INSTALLATION/MAINTENANCE GUIDE

H491D Series Hydraulic Double Acting Caliper Disc Brakes



FEATURES:

- Hard-coat Anodized Aluminum Construction.
- Fits on Brake Discs greater than 12” Diameter.
- Internal crossover porting
- Replaceable friction pads (WCB p/n 4251-9010)
- 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

ATTRIBUTES:

Description	Double Acting calipers
Disc Thick.	5/32”, 1/4”, 3/8”, 1/2”, 5/8”, 3/4”, 1”
Fluid Type(s)	Hydraulic Oil, DOT 3 ABF
Max Pressure	Hyd. = 1500 PSI
Seals	Buna-N Standard, EPR for DOT 3
Wearable	1.90 cubic inches
Bore Diameter	2.5 inches
Total Friction Pad Area	9.14 square inches
Fluid Displacement	0.52 cubic inches

491 Series Installation Instructions

1- For double-acting models (H491D) 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- Standard Hydraulic Brakes, use only mineral based hydraulic oils compatible with Buna-N seals. For Brakes with EPR seals, use only DOT 3 brake fluid.

5- Back pressure in the fluid system should be prevented when the brake is not engaged. Back pressure in the system will result in constant contact of the friction pads to the disc and will lead to excessive heat and wear of the friction pads.

6- Hydraulic brakes are provided with bleeder screws to bleed air from the system. With the brake pressurized to 5 psi or less loosen the upper most bleeder screw enough to allow hydraulic oil to bleed out then re-tighten bleeder screw.

Friction Pad Replacement

1. Be sure that hydraulic lines are not pressurized during friction pad replacement. It is not necessary to remove hydraulic lines when replacing brake pads.

2. Gain access to the caliper friction pads by loosening Bolts (#10) and removing nuts (#14). Note: This will separate the caliper housings, exposing pads. Be aware not to lose the cross-over O-rings (#2).

3. Remove worn brake pads by loosening (#8) 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 (#6) onto pistons and tighten with pad screws (#8).

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.

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H491D CALIPER MAINTENANCE

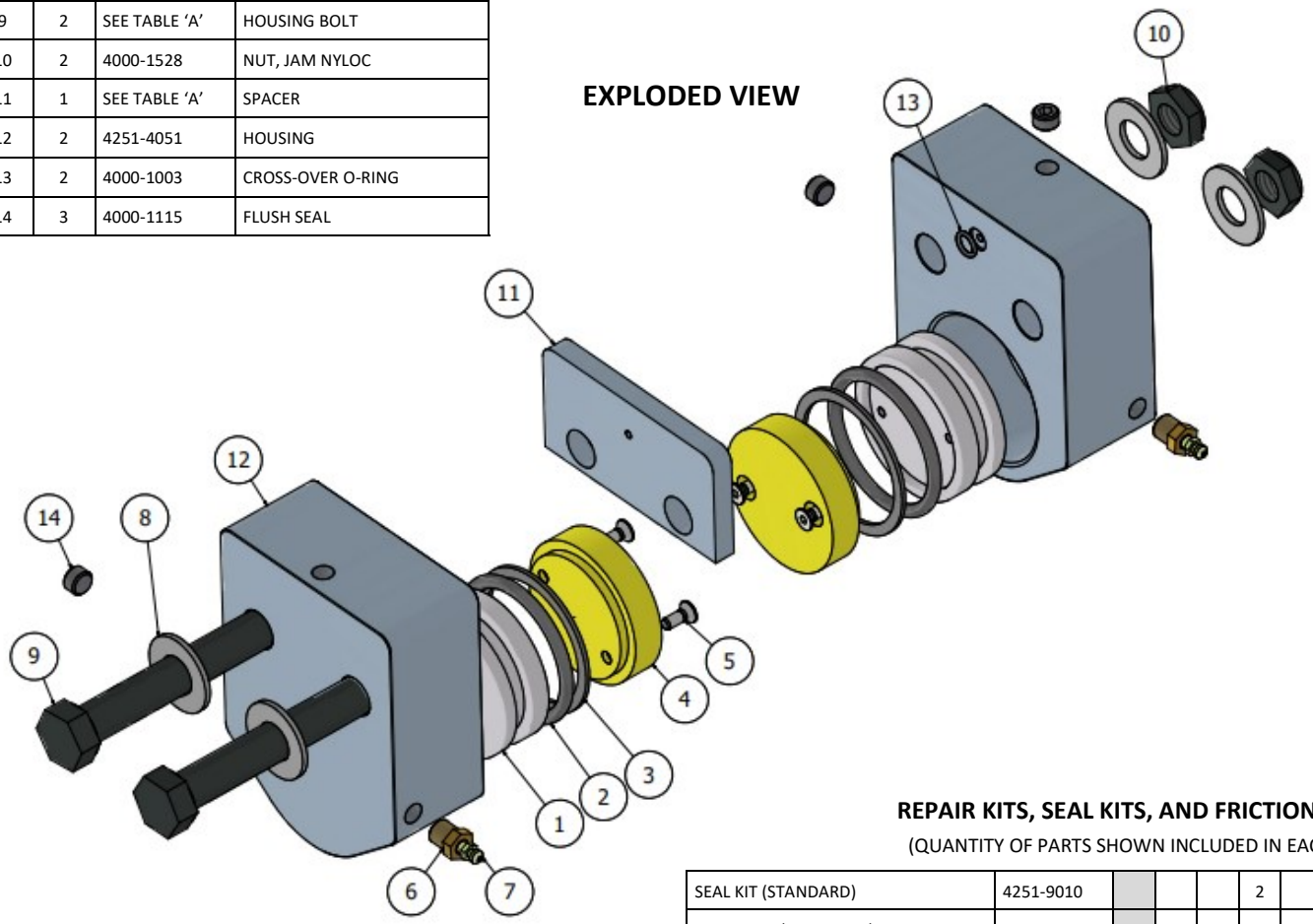
PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	4255-4011	PISTON
2	2	4000-1009	PISTON O-RING
3	2	4000-1112	PISTON BACK-UP RING
4	2	4000-1014	FRICTION PAD
5	4	1601-1016	FRICTION PAD SCREW
6	2	4000-4-1048	BLEED SCREW ADAPTER
7	2	4000-1049	BLEEDER SCREW
8	4	4000-1008	WASHER, FLAT
9	2	SEE TABLE 'A'	HOUSING BOLT
10	2	4000-1528	NUT, JAM NYLOC
11	1	SEE TABLE 'A'	SPACER
12	2	4251-4051	HOUSING
13	2	4000-1003	CROSS-OVER O-RING
14	3	4000-1115	FLUSH SEAL

TABLE A

DESIGNATOR	ROTOR/DISC WIDTH	SPACER PART #	BOLT PART #	BOLT LENGTH	BRAKE MODEL	BRAKE PART #
A	5/32"	4251-4062	4251-1026	5 1/2"	H491DA	4251-0011
B	1/4"	4251-4052	4251-1026	5 1/2"	H491DB	4251-0001
L	3/8"	4251-4065	4251-1026	5 1/2"	H491DL	4251-0035
E	1/2"	4251-4050	4251-1026	5 1/2"	H491DE	4251-0003
T	3/4"	4251-4053	4251-1024	6"	H491DT	4251-0005
O	1"	4251-4054	4251-1024	6"	H491DO	4251-0007

EXPLODED VIEW



REPAIR KITS, SEAL KITS, AND FRICTION PADS

(QUANTITY OF PARTS SHOWN INCLUDED IN EACH KIT)

SEAL KIT (STANDARD)	4251-9010				2		2	2
REPAIR KIT (STANDARD)	4251-9002		2	4	2	2	2	2
FRICTION PAD KIT (STANDARD)	4251-9001		2	4				
		DESCRIPTION	FRICTION PAD	FRICTION PAD SCREW	CROSS-OVER O-RING	PISTON	PISTON O-RING	BACK-UP RING
		ITEM#	4	5	13	1	2	3

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