



Changing the oil in your scooter

What I'm going to describe is how to change the engine and transmission oil in a 150cc Chinese scooter with a 4 stroke engine. The procedure should be pretty similar on 50cc and 250cc models with 4 stroke engines. 2 stroke engines mix gas and oil and so have no engine oil to be changed.

I'd recommend changing the engine oil at least every 1000 miles, and the transmission oil at least every 2000 miles. Regular oil changes are the easiest and cheapest way to maximize the life of your engine. Scooters take so little oil that it should cost less than \$5 to do and once you know how to do it should take you more than 10-15 minutes. It's time and money well spent.

The first thing to do is to warm up the engine. Run it for a few minutes so that the oil is warm. That way it will flow easier. If you run it until the engine is hot, or you change the oil after you come back from a trip, that's OK, but you run the risk of burning yourself on the exhaust or with the hot oil. Be careful.

Find some level ground and put the scooter on its center stand. If the ground isn't level you won't get an accurate reading of the oil level when you put the new oil in. To change the engine oil you'll need a wrench to remove the oil drain plus, a flat dish container with a capacity of about 1/2 gallon and a funnel. First remove the "dipstick" which you use to check your oil. I'd also recommend you wear rubber gloves, or at least on the hand you use to remove the oil drain plus. On most scooters there is a spring which will push the plug out when you have fully unscrewed it and oil will pour out of the drain hole, all over your hand. It's just messy if the oil is cool or warm, but if the oil is really hot it will burn your hand. So wear a glove to be safe.

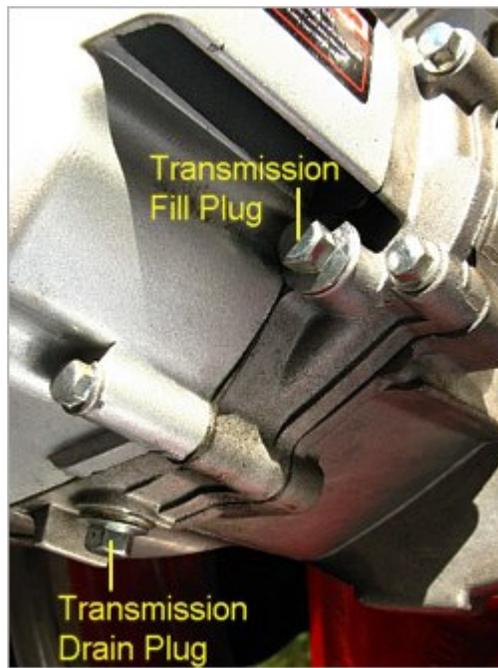


Put the container for the used oil below the drain plus, loosen it with a wrench and then slowly unscrew it by hand. As it comes loose, the spring will push it down, so be prepared for that. You may drop the spring and a small wire mesh filter into the draining oil, but that's OK, you can fish them out later! Give the oil a minute or two to drain out. Make sure the filter is clean and then put the filter, spring and drain plug back. The spring sits on the plug and the filter sits on top of the spring with the mesh basket inside the spring.



You'll have to compress the spring to start the drain plug screwing into the engine, but once it does start, tighten it up by hand to make sure it's not cross-threaded. If it screws in easily, it's OK. If it doesn't want to tighten, you've probably cross threaded it, so try again. Finally tighten it up with a wrench. It should be tight, but don't overtighten it. The seal is made with a rubber "O" ring. You just need to tighten it enough so that it doesn't vibrate lose (which would be a disaster since all your oil would drain and the engine would seize!). The recommended torque on the drain plug is 1.4 kg.m (about 10 ft.lb)

Now you can add the new oil. It goes into the same hole as the "dipstick" fits in. You'll almost certainly need a small funnel to get oil into the filler hole without spilling it. Check your user manual for the recommended oil type, but on most chinese 4 stroke scooters, regular 10-30W or 15-40W engine oil is used. I use Castrol GTX 10-30W. You can get a 5 quart bottle for around \$12 (try WalMart) which is good for at least 5 oil changes on a 150cc scooter. You can also use a synthetic oil blend if you wish, though pure synthetic oil isn't usually recommended. On a 150cc scooter you'll need about 0.8-0.9 liters which is just under 1qt. As you add the oil, check the level with the dipstick from time to time and fill to the recommended level. When you have the right level, screw the dipstick back in and you're done!



Changing the transmission oil is also very simple. Most scooters recommend changing the oil at least every 2000 miles. At the rear of the CVT on the left side of the bike there are drain and fill plugs for the transmission. Place the oil drain container under the drain plug. Now remove the filler plus first, then the drain plug and about 100 to 200cc of oil will drain out. There should be a sealing washer between the drain plus and the transmission casing. On my scooter it's a thin aluminum washer. Make sure it's there and then screw the drain plug back into the transmission case. To refill the transmission, you squirt oil into the fill hole until it runs back out. That's your level check! Use the recommended oil, which in most cases is 80W-90 gear oil (though a few bikes may recommend using engine oil). To get it into the small hole you can use a small funnel and a short length of small diameter rubber hose, a syringe or even something like a turkey baster! All you need is something to squirt 100-200cc of oil into the hole. You may be able to buy the oil in a plastic bottle with a long plastic tip, which you can use to directly squirt oil to the transmission fill hole. When it starts to run back out, it's full and you can replace the fill plug (note that it too should have a thin aluminum sealing washer).

· Now run the engine for a minute or two, then check the oil level and add more if necessary. Check for any leakage around the drain plugs. If all looks OK, you're done for another 1000 miles.