

How To Change Your Oil and Filter-Suzuki GS

by BassCliff (a.k.a. BikeCliff)

By popular demand I have undertaken the task of documenting one of my recent oil and filter changes on my GS850GT. I hope you find this helpful as you care for and maintain your classic Suzuki GS series motorcycle. This procedure will be similar for many of the GS series bikes. However, you are encouraged to refer to your owner's manual, Suzuki Shop manual, Clymer, Haynes, etc, for further information specific to your motorcycle.

This guide assumes that you have all the necessary supplies and parts. Don't ask me which oil to use! This is a hotly debated subject on the [GSR Forum](#). Whether you use the expensive "motorcycle specific" oil or cheap Rotella oil, it is the thought of many that as long as you change it frequently (at least every 1500 to 2000 miles) you can use just about any kind of motor oil. Personally, I've been using the Castol Syntec Blend 20w50 in the summer and 10w40 in winter.

The oil filter itself is common to a lot of Suzuki bikes, from the GS425 on up to the GS1100. Again there are many opinions as to which filter to use and many opinions as to quality; Fram (CH6001), Purolator (ML16800), Napa/Wix (24931), HiFlo Filtro (HF133), K&N (KH133), STP (rebranded Fram), EMGO (10-29800), Suzuki (16510-45040), etc. Personally, I buy filters from an ebay store ([Breezers Motorcycle Parts](#)) in lots of 5 that include the O-rings. Sometimes they have Suzuki OEM filters, sometimes it's HiFlo Filtro. I have no affiliation with Breezers other than I'm a satisfied customer. I feel the same way about filters as I do oil, change it often enough (I change my filter at every oil change) and just about any one will get the job done. If you tend to abuse your oil and go longer between changes, then you may wish to buy the more expensive, higher quality oils and filters. Now let's get down to business...

I like working on a cold bike. Many riders will pull the drain plug when the bike is warm. Warm oil flows more easily and may carry out more contaminants. Then you can come back after the pipes have cooled to finish the job. Have four quarts of oil, filter and O-ring at the ready. You won't need all that oil right away but you'll have extra if you need to top off your oil level between changes. Put your bike on the center stand, unless you're lucky enough to have a lift.

First, take a look under your motor. You should see a large-ish bolt about in the middle of your oil pan. On my bike it is between the exhaust pipes right behind the exhaust crossover. See below.



This bolt is the same size as my spark plugs, 21mm if I remember correctly. Put your oil receptacle under this drain plug before you loosen it. Use your spark plug socket or a socket with a short extension to remove the bolt as such:



I'm using my spark plug socket and an oil drain jug I bought at Pep Boys Auto Parts. They come in different sizes. I have a 10 quart size. It will hold two oil changes if need be. Pep Boys recycles oil too.

Once you have the bolt loose you can finish removing it with your fingers and let the old, yucky oil drain out.



Now take a little break and let it all drain out. Don't forget to put the drain plug in back before you add the new oil. Get it fairly snug, but there's no need to wrench on it too hard.

Next is a picture of the oil filter cover. It is located in the front of the motor, in the middle of the lower case between the exhaust pipes.



These three "acorn" nuts are 12mm. The cover is also spring-loaded.

Use a small socket with a medium extension for easy access to the filter cover nuts. Don't forget to move your oil receptacle underneath to catch the oil that drains out of the oil filter cavity.



As you are removing the bolts, use your fingers for those final couple of turns so that you can catch the bolts and washers and keep them from falling into your dirty oil. Here the cover is off.



If necessary, use some kind of small sharp object to remove the old O-ring.



I usually take a shop rag and clean the O-ring channel too. Make sure there is no debris where the O-ring sits on the cover. Now pull out the old filter and let it drain.



Here is a shot of the empty oil filter cavity. I usually stick my finger in there to rake out the remaining oil.



Here we have the new oil filter and O-ring. The next time I change oil I will put the O-ring in a small book for a day or two so that it lays flat. After being scrunched in the box with the filter it doesn't lay well in the cover.



Before I place the new filter back in the cavity I like to rub some oil on the rubber seal. This will help make a good seal right away.



Then just push it back on the center pipe in the filter cavity. Give it a little twist back and forth and make sure it is pushed in all the way.



Now place the new O-ring in the channel of the filter cover. If it won't lay down, use some oil or a little grease to hold it in place. You don't want it to come out of the channel as you bolt the cover back in place.

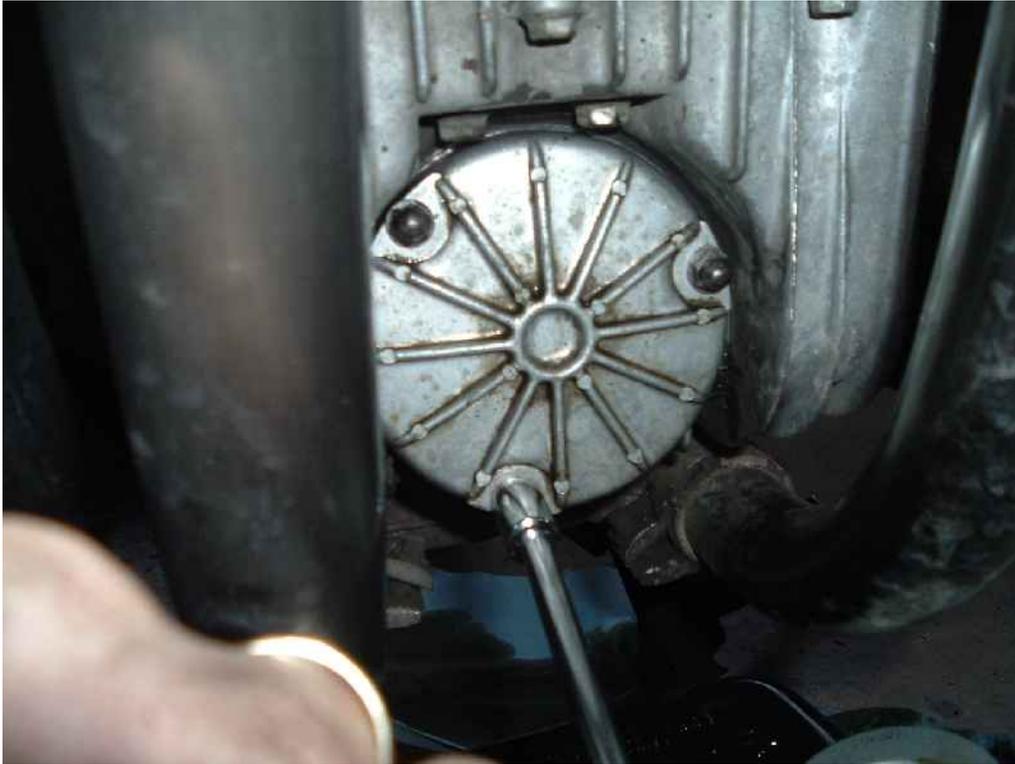


You must hold pressure on the cover while putting the nuts back on. With one hand, tighten them up as snug as you can with your fingers while still holding pressure on the cover with your other hand.



Make sure the O-ring doesn't slip out of place.

Ideally, you should still be holding pressure on the cover as you grab your wrench and put the final tightening on the cover nuts. Keeping pressure on the spring-loaded cover insures the O-ring doesn't slip out of place.



Now you're ready to put new oil back in the crankcase. The fill plug is on the right side of my bike, just behind the clutch cable connection.



Fill with the recommended amount of oil then check the sight glass located on the right case next to the brake pedal and foot peg.



For my bike, the crankcase holds 2800ml (milliliters) of oil. It takes extra when changing the filter too, about another 800ml (about 3 and ½ quarts total). If your bike is on the center stand with the front wheel touching the floor, that means the engine is pitched forward a little bit. If you fill the crankcase up just a little past the **F** mark and rock your bike onto the back wheel, you may notice the sight glass will read way over full. The oil level should be sighted when both wheels are on the ground and the bike is level. But this is hard to do unless you have someone hold the bike while you check the sight glass. As long as you fill up to the **F** mark while your bike is on the center stand, you'll be OK. Be sure to check your oil level every time before you ride.

Now start your bike and check for leaks. If the O-ring has slipped out of its channel on the filter cover you will quickly find a puddle of oil on your garage floor. Hit the kill switch, clean up the mess, take the oil filter cover off, reposition the O-ring, reinstall the cover, pour in more oil and try again.

And so ends another pictorial guide. Thanks for reading it and thanks for taking care of your classic GS motorcycle.

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