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Halderman newsletter

September 2015

### What's new with Jim?

Now that classes have started for most schools, it is a busy time. I am equally busy, updating my titles and planning for my fall travel schedule. I am also very excited to announce that Judy Wax has agreed to help me showcase the FREE resources on my website. Judy has been with Identifix for 8 years and can not only help you develop an amazing curriculum with Halderman Resources but get FREE service information and other cool content from Identifix. Here is her contact information:



Judy Wax-Brevell  
judyhopewax@gmail.com  
(P) 800.941.9734  
(C) 702.469.0497  
www.protech.identifix.com

*Please continue to follow me on [LinkedIn](#), [Facebook](#) and [Twitter](#) for up-to-the-minute updates and for the fantastic interaction I receive from many of you.*

Sincerely,  
Jim

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## Auto Trivia

What was the first year that federal law required all passenger vehicles except for busses to have seatbelts for each seating location?

- a. 1960
- b. 1968
- c. 1972
- d. 1980

Answer posted at the bottom of this newsletter, and I will post this question on my [Facebook page](#)

on Friday. And then will post the answer in comments shortly thereafter.

## Sample ASE question

### QUESTION:

An engine equipped with electronic throttle control (ETC) system runs but the engine speed is fixed at a high idle and a dash warning light is on. What is the most likely cause?

- a. Throttle return spring is broken
- b. System is default mode due to failure of a major component or circuit fault
- c. A broken throttle cable
- d. Stuck throttle pedal



### ANSWER:

The correct answer is b. When an electronic throttle control (ETC) system detects a fault in the system, it defaults to a throttle setting of about 16% to 20%. This means that the driver will be able to move the vehicle out of the way and not cause an unsafe situation. The system fault could be with the accelerator pedal position (APP) sensor, the throttle position (TP) sensor or the throttle body assembly. Answer a is not correct because even though some early electronic throttle control systems used a throttle cable to move the APP sensor, it is not the most likely cause of an engine operating only at a high idle speed. Answer c is not correct because most systems do not use a throttle cable and even with the system that do, the engine speed would be limited to idle speed and not set at a high idle speed. Answer d is not correct because a stuck throttle pedal could cause the engine to operate at a high idle, it would not necessarily cause the system warning light to come on which is triggered when a fault in the system has been detected. If the throttle pedal were stuck, the system would not sense that a steady throttle is a fault and would not light the system warning lamp.

## Tech Tip

### Purchase a flex-fuel vehicle

If purchasing a new or used vehicle, try to find a flex fuel vehicle. Even though you may not want to use E85, a flex-fuel vehicle has a more robust fuel system than a conventional fuel system designed for gasoline or E10. The enhanced fuel system components and materials usually include:

- Stainless steel fuel rail
- Graphite commutator bars instead of copper in the fuel pump motor (ethanol can oxidize into acetic acid, which can corrode copper)
- Diamond-like carbon (DLC) corrosion-resistant fuel injectors
- Alcohol-resistant O-rings and hoses



The cost of a flex-fuel vehicle compared with the same vehicle designed to operate on gasoline is a no-cost or a low-cost option.

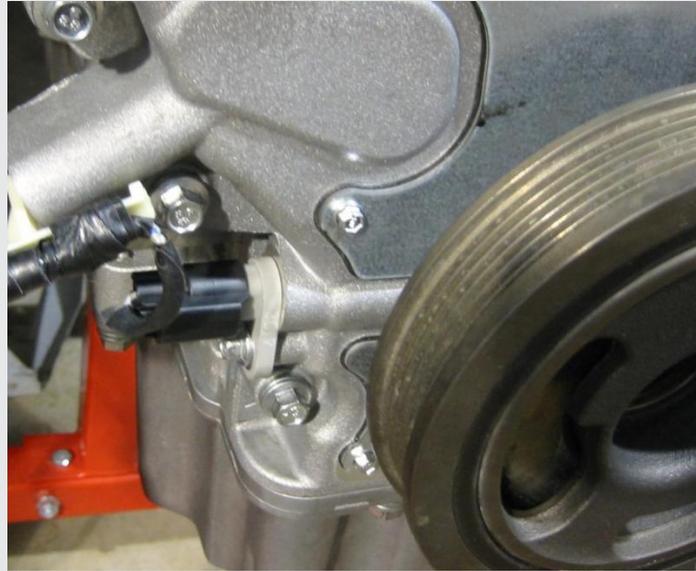
## Straight Talk

From the August 29 Wheels section of Dayton Daily News

## The case of the no-start Saturn

**Wheels:** Jeff W. of Springboro asks:

"I have a 2005 Saturn 300L that has about 130,000 miles and when it runs, it runs great. However, over the past several months, it has failed to start. The engine cranks normally but not fire. If I wait a few minutes it has started. Then last month it stalled on me and it never did start so it was towed to a local shop. They could not duplicate the problem as it always start and ran normally when they had it and there were no stored diagnostic trouble codes. Then last week, it happened again and this time the shop was able to retrieve a diagnostic trouble code for a crankshaft position sensor. I approved their replacing this sensor and I have not had any problems since. What are your thoughts about this being the cause of my previous problems and is there something else that you think needs to be replaced. I am giving this car to my son to take to college and I don't want him to be stranded".



**Halderman:**

It appears that the shop did all of the right things. They did not "throw parts" at the car in an attempt to fix the car without a diagnostic trouble code and they replaced what is most likely the root cause of the problem. Diagnosing a situation of an intermittent problem is difficult and sometimes impossible without using a scope. The crankshaft position sensor is used by the engine computer, called a powertrain control module, abbreviated PCM, to control the spark similar to the function of a distributor in older vehicles. If the sensor fails, usually when hot, the sensor stops sending a signal and the engine stops running. If a scope was connected, the signal could be seen as stopping but this signal would also stop if the engine stopped, running for other reasons. This is why it is so hard to diagnose. Regarding other things that can be done, I suggest you ask the shop to look over the entire vehicle to make sure it is safe first and that all of the needed routine services, such as an oil change and filters replaced have been addressed. Then it should be ready to go to college with your son.

*Have an automotive question? Please write to Jim with your questions at [jim@jameshalderman.com](mailto: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.*