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What's new with Jim?

Do you want a "turn-key" automotive online training program? Now Pearson has just what you need..... Revel (Replaces and updates MyAutomotiveLab). REVEL Features:



- App-The Revel mobile app lets students read, practice, and study-anywhere, anytime, on any device. Content is available both online and offline, and the app syncs their work across all registered devices automatically.
- Assignment Calendar- Revel allows students to see what their instructor has assigned and which readings must be completed on which dates. This clear, detailed schedule helps keep students on schedule as they move forward throughout the course.
- Quizzing- As the student reads, the REVEL program quizzes them to review concepts and preps them for exams without leaving the page.
- Interactive Media and Video-Interactive media and videos are integrated directly in the text content to help bring the concepts to life. The media interactives in Revel have been designed to be completed quickly, and the videos are brief, so the student stays focused and on task.
- Performance View- The Performance View helps instructors keep track of their assignments, and double-checks that the instructor has received the work that the student has submitted.

Instructor access to Revel Automotive is available at no cost by reaching out to Pearson. <https://www.pearsonhighered.com/revel/educators/browse-products/disciplines/automotive.html>

Then supplement REVEL with the resources on the Halderman website for an awesome automotive education training experience. Find your local rep here: <https://www.pearson.com/us/contact-us/find-your-rep.html>



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Where's Jim?

Due to the Coronavirus, all events have been canceled and I have no travel plans for the summer.

Keep up with me at:
www.jameshalderman.com
Email Jim
Facebook

Puzzle of the month

Find this month's puzzle of the month at this [link](#) and test your students knowledge on cranking system diagnosis.

Cranking System Diagnosis And Service
Chapter 53

ACROSS

- _____ should be tight until after you have had the engine assembly in completely.
- A large voltage drop in the cranking circuit may cause slow cranking with low amperage _____ after the start of the cranking cycle.
- _____ is the most common cause of cranking system failure.
- _____ is the most common cause of cranking system failure.
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- _____ is the most common cause of cranking system failure.

DOWN

- A _____ means high resistance.
- One cause of slow cranking is the control circuit in the _____ of the starter.
- _____ is the most common cause of cranking system failure.
- _____ is the most common cause of cranking system failure.
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Auto Trivia

What movie is associated with these license plates?

- Back to the future
- Bullitt
- Sundance Kid
- Both a and b

Answer at the bottom of this page!



FAQ

What is deep cycling?

Deep cycling is almost fully discharging a battery and then completely recharging it. Golf cart batteries are an example of lead-acid batteries that must be designed to be deep cycled. A golf cart must be able to cover two 18-hole rounds of golf and be fully recharged overnight. Charging is hard on batteries because the internal heat generated can cause plate warpage, so these specially designed batteries use thicker plate grids that resist warpage. Normal automotive batteries are not designed for repeated deep cycling.

Sample ASE certification-type question

Question:

If a digital meter face shows 0.93 when set to read K Ohm scale, the reading means _____.

- 93 ohms
- 930 ohms
- 9300 ohms
- 93,000 ohms

Answer/Explanation

The correct answer is b. With the meter set to read K ohms, the reading of 0.93 means that the resistance of the component being measured has 0.93 of a K ohm or 930 ohms. Answers a, c, and d are not correct because they are not slightly less than 1000 ohms.

Tech Tip

Look at battery date code

All major battery manufacturers' stamp codes on the battery case give the date of manufacture and other information about the battery. Most battery manufacturers use a number to indicate the year of manufacture and a letter to indicate the month of manufacture, except the letter I, because it can be confused with the number 1. For example:

- A = January
- B = February
- C = March
- D = April
- E = May
- F = June
- G = July
- H = August
- J = September
- K = October
- L = November
- M = December

The shipping date from the manufacturing plant is usually indicated by a sticker on the body of the battery. Almost every battery manufacturer uses just one letter and one number to indicate the month and year.



Case Study

The Case of the Chevrolet Battery Drain

A 2011 Chevrolet Impala was being diagnosed for a dead battery. Testing for a battery drain (parasitic draw) showed 2.25 amperes, which was clearly over the acceptable value of 0.050 or less. At the suggestion of the shop foreman, the technician used a Tech 2 scan tool to check if all of the computers and modules went to sleep after the ignition was turned off. The scan tool display indicated that the instrument panel (IP) showed that it remained awake after all of the others had gone into sleep mode. The IP cluster was unplugged and the vehicle was tested for an electrical drain again. This time, it was only 32 milliamperes (0.032 ampere), well within the normal range. Replacing the IP cluster solved the excessive battery drain.

Summary:

* Complaint-The battery was dead.

* Cause-Excessive battery drain (parasitic draw) was found. Using a scan tool to test the modules, it was discovered that the instrument panel cluster (IPC) remained awake and never powered down when the ignition was turned off.

* Correction-The IPC was replaced, which corrected the excessive battery drain problem.

Straight Talk

From the August 29 Wheels section of Dayton Daily News

Reader asks about a no oil change lawn mower engine

Wheels:

Steve C. asks:

"I purchased a new Toro self-propelled lawn mower, and on the box, and in the operating instructions, it states that no oil change is required. It says to simply "top off" the oil using a specified SAE 30 engine oil when the oil level is low. I assume that the engine does not come equipped with a drain plug. Is this just a way to reduce their cost or is this something new that engines are now being built that don't need to have the oil changed?"

Halderman:

This is new one on me too. I asked several automotive experts for their comments and here are some of what I heard:

- CW said: This is not realistic. The oil should be changed based on the hours used. The reality is that many people will simply buy a new mower instead of having the blade sharpened or the oil changed.
- JT said: Seems ignorant to me and against all wisdom. Changing the oil in a small engine is cheap and easy.
- BH said: Huh? That seems crazy. I'd still suck it out and refill. Maybe the mower won't last as long as the engine.
- CB said: Wow. Neat, but scary.

I tend to agree that this is a bold move by Toro, but apparently, they have done the research and found that as long as the oil level is at the proper level and that the correct oil is being used, it does not need to be changed on a regular basis. Unlike a car or truck that is operated under a wide range of temperatures, most lawn mowers operate at a temperature that ranges from about 65 to 95 degrees. This temperature range does not include cold weather starting or a lot of moisture due to condensation, etc. Even today's cars and light trucks that use an oil life monitor (OLM) signal the owner to change the oil based on use. Highway driving during warm weather means that oil does not need to be changed as often compared to freezing weather and short trip conditions.

I have always recommended that the vehicles should be maintained and use the specified oil as recommended by the manufacturers. Therefore, Steve, I think you should get a long service life out of your new mower as long as the oil level is checked regularly, and topped off using the specified oil.

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

Trivia question answer: d.

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.