

Oil Changes

Oil should be changed twice per year.

In past years that was a requirement found in almost all generator owner's manuals. Then it went to once per year. Now a lot of service companies use only the hour meter on the engine to determine oil change intervals which may be extended to many years.

What changed? Not the oil. Not the physics.

Marketing became involved.

A long-understood property of combustion is that H₂O is a natural by-product. That is why you see water dripping out of the tail pipe of a car in front of you in winter. H₂O is created in the engine as a vapor then condenses in the exhaust system and drips out of the tail pipe.

The same thing happens with your generator's engine. H₂O develops in the cylinders during combustion and blows out of the exhaust. But some of the exhaust can bypass the piston rings and enter the crankcase where it condenses into a liquid. Liquid water can mix with sulfur from the fuel or oil and create a mild solution of sulfuric acid—H₂SO₄.

Sulfuric acid dearly loves copper and lead. The engine bearings are made of copper and lead. So, the acid attacks the engine bearings and promotes failure. You get to buy a new generator. It will take years, but it is great marketing.

The best way to counter this marketing plot is regular oil changes. That gets rid of the sulfuric acid.

Use the engine manufacturer's recommended oil.

I use synthetic oil if recommended. Check the owner's manual.

If it is a 4-stroke diesel, and most are, I use a multigrade CK-4. See: [Oil Categories for Diesel Engines](#).

If it is a spark ignited engine, I use a multigrade SN or SP. See: [Oil Categories for Gasoline Engines](#).

If it is a 2-stroke diesel, I use a straight weight C class oil.

Always check your owner's manual. Something like Shell, Rotella T 15-40 is the oil most often used.

A note about oil.

It all comes to your town in a pipeline. This is the most efficient way to transport the stuff. As a result, API provides the specification to the refineries so that they can all make the same product. At the terminal it is all dumped into the same tank. Then the oil is pumped through the pipeline to your local terminal. It is all still the same stuff.

The individual brands make withdrawals just like money from a bank. They put it into their name brand containers and add whatever additives they want to make it exclusively their own.

Then they sell it to you. But it starts out as identically the same material.

That is why it is important that you look at the API designation and then use the correct oil. The name brand does not matter.

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