The following article written by Bill Farlow, Appeared in Coast to Coast Magazine titled "Under the Hood"

IF IT SOUNDS TOO GOOD TO BE TRUE, IT PROBABLY IS.
The straight scoop on engine additives.

"Step right up ladies and gentlemen, and I'll tell you about the best thing you can do for your engine. Add one ounce of Grandpa Smith's Secret Engine Treatment to your gasoline tank and you'll get up to 55 percent more mileage--and I'll give you an ironclad guarantee, ladies and gentlemen, an ironclad guarantee. Think of it. If you're getting 10 miles per gallon now, you can get up to 15 miles per gallon, Guaranteed or your money back. Add Grandpa Smith's Secret Engine Treatment to your engine's crankcase at the rate of one pint for every six quarts of engine oil and get a guaranteed increase in the life of your engine of up to 60 percent. Same ironclad guarantee!"

And so it goes. Back in those days when I was but a pup, we called additives such as Grandpa Smith's mouse milk," because that's what it might as well have been for all the good it did. The stuff is still around, and most of it is still about as effective as it was back then. And it still carries the same worthless guarantee.

"But, Farlow, you said that most of the stuff is mouse milk. Does that mean it all is? What's the straight scoop here, Ol' Man?"

First, better watch it with the Ol' Man stuff, Bud. Getting old isn't all that bad. Keep your ears and eyes open, and you can learn some things.

Let's start with the subject of engine-oil additives. There are lots of them around. Some of them claim to restore a worn-out engine to the same youthful vitality it had when it left the factory. Now does that sound reasonable? Do you really think that you can add a $3.00 can of juice to your engine and get the same results you'd get from a total rebuild costing $1500.00? Do you believe you can replace metal with a liquid? That's one test of whether something is likely to work. If it sounds too good to be true, it's probably a lie. And remember, a lie that carries a chrome-plated, polished guarantee is still a lie.

But aren't there any crankcase additives that work? Possible, I do know that there's almost no reason for using the, and plenty of reasons for not using them. Modern engine oils are so carefully made with such carefully selected additives of their own that more aren't needed. In fact, any independent oil engineer will tell you that adding things to today's oils can cause trouble. Too much of some good things is bad. Better just buy top-quality oil and leave it alone.

Now there are some things you add to your fuel that will help in special situations. Back when the EPA took lead out of gasoline to clean up our air, they immediately lowered its octane level. Remember "ethyl" and those high-compression engines that required high-octane gasoline? When ethylene dibromide - which really was a lead compound - was removed from gasoline, the octane ratings fell flatter than a politician's promise and left those high-compression engines rattling like a can full of rocks in a hurricane. Something was needed fast. The something was a gasoline additive that used chemicals other than lead to restore some semblance of high octane and get rid of the rocks. Many of those octane additives are still with us. But are they still needed? Not really.

When petroleum engineers lost ethyl, they began looking for other ways to get high-performance gasoline, and now we have lead free gasoline with octane ratings up to 95, and in some special cases even higher. You can still add octane improvers to 89 octane gas, but it costs more than buying 91 or 93 octane at the pump. Makes no sense to buy an additive if it isn't needed. Increased demands by the EPA to give us air that we can see through and breathe without choking have resulted in significant changes in gasoline. Twenty years ago vapor-lock was a problem with many engines in heavy-duty use. Then we got universal fuel injection, and vapor-lock virtually disappeared. Now we have reformulated gasoline, and vapor-lock has returned. Is there an effective way to combat vapor-lock? Well, some sidewalk engineers say to add one gallon of diesel fuel for each nine gallons of gas, and ;you'll eliminate vapor-lock. And it works. No more vapor-lock. What the sidewalk
Engineers don't tell you is that you also decrease the octane rating by 10 percent - from 89 down to 80 - and detonation begins destroying your engine. Diesel fuel works very well in diesel engines, but keep it out of your gasoline engine. If you start getting vapor-lock, start using the old time-tested ideas for keeping the fuel cool.

There is one gasoline additive that some RVers should use. When gasoline is stored for more than a few weeks, it begins making some chemical changes that result in a fuel that doesn't work the way we want it to. One thing it can do is cause varnish-like deposits on fuel pumps and injectors or carburetors. If your gasoline-powered vehicle is going to get a vacation for a month or longer, buy a can of fuel stabilizer and use it according to instructions. Stabil is one good brand.

There's also a gasoline additive that every RVer should use. Because engine oil is basically dirty when it manages to find its way into the combustion area of an engine, the junk that doesn't burn forms deposits on engine parts. Over time valves, rings and the upper-cylinder area can becomes a mess. To keep this from happening, engineers work very hard to keep engine oil out of the upper-cylinder area. That means that valve stems, upper piston rings and the whole upper-cylinder area - the hottest part of an engine - are starved for lubrication. Perhaps the most abused parts of an engine are the valve faces and seats. When an engine is operated under heavy load conditions such as in RV service, the temperature of valve seats and faces can reach the welding point. A study one for the EPA showed that even hardened valve seats will be eroded by the hot gases and high temperatures.

There is answer that's been around for 80 or more years. It's called upper-cylinder lubricant. Upper-cylinder lubricants are made from special high-flash oils that are almost pure oil. That means they don't burn off at normal combustion temperatures. Add them to your gasoline, and they form a film on all engine parts in the upper-cylinder area. That means valve stems, seats and faces all get an oil coating, as do the upper piston rings and the cylinder walls. An engine that gets a dose of upper-cylinder lubricant with every tank of fuel will last longer and run better. Usually, it will also deliver more miles per gallon.

To my knowledge, there are only two upper-cylinder lubricants on the market, and both have been around almost as long as gasoline engines. One is call Marvel Mystery Oil and can be obtained at most parts stores or auto sections of variety stores. The other is Lubrigas. Lubri-Gas has a higher viscosity rating than Marvel and is my choice.

Diesel fuel have also been changed as the result of our need for air fit to breathe. A couple of years ago, sulphur was put on the no-no list and removed from diesel fuel. One of the reasons diesel engines built such tremendous reputations for long wear was the oiliness of diesel fuel. When sulphur was removed, the fuel lost its oiliness. That meant that no longer did the super-precise injectors and injector pumps get the needed lubrication. mechanics began noticing early wear.

Diesel engines have the same upper-cylinder conditions as gasoline engines, with the added complications of much higher combustion pressures. The answer to both problems - lack of lubrication in the injectors, pumps and the upper-cylinder area - is to use an upper-cylinder lubricant. Most big truck dealers carry such a product. So do John Deere heavy-tractor dealers. Lubri-Diesel is a modified form of upper-cylinder lubricant with a special formulation for diesel engines.

There's one other diesel fuel additive that can be very useful for many RVers. When diesel fuel is permitted to sit for more than a few weeks in proximity of water, a bacterial growth begins to develop. Truckers call it fuel fungus and a few more colorful names. Where does the water come from?

From the air. As you lower the fuel level in your tank air flows in, carrying moisture with it. The tiny particles of moisture condense, and soon there's a layer of water at the bottom of all fuel tanks, even yours. Avoid fuel fungus by buying a can of some diesel fuel supplement with a bacterial fighter and adding it to your fuel. Look for it in any truck stop.

I'm not even going to mention using a diesel fuel supplement to combat the chunks of paraffin that form in diesel fuel when the temperature drops below 20 degrees. Why an I not going to mention it” Because any sensible RVer will have long departed the area before it gets that cold, that's why.
Mouse milk is still with us. Just look at the auto-fluids counter at any variety store. But remember that most do one thing very well. They effect a transfer of money from your pocket to someone else's.