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Halderman newsletter

April 2015

What's new with Jim?

Welcome to my August newsletter and I hope everyone are getting ready for a new school year. Please consider using Pearson automotive textbooks as I believe they are the best and most up-to-date texts on the market today. See my website www.jameshalderman.com for details as I have many new and updated editions including:

COMPREHENSIVE TEXTS: (Covers all eight ASE/NATEF content areas in three levels of comprehensiveness).

- **Automotive Technology -5th** (130 chapters, over 1,600 pages)
- **Maintenance and Light Repair** (70 chapters, over 1,000 pages)
- **Introduction to Automotive Service** (40 chapters, over 400 pages)

SYSTEMS TEXTS: (Covers one or more ASE/NATEF content area).-In alphabetical order

- **Advanced Automotive Electricity and Electronics** (29 Chapters and over 440 pages)
- **Advanced Engine Performance Diagnosis-6th** (30 chapters and over 446 pages)
- **Automatic Transmissions and Transaxles-6th** (17 Chapters and over 316 pages)
- **Automotive Brake Systems-6th** (21 Chapters and over 422 pages)
- **Automotive Chassis Systems-6th** (34 Chapters and over 700 pages)
- **Automotive Electrical and Engine Performance-7th** (43 Chapters and over 700 pages)
- **Automotive Electricity and Electronics-4th** (28 Chapters and over 487 pages)
- **Automotive Engine Performance-4th** (33 Chapters and over 564 pages)

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QUICK LINKS

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- **Automotive Engines-** Theory and Servicing-8th (35 Chapters and over 555 pages)
- **Automotive Fuel and Emissions Control Systems-** 4th (32 Chapters and over 445 pages)
- **Automotive Heating and Air Conditioning-**7th (15 Chapters and over 275 pages)
- **Automotive Steering, Suspension and Alignment-** 6th (19 Chapters and over 445 pages)
- **Hybrids and Alternative Fuel Vehicles -** 4th (20 Chapters and over 340 pages)
- **Manual Drivetrains and Axles-**7th (17 chapters and over 350 pages)

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

Auto Trivia

What is this tool?

- a. Needle nose pliers
- b. Snap ring pliers
- c. Bearing installer
- d. Airbag clock spring remover tool





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.

Frequently Asked Questions

Will R-134a systems be required to be retrofitted to R-1234yf?

No. Currently there is no mandate to retrofit existing systems with R-1234yf. If a vehicle came from the factory with R-1234yf, then this refrigerant, of course, should be used when servicing the vehicle and will require a special machine. R-134a is and will be the primary refrigerant for most vehicles and there is no need or legal requirement to replace it with any other refrigerant at this time.

Tech Tip

Quick and easy temperature conversion

Temperatures in service information and on scan tools are often expressed in degrees Celsius, which is often confusing to those used to temperature expressed in Fahrenheit degrees. A quick and easy way to get an approximate conversion is to take the degrees in Celsius, double it, and add 25.

For example, Celsius $\times 2 + 25 =$
approximate Fahrenheit degrees:

$0^{\circ}\text{C} \times 2 = 0 + 25 = 25^{\circ}\text{F}$ (actual = 32°F)

$10^{\circ}\text{C} \times 2 = 20 + 25 = 45^{\circ}\text{F}$ (actual = 50°F)

$15^{\circ}\text{C} \times 2 = 30 + 25 = 55^{\circ}\text{F}$ (actual = 59°F)

$20^{\circ}\text{C} \times 2 = 40 + 25 = 65^{\circ}\text{F}$ (actual = 68°F)

$25^{\circ}\text{C} \times 2 = 50 + 25 = 75^{\circ}\text{F}$ (actual = 77°F)

$30^{\circ}\text{C} \times 2 = 60 + 25 = 85^{\circ}\text{F}$ (actual = 86°F)

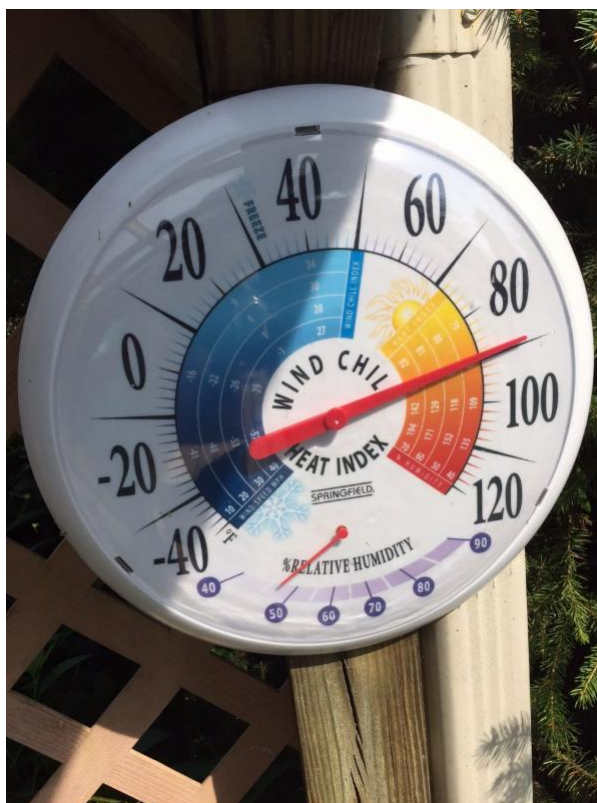
$35^{\circ}\text{C} \times 2 = 70 + 25 = 95^{\circ}\text{F}$ (actual = 95°F)

$40^{\circ}\text{C} \times 2 = 80 + 25 = 105^{\circ}\text{F}$ (actual = 104°F)

$45^{\circ}\text{C} \times 2 = 90 + 25 = 115^{\circ}\text{F}$ (actual = 113°F)

$50^{\circ}\text{C} \times 2 = 100 + 25 = 125^{\circ}\text{F}$ (actual = 122°F)

The simplest way to convert between the Fahrenheit and Celsius scales accurately is to use a conversion chart or use an app on a smart phone.



Sample ASE question

Question: The air-conditioning system seems to be functioning correctly, but it does not cool as fast or as cold as a similar model. Which is the *least likely* cause?

- a. Debris clogged condenser
- b. Low on refrigerant charge
- c. Partially clogged orifice tube
- d. Partially clogged condensate drain

Answer: The correct answer is d. The least likely cause of a lack of cooling is a partially blocked condensate drain. A blocked condensate drain will cause an overflow of water of the evaporator case causing the floor of the passenger side to get wet but is unlikely to reduce cooling. Answers a, b, and c are not correct because all of these could cause reduced cooling.

Straight Talk

From the July 25 Wheels section of Dayton Daily News

Reader has question about water coming from tailpipe

Wheels: Gary of Hamilton asks:
"My father owns a 2009 Pontiac Vibe 4-cylinder with only 25,000 miles on it, which he purchased new. He states that sometime after the first 5,000 miles, he noticed water coming out of his exhaust pipe and notices water in his garage underneath where the car is parked. He has also noticed a hole rusted in his muffler. He has asked the dealer several times what could be causing this, but gets a different answer each time. I suspect they are giving him the run around and he gets tired of asking. Could you advise what could be causing this and what he should do about it? One of the answers he received from the dealer was that he doesn't drive the car enough."



Halderman: I would tend to agree with the dealer that the vehicle is not being driven very far. Every gasoline engine creates about 1 gallon of water for every gallon of gasoline that is burned. Normally, this water is in the form of water vapor and is not visible. However, if the vehicle is not driven enough to fully warm the exhaust system, then the water vapor condenses in the cool exhaust system creating the water that you see dripping from the tailpipe. The "rusted hole" in the muffler is actually a drilled hole to allow any condensed water to escape so that it does not cause the muffler to rust. To summarize, there is nothing wrong with the vehicle and everything you mentioned is normal. It would help to drive the vehicle about 20 miles or more once in a while to help evaporate any water that is still in the exhaust system.

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.