

# Newer **GAS** can *DESTROY* your Old Car

All American cars made before 2004 are NOT equipped for the 10% Alcohol (Ethanol) now in the gas.

Ethanol is hygroscopic, which means it absorbs water. When ethanol & water are combined they make a very corrosive mixture that will 'EAT UP' most of the fuel system of older cars. The alcohol is so corrosive that they don't mixed it until it goes into the final delivery truck – So, the percentage YOU get at the pump can vary – from 0 to 20% or more!



**It will corrode or attack:** **This is NO JOKE - read my comment below!**

**Steel** ..... (gas tanks, fuel lines, fittings, fuel pumps, engine parts, etc),

**Brass** .....(most fittings, jets and internal carburetor parts),

**Copper** .. (fuel level senders, electric fuel pumps, copper washers, etc.).

**Rubber** .. (most types, including Nitrile – hoses, diaphragms, etc.).

**Zinc & Aluminum** ...(carburetors, fuel pumps, filters, crankcases, pistons, etc.)

**See comment below:**

**Corrosion is the most damaging when a car sets for extended periods.**

It is not unusual to find a small amount of water in any gas but ethanol absorbs additional water from the atmosphere - often about ½ cup per tankful.

The amount of water builds up over time making it more & more corrosive.

Water is heavier than gas so it usually goes to the bottom of the tank and float bowl – and it stays there – eating away - particularly if the car is setting over the Winter..

Also, High levels of Ethanol dilution in the motor oil can lead to increased moisture in the crankcase, thereby causing rust, corrosion and even Bearing problems.



**We took a trip last year in a 'Hot Rod'. Stopped for gas in VA. The car ran poorly, so we decided to check the gas - we HAD the proper**

**It is not a question of “IF” your fuel system will be damaged – it WILL be!**

It is only a question of **How Much & How Fast?**

**tool - an Ethyl Alcohol percentage tester. It tested 17.4% Ethyl Alcohol (not the 10% advertised on the pump).**

NOTE: This also applies to other gas powered machines, like lawn tractors, chainsaws, ATVs, pressure washers, weed eaters, lawn mowers and power generators.

Some of the newer ones are made with the proper corrosion resistant materials but it is hard to tell which and **most of the Chinese ones are NOT protected.**

**This Hot Rod normally got 17-18 mpg. When we refilled the tank it checked out at 11.2 mpg! The next tank,**

**What can be done?** **with real 10% alcohol, came right back to 17.3 mpg!**

There are several gas additives that help. Most of them are 95% alcohol, which does not exactly “cure” the situation. They act to protect the system as long as the fuel is flowing – while you are driving the car.

**This is the Key - STORAGE PROTECTION**

But, **they do NOT have Storage Protection.** **The others don't have it.**

If your car sets for extended periods of time (perhaps a month or so between trips – or , worst of all, over the Winter) they will not stop the inevitable corrosion. They are better than nothing. Of course, if you can find “real gas” - without alcohol – that is the best solution.

We found that **CARB DEFENDER** by **DRIVEN Racing Oil** (Developed by Joe Gibbs Racing), works from an entirely different perspective. It contains NO alcohol and, most importantly, it coats everything in the fuel system with a microscopic layer of a corrosion protecting compound. It also conditions seals & diaphragms and carries fuel stabilizers.

The corrosion protecting layer is deposited on everything in the fuel system as it flows through while you drive the car. However, it is also slowly washed away while driving so it is necessary to replenish it from time to time.

Driven recommends you add some with every tankful (but perhaps this can be every third tank). However, **It is Important that you have Full Strength STORAGE PROTECTION if you're going to store your car (or machine) for a month or more (especially over the WINTER).**

So, always put in the recommended amount just before storing the car and be sure to run the engine long enough to completely coat the entire fuel system before you shut it off and store the car (it is best to drive it at least 5 miles before shutting it off).

One 8oz bottle is good for 25 gallons of gas (or 1 oz for 3 gallons) - using more won't hurt.

(OVER - Where to get it – and OIL)

**I personally saw a case where, after sitting a year of so, alcohol ate the copper wires out of the electric fuel pump and the fuel level sender - it left only the insulation. It even completely ate up the beryllium copper wiper and all the copper plating where all the electrical connections were made - so they all just rattled around - not making any connections.**



# Newer **OIL** can *DESTROY* your Old Car

**Engines made with Flat Tappets (ALL new ones before 2004) are NOT Compatible with “Modern” Oils**

Government and EPA oil requirements FORCED all car manufacturers to go to 100% Roller Tappets in 2004 because they MANDATED removal of the special additives required to prevent disastrous camshaft wear on Flat Tappet cams. Flat Tappets have much higher “rubbing” loads than roller tappets and even slow revving older engines with weak valve springs, like Ford Flatheads, are susceptible to damage when run with these modern oils – particularly during break-in. **Most “modern” oils are DEATH to Flat Tappet engines.**

The earlier oils ALL contained high levels of ZDDP (Zinc Dialkyldithiophosphate) as well as Phosphorus & Sulfur additives. The ZDDP coats all the metal parts with a microscopic “soft” layer of wear preventing Zinc compounds. Virtually all of the oils available since 2011 have insufficient levels of ZDDP for Flat Tappet engines.

But, **this is NOT the whole story.** Many think “All I have to do is add ZDDP” (some ZDDP oil additives are available), but they are mistaken. The modern oils have up to 6 times more Detergents to clean the engine – so much that it washes away the ZDDP. You could add “a shovel full” of ZDDP to these oils and it would NOT coat the engine parts properly! There must be a **proper balance between the ZDDP and the Detergents** to PROPERLY PROTECT flat tappet engines.

Older cars have another, unique problem – they are often STORED for extended periods of time. Acids and other corrosives build up in the oil – even more so when the new Ethanol based fuels are used. Temperature and humidity changes during the Winter condense water in the crankcase. Corrosion on engine parts is at its WORST when an engine is setting unused – particularly in the Winter with ethanol and water in the oil.

**How can I tell what oils are Bad & Good for flat tappet engines?** Check the API rating on the bottle. Flat tappet “KILLERS” are SM & SN. The “GOOD” stuff is marked SJ & SL.

**WARNING: There are now some oils on the market that say SJ and then go on to say also SM & SN.**

**What about Synthetic oils?** These are LIES - condoned by our Govt! Anything SM or SN cannot be SJ and is BAD for solid lifters. Synthetics are better, when compared to petroleum based oil. But ONLY if they carry the proper additives

AND if your engine has the “latest & greatest” seals and gasket materials – otherwise it will LEAK!

There are NO additives that will cure this. I'm not sure if the proper seals and gaskets are even made for Flatheads.

NOTE: Some older cars may call for Mobil-1. Be Careful! The NEW Mobil-1 is NOT the same as the old one.

However, you can order “Mobil-1 High Mileage” which is SJ rated and OK for most non-racing flat tappet motors.

## What can be done?

I am not aware of ANY oil additives that help. The camshaft is most susceptible during the first few seconds or minutes – be sure to have the right oil. Break-in oils are BEST – they have a lot more ZDDP and less detergents. Use them for 500 miles MAX & then change oil. Sometimes you can find SJ & SL rated oils in the ATV, Off-Road or Motorcycle Departments.

**Most employees in the auto parts stores are NOT informed. Just go look yourself at their off-road oils.**

The good news is **DRIVEN OIL**. Developed by Joe Gibbs Racing, it is made specifically for all flat tappet engines. It is available in any weight you like. HR-2 (10W-30) is usually best but worn or racing engines may benefit from HR-5 (10W-40) or even HR-1 (15W-50).

Most importantly, **Driven Oil has STORAGE PROTECTION.**

The government developed special additives during WW-II because they sometimes had to store vehicles for long periods and they could not tolerate any rust or corrosion.

As far as I know, Driven Oil is the ONLY one that has it. And, they make Break-In Oils too.

## **Is “Straight-Weight” or Non-Detergent Oil best for my old car?**

NO! All the BEST oils today are multiple viscosity and they have detergents – to carry away whatever can possibly cause wear or damage to bearings and other engine parts and deposit the junk safely in the oil filter. Oil filters & Detergent Oil are what make engine mileage.

**Let's explain the viscosity ratings:** 10W-30 means it is 30 weight at high (operating) temps.

The 10W means it is equivalent to 10 weight in WINTER – at low temperatures.

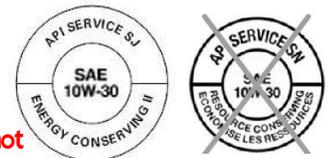
It is NOT thinner at low temperatures – ALL oils get thicker as they get colder.

It doesn't thicken as much – only down to what 10 weight is. So, it will turn over faster and start at cold temperatures.

## Where to get it:

Will's Auto Machine 770-451-4081 (For DISCOUNT: tell Mark you're in the Early Ford V-8 Club) [MotorDoc8160@aol.com](mailto:MotorDoc8160@aol.com)  
3149 Chamblee-Dunwoody Rd., Chamblee GA 30341 Also available online at: <http://SummitRacing.com> & [Jegs.com](http://Jegs.com)  
Ed Preston (Factory Rep. also gives Seminars) 770-315-0534 [Mr.EdPreston@gmail.com](mailto:Mr.EdPreston@gmail.com) Catalog: [DrivenRacingOil.com](http://DrivenRacingOil.com)

(OVER - Gas)



**If it says SJ or SL, and does NOT say SM or SN, it is GOOD for flat tappets (solid lifters)**

