

As many S2000 owners will tell you, one of the first things you should do as a new owner is to replace all the fluids in your car. This article will explain how to change your differential fluid in less than 30 minutes! Honda recommends changing it every 30,000 miles or so, but given how easy (and cheap!) it is to change, there's no reason not to do it sooner.

Note that Honda originally recommended SAE 90 hypoid gear oil but they do not produce the oil themselves. There are stories around the web that even some dealerships did not put the correct differential fluid into our cars, leading to differential failure. This is another reason why you should change the fluid yourself (with this tutorial)! Mobil 1 75w90 gear oil is a popular choice and is used in this how-to.

Required Tools

- **23mm combination wrench**. This is for the fill bolt. Note that there is limited space around this bolt so a wrench is used instead of a socket.
- **24mm 1/2-inch drive socket**. This is for the drain bolt.
- **1/2-inch breaker bar**. A wrench can be substituted for the breaker bar but I found it very difficult to remove the bolt with a standard socket wrench.
- **1/2-inch torque wrench**.
- **Jack stands**. Two pairs are needed so that the car is level and that the fluid drains out evenly.
- **Jack**.
- **Drain pan**.
- **Two wheel chocks**.

Required Parts

- 1 quart of differential fluid. Only around 0.81 quarts is needed.
- Honda part 90402-PCZ-003. This is the washer for the fill bolt.
- Honda part 90401-PCZ-003. This is the washer for the drain bolt. I got both the washers for around \$5 from a dealership.
- Fluid pump for standard quart bottles. This goes into the differential fluid bottle.
- Optional: penetrating oil. Use this to loosen the stubborn bolts.

Step by Step Instructions

Jack up the car on all four wheels

- 1 Put the car up on four jack stands. Make sure that the car is level so that all the fluid drains out. Tip: shake the car violently while it is on jack stands to make sure that the stands are stable!



is level

Find the differential

- 2 Familiarize yourself with the work area. The following pictures are from the back of the car and under the differential.



Torque 33 lb/ft Drain bolt. 24mm. Torque 33 lb/ft

Start working

- 3 Remove the fill bolt with the wrench. There is a washer behind the bolt. Make sure to not lose it if you're re-using the washer.

It is important to remove the fill bolt before the drain bolt. You want to make sure that you can fill the fluid back in if we drain it! Another tip is to spray both the fill and drain bolts with penetrating oil a few minutes before attempting this step. In my case the oil helped a lot.

- 4 Place the drain pan underneath the drain bolt and remove the drain bolt with the breaker bar and socket. There is a washer behind the bolt. Make sure to not lose it if you're re-using it. The fluid will drain down vertically and will take a few minutes.



- 5 Clean the bolts and replace the washers with new ones (or clean the washers if you're re-using them). The drain bolt is magnetic and could have some metal flakes on it. Clean everything thoroughly. Make sure that the washers are installed correctly. The flat side should be facing the differential.



- 6 After the fluid is done flushing, carefully install the drain bolt by hand. Make sure that the bolt goes into the differential smoothly; you don't want to cross thread it! Torque to 33 lb/ft with the torque wrench.
- 7 Install the fluid pump into the bottle, insert the hose into the differential fill hole, and start pumping. The bottle in this how-to has a capacity window, and the differential takes around 0.81 quarts. To be sure that the differential has

enough fluid, keep pumping until liquid starts flowing out of the differential.
Pay attention when approaching 0.81 quarts.







full!

- 8 Install the fill bolt by hand and then torque to 33 lb/ft. You're done!

Conclusion & Wrap Up

You're done! That was easy right? On to the other fluids!

Sizes, Torques, & Specs

Fill bolt 23mm (torque 33 lb/ft). Drain bolt 24mm (torque 33 lb/ft).