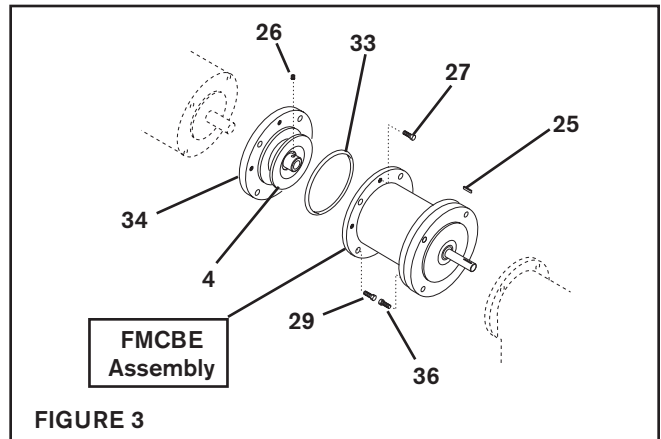
Refer to Figure 3.

1. Insert customer supplied key into the motor shaft keyway.
2. Slide the Female Pilot (Item 34) and the Drive Disc (Item 4) onto the motor shaft.
3. Tighten the Set Screw (Item 26) to lock the Drive Disc (Item 4) onto the motor shaft.
4. Coat the O-Ring Seal (Item 33) and the seal contact surface with a film of O-Ring lubricant, then wipe off any excess lubricant.
5. Place the O-Ring Seal (Item 33) onto the Female Pilot (Item 34) O-Ring diameter.
6. Slide the FMCBE Assembly onto the Female Pilot (Item 34) and the Drive Disc (Item 4).

NOTE
Use Loctite® 242 on all fasteners.

7. Using eight Nexen supplied 10-24 x 0.750" Hex. Head Cap Screws (Item 27), secure the FMCBE Assembly to the Female Pilot (Item 34) and Drive Disc (Item 4).
8. Alternately and evenly tighten the eight Hex. Head Cap Screws (Item 27) to 21 In. Lbs. [2.4 Nm] torque.

9. Using four Nexen supplied 0.375-16 x 1.500" Hex. Head Cap Screws (Item 29), secure the Female Pilot, Drive Disc, and FMCBE Assembly to the motor.
10. Alternately and evenly tighten the four Hex. Head Cap Screws (Item 29) to 15 Ft. Lbs. [20.3 Nm] torque.
11. Slide the FMCBE Assembly input shaft and motor into the gear reducer.
12. Using four supplied 0.375-16 x 1.250" Hex. Head Cap Screws (Item 36), secure the Male Pilot end of the FMCBE Assembly to the gear reducer.
13. Alternately and evenly tighten the four Hex. Head Cap Screws (Item 36) to 15 Ft. Lbs. [20.3 Nm] torque.



OPTIONAL INPUT UNIT

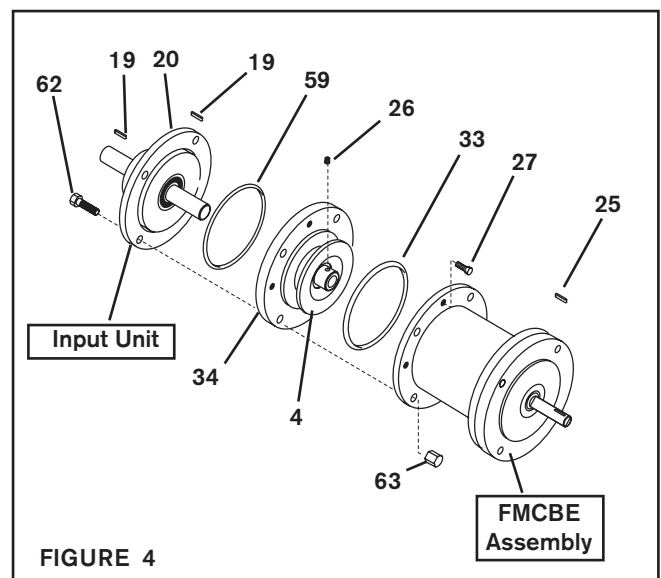
Refer to Figure 4.

1. Coat the O-Ring Seal (Item 59) and the seal contact surface with a film of O-Ring lubricant; then, wipe off any excess lubricant.
2. Place the O-Ring Seal (Item 59) into the seal groove of the Input Unit Bearing Flange (Item 20).
3. Slide the Female Pilot (Item 34) and Drive Disc (Item 4) onto the Input Unit shaft.
4. Tighten the Set Screw (Item 26) to lock the Drive Disc (Item 4) onto the motor shaft.
5. Coat the O-Ring Seal (Item 33) and the seal contact surface with a film of O-Ring lubricant; then, wipe off any excess lubricant.
6. Place the O-Ring Seal (Item 33) onto the seal diameter of the Female Pilot (Item 34).
7. Slide the FMCBE Assembly onto the Female Pilot (Item 34) and the Drive Disc (Item 4).

NOTE
Use Loctite® 242 on all fasteners.

8. Using four Nexen supplied 0.375-16 x 1.750" Hex. Head Cap Screws (Item 62) and Acorn Nuts (Item 63), secure the Female Pilot, Drive Disc, and FMCBE Assembly to the Input Unit (Item 20).

9. Alternately and evenly tighten the four Hex. Head Cap Screws (Item 62) to 15 Ft. Lbs. [20.3 Nm] torque.
10. Using eight Nexen supplied 10-24 x 0.750" Hex. Head Caps Screws (Item 27), secure the FMCBE Assembly to the Female Pilot and Drive Disc.
11. Alternately and evenly tighten the eight Hex. Head Cap Screws (Item 27) to 21 In. Lbs. [2.4 Nm] torque.



OPTIONAL MOUNTING FEET

Refer to Figure 5.

1. Coat the O-Ring Seal (Item 59) and the seal contact surface of the Input Unit with a film of O-Ring lubricant; then, wipe off any excess lubricant.
2. Place the O-Ring Seal (Item 59) into the seal groove of the Input Unit Bearing Flange (Item 20).
3. Slide the Female Pilot Assembly onto the Input Unit shaft.

NOTE
Use Loctite® 242 on all fasteners.

4. Tighten the Set Screw (Item 26) to lock the Drive Disc (Item 4) onto the Input Unit shaft.
5. Coat the O-Ring Seal (Item 33) and the seal contact surface with a film of O-Ring lubricant; then, wipe off any excess lubricant.
6. Place the O-Ring Seal (Item 33) onto the seal diameter of the Female Pilot (Item 34).
7. Slide the FMCBE Assembly onto the Female Pilot Assembly
8. Using eight 10-24 x 0.750" Hex. Head Caps Screws (Item 27), secure the FMCBE Assembly to the Female Pilot Assembly (See Figure 5).
9. Alternately and evenly tighten the eight Hex. Head Cap Screws (Item 27) to 21 In. Lbs. [2.4 Nm] torque.
10. Using two Nexen supplied 0.375-16 x 1.875" Hex. Head Cap Screws (Item 70) and Acorn Nuts (Item 73), secure one optional Mounting Foot (Item 71) to the FMCBE Assembly and Input Unit.

11. Using two Nexen supplied 0.375-16 x 1.750" Hex. Head Cap Screws (Item 76), plug the remaining clearance holes.
12. Alternately and evenly tighten the four Hex. Head Cap Screws (Items 70 and 76) to 15 Ft. Lbs. [20.4 Nm] torque.
13. Using two Nexen supplied 0.375-16 x 1.250" Hex. Head Cap Screws (Item 75) and Acorn Nuts (Item 73), secure the other optional Mounting Foot to the Male Pilot end of the FMCBE Assembly.
14. Using two Nexen supplied 0.375-16 x 1.125" Hex. Head Cap Screws (Item 77), plug the remaining clearance holes.
15. Alternately and evenly tighten the four Hex. Head Cap Screws to 15 Ft. Lbs. [20.3 Nm] torque.

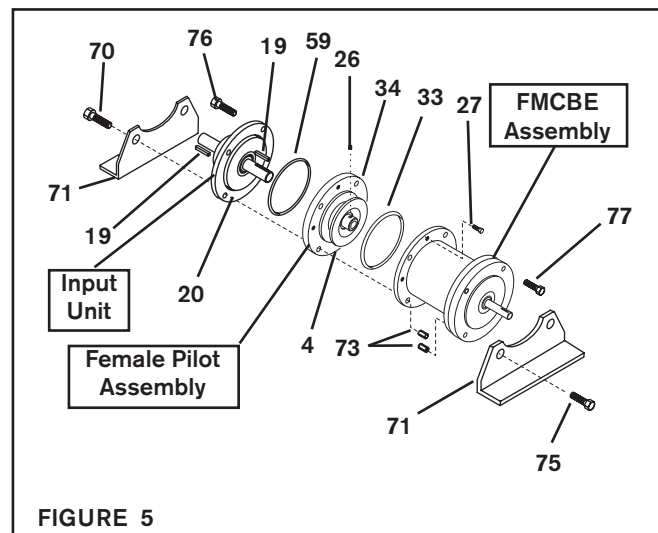


FIGURE 5

LUBRICATION

NOTE

Nexen pneumatically actuated devices require clean, pressure regulated air for maximum performance and life. All seals in Nexen Pneumatically operated devices are lubricated for life and do not require additional lubrication.



However, some customers prefer to use an air line lubricator, which injects oil into the pressurized air, forcing an oil mist into the air chamber. This is acceptable, but care must be taken to ensure once an air mist lubrication system is used, it is continually used over the life of the product as the oil mist may wash free the factory installed lubrication.

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

Synthetic lubricants are not recommended.

Nexen product's bearings are shielded and pre-lubricated, and require no further lubrication.

LUBRICATOR DRIP RATE SETTINGS

	<p> CAUTION</p> <p>These settings are for Nexen supplied lubricators. If you are not using a Nexen lubricator, calibration must follow the manufacturer's suggested procedure.</p>
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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

All Nexen pneumatically actuated devices require clean and dry air, which meet or exceeds ISO 8573.1:2001 Class 4.4.3 quality.

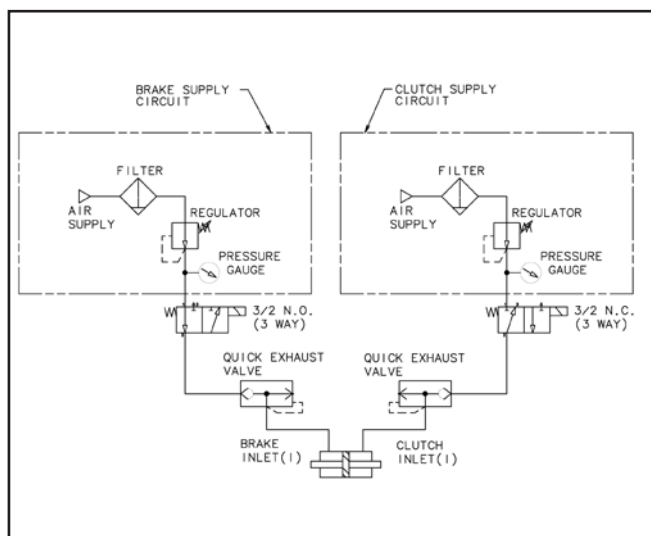
NOTE

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

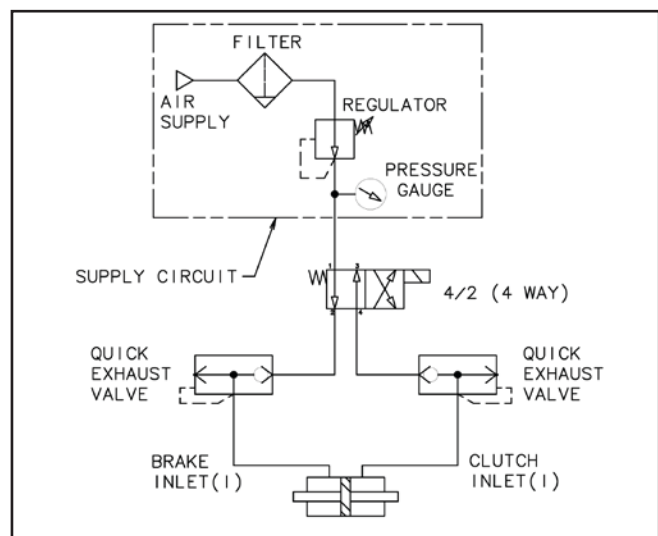
The following are common air supply schemes used with this product. These are examples and not an all-inclusive list. All air circuits to be used with this product must be designed following EN983 guidelines.

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

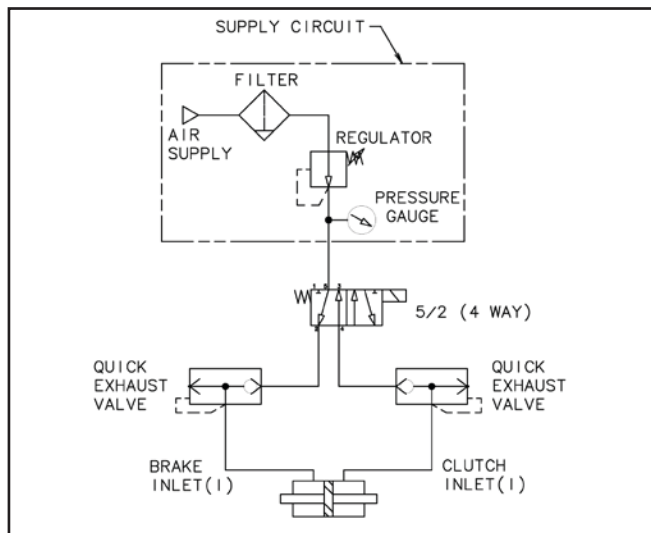
Air Pressure (Gage) Limits
6.9 Bar (100 PSI) Absolute Max.
0 Bar (0 PSI) Absolute Min.



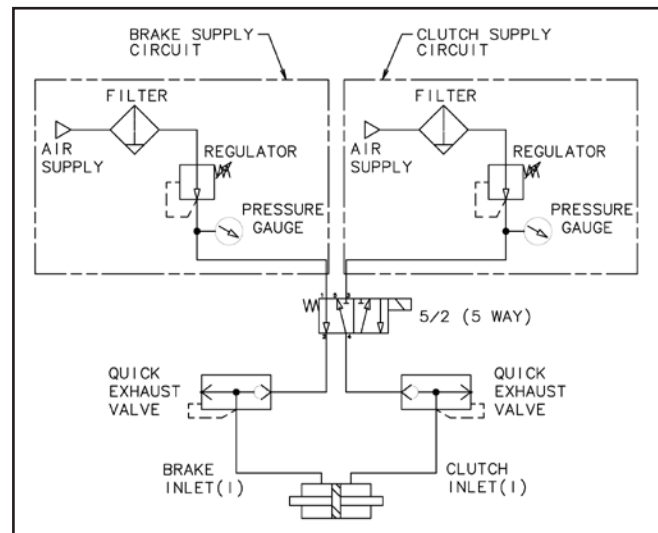
3/2 (3 Way)



4/2 (4 Way)



5/2 (4 Way)

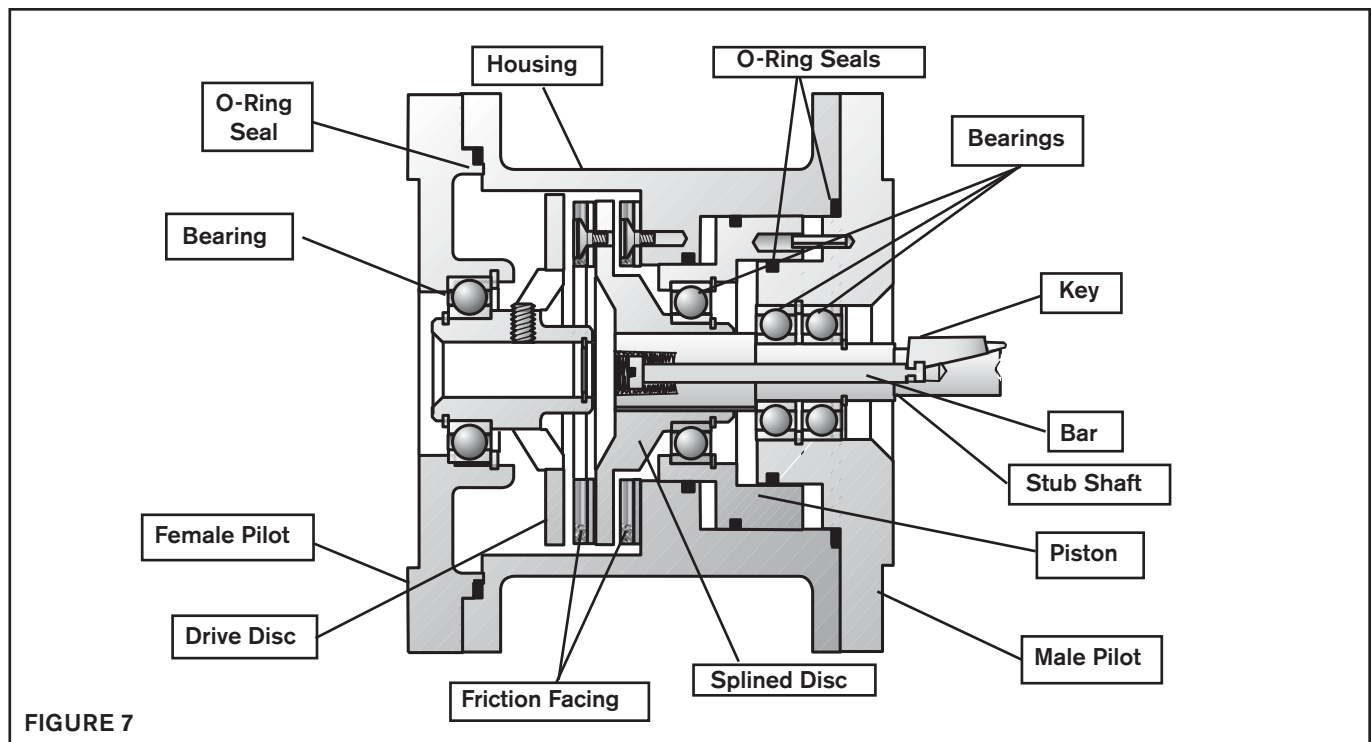


5/2 (5 Way)

FIGURE 6

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	SOLUTION
Failure to engage (Clutch).	Air not getting to the FMCBE due to Control Valve malfunction.	Check for a Control Valve malfunction or low air pressure and replace the Control Valve if necessary.
	Defective O-ring Seals resulting in air leaks.	Replace the O-ring seals.
	Lack of lubrication on Hub Spline.	Lubricate Hub Spline.
Failure to engage (Brake).	Unexhausted air due to a Control Valve malfunction.	Check for a Control Valve malfunction and replace the Control Valve if necessary.
	Defective O-ring Seals resulting in leaks.	Replace the O-ring seals.
	Lack of lubrication on Hub Spline.	Lubricate Hub Spline.
Failure to disengage (Clutch).	Unexhausted air due to a Control Valve malfunction.	Check for a Control Valve malfunction and replace the Control Valve if necessary.
	Lack of lubrication on Hub Spline.	Lubricate Hub Spline.
Failure to disengage (Brake).	Unexhausted air due to a Control Valve malfunction.	Check for a Control Valve malfunction and replace the Control Valve if necessary.
	Lack of lubrication on Hub Spline.	Lubricate Hub Spline.
Loss of torque (Clutch and Brake).	Defective O-ring Seals resulting in air leaks.	Replace the O-ring seals.
	Contaminated Friction Facings.	Replace the Friction Facings.
	Worn Friction Facings.	Replace the Friction Facings.



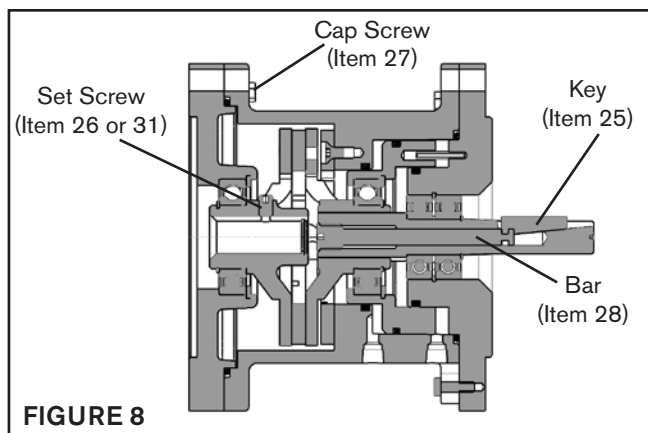
FMCBE WITH LOCKING KEY REMOVAL

Refer to the parts list for details.

1. Model 625: Remove Hex Head Cap Screws (Item 27, 29) that secure the housing (Item 1) FMCBE to the motor or input unit; then loosen Set Screw (Item 26) and slide the motor or input unit off the FMCBE.

Model 875: Remove Hex Head Cap Screws (Item 27) that secure the FMCBE Housing (Item 1) to the Female Pilot (Item 34); then loosen Set Screw (Item 31), remove the Hex Head Cap Screws (Item 29) and remove the Female Pilot from the motor or input unit.

2. Slowly unscrew the Bar (Item 28) one-half turn to release the Key (Item 25).
3. Remove the FMCBE from the gear reducer.



CAUTION

Unscrewing the Bar (Item 28) more than one-half turn will damage the bar.

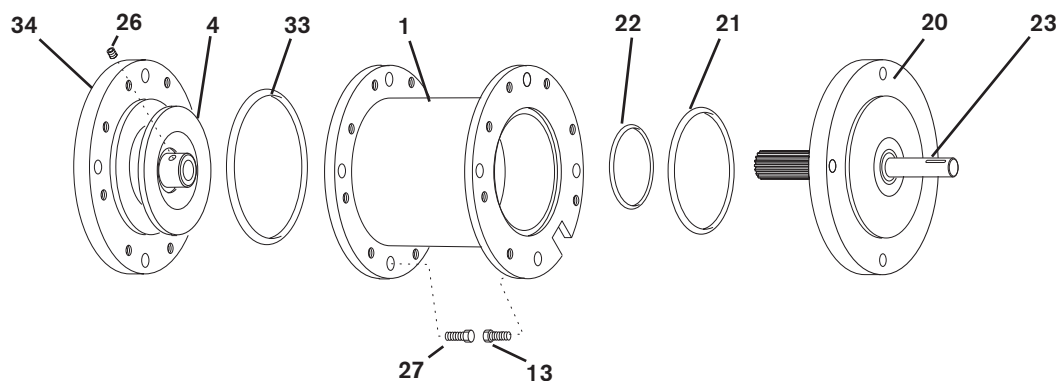
PARTS REPLACEMENT

FMCBE

NOTE

If an Input Unit has been installed, it must be removed prior to servicing the FMCBE.

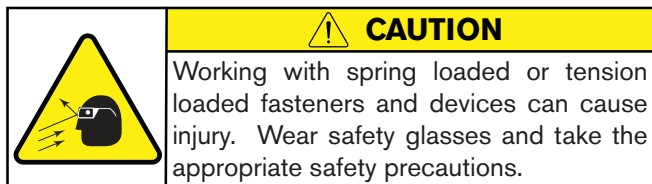
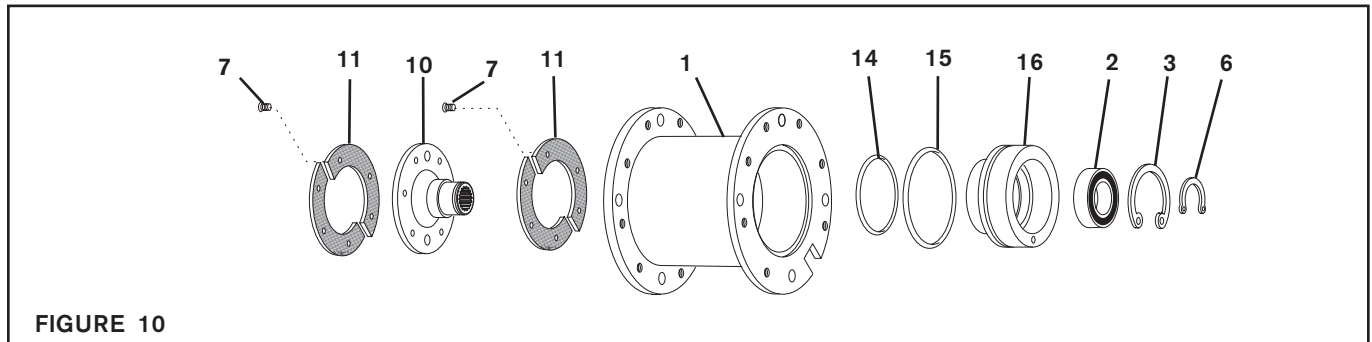
COMPONENT DISASSEMBLY



Refer to Figure 9.

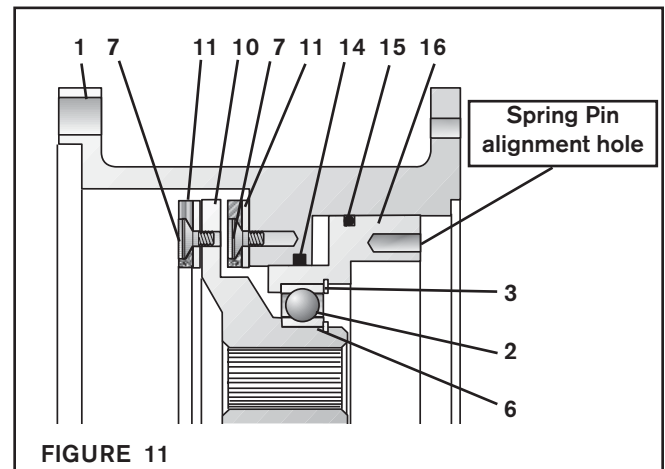
1. Remove the eight Hex. Head Cap Screws (Item 27), Female Pilot (Item 34), Drive Disc (Item 4), and O-Ring Seal (Item 33) from the FMCBE Assembly.
2. Remove the seven Hex. Head Cap Screws (Item 13), Male Pilot (Item 20), Bearings (Item 19), Stub Shaft (Item 23), and O-Ring Seals (Items 21 and 22).

FRICITION FACINGS (Item 11), O-RINGS SEAL (Item 14 and 15), AND BEARING (Item 2)



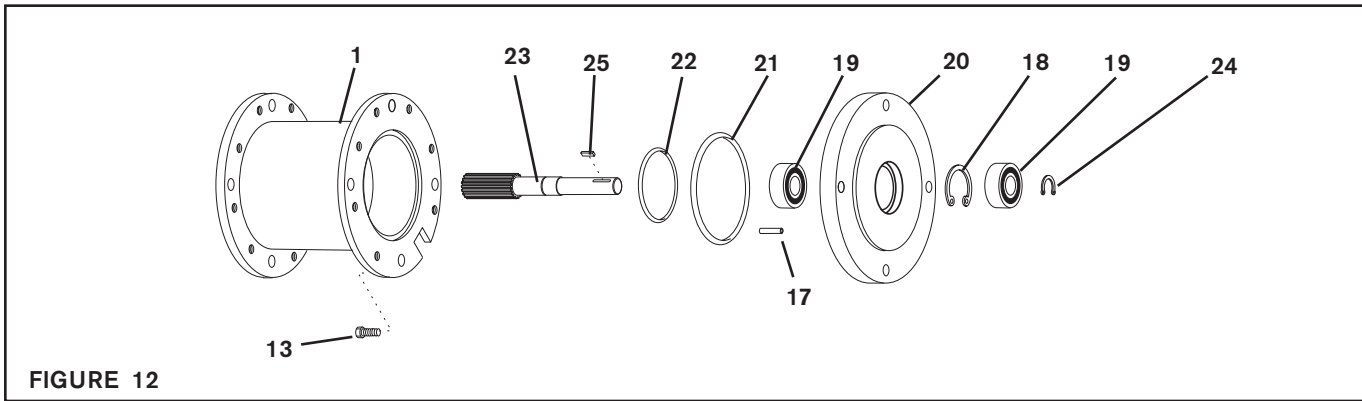
Refer to Figures 10 & 11.

1. Remove the Retaining Ring (Item 6).
2. Supporting the inner flange of the Housing (Item 1), press the Splined Disc (Item 10) out of the Piston (Item 16) and Bearing (Item 2).
3. Slide the Piston (Item 16) and O-Ring Seal (Items 14 and 15) out of the Housing (Item 1).
4. Remove the Retaining Ring (Item 3) from the Piston (Item 16).
5. Supporting the Piston (Item 16), press the Bearing (Item 2) out of the Piston.
6. Supporting the Piston (Item 16) and pressing on the outer race of the new Bearing (Item 2), press the new Bearing into the Piston.
7. Reinstall the Retaining Ring (Item 3).
8. Clean the O-Ring contact surfaces of both the Piston (Item 16) and Housing (Item 1) with fresh safety solvent.
9. Coat the O-Ring contact surfaces of the Piston (Item 16) and Housing (Item 1) with fresh O-Ring lubricant and wipe off the excess lubricant.
10. Coat the new O-Ring Seals (Item 14 and 15) with fresh O-Ring lubricant.
11. Install O-Ring Seal (Item 14) into the Housing (Item 1) and O-Ring Seal (Item 15) onto the Piston (Item 16).
12. Slide the Piston (Item 16) with O-Ring Seal (Item 15) back into the Housing (Item 1) and O-Ring Seal (Item 14).



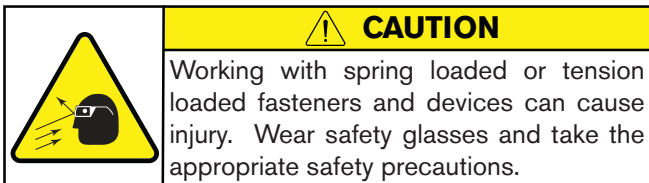
13. Remove the six Machine Screws (Item 7) securing the Split Friction Facings (Item 11) to the Housing (Item 1).
14. Remove the Split Friction Facing (Item 11) from the Housing (Item 1).
15. Using six new Machine Screws (Item 7), secure the new Friction Facing (Item 11) to the Housing (Item 1).
16. Tighten the six Machine Screws (Item 7) to 22 In. Lbs. [2.5 Nm] torque.
17. Remove the six Machine Screws (Item 7) securing the Split Friction Facings (Item 11) to the Splined Disc (Item 10).
18. Remove the Split Friction Facing (Item 11) from the Splined Disc (Item 10).
19. Using six new Machine Screws (Item 7), secure the new Friction Facing (Item 11) to the Splined Disc (Item 10).
20. Tighten the six Machine Screws (Item 7) to 22 In. Lbs. [2.5 Nm] torque.
21. Support the inner race of the Bearing (Item 2) and press the Splined Disc (Item 10) back into the Bearing (Item 2) and Housing (Item 1).
22. Reinstall the Retaining Ring (Item 6).

MALE PILOT BEARINGS (Item 19) AND O-RING SEALS (Item 21 AND 22)



Refer to Figures 12 & 13.

1. Remove the Key (Item 25).

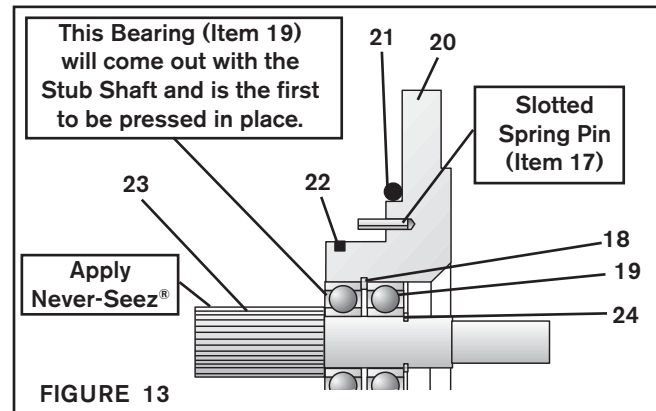


2. Remove the Retaining Ring (Item 24).
3. Press the Stub Shaft (Item 23) out of the Male Pilot (Item 20) and Bearings (Item 19).

NOTE

One Bearing (Item 19) will come out of the Male Pilot (Item 20) on the Stub Shaft (Item 23).

4. Press the Bearing (Item 19) that is still in the Male Pilot (Item 20) out of the Male Pilot.
5. Using a bearing puller, remove the second Bearing (Item 19) from the Stub Shaft (Item 23).
6. Supporting the Male Pilot and pressing on the outer bearing race, press one new Bearing (Item 19) into the Male Pilot until it is seated against the Retaining Ring (Item 18) inside the Male Pilot.
7. Support the inner race of the bearing pressed into the Male Pilot in Step 6 and press the Stub Shaft (Item 23) into the Bearing (Item 19) and Male Pilot (Item 20).
8. Pressing on both the inner and outer races, press the second Bearing (Item 19) onto the Stub Shaft (Item 23) and into the Male Pilot (Item 20).
9. Install the Retaining Ring (Item 24).
10. Remove the O-Rings Seals (Items 21 and 22).
11. Clean the O-Ring Seal contact surfaces of the Housing (Item 1) and Male Pilot (Item 20) with fresh safety solvent.
12. Coat the O-Ring contact surfaces of the Male Pilot (Item 20) and Housing (Item 1) with fresh O-Ring lubricant and wipe off the excess lubricant.



13. Coat the new O-Ring Seals (Item 21 and 22) with fresh O-Ring lubricant.
14. Install the new O-Ring Seals (Item 21 and 22) onto the Male Pilot (Item 20).
15. Coat the splined end of the Stub Shaft (Item 23) with a thin film of Never-Seez®.
16. Align the Slotted Spring Pin (Item 17) in the Male Pilot with the hole in the Piston and carefully slide the Male Pilot Assembly into the Housing and Piston/Splined Disc Assembly.
17. Apply a drop of Loctite® 242 to the threads of the seven Hex. Head Cap Screws (Item 13).
18. Using the seven Hex. Head Cap Screws (Item 13), secure the Male Pilot to the Housing.
19. Alternately and evenly tighten the seven Hex. Head Cap Screws (Item 13) to 21 In. Lbs. [2.4 Nm].
20. **Non-locking key units only:** apply a drop of Loctite® 242 to the Key (Item 25).

WARNING

Do not use Loctite® on Locking Key Units

21. Press the Key (Item 25) into the Stub Shaft (Item 23).

FEMALE PILOT BEARING (Item 2) AND O-RING SEAL (Item 33)

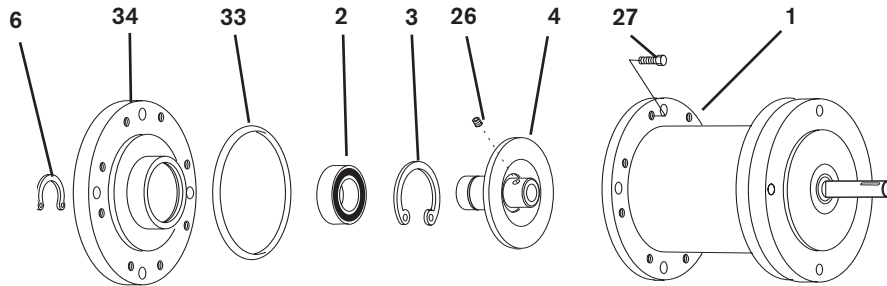
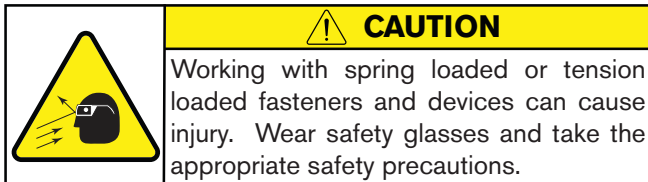


FIGURE 14



Refer to Figures 14 & 15.

1. Remove the Retaining Ring (Item 6) from the Drive Disc (Item 4).
2. Fully supporting the Female Pilot (Item 34), press out the Drive Disc (Item 4).
3. Remove the Retaining Ring (Item 3) from the Female Pilot (Item 34).
4. Press the Bearing (Item 2) out of the Female Pilot (Item 34).
5. Fully supporting the Female Pilot (Item 34) and pressing on the outer bearing race, press the new Bearing (Item 2) into the Female Pilot.
6. Install the Retaining Ring (Item 3) into the Female Pilot (Item 34).
7. Fully supporting the inner race of Bearing (Item 2), press the Drive Disc (Item 4) into the Bearing and Female Pilot.
8. Install the Retaining Ring (Item 6) onto the Drive Disc (Item 4) (See Figures 16 and 17).
9. Clean the O-Ring contact surfaces of the Female Pilot (Item 34) and Housing (Item 1) with fresh safety solvent.

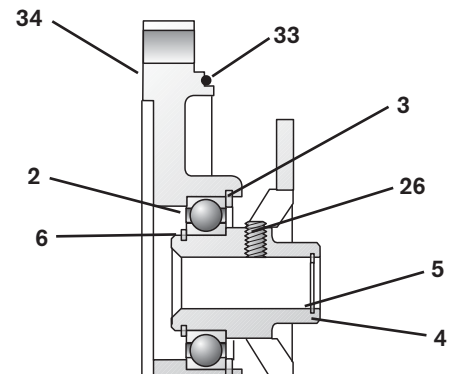


FIGURE 15

10. Coat the O-Ring contact surfaces of the Female Pilot and Housing with fresh O-Ring lubricant and wipe off any excess lubricant.
11. Coat the new O-Ring Seal (Item 33) with fresh O-Ring lubricant and place the new O-Ring onto the Female Pilot.

NOTE

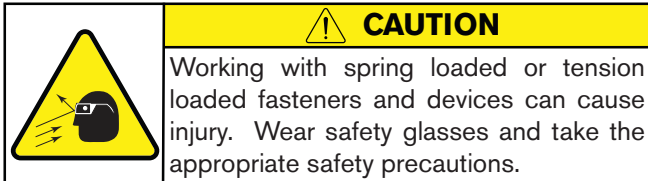
Do not tighten the Hex. Head Cap Screws (Item 27) until the Clutch Brake has been installed on the unit it is controlling.

12. Secure the Female Pilot (Item 34) to the Housing with the eight Hex. Head Cap Screws (Item 27).

INPUT UNIT

Refer to Figures 16 - 18.

1. Remove the eight Hex. Head Cap Screws (Item 27).
2. Remove the four Hex. Head Cap Screws (Item 62) and Acorn Nuts (Item 63).
3. Remove the Female Pilot Assembly, O-Ring Seal (Item 33), and the Input Unit from the FMCBE.
4. Remove the Set Screw (Item 26) and slide the Female Pilot (Item 34) off the Input Unit (Item 20).
5. Remove the O-Ring Seal (Item 59).
6. Remove both Keys (Item 19).

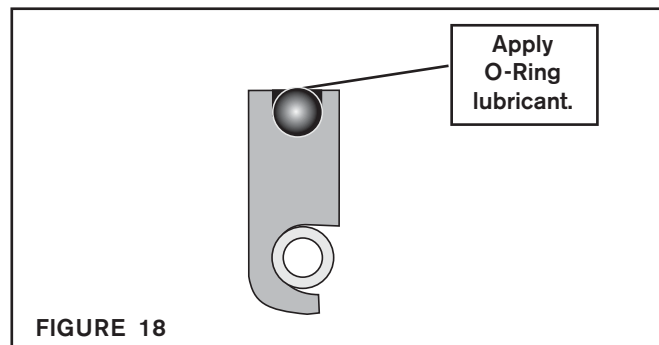
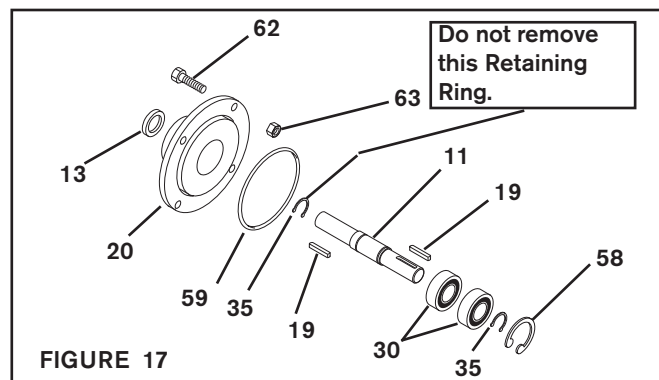
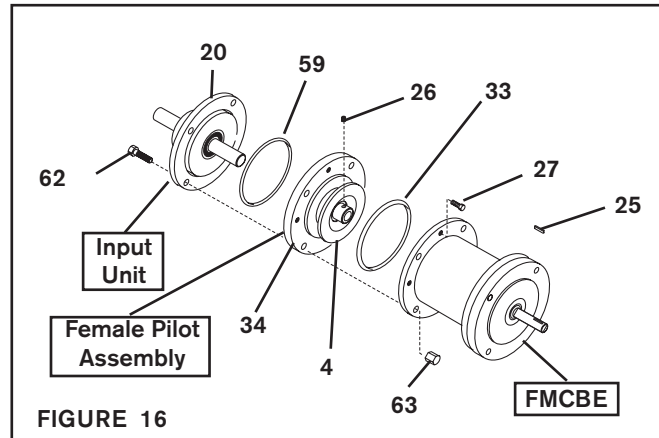


7. Remove the Retaining Ring (Item 58).
8. Supporting the Bearing Flange (Item 20), press the Stub Shaft (Item 11) and Bearings (Item 30) out of the Bearing Flange.
9. Remove one Retaining Ring (Item 35).

NOTE
One Retaining Ring must remain on the Stub Shaft.

10. Press the Stub Shaft (Item 11) out of the Bearings (Item 30).
11. Press the new Bearings (Item 30) onto the Stub Shaft (Item 11) until they are seated against the Retaining Ring (Item 35) on the Stub Shaft.
12. Install the Retaining Ring (Item 35) that was removed from the Stub Shaft.
13. Remove the Variseal™ (Item 13) from the Bearing Flange (Item 20).
14. Supporting the Bearing Flange (Item 20) and pressing on the outer races of Bearings (Item 30), press the Stub Shaft and Bearings into the Bearing Flange until they are seated against the step in the Bearing Flange.
15. Install the Retaining Ring (Item 58).
16. Coat the outer seal of the Variseal™ with a thin film of O-Ring lubricant.
17. Press the Variseal™ with the spring facing out onto the Stub Shaft and into the Bearing Flange.
18. Apply a drop of Loctite® 242 to the Keys (Item 19).
19. Press the Keys (Item 19) into the Stub Shaft (Item 11).

NOTE
After assembly is complete, the Stub Shaft should be rotated and checked for smooth operation. If drag is apparent, move the Stub Shaft in and out to release pressure on the bearing cage and recheck for smooth operation.

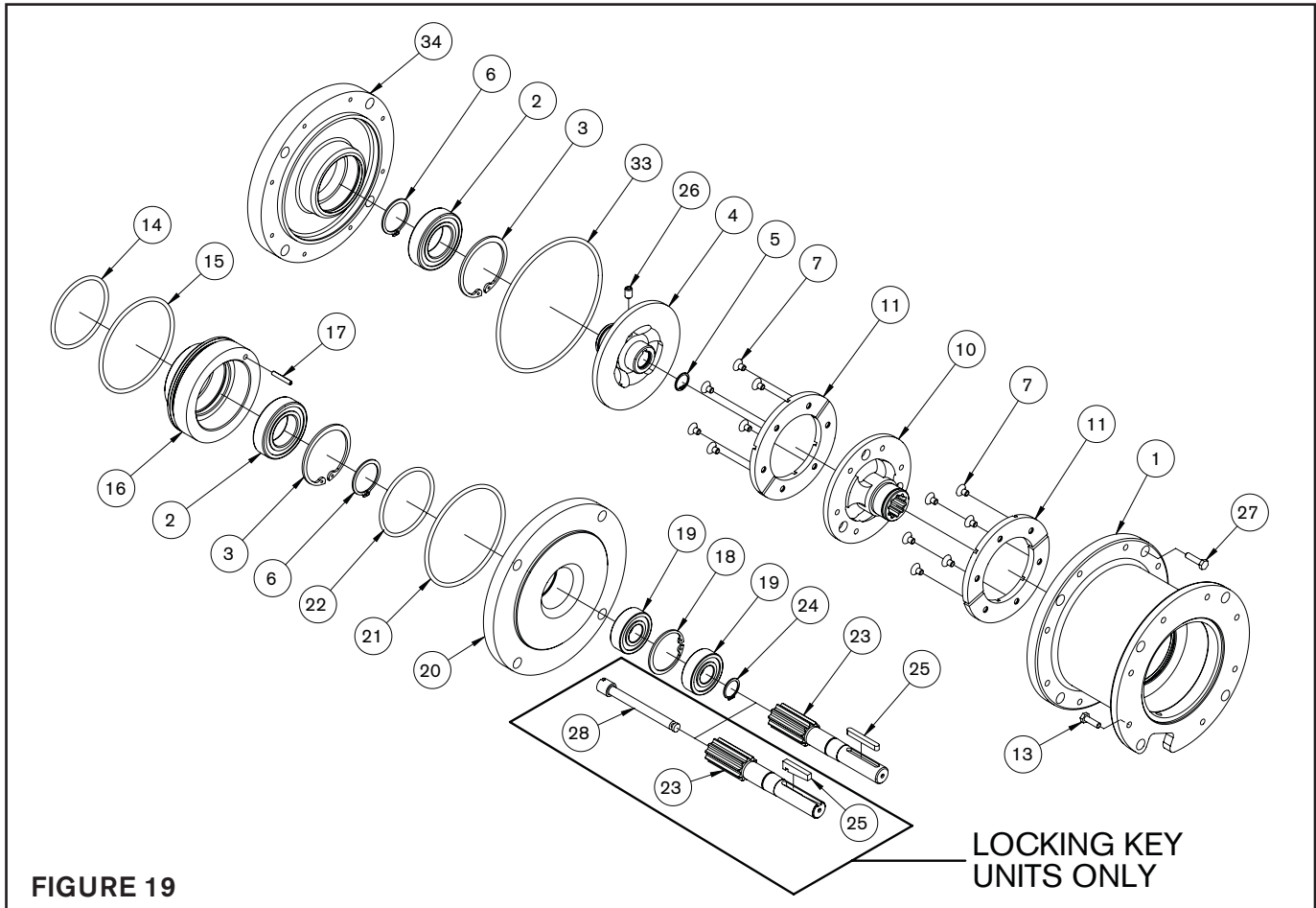


REPLACEMENT PARTS

The Item or “Balloon” Number for all Nexen Products is used for part identification on all Product Parts List, Product Price List, 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.

BISSC CERTIFIED FMCBE



ITEM	DESCRIPTION	QTY
1	Housing	1
2 ^{1,2}	Bearing	2
3	Retaining Ring (Int.)	2
4	Drive Disc	1
5	Retaining Ring (Int.)	1
6	Retaining Ring (Ext.)	2
7 ^{1,2}	Machine Screw	12
10	Splined Disc	1
11 ^{1,2}	Friction Facing (1 Set, Split)	2
13	Hex. Head Cap Screw	8
14 ^{1,2}	O-Ring Seal	1
15 ^{1,2}	O-Ring Seal	1
16	Piston	1
17	Slotted Spring Pin	1
18	Retaining Ring (Int.)	1

¹ Denotes Rebuild Kit item.

² Denotes Friction Facing Kit item.

ITEM	DESCRIPTION	QTY
19 ¹	Bearing	2
20	Male Pilot	1
21	O-Ring Seal	1
22 ^{1,2}	O-Ring Seal	1
23	Stub Shaft	1
24	Retaining Ring (Ext.)	1
25	Key	1
26	Set Screw	1
27	Hex. Head Cap Screw	8
28	Bar (Locking Key Units Only, see Figure 1)	(1)
29	Hex. Head Cap Screw (not shown)	4
33	O-Ring Seal	1
34	Female Pilot	1
36	Hex. Head Cap Screw (not shown)	4

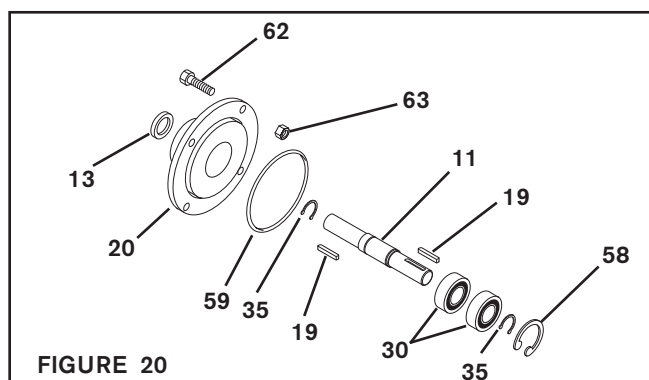
REBUILD AND FRICTION FACING KITS

MODEL	REBUILD KIT	FRICTION FACING KIT
FMCBE-625 BISSC	827252	827253
FMCBE-875 BISSC	827262	827263

INPUT UNIT

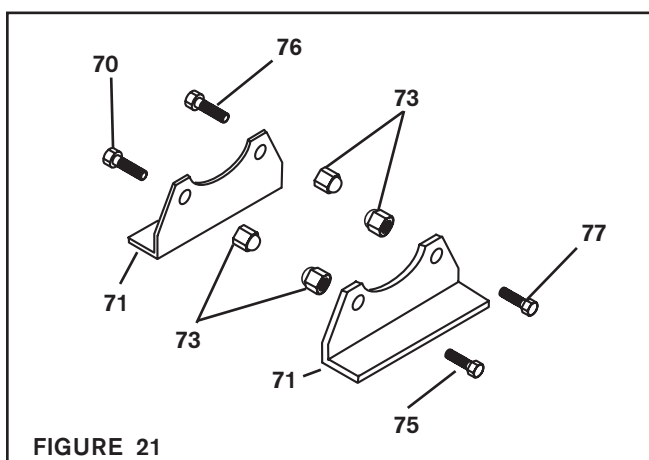
ITEM	DESCRIPTION	QTY
11	Stub Shaft	1
13 ¹	Variseal™	1
19	Key	2
20	Bearing Flange	1
30 ¹	Bearing	2
35	Retaining Ring (Ext.)	2
58	Retaining Ring (Int.)	1
59	O-Ring Seal	1
62	Hex. Head Cap Screw	4
63	Acorn Nut	4

¹ Denotes Repair Kit item.
Repair Kit Product No. 827271



MOUNTING FOOT

ITEM	DESCRIPTION	QTY
70	Hex. Head Cap Screw (3/8-16 x 1.875")	2
71	Mounting Foot	2
73	Acorn Nut	8
75	Hex. Head Cap Screw (3/8-16 x 1.250")	2
76	Hex. Head Cap Screw (3/8-16 x 1.750")	2
77	Hex. Head Cap Screw (3/8-16 x 1.125")	2



WARRANTY

Warranties

Nexen warrants that the Products will (a) be free from any defects in material or workmanship for a period of 12 months from the date of shipment, and (b) will meet and perform in accordance with the specifications in any engineering drawing specifically for the Product that is in Nexen's current product catalogue, or that is accessible at the Nexen website, or that is attached to this Quotation and that specifically refers to this Quotation by its number, subject in all cases to any limitations and exclusions set out in the drawing. 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 for the Buyer for any breach of any warranties provided in connection with this agreement will be, at the election of Nexen: (a) repair or replacement with new, serviceably used, or reconditioned parts or products; or (b) issuance of credit in the amount of the purchase price paid to Nexen by the Buyer for the Products.

Agent's Authority

Buyer agrees that no agent, employee or representative of Nexen has authority to bind Nexen to any affirmation, representation, or warranty concerning the Products other than those warranties expressly set forth herein.

Limitation on 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 damages, 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.

Inspection

Buyer shall inspect all shipments of Products upon arrival and shall notify Nexen in writing, of any shortages or other failures to conform to these terms and conditions which are reasonably discoverable upon arrival without opening any carton or box in which the Products are contained. Such notice shall be sent within 14 days following arrival. All notifications shall be accompanied by packing slips, inspection reports and other documents necessary to support Buyer's claims. In addition to the foregoing obligations, in the event that Buyer receives Products that Buyer did not order, Buyer shall return the erroneously shipped Products to Nexen within thirty (30) days of the date of the invoice for such Products; Nexen will pay reasonable freight charges for the timely return of the erroneously shipped Products, and issue a credit to Buyer for the returned Products at the price Buyer paid for them, including any shipping expenses that Nexen charged Buyer. All shortages, overages and nonconformities not reported to Nexen as required by this section will be deemed waived.

Limitation on Actions

No action, regardless of form, arising out of any transaction to which these terms and conditions are applicable may be brought by the Buyer more than one year after the cause of action has accrued.

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