

Wheels: Richard from Greenville writes by e-mail, “Although they are in the field of art, not engineering, our son has multiple college degrees and is a very smart fellow. However, he has recently shared a rather bizarre opinion with us.

He says that changing one's motor oil is a gigantic conspiracy foisted upon consumers by the petroleum industry in collusion with the automotive industry. He cites a number of persons he knows who claim not to have changed their vehicles' oil and yet received hundreds of thousands of miles of service from their engines. They only add oil as the level goes down. Please provide evidence to refute this idea.”

Halderman: I too have known of people who have not changed the oil and it appears that it does not have any effect on the engine. All vehicle manufacturers will void the warranty if oil changes are not performed according to the published interval, which is the maximum allowable interval.

The foremost reason an engine contains oil is to lubricate the moving parts of the engine, and changing the oil will ensure that the oil is free of contaminants that can harm the parts. Oil itself does not "wear out." However, it becomes contaminated and the additives that help protect the engine from wear are used up.

The first thing that happens when the oil is not changed is that the valve train will stop working as designed and if equipped with variable valve timing, this could affect the engine operation, reduce fuel economy, and increase exhaust emissions. Then, the engine will become noisy due to valve train wear because this is the last place where oil flows in an engine.

Wheels: Will the owner know something is wrong?

Halderman: Yes, at this stage, which could occur as soon as 20,000 miles to 30,000 miles, the owner will be able to tell that the engine is not running quietly. By the time 50,000 miles occurs, the engine bearings will become worn. This will cause the oil pressure to drop and then it is downhill from there. The engine could continue to run for many thousands of miles more but will be noisy and will produce less power than normal and use more fuel. Eventually the engine will be destroyed or will simply not start someday. It would cost many thousands of dollars to replace the engine and may even exceed the value of the vehicle. Of course you could sell the vehicle right before it destroys itself, but will you know when this is about to occur? Compare this to changing the engine oil twice a year which is becoming the standard recommendation in the industry at a cost of less than \$100.00 a year. Therefore, wise vehicle owners change the oil and perform other specified maintenance on a regular basis to help maintain their vehicle so it performs at peak efficiency for many years and many tens of thousands of miles.

