

Oil Consumption It May Be a Normal Characteristic

When dealing with oil consumption complaints, how much should be considered as too excessive? Is the engine consuming an excessive amount of oil or should the amount consumed be considered a normal characteristic? This is especially a concern with the extended service intervals, which may result in the vehicle being driven twice the mileage when compared to previous service intervals. The extended service interval requires keeping a close inspection to be certain the engine maintains a suitable level of lubricant, as some capacities are minimal.

The internal combustion engine requires oil to lubricate the bearings and internal moving components. This includes cylinder walls, pistons and rings. When the pistons travel down the cylinders, a thin film of oil remains on the cylinder walls. A portion of this oil is consumed during the combustion process. The amount varies in relation to engine design and vehicle manufacturer.

Selecting the incorrect oil viscosity for an engine can promote component failure and excessive oil consumption. The correct oil viscosity is imperative in assuring the proper film strength and efficiency, which is necessary to protect the load bearing and moving components from premature wear.

Factory Solution

When dealing with customer complaints of excessive oil consumption make certain that you do your research, which could involve factory solutions or considerations that should be resolved prior to attempting any repairs. For example, owners of 2018–2020 Ford F150 trucks with the 5.0L engine may encounter excessive oil consumption. Ford's engineering analysis determined that complaints of excessive oil consumption may be caused by the powertrain control module (PCM) strategy, which purposely closes the throttle plate during the deceleration fuel shut off (DFS0) events, resulting in high intake manifold vacuum causing oil to be pulled into the combustion chamber from the crankcase, valve guides, and the PCV system. To correct this condition, a revised PCM calibration was released to adjust the throttle plate opening angle to reduce engine manifold vacuum during DFS0 events. In addition, Ford has made a dipstick change, which has a wider 2-quart operating range.

Oil Consumption Rates Vary

GM states that one quart of oil usage in 2,000 miles is an acceptable consumption rate. This volume applies to personal use vehicles, under warranty, and not driven in an aggressive

manner, while being serviced at the appropriate service interval. This consumption rate does not apply to vehicles driven aggressively, operated at high RPMs, excessive speeds, trucks heavily loaded with cargo, or pulling a trailer. During these conditions a consumption rate of one quart per 500 miles driven may be considered as normal usage.

Some Chrysler applications reflect the following oil consumption rates:

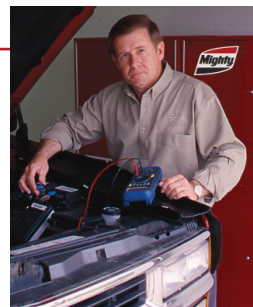
- 1) One quart per 2,000 miles for the first 50K miles.
- 2) Engines over 50K miles...one quart per 750 miles.
- 3) One quart per 500 miles during aggressive driving or heavily loaded conditions.

Some imports reflect one quart of oil every 750 miles as being an acceptable oil consumption rate. Always verify the vehicle manufacturer's oil consumption rates prior to making service recommendations. Do your research and don't get caught trying to correct a condition that may be a normal characteristic for the application.

Basic Checks First

Prior to troubleshooting symptoms/complaints of excessive oil consumption, some basic checks should be performed:

- 1) Inspect the oil pan, valve covers, or any engine cover for evidence of leakage. Oil lines, fittings and seals such as front or rear main oil seals should be inspected.
- 2) A malfunctioning PCV system can result in increased oil consumption.
- 3) Make certain the engine is operating in a normal temperature range, as overheating can result in damage to engine components, seals and gaskets, promoting excessive wear and increased oil consumption.
- 4) When performing a lube service make certain the proper amount of oil and viscosity for the application has been installed and verified in relation to the markings on the dipstick.
- 5) When checking the oil level make certain the dipstick is wiped clean and is fully inserted into the engine block. The vehicle manufacturers recommend a 15-minute wait time should be given for the oil to drain fully into the crankcase, prior to evaluating the oil level on the dipstick.



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