

- a. To prevent moisture from getting into the coil
- b. To keep the oil in the coil at the output (secondary) terminal to help insulate it from the primary windings.
- c. To improve engine performance
- d. To provide a shorter distance for the spark to flow to the center of the distributor cap



Answer at the bottom of this page!

FAQ

Why is most coolant 50/50 with water?

According to the freezing point, it appears that the lowest freezing point of coolant is achieved when 70% antifreeze is used with 30% water. While the freezing temperature is lower, the high concentrate of antifreeze reduces the heat transferability of the coolant. Therefore, most vehicle manufacturers specify a 50/50 mixture of antifreeze and water to achieve the best balance between

freeze protection and heat conductivity.



Sample ASE certification-type question

Question:

A compressor is being replaced. Technician A says that the oil should be drained from the old compressor and measured so that the same amount of oil can be installed in the replacement compressor unless it is shipped with oil. Technician B says the drained oil should be installed in the new compressor to make sure that it is lubricated with the correct oil. Which technician is correct?

- a. A only
- b. B only
- c. Both A and B
- d. Neither A nor B

Answer/Explanation

The correct answer is a. Technician A is correct because the compressor must have enough, but not too much, lubricating oil in the system. Because the compressor holds most of the oil in the system, it is important that the quantity be accurately measured so the correct amount can be installed in the system with the replacement compressor. Technician B is not correct because old refrigerant oil should not be reused. Most refrigerant oil is hygroscopic and absorbs moisture from the air, thereby becoming contaminated. Answers c and d are not correct because Technician A only is correct.

Tech Tip

The Paper Test

To determine if there is adequate airflow through a condenser, many technicians place a sheet of paper or a dollar bill in front of the condenser when the cooling fans are operating. With the engine running and the A/C commanded on and working, the bill should stick to the condenser.

Straight Talk

From the August 26, Wheels section of Dayton Daily News

Does synthetic oil buy me time?

Wheels:

Jim of Centerville asks:

"I own a 2014 Chevrolet Impala and I was wondering if I used synthetic engine oil, can I delay the oil change interval? My car shows the life of the oil in percent and often shows a message to

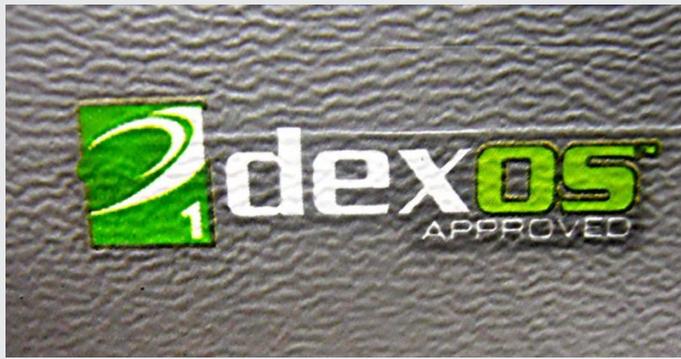
"change oil soon" after just six months of driving. I would rather delay the need to change the oil to once a year so I don't have to visit a shop as often".

Halderman:

The short answer is no. Your GM vehicle requires the use of Dexos certified engine oil and this specification, which is available from many different oil brands, is formulated to meet the needs of your engine. According to General Motors, the oil life monitor (OLM) should be used as your guide to change the oil

regardless of the type of oil used. When the OLM is reset after the oil has been changed, the Powertrain Control Module (PCM) monitors the operation of the engine and the number of starts and subtracts a percentage from 100 as determined by the level of harm that the oil may experience. For example, a cold start when the temperature is below freezing may cause the PCM to subtract 1 number, whereas it may require a long trip at highway speed to subtract the same one point. In other words, the time and miles it takes for the PCM to count down to about 15% and show the message to "change the oil soon" varies as to how the vehicle is driven. Short trips and city driving will cause the oil to be changed more often compared to those who drive many miles at highway speed over long distances.

The bottom line is to use the specified engine oil and change the oil when the oil life monitor indicates that it is time to change the oil.



Have an automotive question? Please write to Jim with your questions at jim@jameshalderman.com

Trivia question answer: B.

Please let me know what you think of the newsletter. I would love to include any of your automotive news, trivia questions or any tech tips you might have. Send me your suggestions! You can email me [here](#) or visit [my website](#). You can connect with me on Facebook, Twitter and LinkedIn too (links above).

Regards,

Jim Halderman

James D. Halderman writes automotive technology textbooks for [Pearson Education](#). He is an ASE-certified Master Technician with more than 20 years instructional experience.