

Your Amsoil Information News Source

Product Highlight: Signature Series Synthetic Motor Oil

March is the time of the year when I start thinking about my annual vehicle maintenance. Although I perform the majority of both of my vehicle's maintenance in May, I take the month of March to diligently assess the various systems within both my vehicles. This process always begins with ordering Signature Series 5W-20 Synthetic Motor Oil for my 2001 Ford F150 and my wife's 2008 Hyundai Elantra. Using Amsoil's Vehicle/Equipment Lookup feature on their website, I can ensure I am purchasing the correct products specific to my vehicles.

AMSOIL Signature Series Synthetic Motor Oil develops a strong fluid film that keeps metal surfaces separated while its robust anti-wear additives further reduce wear in metal-to-metal contact regions for maximum engine life. AMSOIL Signature Series Synthetic Motor Oil provides 75 percent more engine protection against horsepower loss and wear than required by the industry standard, extending the life of vital components like pistons and cams.



Dealer Contact

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What's inside?

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2001 Ford F150 Annual Vehicle Mileage Analytics...Overview

Throughout the year I consistently track my fuel economy. This begins with writing in a notebook that I keep in my glove-box each time I fill up at the gas station. I figured that since I don't keep gloves in my glove-box I might as well keep some other useful item; my data collection log for fuel consumption.

The specific items that I log are as follows:

Date

Current Odometer Mileage Tripometer Mileage Cost Per Gallon Total Gallons Pumped Total Cost To Fill Up Calculated Miles Per Gallon Where I Purchased The Fuel Type Of Gasoline Additional Notes

It seems like a lot of information to record, but I get bored easily and standing at the pump watching my money get pumped away is bothersome. I distract myself by filling out my fuel log.

The key to this whole process begins with filling up your fuel tank with a consistent "fullness". When the pump handle automatically shuts itself off, I don't keep pumping more gas to "top it off". This will throw off the Miles Per Gallon calculation for the next fill up. Additionally, I ensure that I reset the Tripometer each time, as the miles recorded on the Tripometer divided by the gallons pumped will result in the Miles Per Gallon quotient that I use to judge fuel economy. I record the Odometer Mileage to verify my Tripometer Mileage. I record the Cost Per Gallon in conjuction with my Total Gallons Pumped, to validate that the product equals my Total Cost To Fill Up. This also helps me ensure the Gas Station is charging me the correct price on my credit card bill.

It is also important to note where you filled up. If one particular gas station yields you poor gas mileage over another, there is a good chance you are filling up at a sketchy gas station.

I also note the type of gasoline. I typically utilize the same type of gasoline, unless I am conducting some type of experiment on my vehicle or I am in another state that only sells goofy gasoline.

My additional notes section allows me to track changes in my driving and preventative maintenance items. For example, when I build decks and haul heavy loads of equipment and supplies, I note that so when I calculate poor gas mileage, I can assume it is due to hauling. Much in the same, if I travel to Lincoln, I will note that as I should see an increase in fuel efficiency. I also note when I use Amsoil's P.I. Performance Improver Gasoline Additive. This helps me remember every threefour months when I need to add some more.

It takes a little bit of time, persistence, and determination but the benefits of catching a potential problem are invaluable. In 2017:

I drove 7519.1 miles.

I filled up my truck 34 times.

I averaged 225.44 miles between fill-ups at the gas station.

The cheapest I paid for gas was \$1.969 per gallon and the most expensive I paid was \$2.399. On average I spent \$2.18 per gallon.

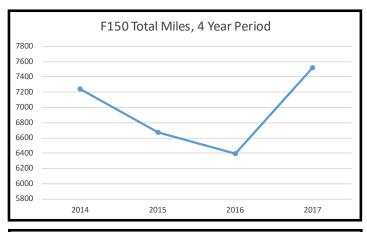
I pumped 586.93 gallons of gasolene totaling \$1,277.07.

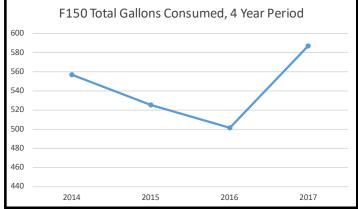
It cost me 16.98 cents every mile I drove.

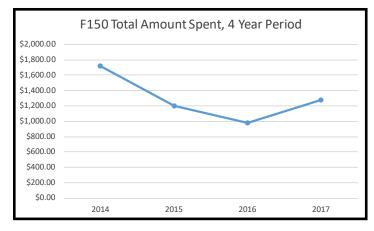
I averaged 13.11 miles per gallon throughout the entire year.

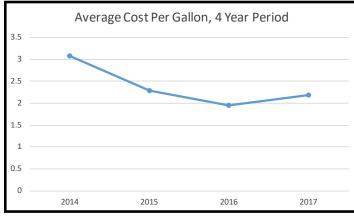


2001 Ford F150 Annual Vehicle Mileage Analytics...Charts





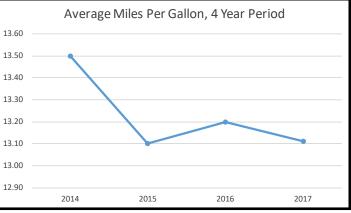




Of all the different ways to look at the data, the primary purpose of recording and analyzing this information is to determine the fuel economy...or Miles Per Gallon. This is important because as a vehicle gets older it has a tendency to not run as well as it once did. If throughout the year there is a drastic dip in fuel economy, that could be a warning sign that something has malfunctioned and needs repair. If not dealt with, it could lead to a more costly break down in addition to the lost money due to poor fuel economy.

In 2015, I noted that I had a concern with my fuel economy dropping from 13.5 mpg to 13.1 but would continue to monitor it in the succeeding months and years. As I look over the past three years I can tell that my fuel economy has remained relatively consistent. Looking at the data, I have no major concerns. I plan on continuing to use the full line of Amsoil products to ensure that my vehicle is protected and is operating at peak performance...whatever your definition of "peak performance" is for a vehicle that is 17 years old.





Diesel Digest - Crankshaft, Oil Galleries, & Timing Gears

Last month we took a look at the Crankshaft and Crankshaft Journals. It is important to note that the crankshaft is the central component that pretty much everything else is connect to. It could be considered as one of the most vital components in understanding how an engine functions. In all engines, diesel and gasoline, the crankshaft has significant weight and requires proper functionality when a variety of pressures and forces are placed upon it.

To help cool and lubricate the crankshaft, there is a network of drilled passageways along its full length. These passages are called oil galleries. Oil galleries feed <u>Amsoil Signature Series Diesel</u> <u>Oil</u> from the main journals to the connecting rod journals and their bearings. The pressurized <u>Amsoil Signature Series Diesel Oil</u> may also be forced up through galleries in the connecting rods, where it lubricates the piston pins and cools the bottom of the piston heads.

Some people think that by adding extra oil (above the full mark on the dipstick), it will do a better job at cooling and lubricating your engine. I talk with my students about this very topic and pose the following rhetorical question.

"Have you ever tried to run in a swimming pool?"

Followed by the next rhetorical question:

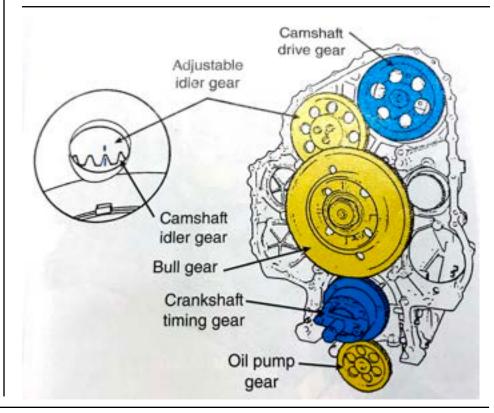
"Doesn't work to well, does it?"

Furthermore, even if you add just a little to much, it can also pose major problems. If the oil level is sitting just right on the crankshaft you can get a whipping action. Much like you would get when making a lemon meringue pie. The crankshaft will whip the top edge of the oil causing it to foam up in the engine and frothy oil doesn't do very well to protect your engine.

Back to the crankshaft...another component mounted to the crank-shaft are the timing gears. One

is directly mounted to the crankshaft, the other is mounted to the camshaft(s). Additionally, there are other drive gears for various items, such as the fuel injection pump, oil pump, and air compressor. All these may be driven off the crankshaft gear, camshaft gear, or an idler or auxiliary gear meshed with one or the other.

Oil Galleries



Shop Talk... with Dr. Jonathan D. Olson, EdD ZO #10458

I have learned a few things over the years of being a shop teacher, and I continue to learn new things each day. It no longer surprises me to hear about equipment failure due to a lack of preventative maintenance. Nor does it surprise me that people are not aware of preventative maintenance measures, such as changing automotive/equipment fluids.

At the school I teach at, every Monday morning we have meetings and students start an hour or so later than they usually would. This requires us to adjust our daily schedule and reduce the time of each class period. In the shop area it can make it more difficult as a significant amount of labwork-time is wasted on taking attendance, getting all the tools out, cleaning up at the end, putting all the tools away, etc.

Rather than having a subpar day of productivity, I routinely deploy a "Maintenance Monday" pedagogy in several of my upper level courses. The notion is as follows:

#1 - We have a ton of equipment.

#2 - 100 students abuse the equipment all day long everyday.

#3 - The equipment needs routine maintenance.

Thus, "Maintenance Monday" is a perfect opportunity to both learn about and perform preventative maintenance on the machines and equipment.

Dealer's Zone

By Don Olson, ZO #4901

Price Adjustment Effective April 9

Posted: February 19, 2018 - Announcement

Rising raw-material costs have prompted most major and independent lubricant companies, including ExxonMobil, Castrol, Chevron and Shell, to announce 4-10 percent price increases effective in February and March. These rising costs also affect AMSOIL, requiring us to implement an average price increase of 3-6 percent in the U.S. and Canada effective April 9, 2018. Commission credits will be increased accordingly.

Availability of Printed Materials

Updated pricing information will be available in the Product Pricing Interface in the Dealer and Account Zones as soon as possible. The AMSOIL Wholesale Price List (G3500, G8500) will be available in all distribution centers approximately March 9. The AMSOIL Retail Catalog (G100, G300) and all market catalogs (Professionals [G3469, G3474], Powersports & Racing [G3511, G3512], Retail Program [G3520, G3521] and Automotive [G3549, G3550]) will be available with updated pricing in early April. Watch the Dealer Zone for announcements of availability. We will notify your retail and commercial accounts of the price adjustment in the March Service Line; we encourage you to follow up with them in person as well.

P.C. Pricing

To facilitate further promotion of the Preferred Customer Program and assist you in making quotes for customers, Preferred Customer pricing is being added alongside full catalog retail pricing in all customer-facing catalogs. The April 2018 editions of the AMSOIL Retail Catalog (G100, G300), Powersports & Racing Catalog (G3511, G3512) and Automotive Catalog (G3549, G3550) will contain both sets of pricing.