

Take this car care quiz to find out how much you really know

"How often should the muffler bearings be lubricated?" "Where does one add exhaust fluid?" "How often should the air in your tires be changed?" "How hot can your engine get before it is considered overheated?"

If you recognized the first three of the above as trick questions and are not sure about the answer to the fourth, you are like most of the 66 drivers tested by University of Michigan Transportation Research Institute's Paul Green.

Dr. Green's goal was to determine how drivers might respond to various types of instrumentation being considered for cars of the future. His first step: To find out how much people know about the workings of their cars.

He learned that most of the people in his test group did not know much about their cars' mechanical functions. Most of them could not correctly answer questions about the operating temperature of their cars' engines, nor tell how much anti-freeze/coolant their radiators held.

Although 10 people attempted to answer the trick questions, most realized these were "put-ons" by the time they reached the third.

If you recognized the first three questions as tricks, and stated 250-275 deg. F. as maximum temperature before overheating, you're ready for a few more legitimate questions from Car Care Council about the cooling system:

(1) For improved engine efficiency, cooling systems are pressurized. Normal range of pressure is 8 to 10 p.s.i. True or false?

(2) You're stuck in a traffic jam on a hot day. Your car overheats. Until you can safely pull off the road to get help you should: 1) Close all the windows and turn on the air conditioner to MAXIMUM; 2) Open the windows and turn the heater to its hottest setting with the fan on high; or 3) Turn on the headlights and emergency flashers. Choose one.

(3) Cooling system hoses circulate up to: a) 500 gallons per hr.; b) 1,500 gallons per hr.; or c) 7,500 gallons per hour.

ANSWERS TO CAR CARE QUIZ

1) True. The normal range of pressure is 8 to 10 p.s.i. The extra pressure helps circulate the coolant, thereby helping dissipate engine heat.

2) False. Typical cooling system pressures range from 14 p.s.i. to 17 p.s.i. The boiling point of coolant increases three degrees for every pound of increased pressure.

3) The answer is (c), 7,500 gallons per hour. Hoses must survive under-the-hood temperatures of up to 280 deg. F. and are subject to pressures near 18 p.s.i., a weak pressure cap will cause coolant loss and engine overheating.

For further information on cooling systems are up to the task.

For a complete self-addressed envelope to Car Care Council, 222 Cedar Lane, Tennessee, TN 37066.

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You can prevent C-V joint problems with periodic checks and quality care

The wonderful world of front wheel drive (FWD) motoring carries new owner maintenance responsibilities with it.

Front wheel drive constant-velocity (C-V) joints are the grown-up descendants of the universal joints in rear wheel drive cars.

Their role is to transmit driving force from the engine through two short driveshafts to the front wheels. In the process, they have to cope with up-and-down suspension movements, steering changes, in-and-out movements of the driveshafts and other forces U-joints never heard of. It's easy to see why they're so important to FWD cars.

There are four C-V joints on each FWD car, and each C-V joint is protected by a "boot" made of neoprene or a synthetic material.

An American success story

C-V joints were invented in America in 1928. Today, Perfect Circle, one of Dana's brand names, stands as the only U.S. manufacturer of C-V joints solely for the aftermarket.

C-V joints first came to Americans' attention when FWD cars began to flood our highways in the late 1970s. Perfect Circle estimates there will be 84 million FWD vehicles on our roads by 1995!

What can go wrong?

Today's C-V joints are marvels of high-tech engineering, good for 75,000 miles of trouble-free driving under normal circumstances.

The most likely cause of C-V joint damage is failure of the protective boot. If a boot becomes torn or cracked, it will let out the special C-V joint lubricant, and let in dirt or moisture.

The chief causes of C-V joint boot damage are road debris, potholes and im-

proper towing procedures, along with extremes of temperature and simple old age.

The C-V joint itself can be damaged by dirt or by rust. Some damage isn't terminal; C-V joints can be reconditioned.

However, the best bet is usually a new C-V joint. Perfect Circle, for example, offers a lifetime limited warranty on new joints, so why try to pinch pennies?

How do you know you've got problems?

Running over a large stone, exhaust pipe or wire in the road is a common cause of C-V joint trouble. If you're worried about possible damage to your car, have it checked at the first opportunity.

The appearance of unusual drivetrain noises is another clue. Don't ignore these noises in a FWD car!

Perfect Circle experts estimate you have about eight hours of driving time from boot failure until the C-V joint is permanently damaged.

Humming or knocking noises, popping or clicking sounds in turns, or vibrations that appear at specific speeds are potential C-V joint trouble signals.

At the garage: What you need to know

C-V joint repairs are not for amateurs. Skilled professionals with chassis training and the required special tools are the order of the day.

And C-V joint work can be expensive. A boot replacement might cost \$50-60 for parts and labor, and complete C-V joint replacement can run upwards of \$250.00.

Finally, our Perfect Circle experts suggest that you insist on quality installation and quality parts from reputable manufacturers. Look for knowledgeable service technicians, brand names with national reputations, and warranties you can make use of anywhere.

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