

Complete
Automotive
Repair

Meyers'
Auto Tech
Inc.

Brought to you by
**MEYERS' AUTO
TECH, INC.**

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“Check engine” lights deserve a check!

When your “check engine” light comes on, it means something is wrong. If you’ve checked the gas cap, and it’s on correctly—and still there’s a light on the dash glowing orange—you need to have the problem diagnosed. It could be any one of a thousand or more things, some of them potentially serious. Pinpointing the source of the trouble is our job.

Diagnosing the specific problem in a complex vehicle such as your car requires the right equipment coupled with technical know-how. Each code in your car’s computer has a coordinating test that should be run, and there’s a parameter for running that test in accordance with the

manufacturer’s design. This type of diagnostic work requires trained technicians.

On some cars, when something is seriously wrong, the “check engine” light will flash. In this case, shut off the car and call for a tow. It’s never a good idea to just leave the “check engine” light on without having it checked out, since there could be safety issues involved.

Driving around for a while with the “check engine” light on before you have it checked may cost you substantially more than if you took care of it right away. Don’t take chances with your engine or your life. Whenever a “check engine light” comes on, bring your car to us for the diagnostic tests you need to get to the bottom of the problem.

**Check
Engine**

Turning the light off isn't enough!

There are repair shops that will be happy to just make your “check engine” light turn off. Not only will this not solve the problem with your engine, turning off the light will wipe out the memory. Then, when you finally have the problem checked, the data necessary to diagnose the problem will no longer exist.

Our technicians are tops!

Our automotive repair technicians are the best, and we aren’t afraid to say so. Because modern cars and trucks are so complicated, not just anyone can perform the necessary diagnostic work and repairs they need. Today’s technicians are highly trained specialists, and we happen to have some of the best right here in our facility.

Certification is a must with the technicians we hire. Certification includes work experience (not unlike a physician’s residency training) and passing a written test. Technicians who are certified are among the best in the auto repair industry.

It doesn’t stop with certification, however. A good technician must understand a number of vehicle systems and be a good diagnostician. Experience working on vehicles in addition to knowledge is essential to becoming skilled at diagnosing the problem and determining the right solution.

Other hallmarks of good technicians include the ability to consistently and persistently apply knowledge and to patiently search out the root cause of a problem. A good technician will apply the necessary patience to correctly diagnose the problem and find the right answer.

We’re proud of the excellent technicians we’ve hired. They’ve proven themselves in terms of knowledge and diagnostic ability, and we trust them. We hope you’ll trust your car to them, too.

Meyers' Auto Tech, Inc.
Customer conveniences

**“CHECK ENGINE LIGHT”
SPECIAL!**

\$20 OFF

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CHECK ENGINE LIGHT
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DON'T SETTLE FOR LESS...COME TO MEYERS' AUTO TECH

OEM? OES? Aftermarket?

If you're in the market for car parts, you may hear some terminology you aren't familiar with. This can be confusing. Worse yet, you may be asked questions about whether you want OEM parts or if aftermarket will do. Someone else you talk to may mention OES parts. As the consumer, you're just wondering, "What does all this mean...and how does it apply to my car?"

Relax. We've got the answers. Let's start with OEM. OEM parts are those made by the manufacturer of your car. In fact, OEM stands for "Original Equipment Manufacturer." They are original parts made to work and fit for your particular model vehicle.

OES is pretty much the same...but also a little different. Let us explain. OES stands for "Original Equipment Supplied." Some folks use the terms OEM and OES interchangeably, but

they aren't exactly the same. OES, or OE, parts may not be made by the manufacturer of your car. However, they were probably purchased by the manufacturer from another parts maker and used on your car, so for all intents and purposes, they are original equipment.

Aftermarket parts are another story. These parts are made by a manufacturer other than the car maker. They are often purchased by dealerships as additions to vehicles on their lots. They are very close but not necessarily identical to original parts. In most cases, however, an aftermarket part will do the job as well as an OEM part. It really depends on the specific part. Some are known to not hold up quite as well as the originals, though, so be cautious about which you choose. If you aren't sure, it's best to trust a professional. We can give you the information you need to make a smart decision on OEM and aftermarket parts.

Making the wheels go round

Honoring "Otto"

The four-stroke process, which drives most car engines today, was developed in 1867 by Nikolaus Otto. If you ever hear the process referred to as the "Otto" cycle, you will know that it is named for this inventor.

Some people love engines. They know the details of what makes a car run. Then, there are those people who just put gas in and hope it goes. For those who are genuinely curious about how their cars run, the process can be demystified a bit.

Basically, what a car engine does is turn gasoline or diesel fuel into the force that moves your car. The idea is to enclose a small amount of fuel in a very tiny space and then ignite it to create energy. In the case of a car, this generally occurs in a four-step process.

The intake stroke does exactly what it sounds like it does: The valve opens and takes in a cylinder's worth of air, combined with a very small amount of fuel. Likewise, the compression stroke "compresses" this combination of fuel and air to spur the ignition. The combustion stroke involves a spark from, you guessed it, the spark plug, which causes the mixture in the cylinder to burn. On the final stroke (the exhaust stroke), a valve opens to release the vapor (a by-product of the combustion), which then exits the car through the exhaust pipe. The energy created by this process drives the piston up and down, which causes the crankshaft to turn a motion, resulting in the wheels of your car moving.

That's a very simplified explanation, but it should give you a pretty good idea of the concept behind the internal combustion engine that moves your car. There are other engines—rotary engines, for instance—that work somewhat differently. Whenever you have questions about your engine, turn to a qualified technician for answers.

GOT GAUGES?

Some cars have an abundance of them...and some cars hardly have any. We're talking about dashboard gauges. Although gauges started to disappear a little over 20 years ago, many have reappeared or are offered as options on new cars. That's a good thing, because gauges can often tell you when there's a problem with your car before something has really gone wrong...provided that you know how to read them.

TEMPERATURE

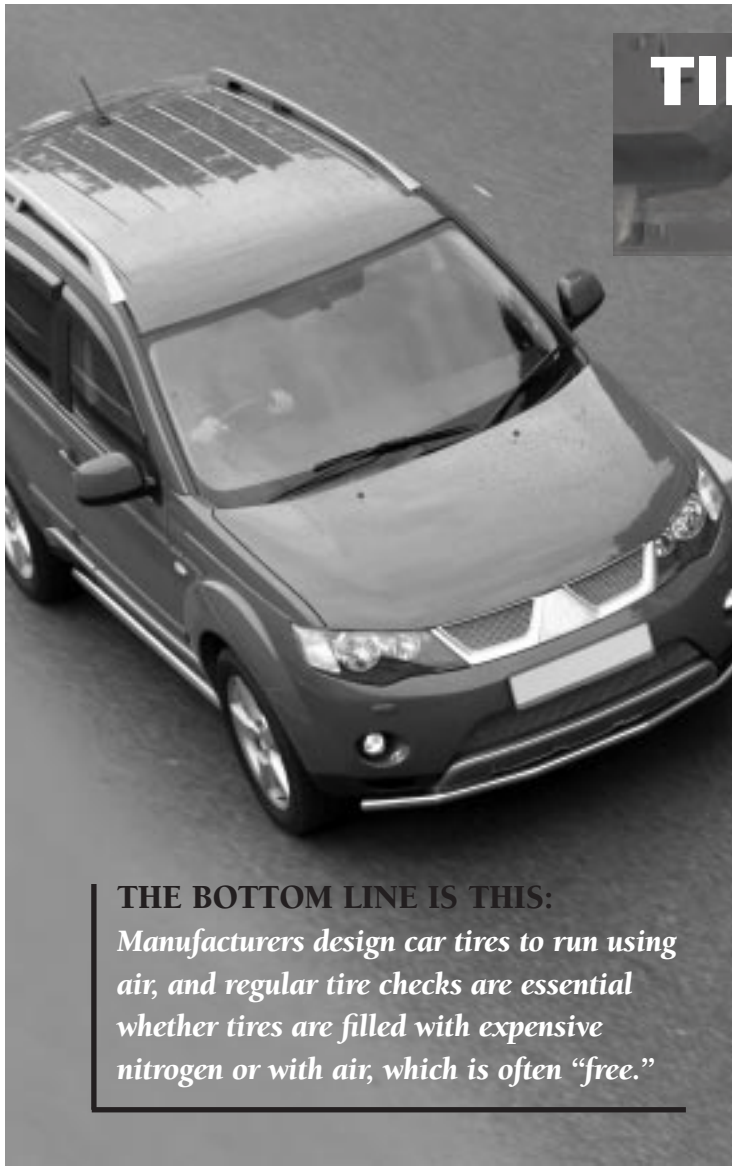
Temperature gauges are there to tell you how warm or cold the engine coolant is. The temp will be cold when you first start the car and warm up to about 80° to 200° F or 27° to 93° C. Lower or higher temperatures than the norm noted here could be signs of worn hoses, low coolant, a belt that's slipping, or a bad thermostat.

OIL

Your oil-pressure gauge should remain pretty much steady at 30 to 40 psi, except when the engine is running at a fast idle and the engine is cold. Then, it could jump to about 60 psi. It may also be slightly lower when your car is idling. If oil pressure drops significantly, you could be running out of oil, using the wrong oil, or have a filter that's plugged.

Other gauges located on your dashboard may include a tachometer (which indicates engine speed), a gas gauge, a voltmeter (which reflects how your charge system is doing), an odometer, and a speedometer. Giving your gauges a little attention now could help you avoid spending a whole lot of money later on.





TIRES—

Do you *really* need to spend the extra money for nitrogen?

THE BOTTOM LINE IS THIS:

Manufacturers design car tires to run using air, and regular tire checks are essential whether tires are filled with expensive nitrogen or with air, which is often “free.”

Thinking about having your tires filled with nitrogen instead of air the next time you have them serviced? Some service centers and tire shops are offering this service for a little extra charge for each tire. They're selling the concept based on a number of “benefits” nitrogen is said to offer over air. Among these are reduced tire wear, better gas mileage, and reduction of pressure loss. Sounds good, right? Well, maybe. Maybe not.

Although nitrogen is used regularly in certain types of vehicles, such as 18-wheel trucks and racecars, its use in passenger cars is not very well documented. Claims that gas mileage can be improved by a mile or more per gallon are more likely related to the fact that the tires were just fully inflated rather than any true change. A recent *Consumer Reports* test found little difference in nitrogen loss and air loss in tires over a year's time.

The test also concluded that whether tires are filled with nitrogen or air, they must be checked and inflated regularly for optimum wear, gas mileage, and safety. Therein lies a fundamental problem. Because car owners are told that nitrogen pressure will hold up longer in their tires, they may be less likely to check them and reinflate them on a regular basis.

The bottom line is this: Manufacturers design car tires to run using air, and regular tire checks are essential whether tires are filled with expensive nitrogen or with air, which is often “free.” Why spend the extra money when you don't need to? By giving your tires the regular attention they need, you can enjoy just about the same benefits and keep a few more dollars in your wallet.

What could go wrong?



When an engine dies, there are a few basic things you probably think of right away. “Did I run out of gas?” is one of the top questions. Setting aside a gas gauge that doesn't work properly, chances are good that if you're out of gas, you know it.

So, what else can go wrong? Although the engines on newer-model cars are very complex, there are still some major problems we always look for first. One of these actually has to do with lack of gas. Sometimes there's plenty of gas in the tank, but it just can't get to the engine. Or, if the engine is getting too much gas, that will cause trouble as well. Problems with gas itself, such as too much water in the fuel, can cause grief, too.

Sometimes there is difficulty with the ignition. Timing problems are often at the root of this because they cause the gas to ignite at the wrong time. Lack of spark because of a worn plug or because of a deficiency in the system is another cause.

In the compression chamber, a host of parts can fail. Everything from a cylinder that's blown a hole to an intake or exhaust valve that isn't closing all the way can mean trouble. Worn piston rings can result in a lack of compression as well.

Other things that can cause your engine to conk out include, but are not limited to, problems with exhaust, lack of oil, and a crankshaft that is frozen. Relax, you don't have to know all the things that can cause your engine to die. However, you should know that regularly scheduled maintenance can help you avoid most of the problems that can lead to a breakdown. Don't take chances; have the maintenance you need to keep your car running smoothly.

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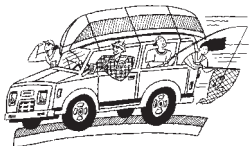
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OUR SERVICES

The many services
we offer include:



- electrical repairs
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- 30/60/90K inspections
- transmission and coolant systems flush

Want to blow an engine?

Of course you don't. No one does. However, as you probably know, people blow engines every day and are faced with not only breakdowns, but also a huge decision: "Do I have my engine rebuilt or buy a new vehicle?" No matter which course they take, the decision will be an expensive one.

Although not all blown engines can be avoided, some are preventable. Here's a tongue-in-cheek look at things you can do to blow an engine...should you ever want to.

How to blow an engine...

1. Ignore your coolant system. Don't check your radiator. Don't look for leaks. Don't have your thermostat checked.
2. Don't change your oil. Don't add oil, either. In fact, forget that your engine needs lubricant to keep parts moving smoothly and remove heat. NEVER look at the oil gauge on your dash. This step is pretty much guaranteed to blow your engine.
3. Don't let us check your EGR (exhaust gas recirculation) system for possible signs of damage that could be evidence of detonation. We'll also try to look for deposits in the combustion chamber and signs that your car is burning oil, if you don't stop us. We just can't help it.

Of course, it should be quite clear that we don't want you to do any of the things we've listed here. In fact, we want you to do the opposite. Although, if you bring your car to us regularly, you really don't have to worry about number three. We'll be sure to give your car all the checks it needs when you bring it to us for regular service and maintenance.