# CALIPER REBUILD

How to make your calipers work as good as new

Wilwood calipers have a very long service life, so it will take many years before a caliper will require rebuilding. The calipers are made out of stress-flow forged, premium-grade aluminum billets, and the pistons out of high-grade stainless steel, so there is no chance of rust occurring on the pistons or in the bore. After many years of service, you may find ordinary wear of the specially formulated rubber bore seals (o-rings). Wilwood offers replacement square o-ring kits for every piston size the company makes. Each kit is referenced by a unique part number for each caliper and bore configuration. It's always a good idea to inspect your brake system on a regular basis to make sure the pads are in good condition and that there is no fluid seepage around the caliper pistons.

If you are replacing brake pads, or just doing an inspection to see how pads are wearing and notice any amount of seepage around the pistons bores, it's time to rebuild the caliper. From a mechanical perspective, the calipers are very straightforward, because the only moving parts are the stainless steel pistons, and the only parts that need replacement are the bore seals. Unlike other calipers that use round seals, Wilwood calipers use square seals, which makes them much easier to service. If you are looking to replace seals for your calipers, you will need to know the kind of calipers your car uses and the size of the piston bores. To determine your model, inspect it closely inside and out for a number stamped on the caliper body (location may vary by caliper model). Using that model number, search the Wilwood website and cross-reference the square o-ring kit on that product's detail page, or contact a Wilwood dealer. We also recommend changing the seals in both calipers on the same axle even if only one is seeping.

Rebuilding calipers is an easy process, even for those with a minimal amount of mechanical knowledge. Start the rebuild by removing the brake fluid line from the caliper. Cap the feed line to prevent fluid from draining the system. Next, remove the bolts securing the caliper to the caliper bracket. Record the number of shims used for proper reassembly. Drain the brake fluid out of the calipers and disassembly can begin.

Remember, after the calipers have been rebuilt and reinstalled on the car, the system will have to be bled properly to purge all air from the lines and calipers. The most difficult process in a caliper rebuild is the removal and reinstall of the caliper itself to the vehicle.

In the following steps we will be illustrating the rebuild procedure using a Wilwood Forged Narrow Superlite 6R caliper with differential bore sizes.


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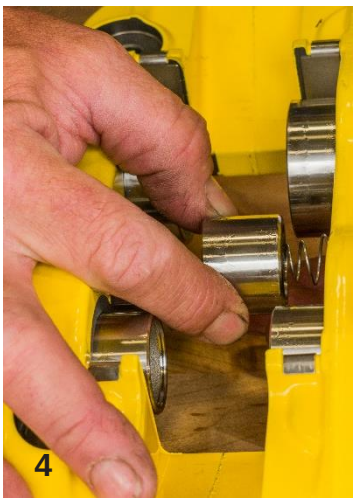
There is a square o-ring kit for every caliper Wilwood manufactures like this Forged Narrow Superlite 6R caliper. Tools to have on hand to make the job easier would be aluminum blocks (or wood), compressed air with blowgun nozzle, flathead screwdriver, razor knife, and Wilwood brake fluid.

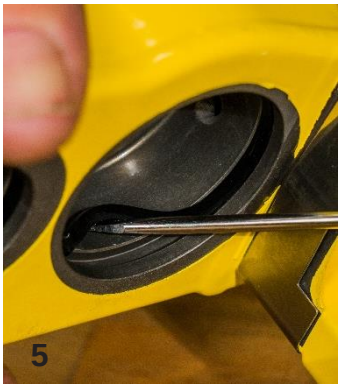

The caliper we are going to rebuild is a Forged Narrow Superlite 6R. We found the caliper part number stamped on the inside of the caliper, 120-11781, and cross-referenced it to the o-ring kit, 130-5972, on the Wilwood website or by contacting a Wilwood dealer.


A block of aluminum, or wood, is used inside the caliper to limit the outward movement of the pistons when applying a little air pressure to the caliper inlet. DO NOT apply air without blocking the pistons as they can shoot out at a high velocity, and make sure your fingers are clear of the area.





Carefully remove all the pistons and springs and set aside. Inspect the pistons, and if they are in good condition, they will be fine to use again during the rebuild.





Using a small screwdriver or pick, remove the old o-rings from the piston bores. Do this carefully to prevent scratching the bores of the caliper body.


To prepare the pistons for reinstall, either very lightly clean them with a mild abrasive scratch pad, or use a clean, lint-free rag and some brake cleaner. Also, inspect the inside of the caliper bores to make sure they are in good condition – do not use any abrasives inside the caliper bores. Wipe them with brake cleaner on a clean lint-free rag.


Use the plastic blister from the package as a tray and pour in some DOT 3 or DOT 4 fluid to lubricate the new o-rings sufficiently on all sides.


Insert the lubricated o-rings into the appropriate size bore and properly seat them into the seal gland making sure they are not twisted or pinched in any way. Test the seating by running your finger around the bore and make sure the seal is flat to the caliper bore.


Using more DOT 3 or DOT 4 brake fluid from the lubrication tray, oil the outside and rear of the pistons.


Using a clean towel lay the caliper on its side and center the spring inside the bore.


Slowly insert each piston and make sure you use plenty of lubrication, so they slide in easily without gripping or displacing the o-rings. Flip the caliper over and repeat steps from images 10 and 11 for the remaining pistons.

After all the pistons are installed the calipers can be mounted back onto the caliper brackets making sure to use the correct number of spacers. You may use old brake pads; however, we recommend new pads if they are glazed or used past halfway.

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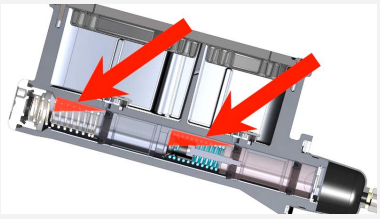

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