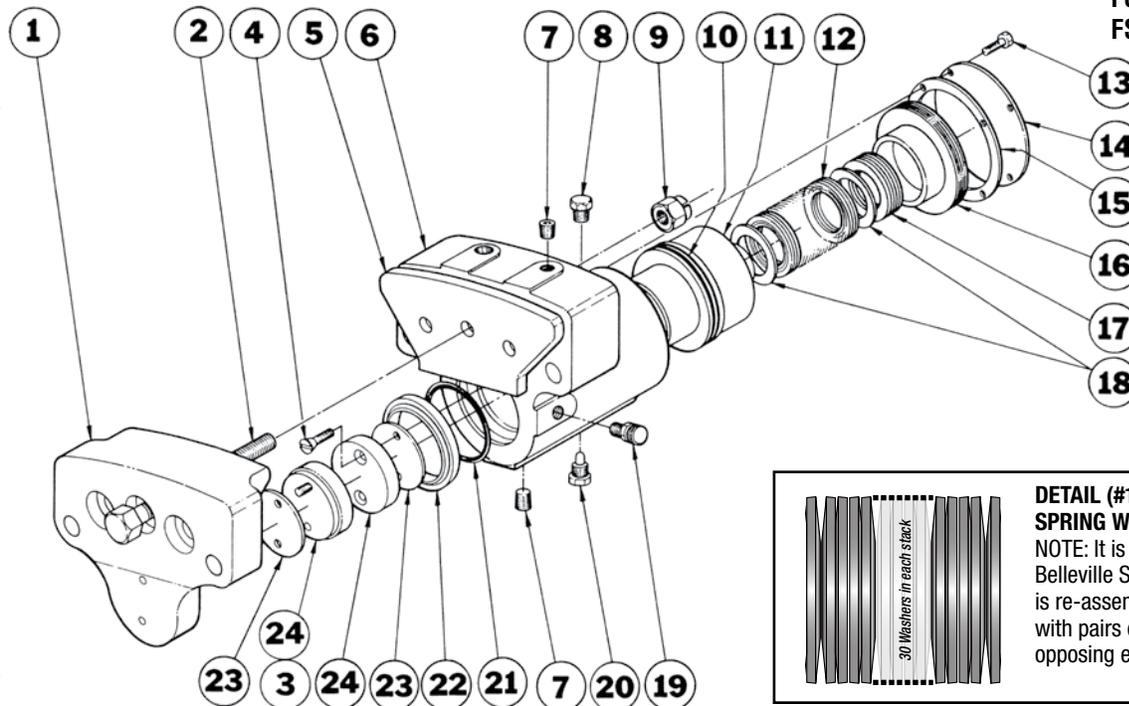


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# SPRING-APPLIED BRAKE FS440

## DUCTILE BRAKE

Models: FS440L 0768-0001  
 FS440E 0768-0002  
 FS440N 0768-0003  
 FS440Q 0768-0004  
 FS440Q 0768-0005



**NOTE:** Torque output from spring applied brakes declines as pucks wear. If brake is used dynamically check brake performance frequently.

### Parts List

ITEM	PART NO.	DESCRIPTION	FS440L	FS440E	FS440N	FS440Q	FS440Q
1.	0768-1013	Dead Side Housing	1	1	1	1	1
2.	0768-1023	Hex Head Bolt, Gr. 8, 4" long	3	3			
	0768-1006	Hex Head Bolt, Gr. 8, 5" long			3	3	3
3.	0768-1018	Flat Head Screw, .625" long	2	2	2	2	2
4.	0768-1002	Flat Head Screw, .500" long	2	2	2	2	2
5.	0769-1009	Spacer, .500" thick			1		
	0769-1010	Spacer, .750" thick				1	
	0769-1011	Spacer, 1.000" thick					1
6.	0768-1000	Live Side Housing	1	1	1	1	1
7.	1014-1065	Pipe Plug	2	2	2	2	2
8.	0768-1022	Breather Plug	1	1	1	1	1
9.	0768-1012	Flexloc Nut	5	5	5	5	5
10.	0769-1038	O-Ring, Buna-N	1	1	1	1	1
11.	0768-9002	Piston	1	1	1	1	1
12.	0768-1017	Belleville Spring Washers	30	30	30	30	30
13.	0768-1029	Hex Head Screw	4	4	4	4	4

ITEM	PART NO.	DESCRIPTION	FS440L	FS440E	FS440N	FS440Q	FS440Q
14.	0768-1008	Cover Plate	1	1	1	1	1
15.	0768-1009	Gasket	1	1	1	1	1
16.	0768-9001	Wear Compensator	1	1	1	1	1
17.	0768-1016	Washer	2	2	2	2	2
18.	0200-1322	Thrust Washer	3	3	3	3	3
19.	0740-1002	Bleeder Valve	1	1	1	1	1
20.	0768-1010	Shear Pin	1	1	1	1	1
21.	0768-1005	O-Ring, Buna-N	1	1	1	1	1
22.	0768-1042	Back-Up Ring, Buna-N	1	1	1	1	1
23.	0769-1008	Spacer, Puck	2				
24.	0768-1001	Puck, Friction	2	2	2	2	2
25.	0768-1040	Back-Up Ring, Buna-N	1	1	1	1	1
	0768-1034	Hex Head Bolt, Gr. 8, 4.5"	2	2			
	0768-1046	Hex Head Bolt, Gr. 8, 5.5"				2	2
	0768-1006	Hex Head Bolt, Gr. 8, 5.0"			2		

**NOTE:** Model number letter suffixes have the following meanings:

"E" indicates the brake is designed to work with a 0.5" (12.7mm) thick disc.

"FS" indicates the brake is spring applied, hydraulically released

"L" indicates the brake is designed to work with a 0.375" (9.53mm) thick disc.

"N" indicates the brake is designed to work with a 1" (25.4mm) thick disc.

"O" indicates the brake is designed to work with a 1.25" (31.8mm) thick disc.

"Q" indicates the brake is designed to work with a 1.50" (38.1mm) thick disc.

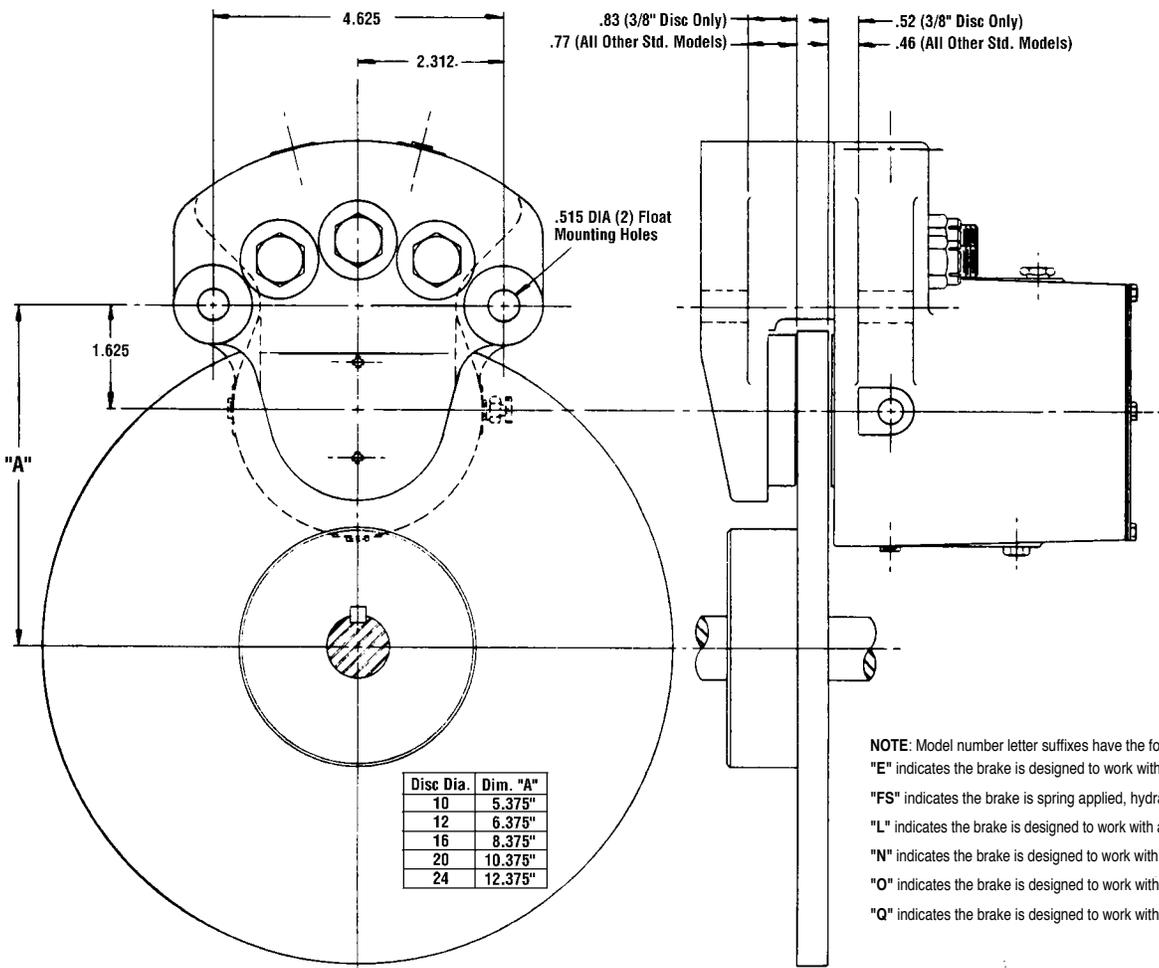
**INSTALLATION**

- WARNING:** The brake is under spring tension. Do not try to remove bolts until spring force is removed from the dead or fixed side.
- This brake caliper is supplied with a manual retraction mechanism. To operate, remove Cover Plate (#14), insert a 1/2-13 UNC hex head bolt with a jam nut into Piston (#11) through the hole provided in the Compensator (#16). Screw jam nut down until it rests on Compensator. Hold the head of the bolt with one wrench and turn the nut with another wrench, clockwise. Movement of retractor will be about .031 of an inch. This is adequate to provide clearance for initial mounting or to provide adequate clearance to free disc to allow the machine to be moved after a hydraulic system failure, if required.
- This brake is also equipped with a Manual Wear Compensator. Such a mechanism allows for the resetting of spring tension after puck wear. Thus the brake can be at or near its maximum braking capacity at all times. To use: release pressure from the brake. Remove the cover plate (#14). Insert a 1/2-inch socket wrench into Compensator (#16). Turn the Compensator clockwise as far as possible, then back off

approximately 1/2 turn. Pressurize the brake. Check braking surfaces to see if the disc is free. Normal clearance per side is .031 inch. If clearance is not sufficient, back off an additional 1/2 turn. Then recheck the clearance.

- The required pressure to release the disc is 1,310 PSI (90.3 bar). The maximum operating pressure is 2,000 PSI (137.9 bar).
- FS440 brake is provided with one (1) Bleeder Valve (#19) and 4 optional bleeder valve locations. After mounting, place the bleeder valve in the port with the highest elevation. Improper bleeding will cause poor release performance.
- The FS440 is a floating mount brake. Mount the brake as shown. All Grade 8 bolts must be torqued to 50 ft-lbs (67.8 N-m). Care must be taken in mounting the brake to be sure puck faces are parallel to the disc.
- Screws (#3 and #4) must be assembled with Loctite® and be torqued to 20 in-lbs (2.26 N-m), when replacing the friction lining.

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