Your Amsoil Information News Source

Winter Maintenance

As I sit here and write this, there is about seven inches of snow on the ground. On these cold, wintery days it is important that when we get in our cars and turn the key, they start without issue.

Preventative maintenance works for all cars, in all locations and climates, and under all driving conditions. One of the most vital components to ensuring your car will start each time is to first start with doing the preventative maintenance each month. However, there is no universal maintenance program that applies to all automobiles all of the time. Thus, your goal is to individualize your

vehicle's maintenance program.

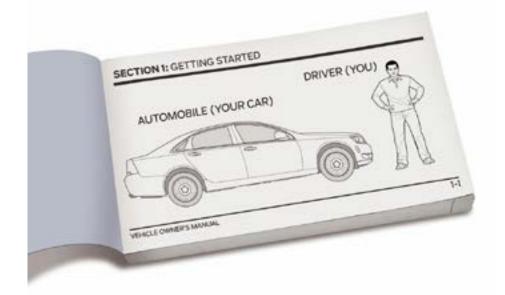
The first step is to always read your owner's manual from cover to cover. A few years back I was told that according to the Guinness Book of World Records, the least read book is a vehicle owner's manual. I couldn't verify that statistic, so don't quote me on it. However, I think it does illustrate a point that we all have an owner's manual that we probably have never (or rarely) looked at. Nonetheless, it is always good to check there first. Your manual will list recommendations as to when......

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maintenance jobs should be done based on time or miles driven, whichever occurs first.

However, even though the Owner's Manual says to do something at a specific time or mileage interval, doesn't always mean it is correct. This is where you need to know your vehicle, know your environment and know how you treat your vehicle. For example, if you are running Amsoil Signature Series Motor Oil, you may only need to change your oil once per year rather than four or more times per year. Or, if you always drive in heavy city traffic, where your vehicle idles much of the time, the fluid change intervals may vary. Or perhaps you have what my parents use to call a "lead foot." You might need to tweak your preventative maintenance intervals from what the Owner's Manual states or even select a different oil viscosity or type.

In this month's newsletter, I am going to specifically focus on cold climate preventative maintenance, as we are currently in winter and the vast majority of newsletter readers will deal with temperatures below 50 degrees this winter.



If you live in an area where extreme cold, snow, and ice are present then your vehicle could be in grave danger. These threats affect virtually every part of your car's performance. Two of the essential systems that you need to check prior to cold weather include the cooling system and the electrical system, especially if you park your vehicle outdoors. These are the two systems that we will focus on for preventative maintenance in this month's newsletter.

Electrical System

The battery loses power in cold weather. The chemical action that produces the electrical power slows down at lower temperatures. If you have ever tried to start your vehicle after it has been sitting in the extreme cold for a long period of time, you may notice that it takes an extra "crank" or two for the engine to turn over. Or sometimes it feels as though the "crank" is a little slower than it should be.

At zero degrees Fahrenheit, a typical battery will have lost nearly 40% of its power, as compared with its performance at 80 degrees Fahrenheit. In addition, at zero

degrees Fahrenheit, the engine requires more than twice the normal amount of power to crank and start. Thus, the battery should be in top condition for cold weather use.

Electrical wires and cables that are corroded or damaged will not carry sufficient electrical current during cold weather.



Many years ago my wife's vehicle had intermittent issues of it not starting. For the longest time we couldn't find a solution because we couldn't replicate the problem when a mechanic would look at it. Finally, it was determined that moisture had worked its way down the cable and it had begun corroding down inside the cable jacket where it was not clearly visible. After replacing the entire length of cable the problem was solved.

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As a vehicle owner you can check the battery cables and any exposed wires. If it appears as though there is fuzzy, crusty stuff on the exposed wires then they are corroded. Many times you can clean corroded areas with baking soda and water. If areas are really bad, they may need to be replaced.

Additionally, you can double check that all electrical connections are tight. If you gently wiggle the battery cables, they should be firm and not move around. Moisture that gets into any connection and freezes can damage the wries or cause a short circuit.

If you don't feel comfortable performing any type of service to your electrical system, most auto parts stores will test your battery and check all of the previous things I talked about for free. I highly recommend taking your car to have this preventative maintenance service completed. Many auto parts stores will also install a new battery for free if they determine that your old battery is becoming weak.

Cooling System

Inside of your engine there is a fairly substantial amount of coolant. This is a mixture of antifreeze and water. The design of coolant is to remove excessive heat from your engine so it does not overheat. However, coolant can "wear out" and cause it to not work properly. One of the characteristics of good coolant is that it does not freeze until it reaches temperatures well below what we experience outside. My coolant mixture will stay liquid down to negative 60 degrees Fahrenheit.

To prevent freezing, your coolant should be tested prior to winter.



If it is determined that your coolant is no longer protecting your engine, the entire cooling system should be flushed out and refilled with the proper mixture of new antifreeze and water to prevent freezing in cold weather.

Added benefits to having good coolant is the prevention of rust and corrosion forming inside your engine and preventing engine damage caused by electrolyses.

Checking your coolant is as simple as dipping a <u>PH strip</u> into the coolant reservoir and checking it against a colored chart.

It is also important to check cooling system hoses and heater hoses. These are typically rubber black hoses run throughout the engine. Most auto parts stores will also help you check your cooling and heater hoses for free. To check these, you can do a visual inspection to look for any bulges or you



can squeeze the hoses to feel for weak spots. If your coolant hose ruptures you will loose the majority of the coolant in your system and your engine will no longer have the necessary protection to keep it from overheating



Shop Talk...

with Dr. Jonathan D. Olson, EdD (Independent Amsoil Dealer #10458)

Christmas is my favorite time of the year. It is a time to get together with family, eat good food, and watch kids open presents. I also find myself eating too much pie and other sweets.

Those of you that know me, know that I am big into research and Christmas is no exception. I find it fascinating to research and learn about the historicity of traditions associated with Christmas and develop a deeper understanding for the impact that one moment in time 2000+ years ago has had on reshaping the entire world. Spoiler alert...the three wise men didn't ride camels.

https://www.gty.org/library/sermons-library/2182/who-were-the-wise-men

This coming year will be full of research related to my vehicles. In January we will finish up with some Winter Preventative Maintenance. February, March and April I will be talking about fuel analytics for several of my vehicles. May and June I plan on talking about the use of Upper Cylinder Lubricant and what I found after running it for an entire year in several of my vehicles. July and August I plan on taking a look at Oil Analytics in several of my vehicles. The tentative plan is also to purchase a different vehicle for the purpose of additional research and a new series of YouTube preventative maintenance and repair videos. Things look like they will be busy...and busy is good.

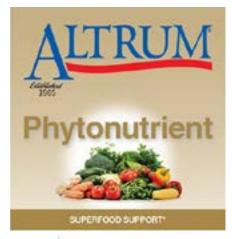
Happy New Year!

Altrum Minute - Phytonutrient Support

There are many phytonutrients in vegetables that we should consume daily. However, it may be difficult to eat the recommended five daily servings. Supplementing with nutrient rich, concentrated vegetables, such as <u>Superfood Phytonutrient Support</u>, can provide high contents of health-providing phytonutrients.

Phytonutrients nutritionally support healthy, normal function and structure in the entire body such as joint comfort and ease of mobility*, antioxidant activity that provides cell protection* and promotes good general health.*

Some of the naturally occurring phytochemicals in <u>Superfood</u> <u>Phytonutrient Support</u> include flavonoids, sulforaphane, indoles, methyl groups, lycopene and the carotenoids. Superfood Phytonutrient Support contains nine super vegetable concentrates including brocolli, tomato, spinach, carrot, cauliflower, kale, beet, brussel sprouts and celery.





Congratulations to NEW Amsoil Opportunists and Enthusiasts!

Congratulations: New Preferred Customers

Carl Bryant Fontana, CA

Congratulations:

New Catalog Customers

Etienne Rochette Saint-Raymond, QC

> Manuel Garay Greeley, CO

Jason Bogacz West Henrietta, NY

Coleman Pietsch Antlers, OK

Duy Nguyen Saint Paul, MN

Congratulations:

New Retail Locations

J-Rod's Tire Service, LLC Sharon Springs, KS

