



"The Professional Service Station That Comes To You!"



PACKERLAND MOBILE OIL CHANGE, LLC

(920) 544-3452

[www.packerlandmoc.com](http://www.packerlandmoc.com)

Volume 1, Issue 1, Date

# The Maintenance Minute

News and Insights about the needs of your vehicle



*We use professional storage tanks and digitally metered dispensing nozzles to ensure accuracy and eliminate waste..*

## Try Us Out!

- **Ultimate Convenience** - Fill out a form and we do the rest.
- **Quality Products** - All of our products meet or exceed original equipment standards.
- **Payment Options** - Cash, Check or all major credit cards are accepted.
- **Regular Scheduled Visits** - Most are once a month.
- **Environmentally Responsible**
- **Full Service Oil Change** - 12 Point inspection including fluid top off.
- **Insured**
- **Locally Owned**

## How Often Do I Really Need To Change My Oil (Part 1)?

You know your vehicle needs oil changes, but are you tired of getting a different answer every time you ask how often? Why is it so confusing and why do different people say different things? Should you get your oil changed after three months even if you are nowhere near the miles? Do I trust the light on my dash? The only simple answer to these questions is, "It depends."

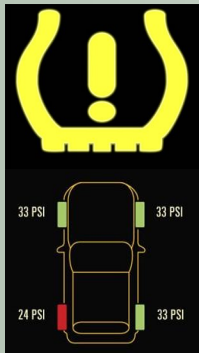
Fortunately the story doesn't end there, but we need to first learn a bit about what oil does and the factors that affect it. After you mix that in with the type of vehicle you have and how you drive, you will be able to make your own determination. First, lets look into what functions motor oil serves in an engine and why it needs to be changed periodically. The motor oil in your engine stays busy; it lubricates, it cleans, and it cools things down when the going gets hot. We are going to simplify this a bit, but we will hit the major points and hopefully you can get a better sense of the life your oil leads.

*(Continued on page 2)*

## Why Packerland Mobile Oil Change, LLC?

When it comes to your free time, even ten minutes wasted is ten minutes too much. We strive to bring the quality care and knowledge of a service station or dealership to your workplace with a level of convenience that not even a quick lube can touch. We offer full service oil changes and regular vehicle maintenance performed in an environmentally responsible, honest and convenient manner. We believe we can remove the constant worry about vehicle maintenance and ensure that your vehicle does what you bought it for: transport you through your life. We exist to make your life easier.

## HELP, I Don't Speak Car! - Tire Pressure Monitoring Systems



*TPMS systems are now required on all new cars. For more information on automotive safety systems visit [www.safercar.gov](http://www.safercar.gov)*

If you bought a new car over the last year or two you may notice a new warning lamp coming on this fall. You may see an orange or yellow symbol (pictured on the left) that is trying to tell you to check the air pressure in your tires. With fall approaching I thought it would be a good time to talk about what this light is about, why it should be important to you and why you might see it soon.

Tire Pressure Monitoring Systems (TPMS) are electronic systems designed to monitor tire pressure and alert the driver of low or flat tires. The following statistic is available on Wikipedia.com:

Properly maintained tires help with vehicle safety, performance and economy. In the US, the [National Highway Traffic Safety Administration](http://www.nhtsa.gov) (NHTSA) has estimated that every year, 533 fatalities are caused by tire defects in road accidents. Adding TPMS to all vehicles could avoid 120 of the 533 yearly victims and spare as many as 8,400 injuries every year.

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Lets start with a bang: In internal combustion engines an explosion of fuel and air is trapped in a small area and is forced to move very tight fitting metal parts in order to transfer this energy through other moving parts and eventually move the vehicle. The parts fit tightly so that this explosion creates useful energy and ensures that harmful gases don't leak into the environment. As one might guess, this movement causes a great deal of friction and heat. This



*Cut-away of common oil filter showing paper element*

is where our friend motor oil comes in. It is used to bond to the metal surfaces and create a thin film between these parts, allowing them to move freely.

Even with this film of super slick stuff there is still some scraping of metal parts as well as some soot from the explosion that gets

collected by this oil. That is ok, it is supposed to gather all of these contaminants, otherwise they would act like sandpaper and quickly wear away those metal parts. Once the oil has done its job it falls down the engine and into the oil pan on the bottom of the engine. Airflow under the car helps cool the oil as it sits there. Once at the bottom the oil is sucked out of the pan, through the pump and then through a paper oil filter. It then travels through small channels to various parts of the engine to start lubricating again. Keep in mind that during combustion the oil is exposed to temperatures as high as 320° Fahrenheit. Diesel and turbo charged engines create even more heat.

So far we have looked at the basic functions of oil and hopefully we are starting to see how oil could get dirty and start to break down in the first place. In the next installment we will deal with the particular car you drive and how that effects this burning question.

## As The Pan Drips

You might now say, "Cooling, isn't that what 'coolant' is for?" You would be right, but a good portion of the job of maintaining even temperatures in an engine is done by the oil and then the heat is transferred to the coolant where it can be dealt with completely. In fact some engines are small enough, heat efficient enough or have sufficient airflow that they don't use coolant at all. Engines that we hear of as "air-cooled" actually get a great deal of their cooling from their oil. This is true of your lawn-mower, small airplanes and even your neighbor's V-twin motorcycle.



## Editor's Note



**Sean Shoemaker**  
Owner/Operator

Thank you for reading this first edition of "The Maintenance Minute." The purposes of this newsletter are to raise awareness of our service, answer frequent questions from customers and share relevant news that affects the care of your vehicle. The stories and pictures have been compiled by Sean Shoemaker, the Managing Member and Operator of Packerland Mobile Oil Change, LLC. He is a long-time car enthusiast who watches the automotive industry very closely on both a local and global scale. Your comments and suggestions for future articles and content are greatly appreciated. If you have a question, others may want to hear the answer, please send them in an e-mail to [info@packerlandmoc.com](mailto:info@packerlandmoc.com)



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Reaction to the Ford-Firestone Rollover case led to TPMS systems becoming required on all cars and light trucks produced after September 2007. Some manufacturers began including tire pressure monitoring systems as early as 2005.

The aim of any of these systems is to encourage the driver to maintain proper tire pressures. Underinflated tires can lead to **shortened tire life, decreased fuel mileage** and a **greatly increased chance of a tire failure**. Many of the fatalities mentioned above could have been prevented with proper tire inflation and inspection. It may seem strange that a new gadget is actually designed to make you work more, but for the safety and performance of the vehicle, tire pressures are critical.

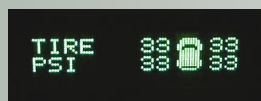
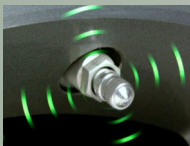
As the ambient air temperatures decrease, the air molecules in your tires get more compacted and this results in less pressure when cold. Initially you may only notice the light on when you start out in the morning. This still means that the tires are low, they are just borderline. You may even need to add air more than once. Last winter I observed the same vehicles tripping their TPMS light 2 or three times as the temperatures went down. While this may seem like a huge annoyance, please bear in mind that your tires were probably underinflated in your old car too, you just didn't know it.

### Consumer Caution



While these sensors are generally robust it is important to note to your tire store that your car has them. Carelessness by the technician can lead to a broken sensor and most are over \$100. Also with this new style there is no need to replace the "valve stem" so you should not see that charge when you buy tires.

### How It Works



These systems come in two basic styles; indirect and direct. The indirect system uses sensors from the Anti-Lock Braking System (ABS) to calculate the relative air pressure of the tires, while the direct system utilizes a sensor in each tire to measure actual pressure. The direct system can be identified by the shape of the valve stem on the tire. It will typically be silver in color (older valve stems are black rubber) and is actually the tip of a sensor that resides inside the wheel. Some vehicles will illuminate the previously mentioned warning lamp to alert you of a problem, but some direct equipped vehicles will actually include a display that shows the location of the low tire and even the current pressures of all tires.

If you see that funny little symbol on your instrument panel, it just wants you to know that you have a low tire or tires. First thing is to stop the car and look at the tires to see if one looks low. If you have a pressure gauge (highly recommended), even better. Generally if only one tire is low it is time to start looking for a screw or nail. If all of the tires are low, then start with inflating them back to the correct pressure and observing them for the next few days. Pressurized air is available at many gas stations. Regular full service oil changes may avoid this altogether as tire pressures should be reset each time. Note also that most manufactures' recommend checking your air pressure with a gauge every two weeks.

To remove your name from our mailing list, please [click here](#).

Questions or comments? E-mail us at [info@packerlandmoc.com](mailto:info@packerlandmoc.com) or call 920-544-3452

Sean Shoemaker - Managing Member/Packerland Mobile Oil Change, LLC 2008