

WARNING:

Read these instructions completely before installation. The installation and assembly of all components should only be performed by qualified professionals with experience in the installation and assembly process of high performance automotive brake components / systems. These components will not function as intended if not installed or assembled properly to the correct specifications. It is the responsibility of the person installing or assembling any brake component to determine the suitability, and safety of the component. This product is intended for off-road use only.

Disclaimer:

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CAUTION:

Brake calipers are safety critical components of a vehicle's brake system, and must be inspected and maintained periodically to ensure safe and optimal results. Calipers subjected to high temperatures must be inspected and maintained more frequently.

To avoid damage to the seals, do not use gasoline or any mineral oil based cleaning agent or lubricant.

Anodized Aluminum Finish:

Paragon PA015 calipers are hard anodized. They are subject to corrosion when in contact with corrosive agents including brake fluid, certain types of wheel cleaner / soap, road salt, etc. Please exercise caution when the calipers are in contact with these substances.

Exploded Diagram:

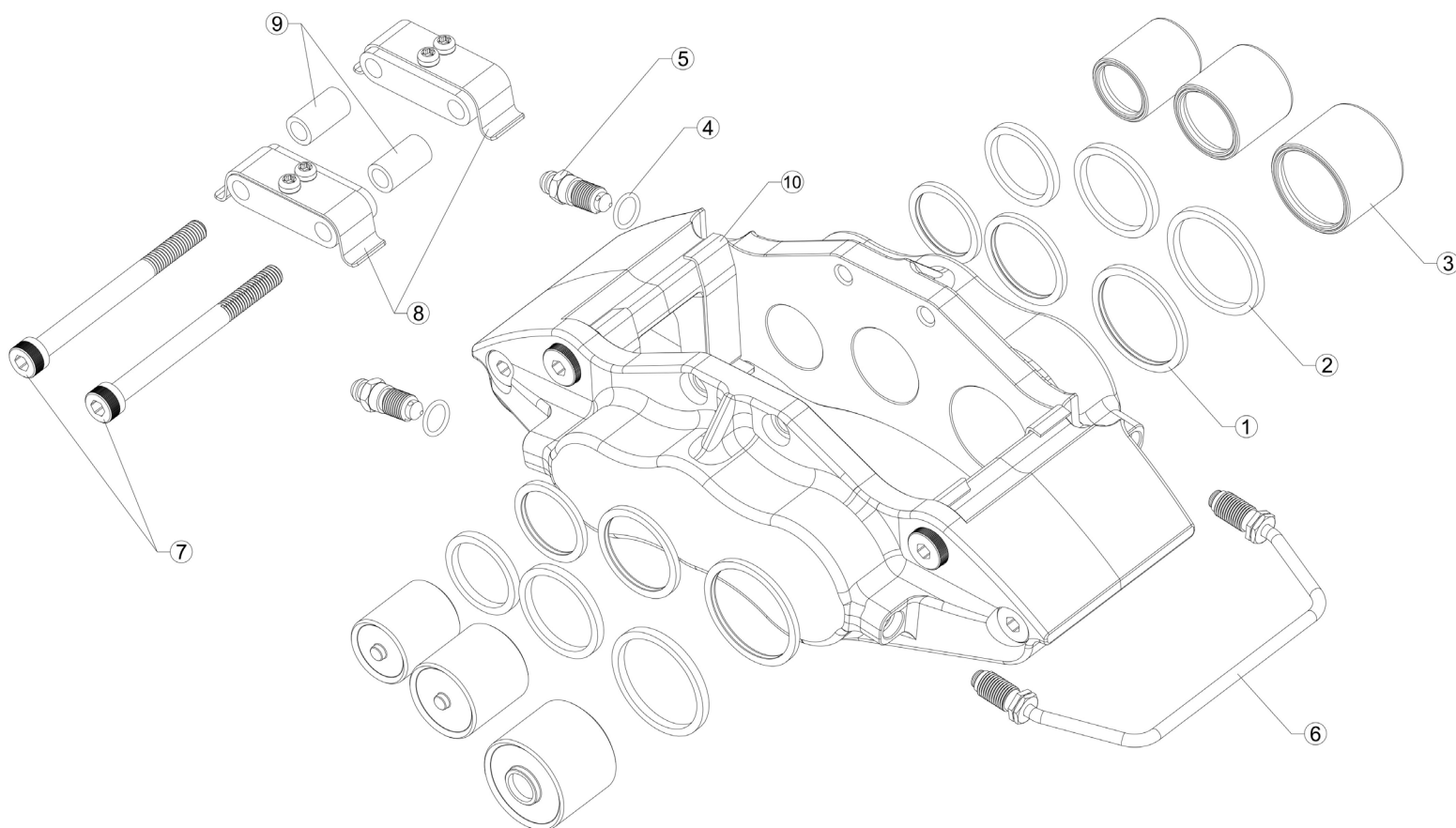


Fig. 1

Components List:

Item No.	Description	Qty (per caliper)	Included in seal kit	Included in piston kit
1	Dust seal (wiper seal)	6	Y	Y
2	Piston seal (pressure seal)	6	Y	Y
3	Piston	6	N	Y
4	O-Ring for bleed screw	2	Y	Y
5	Bleed screw	2	Y	Y
6	Crossover tube	1	N	N
7	Pad retaining bolt	2	N	N
8	Anti-rattle pad retainer	2	N	N
9	Pad retaining tube	2	N	N
10	Stainless steel abutment plate	4	N	N

Rebuild Instructions :

CAUTION:

Professional rebuild is highly recommended. A complete rebuild service is available from Paragon, including cleaning, disassembly, inspection, assembly, and pressure testing. Inquire for more details.

The 4 bolts that are holding the caliper halves together and the crossover tubes (6) do not need to be removed, and we strongly advise not to remove the bolts and crossover tubes.


Numbers in parenthesis highlighted in blue refer to the components list and Fig. 1

Step 1: Pour clean brake fluid into a container and lubricate the piston seals (2) and dust seals (1) sufficiently on all sides. New seals should be soaked in brake fluid for at least 30 minutes prior to installation.

Step 2: Chock rear wheels. Raise vehicle and support with jack stands. Remove front wheel. **NOTE:** NEVER go underneath a vehicle only supported by a floor jack. A floor jack IS NOT a jack stand.

Step 3: Remove the anti-rattle pad retainers (8) and brake pads.

Step 4: Disconnect brake line and unbolt caliper from the vehicle. Drain brake fluid from the caliper.

 **NOTE:** Have a rag and drain pan available to catch any brake fluid which leaks out. Brake fluid is highly corrosive and can damage painted/anodized finishes. Wipe off contaminated surfaces immediately. If brake fluid contacts the skin, wash contaminated skin immediately with water.

Step 5: Place a block of wood inside the caliper to prevent the pistons (3) from ejecting completely. Use an air gun to apply compressed air to the caliper fluid inlet and extend the pistons until they can be removed by hand.

 **NOTE:** NEVER apply compressed air without blocking the pistons, as the pistons can eject at a high velocity.

 **NOTE:** Eye protection required. Keep fingers and other body parts clear.

Step 6: Carefully remove the pistons by hand. Avoid using pliers to remove the pistons whenever possible as pliers may scratch/damage the pistons.

Step 7: Using a pick or a small screwdriver, carefully remove the old dust seals and piston seals.

 **NOTE:** Be careful not to damage the piston bores or seal grooves.

Step 8: Clean pistons, piston bores, and seal grooves. Inspect and make sure the pistons are not scratched or dented. Any pistons that are damaged must be replaced. The piston bores should be in good condition, without buildup.

NOTE: Clean pistons with a parts washer or brake cleaner.

! **NOTE:** To avoid fluid contamination, DO NOT clean calipers with a parts washer. Clean calipers using warm soap water, rinse thoroughly, and use an air hose to blow dry the calipers.

Step 9: Test fit the pistons without the dust seals and piston seals in place. The pistons should slide in and out of the piston bores smoothly without catching.

Step 10: Insert the lubricated piston seals and dust seals into the appropriate size bores and properly seat them into the seal grooves. There are 2 seal grooves in each piston bore. Piston seals are square in section and are fitted to the inner seal grooves. Dust seals have a “v” section and are fitted to the outer seal grooves (closer to the pads). Refer to Fig. 2, 3, and 4 for reference.

! **NOTE:** Inspect and make sure the seals are flat to the piston bore, and are not twisted or pinched in any way by running your finger around the bore.

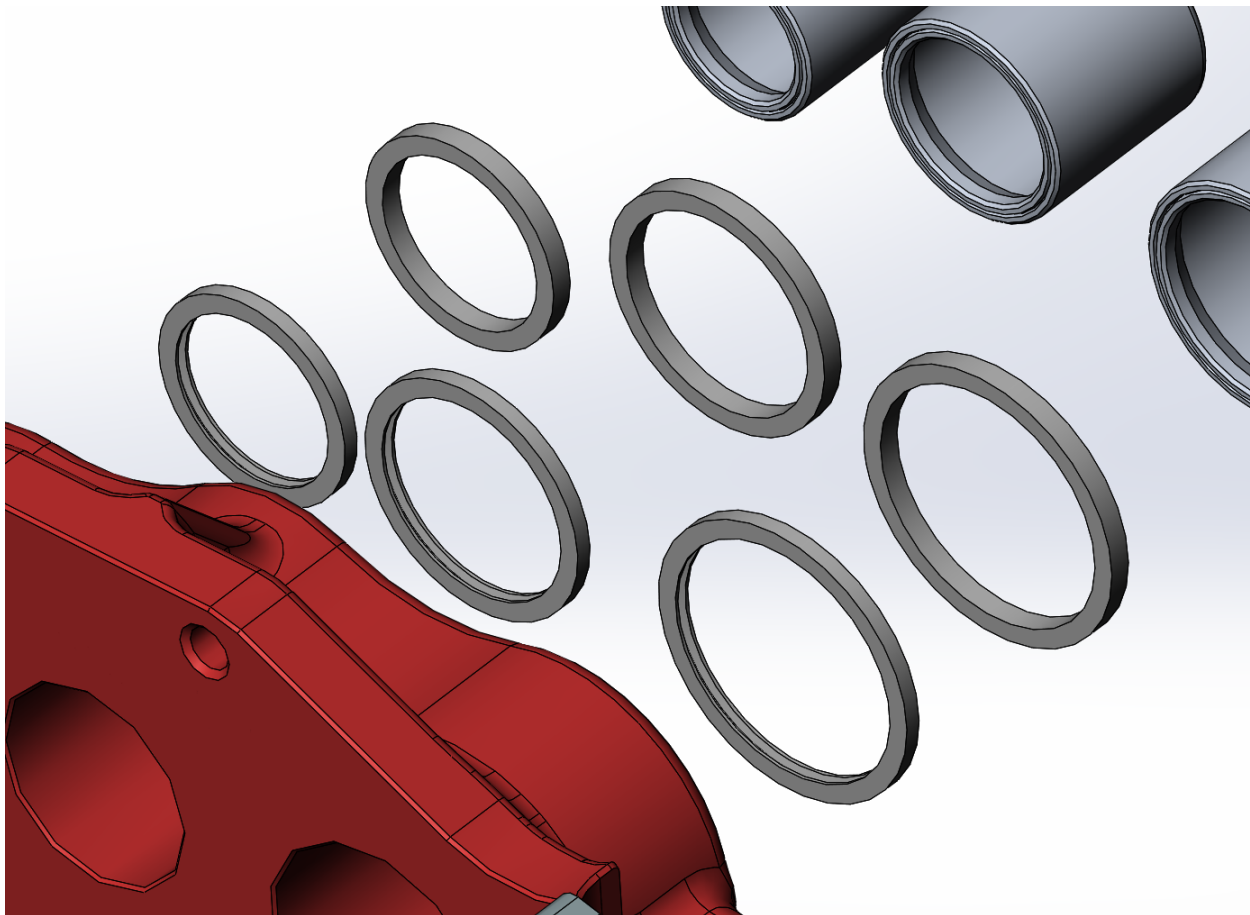
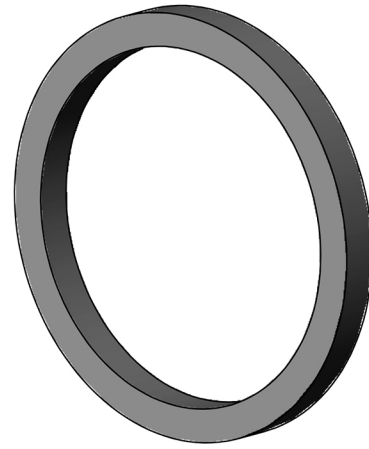


Fig. 2



Dust seal

Fig. 3



Piston seal

Fig. 4

Step 11: Using clean brake fluid, lubricate the bottom and sides of the pistons. Apply even pressure and slowly insert the pistons into the piston bores, through the dust seals and piston seals.

! **NOTE:** Do not use excessive force. Rock or rotate the pistons if necessary. Make sure the pistons slide in easily without displacing the seals.

The pistons should be pushed all the way to the bottom of the piston bores. The top of the piston will be nearly flush with the inside face of the caliper.

If the piston does not slide through the seals with hand force, remove the piston and check if the seals are seated properly inside the seal grooves.

Step 12: Remove and replace the o-rings (4) and bleed screws (5). Torque the bleed screws to 12.5 lbf-ft / 17 Nm.

Step 13: Pressure test the calipers, then install on the vehicle. Bleed the brakes with fresh brake fluid.

Step 14: Install wheels and torque to factory specifications. Lower vehicle and remove chocks.

Step 15: At low speed (< 5 mph), drive the vehicle with utmost caution and test the brakes. Double check for any sign of leakage and make sure the brake system is functioning properly.

WARNING: Only test drive in a safe and controlled environment.

For more technical information, visit
<https://www.paragonbrakes.com/technical-information/>

If you need any assistance, please contact
technical support at tech@paragonbrakes.com