

The Datsun Sumitomo Dunlop Brake Cylinder

Disclaimer: This is intended for information purposes only. Work on your brakes at your own risk.

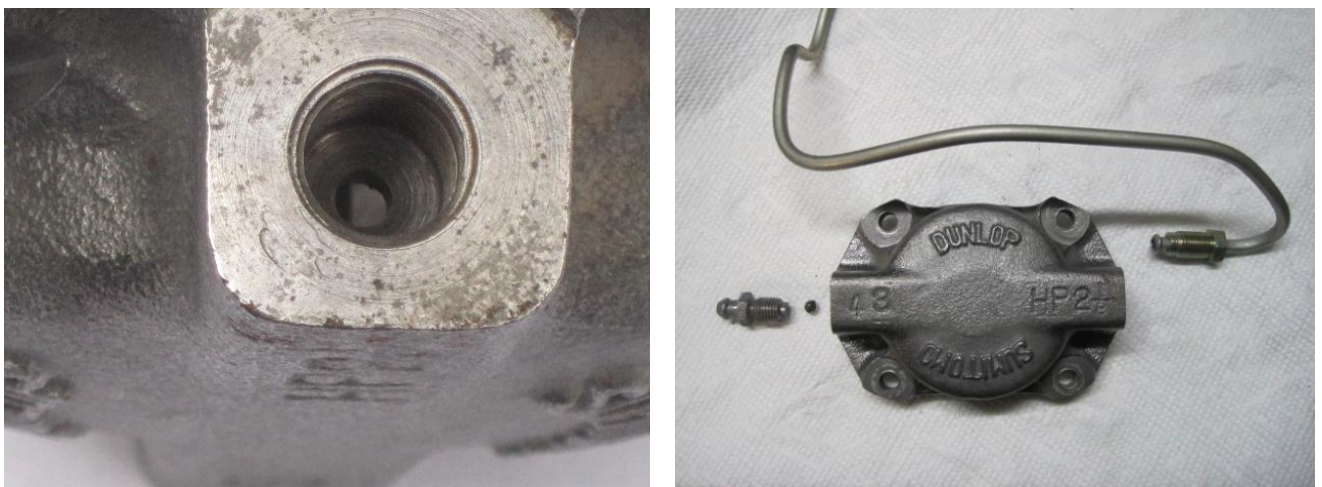
Curtis Marsten

The Datsun brake cylinder as noted in an article on 311s is a "Dunlop Mark II" cylinder used on Datsun, Jaguar, Ferrari and others. It is single pot 2-1/8" diameter cylinder with one on each side of the caliper. There are four cylinders total with an inner and outer that are different from each other. The outside has two tube connections. The inside has a tube connection and a bleeder screw.

The outside cylinder connections have one concave port and one raised port. The crossover tube has a longer nut and goes to the concave port. The transfer tube with the shorter nut goes to the raised port.



The inside cylinder has two concave seating surface for the transfer tube and check ball and bleeder screw.



The easiest way to disassemble the cylinder is using compressed air and a blow gun if you have access to one. You can wrap the cylinder with a rag to keep the piston from flying off. I hold it on the back side with the piston against the floor. Too much air pressure and your cylinder will become airborne. You want to be especially careful not to bend the guide pin in the cylinder body. Leave the bleeder in to pop the inside cylinder. Blow air through the other connection. For the outside cylinder you can put the bleeder in one hole to block it off or a plug of some sort. I just used my finger and it worked.

If you don't have an air compressor at your disposal and it may not work anyway because they are rusted and/or stuck together then you'll have to try other methods such as penetrating oil, Evapo Rust, or soak it in ATF fluid (suggested by Linda). One method I used is to clamp the flat sides of the piston in a vise and very carefully and slowly pried the piston out evenly using two screwdrivers so I wouldn't bend the pin.

Hopefully you can get the tubes off. They tend to get stuck and rusted on too. I have yet to have this happen but if I did I would get the piston out first and then proceed with penetrating oil, heat and flare nut wrench. The rear cylinders are another story, steel and aluminum don't seem to like each other. If you have the useless plastic covering on your tubes remove it. It just promotes rust.



Inside mating surfaces.

Cylinder disassembled. Piston, cylinder body, piston seal and dust cover.



The condition of the cylinder bore determines whether it can be rebuilt, sleeved with brass or stainless or you need to buy new cylinders. If the wall is pitted from rust you are not likely to get a seal that will hold even with honing and have a leaky cylinder.

As of November 2020 you can still get the seal kit from Nissan, part number 41120-73425 . There are aftermarket kits available as well.



Below is my cylinder that was sleeved with stainless steel. This is the condition of it after more than 15 years of use without ever having a complete flush of the brake system. It had a minor amount of debris and rust in the corner. The side sealing surface was cleaned up using a Dremel tool with the steel wool type wheel. Not one pit in it.

My *opinion* on cylinders: I have never purchased a new front cylinder. The closest I have come is a set of brakes with new cylinders that had only 200 miles on them. I will never buy a new cylinder after this experience with sleeved cylinders. Having a cylinder sleeved is in most cases cheaper than new. If you are in a pinch and have to use new cylinders you have to make sure to do yearly maintenance on them or you'll have rust.



Assembled cylinder. I forgot to paint the piston. The brake caliper paint works great.

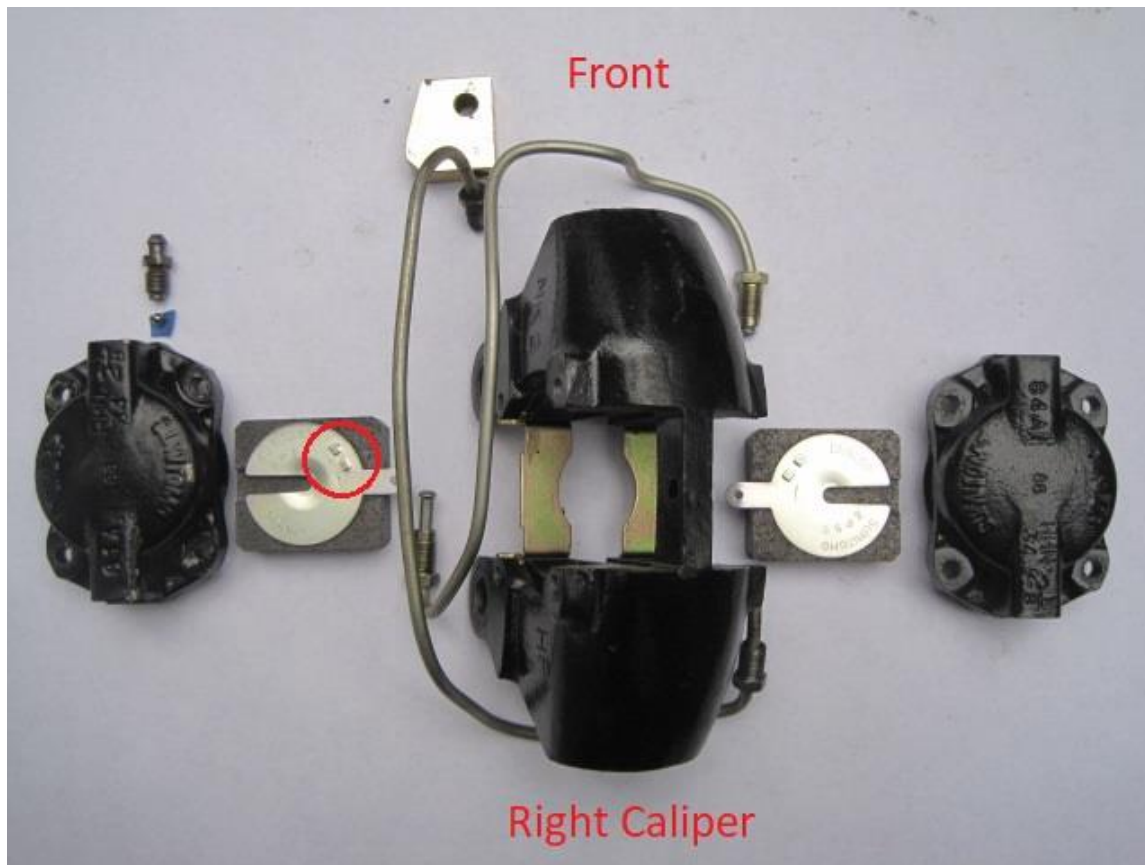


As I recently learned due to 311s the original Nissan brake pads are directional. There are two raised squares and an arrow indicating which cylinder the pad should be installed on based on the rotation of the rotor. You might find aftermarket pads don't have this.



For the brake tubes you can buy stainless steel or steel reproductions. They are NLA from Nissan. I bought a set from Rising Sun which had the 7/16" head flare tube nut like the original on both the transfer and crossover tubes.. The tubes I received with my brake line set from Classic Tube had smaller 3/8" head tube nuts on the transfer tubes. It cannot be emphasized enough to use flare nut wrenches on these.

Exploded right caliper assembly.



For an easier time bleeding the brakes you can replace the stock bleeder and ball with the speed bleeder on the left. The speed bleeder has a spring loaded check ball inside and prevents air from entering back in to the cylinder. Put a tube on the bleeder to a container with a hole in the top. This pretty much eliminates the need for a helper. I reach in with my foot and pump it and watch the master to make sure it doesn't empty.



Assembled calipers, left and right.

