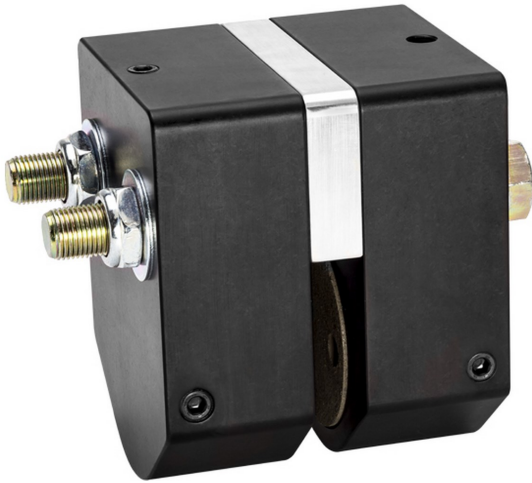


P491DR Series Pneumatic Double Acting Caliper Disc Brakes with Spring Retractable Pistons



491 Series Installation Instructions

- 1- For double-acting models (P491DR) mount brake using the additional length in the two housing bolts.
- 2- During installation mount the brake with the disc centered between the friction pads. There should be approximately .060" gap on each side of disc. Verify that the friction pad faces are mounted parallel to the disc surface. Use shims if required. Tighten nuts and bolts to 40 ft-lbs.
- 3- The disc should be made out of mild steel, stress relieved and ground to a 50-80 RMS finish and be flat within .020" for dynamic applications. The disc surfaces should be clean and free of oils for maximum braking performance.
- 4- Supply clean, dry air to brake. Install air fittings in brake port. Do NOT exceed 200 PSI.

FEATURES:

- Hard-coat Anodized Aluminum Construction.
- Fits on Brake Discs greater than 12" Diameter.
- Internal crossover porting
- Replaceable friction pads (WCB p/n 4000-1030)
- Dynamic torque (inch/lb): 353.5 lbf per 100 psi x brake radius.
- Parking/static torque (inch/lb): 211 lbf per 100 psi x brake radius.

ATTRIBUTES:

Description	Double Acting calipers
Disc Thick.	5/32", 1/4", 3/8", 1/2", 5/8", 3/4", 1"
Fluid Type(s)	Air
Max Pressure	200 PSI
Seals	Buna-N Standard
Wearable	1.90 cubic inches
Bore Diameter	2.5 inches
Total Friction Pad Area	9.14 square inches
Fluid Displacement	0.52 cubic inches

Friction Pad Replacement

1. Be sure that pneumatic lines are not pressurized during friction pad replacement. It is not necessary to remove pneumatic lines when replacing brake pads.
2. Gain access to the caliper friction pads by loosening Bolts (#8) and removing nuts (#1). Note: This will separate the caliper housings, exposing pads. Be aware not to lose the cross-over O-rings (#6).
3. Remove worn brake pads by loosening (#10) pad screws on both housings. Once pads have been removed inspect pad mounting surface and clean to free any debris prior to seating new pads.
4. Use Blue Loctite 242 on piston/pad mounting hole. Place new friction pads (#11) onto pistons and tighten with pad screws (#10).
5. Re-assemble the caliper with bolts and fasteners as orientated prior to pad replacement.

Pad Wear Inspection:

Friction pads can be visually inspected for wear by inspecting the (2) friction pads mounted on the dead side housing.

In new condition the pad thickness will measure .323" which results in a 0.060" gap between the pad face and surface of the disc.

Friction pads have a maximum allowable wear of .218" which will result in a gap of .278" between the pad face and surface of the disc.

These dimensions may be inspected to monitor pad wear and determine pad replacement as necessary.

P491DR CALIPER MAINTENANCE

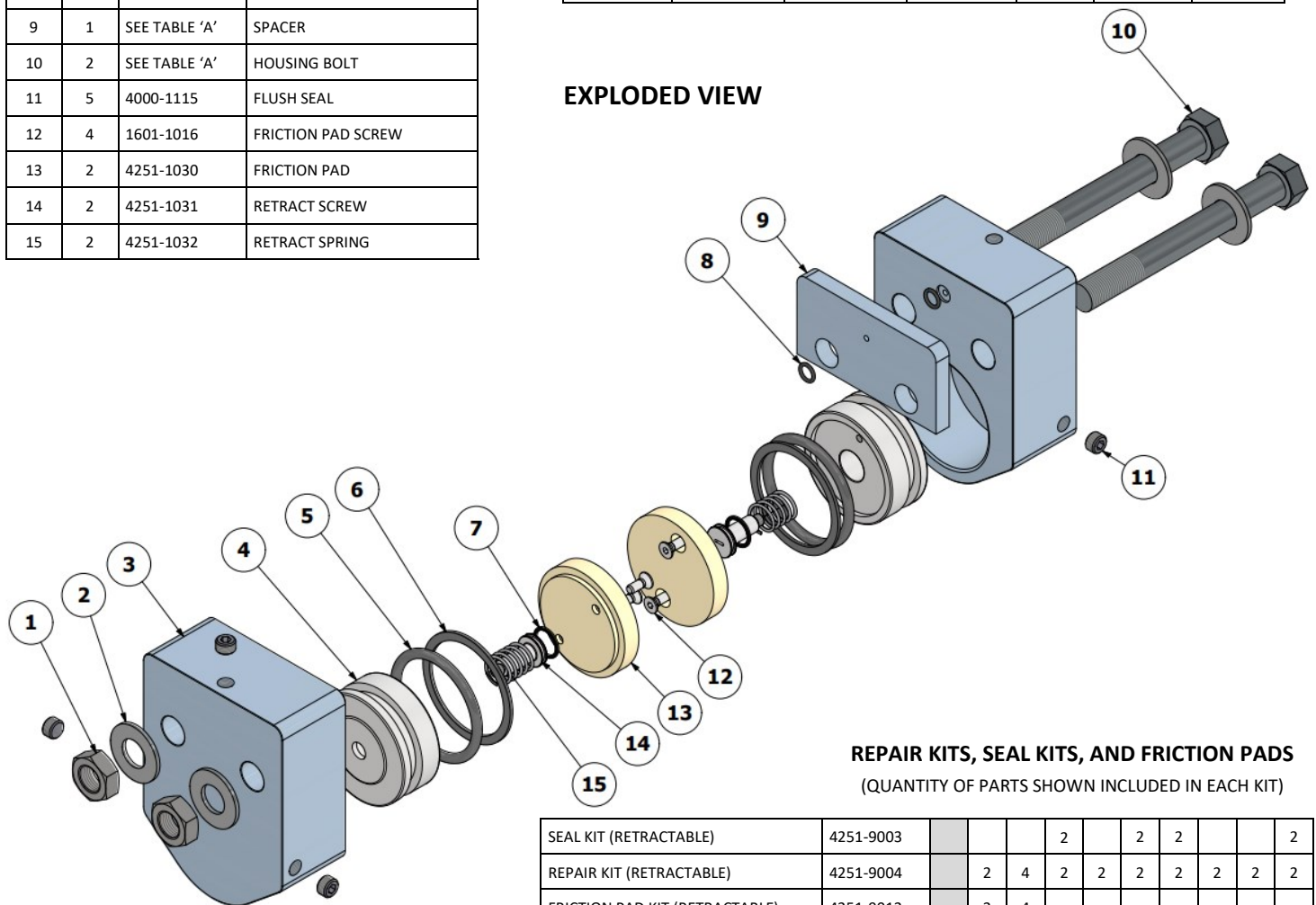
PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	4000-1528	NUT, JAM NYLOC
2	4	4000-1008	WASHER, FLAT
3	2	4251-4051	HOUSING
4	2	4251-4012	PISTON
5	2	4000-1009	PISTON O-RING
6	2	4000-1112	PISTON BACK UP RING
7	2	1100-1111	RETRACT SCREW O-RING
8	2	4000-1003	CROSS-OVER O-RING
9	1	SEE TABLE 'A'	SPACER
10	2	SEE TABLE 'A'	HOUSING BOLT
11	5	4000-1115	FLUSH SEAL
12	4	1601-1016	FRICTION PAD SCREW
13	2	4251-1030	FRICTION PAD
14	2	4251-1031	RETRACT SCREW
15	2	4251-1032	RETRACT SPRING

TABLE A

DESIGNATOR	ROTOR/DISC WIDTH	SPACER PART #	BOLT PART #	BOLT LENGTH	BRAKE MODEL	BRAKE PART #
A	5/32"	4251-4062	4251-1041	5 1/2"	P491DAR	4251-0079
B	1/4"	4251-4052	4251-1041	5 1/2"	P491DBR	4251-0073
L	3/8"	4251-4065	4251-1041	5 1/2"	P491DLR	4251-0074
E	1/2"	4251-4050	4251-1041	5 1/2"	P491DER	4251-0075
T	3/4"	4251-4053	4251-1024	6"	P491DTR	4251-0077
O	1"	4251-4054	4251-1024	6"	P491DOR	4251-0070

EXPLODED VIEW



REPAIR KITS, SEAL KITS, AND FRICTION PADS

(QUANTITY OF PARTS SHOWN INCLUDED IN EACH KIT)

SEAL KIT (RETRACTABLE)	4251-9003			2		2	2			2
REPAIR KIT (RETRACTABLE)	4251-9004		2	4	2	2	2	2	2	2
FRICTION PAD KIT (RETRACTABLE)	4251-9012		2	4						
ITEM#	DESCRIPTION									
13	FRICTION PAD									
12	FRICTION PAD SCREW									
8	CROSS-OVER O-RING									
4	PISTON									
5	PISTON O-RING									
6	BACK-UP RING									
14	RETRACT SCREW									
15	RETRACT SPRING									
7	RETRACT SCREW O-RING									