

Having trouble viewing this email? [www.jameshalderman.com](http://www.jameshalderman.com)



## Author & Automotive Expert James D. Halderman



Connect with me:

View our profile on  
**LinkedIn**

**f** Follow me on  
**twitter**

Halderman newsletter

March 2018

### What's new with Jim?

I am pleased to announce that the new "Light Vehicle Diesel Engine" is now available and can be ordered for future classes. Order ISBN 0-13-467872-9.

The content includes the following chapters:

CHAPTER 1 - DIESEL

ENGINE OPERATION

CHAPTER 2 - DIESEL

ENGINE BLOCKS AND

ROTATING

ASSEMBLIES

CHAPTER 3 - DIESEL

CYLINDER HEADS AND

VALVE TRAINS

CHAPTER 4 - DIESEL

ENGINE LUBRICATION

SYSTEMS

CHAPTER 5 - DIESEL ENGINE COOLING SYSTEM

CHAPTER 6 - DIESEL ENGINE CONDITION DIAGNOSIS

CHAPTER 7 - DIESEL ENGINE DISASSEMBLY, CLEANING,

AND CRACK DETECTION

CHAPTER 8 - DIESEL ENGINE ASSEMBLY

CHAPTER 9 - TURBOCHARGER SYSTEMS

CHAPTER 10 - AIR INDUCTION AND EGR SYSTEMS

CHAPTER 11 - DIESEL AND BIODIESEL FUEL

CHAPTER 12 - FUEL SUPPLY AND LOW-PRESSURE FUEL

SYSTEMS

CHAPTER 13 - HIGH-PRESSURE COMMON RAIL DIESEL

FUEL SYSTEMS

CHAPTER 14 - HYDRAULICALLY ACTUATED ELECTRONIC

UNIT INJECTOR (HEUI) SYSTEMS

CHAPTER 15 - EXHAUST AND AFTERTREATMENT SYSTEMS

CHAPTER 16 - DIESEL SERVICE PROCEDURES

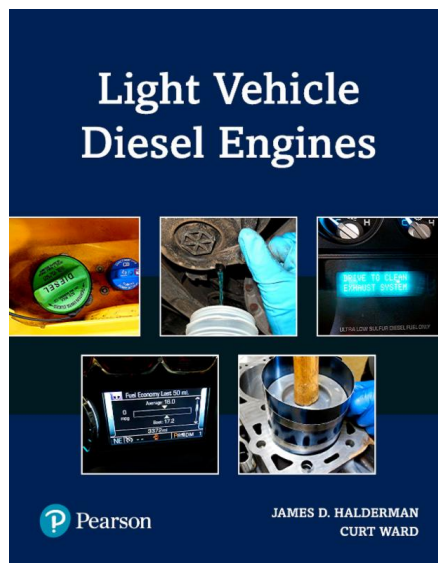
CHAPTER 17 - DIESEL ENGINE ELECTRONICS

CHAPTER 18 - CAN AND NETWORK COMMUNICATIONS

CHAPTER 19 - DIESEL OBD II

CHAPTER 20 - OBD-II DIESEL MONITORS

CHAPTER 21 - OBD-II DIESEL DIAGNOSIS



### IN THIS ISSUE

[Auto Trivia](#)

[FAQ](#)

[Sample ASE](#)

[Tech Tip](#)

[Straight Talk](#)

### Where's Jim?

I will be attending the following events in March.

**March 16-17-** ATE Conference, Seattle, WA

**March 29-30-** ICAIA, Joliet, IL

Due to a family wedding I will **NOT** be attending Vision KC this year. I will be back there next year!

[Keep up with me at:](#)

[www.jameshalderman.com](http://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 transmissions.





**Question:**

A pickup truck equipped with a diesel engine has been towed to the shop. The engine speed increases when the driver depresses the accelerator pedal and releases the clutch pedal, but the vehicle does not move. Technician A says the clutch may be defective. Technician B says the dual-mass flywheel may be defective. 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 c.* Both technicians are correct. Technician A is correct because a defective or excessively worn clutch can cause the engine to increase in speed and not power the vehicle when the clutch is engaged (pedal up). Technician B is correct because a dual-mass flywheel consists of a primary section attached to the engine and the secondary section, which is attached to the clutch separated by springs and dampers. If these dampening devices fail, torque is not transferred from the engine to the clutch. Answers a, b, and d are not correct because both technicians are correct.

## Tech Tip

**Take precautions**

Whenever working on a clutch assembly, most vehicle manufacturers recommend the use of personal protective equipment (PPE) to protect the technician against possible hazards. The items needed include:

- 1. Safety glasses
- 2. Protective gloves

Because clutch disc material may contain asbestos, precautions should include avoid causing any clutch friction material from becoming airborne by wetting the area. Check service information for specific precautions recommended by the vehicle manufacturer for the vehicle being serviced.

## Straight Talk

## Reader asks where to buy gas that doesn't contain alcohol

**Wheels:** Dick of Michigan writes by email: "I hope you can help me. I have many lawn and garden pieces of equipment plus a snow blower and several tractors. I am storing half them over the summer and the others are in storage over the winter. I have heard that all gasoline today contains alcohol and that this can cause issues with the fuel system in my equipment. My questions include:

1. Is it true that gasoline today contains alcohol?
2. Where can I find gasoline that does not contain alcohol?
3. If I can't find pure gasoline, is there something I can use to treat the fuel to help prevent causing damage to my equipment?

**Halderman:** Thanks for asking and you did hear right that there is alcohol in most gasoline today. The alcohol used is ethanol, also called grain alcohol or ethyl alcohol, and it is the same alcohol as is in wine, beer and whiskey. The ethanol is usually made from corn and then "denatured" so that it is not drinkable and then added to gasoline at the local fuel depot (distributor).

Gasoline today contains up to 10% ethanol. There is a website ([www.pure-gas.org](http://www.pure-gas.org)) that lists stations that carry gasoline that does not contain ethanol. Ethanol-free gasoline also costs more.

Regarding your third question, I suggest that two things be done to help protect your equipment:

1. Keep the fuel tank full when not in use. Ethanol can absorb moisture from the air so if the tank is kept full, then there'll be very little air in the tanks. When ethanol combines with moisture, the ethanol separates from the fuel and sinks to the bottom of the fuel tank. It is this concentration of ethanol at the bottom of the tank where it can be drawn into the engine that can cause issues such as corrosion of the fuel system and could make the engine run rough.
2. A fuel stabilizer such as STA-BIL can be used every time the equipment is refueled. This can help keep the gasoline from oxidizing and also help prevent the ethanol from separating from the gasoline. Add the stabilizer to the fuel storage container used to refuel the equipment and be sure to use fresh stabilizer in fresh gasoline (less than 90 days old) for best results.

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

**Trivia question answer: A.**

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.*



Copyright © 2003-2018. All rights reserved.