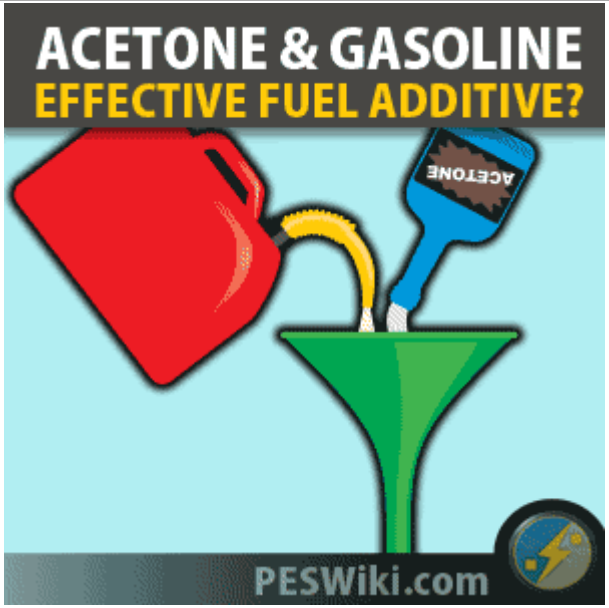
Directory:Acetone as a Fuel Additive



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Acetone as an Additive

shortcut url

AddAcetone.com

This project page was created as an adjunct to the following article by Louis LaPointe, which we recommend as an introduction to the subject.

- **Acetone In Fuel Said to Increase Mileage** - Acetone said to improve the fuel's ability to vaporize completely by eliminating the surface tension that causes an increase in particulate vaporization temperature. (*PESN*; March 18, 2005)

A growing number of people are reporting their results, as tabulated here. Most have noted modest increased mileage (e.g. 2-15%), more power, more stable idle, faster start-up, cleaner emmissions. Part of that improvement is likely to be from the cleaning of the engine that the acetone accomplishes, without impinging lubricity. A few have not seen an increase in mileage at the concentration of acetone they tried. Too much acetone decreases mileage. Some have reported that Alcohol in the fuel tends to reduce the positive effects of acetone. ~~No one has yet reported damage to their engine from acetone being added to the fuel.~~ Several have soaked fuel components in pure acetone for extended periods and have not seen substantial effect other than some minor swelling.

Main Sections:

- **Individual Reports** - Listing of results from adding a small amount of acetone to the fuel in a wide range of vehicles.
- **FAQ for Acetone Project** - What does acetone do to the fuel system components? How much do I add? Will it hurt me? How does it affect performance?

Cautions

- **Keep acetone away from painted surfaces.** It is the key ingredient in paint remover.
- Acetone is a poisonous substance with dangerous vapors, similar to gasoline.

Banned

Vietnam officially bans acetone as additive in gasoline [dead link] - Acetone is a solvent that can be used as an additive for boosting octane levels in gasoline. However, a high amount of acetone in gasoline can affect the rubber seals of vehicle engines, and is being blamed for the large-scale breakdown of motorcycles in Ho Chi Minh. (Platts; Sept. 8, 2006)

Glencore Singapore to recall acetone-tainted gasoline from Vietnam (*International Herald Tribune*; September 12, 2006)

Experiment at your own risk

Acetone is known to deteriorate cheap plastics and other substances. While the components in a car's fuel system should be of high quality, and thus immune to any deleterious effects from exposure to acetone, be aware that "ideal" is not always the case in practice. Be advised that not all systems have been tested against acetone. Until such thorough testing has been accomplished and certified by an accredited authority, you assume your own liability for experimentally testing acetone in your particular system.

Diesel, Acetone & Water Emulsification

- **Diesel, Acetone & Water Emulsification** - Issues to be aware of regarding adding acetone to fuel in the case of diesel engines as it pertains to water ramifications.
- **Water Carrying Properties of Alcohol Compared to Acetone**

Swelling of fuel system components

NOTE: I am the only person I know who has actually tested various fuel system delivery components with various concentrations of acetone. I assume I am the "some" that is mentioned below.

I obtained fuel rail gaskets and internal fuel injector gaskets (via sawing an injector in half) prior to testing them in various acetone concentrations.

I observed noticeable swelling of fuel rail and fuel injector gaskets with 100% acetone. I did NOT notice any degradation of the gaskets. This was after total immersion for several weeks. On removal, I compressed the gaskets with pliers until they fragmented. I noticed no observable difference in the amount of pressure required for the acetone soaked gaskets vs. the non-soaked gaskets.

Using a solution of 1:160 I noticed a slight swelling of the gaskets, just enough to be noticeable. 1:160 is DOUBLE the maximum recommended ratio for acetone usage.

Acetone had no effect on high pressure fuel line and fuel fittings.

I have used acetone in three vehicles over the last 5 years (as of 2006) with only good effects. The observant motorist/mechanic will note that gasoline in and of itself is an excellent solvent, and therefore anything that must endure constant service with gasoline must by necessity be solvent resistant.

-Dave Narby

(Below is the information that prompted me to add the above edit)

Some who have tried soaking fuel component in pure acetone have noted a slight swelling of some components. Noting that, someone posted the following:

"Swelling of fuel system components listed as 'adverse effects' indicates a chemical reaction and is potentially dangerous.

"Commercial products are tested for use in the automotive system where they are intended to be used. See the SAE Manual for additional information on fuel and brake systems chemical compatibility.

"The SAE Manual is available in engineering libraries at schools across the country."

Swelling of materials after immersion in fluids (oils, fuels,etc.), regardless how little, is usually an indication of the breakdown of the physical properties of the material. Amongst those properties would be, tenisle strength (the amount of stress that is required to break a sample), and elongation (the amount the sample has sretched at the breaking point).

The following is a brief overview of the testing process. It is much more involved than shown here but this will provide a general description of the process.

Testing of these properties is usually made on at two sets of samples. One sample that is in the 'as received' state, and again on the other sample in the 'conditioned' (in this case, immersed) state. Using these results will provide us with information regarding the impact that immersion in a particular fluid will have on a given material in comparison to the 'as received' state.

Damages Fuel Injectors and Fuel Pumps

As a former mechanic I found this experiment to be of great interest. I was unfortunately a victim to the early testimony here that said acetone does not harm engine parts.

I added acetone as recommended to both my 1996 Honda Accord wagon and saw increased miles right away. I also put it in my 1997 Dodge Ram 1500. After several tanks in my truck (and a little better mileage) I found my number 1 injector showed up as failing. Shortly after that I was talking to John Bedini about the better mileage I was getting and then he said, "yeah, but it will kill your injectors." Then I laughed and told him this just happened to me.

So this weekend I went up to the cottage and my Honda would not start again. Had to tow it home 100 miles and go home early. Turns out my fuel pump was gone. The mechanic asked me, have you used injector cleaner in your car? I told him about the Acetone. He said, Honda pumps never go unless you damage them like this.

So I conclude that this added mileage is certainly not worth the damage it causes. And I suspect that we only read the initial reports here and not the long haul uses of acetone.

Be warned.

Rick Friedrich

-I've been running acetone in a fuel injected '93 Mercury Sable for about 50k miles now, and have had absolutely no problems (car now has 127k miles on it). In fact, prior to running acetone I sawed a junk fuel injector apart in order to test the internal gaskets and plastic bits in a solution of 1:160 acetone (double the recommended upper limit usage of 1:320). I cut the gaskets in half so I could compare the soaked half vs. the unsoaked half. I also tested some high-pressure plastic fuel line.

All I noticed after a week was an almost imperceptible swelling of the gaskets (my wife could not see the difference). The gasket material did not degrade or weaken in any way. The fuel line was completely unaffected.

Gasoline is an excellent hydrocarbon solvent, just like acetone. It stands to reason that anything that is gasoline resistant is acetone resistant.

I have lot of respect for Bedini, but his expertise is in electronics, and to my knowledge he has not done any testing with acetone on various fuel delivery components.

Dave Narby

I also ran acetone in my 1996 Ford Aspire with no problems. Rick you don't tell us how many miles were on your injectors or fuel pump (these things don't last forever) or how much acetone you were using. John

Damages Valves

On Dec. 26, 2007, Jerry Clark said:

The store owner at Ace Hardware said that in even small amounts acetone would cause damage to the valves of the engine.

-I've been running acetone in a '93 Mercury Sable for over 50k miles now, and have had no problems (car now has 127k miles on it). If this guy knows so much about ICE chemistry that he can state with certainty acetone damages valve, it makes me wonder why he's running a hardware store. -Dave Narby

How is "The Guy at Ace" an expert, and how would it damage the valves. The valves are metal, if it damages the valves it damages everything before the valves. John

Attacks Nitrile (RVs)

On January 29, 2012, we received the following input:

Many RVs have nitrile hoses between gas port and tank. Acetone attacks Nitrile. I have had to replace my hose (had several small holes, as if they had been drilled.) The replacement was only available in same armored nitrile 2" x 3foot hose.

I have good mileage increase in a Honda 2001 cr-v suv, (checked with scan gauge) but not clear if milage increased on 1996 RV (can't use scan gauge.) When mileage can vary from 5.5 to 6.7 (hills, no hills, wind no wind), it is hard to tell. Auto averages about 15% better. NO bad effect on Honda or Miata over last 3 years of acetone use.

Toyota Prius gas-tank lining issue

! ! WARNING ! ! The TOYOTA PRIUS has a synthetic bladder lining to its gas tank. Although I am an big advocate of using acetone in your gas, I've heard & read instances of acetone reacting with the bladder. -- User:Winnix (June 18, 2006)

Products

- **HAFC: Hydro Assist Fuel Cell kit** - The HAFC kit presently for sale combines three fuel saving technologies along with a sophisticated computerized emission system optimizer. It includes 1) an electrolysis unit for on-board hydrogen injection; 2) a vaporizer/ionizer using magnets; and 3) additives that include **acetone** and xylene.

Data Compilations

- **Database** Compiling all of the tests into one report. If you have results from adding acetone to your fuel, feel free to add them to the database. (*PES_acetone YahooGroup*) Do remember though, this is a data base largely of novice reports, not from a rigorous scientific study, though some are more scientific in their approach.

Individual Reports

If you would like to post files along with your report, and you don't have a website location where you can post and then link from here, then contact PES Network, and we can upload them to one of our servers for you to link to it there.

Featured

Most Miles Documented

2008 BREAKTHROUGH.

New data reveals more on behavior of acetone, resulting in simple technique to fully utilize it. V8 Ford T-Bird got 100+% increase in hwy. mpg, MATCHING THE TOYOTA PRIUS HYBRID AT 45 MPG. Full report of data and testing: Article:Truth_About_Acetone_and_Ethanol

Jancik's Semi Truck on Acetone

- **Mileage improvement using acetone additive in Semi Truck** - Has seen average go from 6.1 to 6.5 mpg using 2 oz acetone per 10 gallons diesel in Freightliner/Caterpillar diesel engine.

Sizemore's Semi Truck

- **Semi-Trailer Truck Mileage Increases 4% with Acetone Added to Fuel** - Adding 2 oz of acetone per 10 gallons of diesel fuel gave a modest increase in mileage; measured over 12,000+ miles.

Price less and Environmental

Acetone Gets Me to Film School for Less, and Helps the Environment Too

- Honda Del Sol 1993 SI - An overly-exhaustive treatise on the experiences of a UCLA graduate film student (author and former newspaper reporter) using acetone for over **30,000 miles** as he commutes between San Diego and Los Angeles. Short version: Definite increase in efficiency from 27-29 mpg without acetone to 33-35 mpg with acetone. Also more power and nice, smooth-running engine.

Most Accurate Testing Reported Here

- **Acetone in Acura Integra '92 Fuel Drops Mileage by 1.1%** - Four runs of ~100 miles, two without acetone, two with, did not yield increased mileage as expected, but a slight decrease. Ratio may be too rich. (*PESN*; March 25, 2005)

Results, Listed Alphabetically

Results, Listed Alphabetically According to Manufacturer -- Automobile

This is a publicly editable website, so you can add your results as you obtain them. You can build a separate page to chronicle your progress, if you are so inclined. See POST YOUR DATA section below for instructions, as well as the help page. It is really quite simple.

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Acura

- **Acetone in Acura Integra '92 Fuel Drops Mileage by 1.1%** - Four runs of ~100 miles, two without acetone, two with, did not yield increased mileage as expected, but a slight decrease. Ratio may be too rich. (*PESN*; March 25, 2005)

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BMW

- 1994 BMW 318i - not tests yet, but preliminary plans to do so reported.

- 1994 BMW 325i - After 1 month of use OBC indicates an increase in inner city gas mileage from 19mpg to 23.5mpg. Car runs smoother, most noteably the throttle response.

- 2001 BMW 330i - After 1 month of use OBC indicates an increase in inner city gas mileage from 18mpg to 20.5mpg. Highway mileage increased from 23 to 27mpg. Car runs smoother in cold mornings.

- 1993 BMW 520i - On Full Tank - Extra 80 kms after adding acetone 30 mil / 20 liter , approx. +13% fuel economy , more power/torque , smooth idle and comfortable engine . (March, 2007)

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Chevrolet

- Acetone in a Blazer - Initial findings by "burntkat": modest mileage improvement, exhaust odor gone, better idle.

- Chevy K5 Blazer 1986 - went from 11 mpg to 15 mpg using 2 oz / 10 gal. (Nov. 16, 2005)

- Acetone gives Geo Metro a modest increse in economy (6 min) - Video shows two "before" trips, and two "with" trips, followed by another "without" (but with some risitual in tank. Without acetone was 57.0 mpg. With acetone was 58.5 mpg, a 2.5% increase. (*YouTube*; Apr. 16, 2007)

- 1986 Chev Blazer S-10 - Harold from Sulley BC improves mileage an performance by adding 1-2 oz acetone/10 gal. (July 22, 2005)

- 1994 Chevy Suburban - report that 3.5 oz per 10 gallons led to 20%+ DROP in fuel economy. One test only. Could have been measurement error.

- '83 S10 2.8 6 Cyl. ~90K Miles. After tune up (plugs, filters, gumout, synth oil, rebuilt carb, etc.) 15 MPG average. 3 oz. / 10 gal = 13 mpg - 2 oz. / 10 gal = 13.5 - 1 oz / 10 gal = 18 mpg. Refining concentrations between 1 and 2 oz. for testing for further increases.

- 1992 Suburban ---

    1. PreAcetone | 178518.5 Mileage 295.3 Trip, Consumed 22.694 Gallons 87 Octane, Mileage 13.012 MPG.
    2. Acetone 2.5 per 10 gallons Gasoline | 178728.6 Mileage 210.1 Trip, Consumed 15.251 Gallons 87 Octane, Mileage 13.776 MPG, 5.8% increase.
    3. Acetone 2.5 per 10 gallons Gasoline | ##### IN PROGRESS ####

The above was done in Orlando, Florida, September 2005. 50:50 Mix of Highway/City driving. Average Ambient Temperature 88o F.

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Chrysler

- **Acetone in Two Chrysler Jeeps** - Initial findings by "burntkat": modest mileage improvement, exhaust odor gone, better idle.

- **2002 Sebring Convertible** - Generally better performance...1st try, 1oz to 10 gallons no mileage increase (27 mpg), 2nd try 3 oz to 10 gallons, mileage decrease (22 mpg), 3rd try was 3 oz to 10 gallons and no mileage increase (27 mpg)...will keep trying. Car typically gets 27 mpg without Acetone. (Oct. 17, 2005)

- **2003 300M** - I have just started using Acetone on my 2003 300M I will keep all posted on my results. Recently ive been using poor fuel so my fuel economy has darastically declined, 11.4L/100km "chab90" (March 23, 2009)

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Daewoo

- Daewoo Cielo 1997 - Pdabin reports increased mileage, power, and performance over last six months of usage. (Jan. 9, 2005)

- Daewoo Lemanz 1994 - Still testing (30 ml / 20 Liter), in general more power , smoother idle , more torque, less fuel consumption, engine noise decreased .

i usually get 31 mpg , will post new mpg soon.(March, 2007)

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Dodge

 A member of the Chrysler Group

- **Long-term Use of Acetone in Dodge Caravan V6** - General increase in mileage with addition of 4 oz per 10 gallons. Test reports of acetone effect on fuel-line components. (by Dave Narby)

- M.R.'s Report on 96 Dodge Grand Caravan - At a ratio of 2.8oz. per 10 gallons of premium gasoline, I have enjoyed a 12mpg increase in efficiency in my Dodge Grand Caravan. (April 4, 2005)

- **2005 Dodge Durango Hemi** - Always got 17MPG. Added 3 oz/10 gal gas with acetone and got 21.64 MPG. An increase of 27% better mileage. 6 months out no negative scenarios. IT WORKS! (Bob Galvin; <bgalvin {at} comcast.net>; Jan. 4, 2009)

- **"rface" Reports on Acetone** - Plans to try it on 1993 Dodge Spirit.

- **1991 Dodge grandcaravan se model** 140,000 miles. I am going to test the affects of acetone in the gas. Before I perfomed the start of this testing. I had changed my oil new plugs etc. I always have made sure that my van is in top running condtion. cuz it has to last me a long time. I now have ran 1 tank of 4oz. of acetone to 10 gals of gas. I

plan on running 5 tanks this way. skipping every 3rd tank full with out adding acetone. currently i average 19-21 miles to gal. That is a city highway mix of driving. I drive sometimes to work which i must take the freeway. then i will try next tanks of gas at 3.5oz then 3.0 oz etc. I have a log book i created to keep track of all this writing down mileage etc. i usually go 330 miles on a tank my goal is to go 400 miles on a tank and then imagine what i would get if I was to drive on along trip. Most people run 1 tank of acetone in the gas and say it did not work or there mileage was worse. Read the web page that tells you how to do this. Then see some peoples cars fuel systems are really dirty and would require a couple tanks of cleaning. Good luck I will get back with my results. -- John (Aug. 29, 2006)

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Ford

- **Ford Aspire 1996 1.3L 2 door** - Performance appears to be good. Note some oil leaking. -- Evans N. (Commenced Dec. 2005)

- **Ford Aspire 1996 2 door, Auto** - A 12% increase in mileage with 6559 miles logged on acetone. A continuing study in order to fine tune the ratio to get the best gas mileage. In my experience, it works. --Harrytheface 18:32, 12 May 2007 (EDT)

- **Ford Contour 1999 2.5L V-6 w/5-speed manual** - Round trip on the highway totaling 1043.3 miles. Drove from point A to B on Gasoline and overall 31.58 MPG. Point B to A using 0.235% acetone loosing 8.9% to 28.78 MPG and using 0.121% acetone gaining 4.4% to 32.97 MPG. Overall loosing 1.8% at 31.01 MPG. The plastic device

used to measure the amounts of acetone melted during the experiment, this causes concern because the car is equipped with plastic fuel tank.

- RESPONSE: The plastic in fuel systems is of a much higher quality, and is not attacked by acetone, as cheap plastic is.

- **Ford Escort 1994 wagon** - mileage and performance improvements noted by Ray (Sept. 11, 2005)

- **Ford Escort GT 1994 1.8L 2 door** - 4+ refills using acteone, then switched back to plain gasoline. Idle went from 1400-1700rpm down to ~1200 rpm(using the acetone once again). With a hole in the exaust under the engine, the noise was noticably lower, and acceleration was vastly improved when in first and second gear, and engine braking sounded smoother Overall, ~27MPG using a 3oz per full tank ratio. (GT engine, manual transmission, NO use of the third gear, highway driving) 5spd. -- Scott B. (Nov. 11, 2005)

- **1997 Ford Escort 2.0L 4DR SEDAN - Toronto, Ontario, Canada - Last Update: May 25, 2007** - After running 7 tanks using varying amounts of acetone, and different grades of gas, I still am not seeing any improvement over 1 or 2 MPG. Still continuing to use it though and trying to come up with some solid results. In the process of increasing my acetone by 1 oz each new tank. I am testing around 5oz/tank. - AndrewSFM @ hotmail . com

- **Ford Escort 1998 2.0L 4 door** - Over 2,000 miles with acetone so far. Went from an average of 270 (was impossible to go over 300) miles out of 10.5 gallon tank to an average of 330, and a record of 363 by using 3 oz of acetone. Same if not worse driving habbits (gotta love the improved acceleration). I will never drive without acetone again. -- Alex K.

- **Ford Expedition** - 27 percent increase at 50mph and a 33% increase at 70 mph. FarleyS.

- Ford Explorer 1996 report by "rface" - goes from 16.7 to 20 mph with 3 oz / 10 gallon mix.

- **Ford F150 1995** - I have a Ford F150 with a 5.8 liter. V8 Truck has approximately 157,000 miles on the odometer. I have run the acetone test with the following results while using 2 oz. per ten gallons normally I get about 220 miles per 17 gal. tank. With the addition of acetone the mileage has gone up to 248 per 17 ga. tank. The acceleration is improved and morning start up is almost instant. -- Scott. 10/27/05

- **Ford F150 2004** - 16-17 mpg hwy before; 22-24 mpg hwy after; running for about 6 months, since Apr/May 2005; have been telling all my family and friends about acetone and the Scan Gauge. -- Ferrell Beaird <hcc{at}valornet.com> (Jan. 6, 2006)

- Ford F-250 2002 report by NRG-wise - Powerstroke Tests; still testing, but so far a loss in mileage for Diesel; black smoke has gone away. (Updated 05/05/05)

- Ford Ranger report by Sentzmastersmith - Initial findings from adding 2 oz / 10 gallon ratio: increased power, better idle, better shifting. (March 26, 2005)
  - 25.5% increase in mileage in Ford Ranger 4x4 Extreme with acetone added in ratio of 2 onces per 10 gallons. (March 27, 2005)
  - Ford Ranger 4x4 Extreme: increase by 32% at 2.5 oz/10gal. (April 9)

- Ford T-bird, 1988 report by "Hello World" - mileage increases 18%; 2001 Chevy Tahoe increases 6%; using 2.5oz acetone per 10 gal fuel. (March 31, 2005)

- Ford Taurus, 2001 report by Millermagic - No mileage increase noted yet. Only one tank and I poured 6oz for the 18 gallon tank. However, car idles MUCH smoother.

- Ford Windstar 2002 - T. Cole says acetone improved his gas miliage over 3.7 m.p.g. with 3 oz. acetone to 10 gallons of gasoline. (Sept. 8, 2005)

- Ford Escape, 2002 report by "Nieking" - mileage decreased by 1-2 MPG using 2.0oz acetone per 10 gal fuel. I believed it is the additives in the Cali. gas that prevents benificial results. I have a buddy with the same vehicle in South Carolina who got a significant increase in MPG. (November, 2005)

- ford escape, 2003 report by WinNIX - When experimenting with different mixtures, use that mixture for TWO tanks of gas. I've learned single-tank acetone experimentation is almost COMPLETELY unreliable. That said, my 2003 ford escape gets 18.5 mpg on plain gasoline. I've had the following success with multi-tank mixtures of the following:

1oz per 16 gal, nothing.

2oz per 16 gal, 1 - 2 mpg increase. Engine idle down by 50-100rpm.

3oz per 16 gal, 2 - 4 mpg increase. Engine noise reduced, idle speed not recorded.

4oz per 16 gal, 4 - 6 mpg increase. Engine accelerates smoother.

5oz per 16 gal, 3 - 6 mpg increase, this appears to have about the same effect as 4oz.

6oz per 16 gal, 3 - 5 mpg increase. mpg is going down slightly. anything above this decreases mpg.

A total of roughly 30 tests and 8,500 miles. 75% of the time i used the same HESS gas station in town. Sometimes, of course, I must get gas elsewhere. Best tank, 23.9mpg at 4oz.

(June 18, 2006)

- **Ford E150 Van 302 EFI 1987** - Tried for a tank with the "3 oz/10 gal", MPG decreased about 10%. Failed emissions due to high "low speed hydrocarbons". Put fresh gas in but also changed plugs & rechecked timing and it passed emissions. -- Danny M. (Jan. 12, 2007)

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Opel / GM

- **Viggo's Opel Vectra on Acetone** - with 2 oz per 10 gallons, saw mileage go from 25.6 to 28.3 mpg, with engine and idle running smoother. (May 17, 2005)

- I tried this thing with my **1992 Opel Vectra** (1.8 litre, mileage before tests around 115000km). I drove about thousand miles (1500-1600kilometers) both with and without acetone (15ml / 10l). There was a small _decrese_ in MPG: the fuel consumptions were with acetone 7.76 litres/100km and without it 7.42 litres/100km. (Apologies for the european units). Tests from May 2005 to August 2005.

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Honda

- **Honda CRV 1999** - I used 3 ounces of acetone per 10 gallons of regular gas (no ethanol) for 7 tank tank fill. I didn't observe any change in my mileage. I was

disappointed that I didn't get any boost in my MPG. I decided to report this on this site, because it was this site that made me decide to try it. Eric (July 26, 2008)

- Honda Accord Wagon 1996 - Bill reports 22% increase in mileage with 3.5 oz acetone per 10 gallons; smoother performance

- Honda Accord Sedan 1992 - Currently testing on 160,000 miles, fresh oil change, 2 oz in 12 gallons, 320 miles on a normal tank

- Honda Civic Hatchback 1991 - Don from SLC reports substantial mileage and performance improvements in his Civic, using 1 oz acetone / 10 gallons gasoline. (July 12, 2005)

- Honda Del Sol 1993 SI - An overly-exhaustive treatise on the experiences of a UCLA graduate film student using acetone for over 30,000 miles as he commutes between San Diego and Los Angeles. Short version: Definite increase in efficiency from 27-29 mpg without

acetone to 33-35 mpg with acetone. Also more power and nice, smooth running engine.

- Honda del Sol 1994Si - Steven reports a 20% increase in mileage with 2 oz acetone per 10 gallons; slight increase in performance to. I travel 150 miles a day to and from work. I definately have enjoyed this decrease in gas spending. (Sept. 9 2005)

- Honda Element 2003 - please3mta3 reports modest increase in mileage. (Aug. 20, 2005)

- Honda Odyssey 2000 - Pascal reports improved mileage and performance. (Aug. 31, 2005)

- Honda Pilot 2004 - AWD 3.5 v-6. Preliminary report from just miles since adding acetone; reports mileage going from 20 to 25 mpg with mixture of 3 oz per 10 gallons of fuel; significant increase in horsepower.

- Honda Prelude Si 1993 - 2.4L NO CHANGE! Measured 31.5mpg (w/ 1.5oz/10gal) compared to similar tanks of 29.5mpg(6/27/05) and 30.5mpg(8/6/05).

- Honda Prelude SR 2.3L Auto 1992 (Ottawa, Canada) - This car has 177,143 km (110,714 miles) on it. Tested from Apt 1, 2006 - Aug 15, 2006 for 2708 km (1,692.5 miles). 9.619 L/100 km (24.459 mpg) with 60 mL per 52 L of fuel. No significant increase in housepower. Original is 13 L/100 km (17.759 mpg). Pure city drive in Ottawa, with average speed < 65 km/h (40 mph). By keeping 60 mL of acetone, fuel consumption is keep on dropping for every refill. I suspect it is cleaning up the carbon deposit, or something, and making more efficient fuel consumption. By theory, 60 mL of acetone should show constant mpg, if driving habit does not change. However, I still don't archive it yet, so I will expect 60 mL will continue improve the mpg in next few months. I should perform another test without acetone, if it has clean up my engine. (John CHEN Sing-Cheong Aug 15, 2006).

- Directory:Acetone: 2.0L auto Honda Accord LXi 1989 - Steve reports After using 2oz per 10 gallons for the last few months an average increase of 4-6 mpg in mostly stop and go traffic.(8/22/06)

- **2007 Honda Pilot AWD 3.5 Engine** @ 10,000 km in Ontario, Canada - Vehicle was running at 20 L / 100 km. Since then started with 2 oz for the 72 liter tank. Milage was improved and definitely more pep. Decreased the amount of acetone to 1/2 oz for every half tank and the fuel efficiency, mainly city driving improved at 17L/100km. Tested

primary highway driving with the aceton and discovered 14L/100km. Really great mprovement.

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Isuzu

- 1997 Isuzu Rodeo - Dr. Paul reports increase in mileage, engine runs quieter

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Jeep

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KIA

- **2005 KIA Sorento 25% mpg increase** - *On May 08, 2011, JIM H wrote*: I am a master diesel mechanic and have started using acetone additive to my KIA Sorento with great results. It takes a few tanks to get the results where you would expect. It seems the engine computer and sensors need time to adjust to the acetone, but once you begin to see the increase, you begin to smile. I have logged a definite 25% mpg increase and I'm still tweaking. The cost of the acetone is very small

compared to the cleaner injectors and smoother idle and OH YES; the better gas mileage. Give me a lie detector test, or just drive my Sorento; but if you don't give the acetone and your engine computer time to adjust, you're not going to see the change. I am putting acetone in my wifes Tucson, as well.

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Lexus

- **Lexus GS 430** - City driving showed a 1.2 mpg increase...less than 10% increase. Highway at 80 mph went from 17.5 to 20.3 mpg -- better than city. I'm using 3oz / 10 gal premium. (Sept. 30, 2005)

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Lincoln

- **90 Town Home up 5%** - "3oz/10 gal in 90 town car over same 60 mile route 10 times /week gave a 5% increase in fuel economy." (submitted March 26, 2005)

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Mercedes

- **Long-term Use of Acetone in Mercedes Sable V6** - General increase in mileage with addition of 4 oz per 10 gallons. Test reports of acetone effect on fuel-line components. (by Dave Narby)

- My 83 Mercedes 300td wagon runs on used cooking oil. I added acetone, and I can see a differance. -- John, in Clearwater, Fla. THE VEGGIE MAN (Sept. 14, 2005)

- Mercedes C-class c200 1998 - Smoother idle , more power , fuel economy drastically increased (not measured yet) , no side effects (2 oz / 10 gal).

- **MBZ SLK 230** - After seven months of roughly 0.2oz/gal in my MBZ SLK 230, I not only had an average 12% improvement in fuel economy but just passed the enhanced CA smog test with 10% of the max HC and 6% of max CO2 at 777 RPM, and essentially none of either at 2527 RPM. (Andrew; October 17, 2008)

- Mercedes W123 1981 **- 4 cylinder 2000cc carburator** - one touch startup, No need to heat up the engine in the cold mornings , no engine hesitation, more power , more torque , fuel economy increased so much. not any problems yet.(March, 2007)

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Mercury

- 1999 Mercury Cougar - Drop in mileage using 3 oz / 14.7 gallons.

1998 2.0L Mercury Tracer - I could NEVER get above 330 miles on a tank of gasoline without using acetone in my fuel. I started using 2 oz. acetone per 10 gallons gas and I now get 380 miles per tank. My economy has gone from 29 mpg w/o acetone to 34 mpg w/ acetone. My overall increase is 17% more mileage. I'm sold and will NEVER fill up without using acetone again!

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Mini

- **Mini Cooper 2002** - Mr. Saffron reports 29 mpg before, 32 mpg after. Report is noteworthy inasmuch as it includes testing done to arrive at optimal ratio of 2 oz. per 10 gal fuel. Also includes recommendations about how to add acetone without jeopardizing paint job. (May 12, 2006)

- **On the other hand** - Mr. Snow tried 2 and 3 oz of Acetone over a period of 3 weeks where he commuted to and from work for a total of 180 miles of interstate driving a day and never noticed any difference. He even tried to reset the car's ECU to calibrate to the new fuel, but it never made a difference. All in all, he got approximately 30 mph at an average speed of 65 mph consistently with and without Acetone added to his gasoline. The average speed (mph) and average fuel efficiency (mpg) was easy to measure using the stock digital gauges equipped on the Mini. (Measured between Oct 2006 and Nov 2006 in South Carolina)

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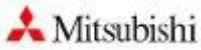
Mitsubishi



- **Jim Bolf's Dodge Ram (Mitsubishi)** - Mileage went from 24 mpg to 28.5 mpg using 3 oz per 10 gal. acetone over 1800 miles. Notes better idle, engine running smoother. (May 24, 2005)

- **1994 Lancer** - My average fuel economy went from 10.x km/L to 14.67 km/L using 2oz per 10 gal acetone. (Dec 15,2006)

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Misc.

- Monaro Holden 2005 1oz to 10 gal 5Mpg 6Mpg 2000 Nil ref

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Nissan

- **Altima GXE 2000** - After a lot of reading, I decided to try this out. Started with the standard 3 oz per 10 gallon ratio (Acetone is from WalMart paint department). Did this for 3 tanks consecutively. Kept the variables to the minimum. Here they are.. Gas: Shell 87 Octane (Same gas station); Driving: 60-70% City, rest highway; mileage: 300 miles per tank (+ or - 10 miles max). So far I have not observed anything at all. I'm not sure whether I'm doing anything wrong. -- User:Partha (Feb. 12, 2006)

- **Nissan March, 1998** - Julius Huang reports improved performance. (Nov. 30, 2005)

- **1996 Sentra** - Increased mileage , better performance, at 3 oz / 10 gal.
- **Skyline GXE 1988** - smoother, better mileage (unquantified), after just two tanks! on 125ml per 60 litres of petrol. (Mar. 27, 2006)
- **300ZX na 1987** - saw an increase of around 28% in mpg from 21 to 27 for summer mixed driving...at least 1/2 of this increase is from driving easier and other mods though.

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Peugeot

- Peugeot 309 1.6i - Ratio 1:500 or less, 13 % increase in mileage, average over a year. - Forgot to add acetone some times, mileage could get better.

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Pontiac

- Sentzmastersmith's Acetone Report - Initial findings from adding 2 oz / 10 gallon ratio: increased power, better idle, better shifting. (March 26, 2005)

    - Pontiac 95 Bonneville: mixed extents of increased mileage; better at 2.5 oz than 2 oz/10gal. (April 9, 2005)

- M.R.'s Report on 95 Pontiac Bonneville - At a ratio of 2.8oz. per 10 gallons of premium gasoline, Bonneville increased by 10mpg. (April 4, 2005)

- **Pontiac GrandAm SE, 2000** - (207ci v6 (3.4L), 4speed auto, 3300 pounds). Matt Peterson reports: "87 octane fuel: 22-24mpg average over several tanks; 91 octane+acetone:24-27mpg average over several tanks, better response noted also." (Jan. 23, 3006)

- 1984 Pontiac Parisian - More miles per gallon, and "takes off like a rocket."

- Pontiac Grand Prix, 1997 3.8 V6 - First test had little to no effect. mpg similar on two exact trips with same driver and cargo(32 mpg without to 31.5 mpg with). Removing acetone later increased mileage to 32.7 on different trip but similar driver.

Simple tests show that fuel mixed with acetone actually evaporates slower. Acetone may just clean the engine since it is a powerful solvent and not actually increase fuel evaporation. Further tests are underway.

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Saturn

- **2002 Saturn SL1** - I have been useing acetone for over a year now and have noticed that my average per tank was 33mpg. With 2oz acetone for 12 gallons of regular gas I get 40/41 mpg. (James G.; April 29, 2006)

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=SEAT (VW)

I am based in the UK and we don't use GAS but we use either 95 octane petrol or 97 octane petrol. I was getting 315 miles to a tank of 95 octane petrol in my 1999 SEAT Toledo (same as VW Bora) so started using acetone as an additive but only used 40ml or 1+1/3rd OZ beofre filling up at the petrol station. The result was an increase in MPG from 29 to 36 and 400mles to a tank. I have recently sold the car for an old 280ce mercedes which would be expensive to run as petrol is £1 ($1.60) per Litre or £4.50 ($7 per gallon) so I am hoping to use acetone to see if I can get the 2.8L 6 cylinder upto 30mpg. I 'll let you know my findings soon. Does anyone know about the HHO theory? I fascinated and want to give it a try.

Subaru

- Bill Milo's Subaru Legacy - Mileage went from 24 mpg to 29.5 mpg using 3 oz per 10 gal. acetone over 1800 miles. Notes better idle, engine running smoother. (May 22, 2005)

2008 Subaru WRX - Planning on doing some tests starting tomorrow. I drive to maximize efficiency so this should be pretty accurate in tests. I have a built in MPG Gauge which I have tested and concluded is accurate. On my last tank I averaged 27.3 mpg without acetone. I will try acetone and share my results soon.

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Suzuki

- Suzuki GS750 1977 - multiple improvements on older bike. Power increase, Throttle responce increase, almost eleminated unburnt fuel smell from idle exaust.

- **Suzuki Ignis**; purchased in 07.2004. The standard mileage is 8.5litre/100km (only in city) before I use aceton in fuel. After, it was only 6.4l/100km! It was wonderful! -- Tamas Hodjan (Budapest, Hungary) (May 12, 2006) <hodjantamas {at} gmail.com>

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Toyota

! ! WARNING ! ! The TOYOTA PRIUS has a synthetic bladder lining to its gas tank. Although I am an big advocate of using acetone in your gas, I've heard & read instances of acetone reacting with the bladder. -- User:winNIX (June 18, 2006)

- **Toyota Avalon**
  - Toyota Avalon 2004 – I have used acetone on 4 different full tanks. I use 6 ounces per tank, and I like to fill my tank halfway then pour in the acetone and then finish filling my tank to get a good mix. I originally was getting 350 miles per tank, and the tank is 17.5 gallons(20mpg). However after the acetone, I have noticed huge improvements! I have gotten mileage of 408, 426, 414, and 432. Those are mileages of 23.3, 24.3, 23.6, and 24.6mpg respectively. The average was 19.7% better fuel efficiency. I buy the acetone from walmart that is located in the nail and beauty products section. 12 ounces is $1.97, and 1 bottle is good for 2 full tanks! I use a oil funnel to pour the acetone into my tank so as not to spill on the car paint. (July 11, 2007)

- **2004 Toyota Avalon** - Monitored engine for first 2 weeks of May, 2008. I have a 50 mile commute to work each day and I averaged 26 mpg driving at 60mph. On May 15, 2008 I added 3oz pure acetone to a full

tank of gas and drove home from work and averaged 32.5 mpg driving at 60mph. An immediate 25% increase. Will run with acetone added through the end of the month and report average again. ((Don't forget to tell us what the ethanol percentage of the gas you're using is?? Thanks.))

- **1998 Toyota Corolla** - After a full year of experimentation with acetone, I can see a fairly consistent 10% increase in MPG. However, there are still too many variables to draw solid conclusions, so I will continue to log data and report back. Mixture is always 3oz to 10gal, 95% city driving.

- **Toyota Corolla**
  - Toyota Corolla 1999 - Mileage up by more than 10%; performance increase noted. Report from Manila, Phillippines.

- **Toyota Cressida**
  - Toyota Cressida 1988 - 1988 Toyota Cressida, 5M-GE, 2.8L, I6, automatic. Slight power increase...probably from cleaning effects. mileage decreased proportional to acetone %. (Oct-Nov 2005)
  - **86 Toyota Cressida** (fuel injected straight 6 cyl. engine) - I've been using Acetone in my gas tank with Regular gas for two years. I have been enjoying a 20-25% increase in mileage PLUS noticeably better

acceleration, with NO problems of any kind. I add about 3 oz Acetone/10 gal of gas using a glass pyrex measuring cup and a funnel. A gallon of Acetone at your local hardware store will run @ $14-16. One gallon (128 oz) will treat approx. 427 Gals of gas = about 4 CENTS/gal cost. This is a real winner!!! (Randy Klimt <rklimt1 {at} sbcglobal.net>; April 2, 2007)

- **Toyota Highlander**
  - Toyota Highlander 2003 - Went from 20mpg to 22mpg in city and from 22mpg to 24mpg on the highway (Feb - 2006)

- **Toyota Matrix**
  - Toyota Matrix - Tom Sarsfield reports essentially 'no change' over consistent route. (Nov. 5, 2005)

- **Toyota Noah**
  - [2005 Toyota Noah] - 2.0l 4-cyl direct injection engine, CVT automatic gear, registered 2005-09, about 10,000km, average near 10km/l, hwy 11-14 km/l, city 8.1-9.4km/l. From when the car was new, engine oil blackened quickly (not so on my 1996 Toyota Caldina). First test, 1:1000 acetone added, city driving. After engine was warm, idle (in neutral) remained at 800 RPM, did not go back to

the usual 700 RPM. An early indication of better evaporation? (2006-12-08)

- 2006-12-16. Idle went back to normal on second trip. Today, filled up 38.6l @ 341km -> 8.8 km/l. Compared to prior tank, this could be a 4% savings, but variation due to different routes is 16%, completely masking any changes. For now I guesstimate savings likely to be less than 10% and may be near zero. I do not plan on wasting fuel for test driving although it may be a good investment, however, this car has no mileage gauge.
- 2006-12-26 filled up after 665 km with 47.6l, that is 14.0 km/l, mostly hiway, same milaege as I had on a hiway run in October, but now with snow tires, ski gear and baggage for 3 nights, and about 1h wasted in stop-and-go. Did the acetone help any? Maybe, at least it did not hurt, but variability in driving conditions is just too great to detect the change reliably. Anyway, after filling up, I added 50cc Acetone for the 1:1000 ratio. One more try.
- 2007-01-28 +371km, 43l makes 8.6 km/l in the city, much of it cold start and short distance. No smell from the exhaust, that is nice. Compared to average one year ago with similar driving conditions, lost about 4% in mileage, maybe due to driving conditions. Conclusion: Acetone is not helping much if at all in this direct injection engine.

- Kerosene: I feel I got better results from what I did for years before I heard about acetone. I added about 1% of kerosene (called touyu in Japan). It is much cheaper than acetone, easy to get (diesel or light heating oil will do) and has a tad of lubricity. With the prior car and the motorcycles, kerosene gave noticeable better acceleration and mileage; however, I did not measure that. On the 4-cylinder Kawasaki, advancing the ignition by 5 degress and careful tuning of the 4 carbs each gave more performance than the kerosene, though.

- **Toyota Prius**
  - "Pretty hard to believe that only 2-3 oz. of Acetone could have such a dramatic effect, but my mileage on my Prius went from 43 mpg to over 54 mpg, on the same tank of gas!" (J.; March 21, 2005)
  - "Still getting about 15-20% improvement in my Prius Mileage w/Acetone" (J; April 6, 2005)
  - "Great results in my Prius which is currently in the Tour de Sol Rally. Will post data next week." (J; May 13, 2005)
  - "Still haven't finished the Acetone Dyno testing, but it still is helping my Prius and suburban, about 10% on average." (J; June 7)

    - "Suspended the testing as I have been loaning my car out to different people – too hard to collect data. Still planning to do some Dyno testing when I get some Free time." (J; Aug. 30, 2005)
- "I am starting testing using acetone today and looking forward to 60's in my MPG." (E; May 1, 2006)
    - I started out as a skeptic, but now am forced to accept that this does boost mileage. Mine went up from 47 to 57 mpg when I added some acetone when the gas level was around 6 bars**

- **Toyota Tacoma**
    - Toyota Tacoma 2007 - V6 - After 2000 miles, mileage went from 20 down to 19 mpg. (Feb 23,2007)

- **Toyota Tercel**
    - Toyota Tercel 1985 1425cc - mileage is better. (April 7, 2005)
    - Toyota Tercel 1991 Jean Gaudreau (Commenced Aug. 24, 2005)

- **Toyota Tundra**
    - Toyota Tundra 2000 - Lcwoolco's initial findings from adding 4.5oz / 21 gallon ratio: increased power, better idle, no drip from tailpipe. (*PESWiki*; March 27, 2005)

- **Toyota Yaris**

- Toyota Yaris 2003 model D-4D - 'Umbra' reports significantly increased mileage and performance all around. (Jan. 2, 2006)

- **Toyota 4runner 2005**
  - bioelectric@copper.net 2oz every 10 gal, driven 1600 miles thus far, ave 22.3mpg from best ever of 21mpg (show room advertised). If I drive 45-60 mph back roads I get ave 23.8mpg. This is a V8, 4-wheel drive always. 27 Jun 2006

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Volvo

- 1989 Volvo 245 - Randy's Volvo went from 24.95 mpg to 26.12 mpg using 2.5 oz / 10 gal. (Nov. 12, 2005)

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VW

- **Jetta GLI 2005** Mark Cooper is getting 20% more gas mileage now like clock-work.
- After roughly 5000 miles, my **2002 VW TDI** is getting approximately 11% better mileage on average using 2 oz./10 gal. of diesel. Definitely worth doing!

- **1986 VW Diesel** {1.6 Ltr} Mileage, 226980; Distance of daily drive round trip, 102.4 miles; Acetone amount used, 1.5floz. I have just started this test, having to drive 500 miles + a week is good incentive to try this out. I regularly get between 41 and 44 mpg with my trusty diesel VW. Not as great as my last rabbit, but better than anything detroit has to offer currently. I will run this amount of acetone for a 30 day trial and gauge what the improvements may or may not be. As you can see, I have a barely broken in VW diesel, a tight, well maintained engine with excellent compression with less than 2% variance between cylinders. This should be a good test as the distance is traveled all on highways, with little if any city driving to effect the testing for max mileage on the highway. Semper Fi. -- User:Gunnyusmc (Jan. 18, 2006)
  - With 231470 miles on it now. So far I've refined the acetone down to 2.5 oz per tank. I've seen a modest increase in mileage, from an average of 420 miles a tank {driven down to 1/8th of a tank) to 470 miles per tank driven. I have noticed a reduced amount of smoke on hard accelration and an overall increase in power. Considering it has only 52bhp, any increase is noticeable.

- **Seat Ibiza 1.2 2002** - I'm getting 43 mpg before using acetone. But I wanna have better results, smoother engine. (June 2006)

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2-Stroke Reports

- **Acetone boosts 2-stroke paraglider performance** - Robin Rumbolt reports increased mileage, decreased oil leakage, lower build-up on spark plugs, increased power, no impact on gaskets.

POST YOUR DATA

Feel free to insert a brief synopsis above under the make/model of your car.

If you would like to post a more thorough report, feel free to create a new page and then link to it from this index. There is a **Template** to give you a start for header/footer and other organizational content.

Template Instructions

1. log in,
2. click on this "template" link,
3. select "edit" at the top of the template page,
4. *copy* the contents of this edit window, and paste it into a temporary location such as notebook,
5. create a new URL with your name in it, e.g. *http://peswiki.com/index.php/Directory:Acetone:MAKE:MODEL:YOURNAME*(replace "YOURNAME" with your name, and enter the make and model as indicated),

6. select the "edit" tab at the top of the new page (this will open a blank window),
7. paste the "template" contents into the window,
8. edit the template content, adding your information,
9. preview the page,
10. save the page,
11. bookmark the page so you can come back and update it with new info as you get it,
12. (optional) link to your new page from this page under 'Individual Reports' as well as from the "latest" page for the site.

OR

- **Post your data here.** - If the above instructions are a tad too complicated for you, just post your information right here, and someone will move it to a separate page for you; or you can post it to the discussion page for this main acetone index and someone can move it to the appropriate location from there. You can copy what you want your report to say directly following this text.

About Acetone

Acetone

A colorless, volatile liquid with a sweet odor. It is considered the least toxic solvent in industry. It can occur naturally. It is used in the production of lubricating oils, chloroform, pharmaceuticals, pesticides, paints, varnishes and lacquers. If present in water, it is more likely to volatilize or biodegrade before bioaccumulating or adsorbing to sediments. Acetone will also readily volatilize and biodegrade in soil. It is also a common laboratory contaminant, so its presence in a sample does not always indicate its presence in the environment. Synonyms - Dimethylketone and 2-propanone. (Environmental Terms Glossary by U.S. Military)

- **Acetone** - Facts sheet by *Agency for Toxic Substances and Disease Registry*. What is acetone? What happens to acetone when it enters the environment? How might I be exposed to acetone? How can acetone affect my health? How likely is acetone to cause cancer? Is there a medical test to show whether I've been exposed to acetone? Has the federal government made recommendations to protect human health?

- **FAQ for Acetone Project** - What does acetone do to the fuel system components? How much do I add? Will it hurt me? How does it effect performance?

- **Article:Water Carrying Properties of Alcohol Compared to Acetone**

- **The QUALITY of the acetone used...MATTERS???** "However the acetone purity is not all the same when you buy it at stores. I and others have found the best acetone for mileage is 100-percent pure. While we often get technical grade from a chemical supply at ScienceLab.com, we rely on the brands at beauty supply stores labeled 100-percent pure. What happens with impure acetone, even that which is labeled falsely as 100-percent pure? The engine runs rough. You mileage will not improve. Look at the label for undesirable ingredients, such as benzoate. Water in the acetone will make it go bad. If your car has bad plugs or faulty ignition wires or the engine needs work, you will not gain a mileage boost. Do not buy acetone from drug stores. I recently tried bad acetone with good gasoline in two of my cars. Both suffered a small decline in MPG from their normal mileage. Ran all that gas out and went back to the beauty acetone. The cars' mileage recovered to what it had been."

- **a MORE ADVANCED use of additives**

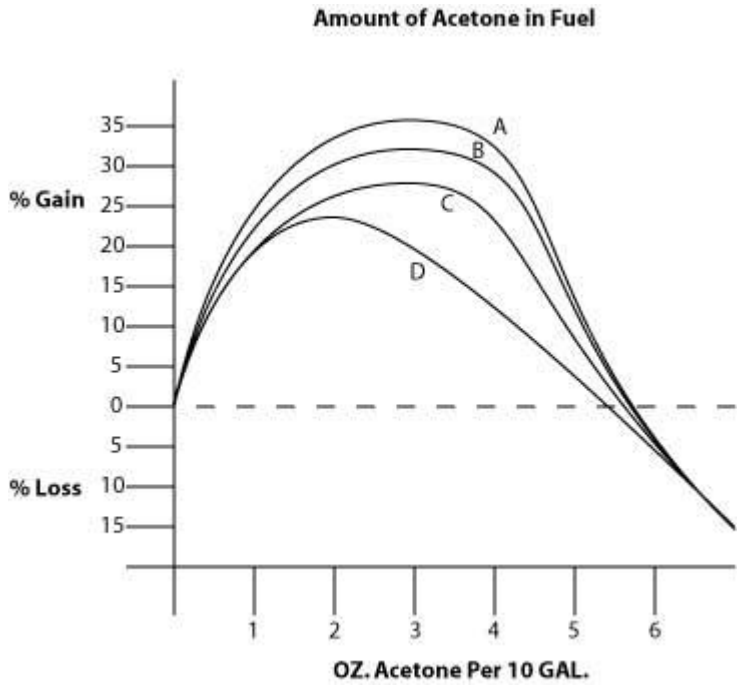
Reduces Hydrocarbon Emissions

Acetone can reduce hydrocarbon emissions up to 60-percent. In some older cars, the HC readings with acetone went from say 440 PPM to 195, as just one example. -- LaPointe

I used 2% (+ for evaporation as it was added) in a 1997 Mazda MX 5 Miata 1.8 L engine. In the 4 months before the test; I went 6728 mi and burned 218.8 gal for 30.7 mpg. In the 4 months I used acetone; I went 7902 mi and burned 269.96 gal for 29.27 mpg. In the 2 months following the test; I went 1680 mi and burned 52 gal for 32.3 mpg. I attribute the increase after the test to the Scangauge and it's teaching me how to drive. Bottom line is that any increase or decrease in mileage provided by acetone is insignificant in my application.

Methods

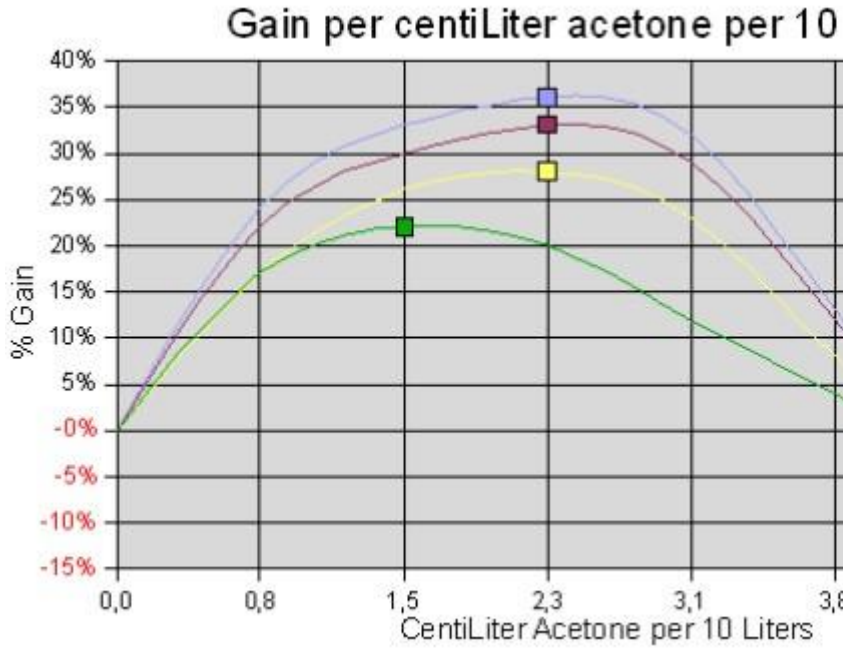
Graph: Mileage gain per Oz Acetone per 10 Gal.



Caption

Shown is the percentage MILEAGE GAIN when a tiny amount of acetone is added to fuel. The curves A B C show the effect on three different cars using different gasolines. Some engines respond better than others to acetone. It is important to use the same gasoline from the same gas station when testing mileage otherwise you have too many variables and get undependable results. The D curve is for diesel fuel. -- Louis LaPointe

The same graph in metrics format (LITERS to replace the GALLONS) for countries which use the metric system



Tools

ScanGauge MPG Instrument for Your Car

- **ScanGauge II** - Track your automobile statistics with ease. Unit plugs into the diagnostic connector found under-dash on 1996 and newer cars and light trucks.

This unit plugs into and gets it's data from the ECM (on-board computer that controls the engine). Some of the newer cars have a "driver information center" that gives readouts from the ECM as well. What is nice about these devices is that they give you instantaneous mileage readouts as well as trip computations.

You will notice quite a difference in mileage between warm or cold days, humid or dry days, amount of traffic on the road causing increase/decrease in speed, and other factors.

Such gauges are adequate for rough estimations of what products/methods improve mileage. However, if you are being scientific, you will want to use more rigorous methods such as using a treadmill, running to empty, adding a fixed amount of fuel, then running till empty, etc. Filling the tank to the top and burning only a few gallons is not a very inaccurate way of

measurement because the expansion rate of the remaining fuel in the tank will vary with temperature.

In any testing regimen, you will want to run multiple instances of the same parameters to establish reproducibility and margin of error.

Acetone Mix Calculation

In general it is better to use **RATIO** instead of oz/gallons or ml/liters. A ratio is always valid for mixing any different fluids or materials by volume or weight. Ratio is completely independant of US or Imperial Gallons or Liters and can be compared directly.

For example, 1 part per 5000 is the same as calling it a ratio of 1:5000 (1 to 5000). If you want to know the percentage then use the formula 1/5000 * 100 = 0.02% Likewise the a 1:3000 ratio is the same as 1/3000 * 100 = 0.033%.

Using ratio gives very easy calculations for the amount of acetone to use.

If for example using a ratio of 1:640, which is the 2 oz per 10 gallons (1280oz), just take the total oz of

gasoline (1280) and divide by the ratio of 640, which gives oz of acetone.

To find your ratio, do this:

1 Convert gallons to ounces(oz) (I.e. 10 gallons = 1280oz)

2 Get ratio by dividing ounces of gas by ounces of acetone (I.e. 1280 / 2 = 640)

3 Divide ounces of gas by the ratio (I.e 1280 / 640 = 2 oz of acetone)

For example, if the tank takes 15 gallons, then it will be 15*128 oz => 1920 oz / 640 = 3 oz acetone.

For liters it is the same method: If the tank takes 50 liters, then it is 50000 ml / 640 = 78.1 ml.

In other words, use the same volume unit on both the gasoline and the acetone, and divide using the ratio number.

This is why ratio always must be included when logging in the acetone test database in the yahoo

group. Ratios can be compared directly independant gallons or liters.
See http://autos.groups.yahoo.com/group/pes_acetone/database

For the mileage it is a little more complicated, as the mpg (mile per gallon) is distance per volum of fuel, whilst the european method is liters per 100 km, eg volume of fuel per distance. For easy conversion between the two plus many other conversions, one can use some great online tools found on this page: http://www.teaching-english-in-japan.net/conversion/

Getting the acetone into the tank:

It's not all that easy to get the acetone into the tank without the process taking too much time or getting it on the paint.

The best method I've found is to use the flip top Nails Be Gone acetone bottles as found at Walmart (and other stores?). The ones I have are around a 9 oz capacity (16 oz are available), and have a flip top that

allows you to squirt the acetone or other fuel mix into the tank...slowly and without splash.

I use a permanent marker to draw "ounce lines" on the side of these bottles.

After the car is filled...I then squirt the right amount into the tank.

I carry these in a cut down laundry detergent bottle, using it as a tray to keep the bottle UPRIGHT (they may leak vapor slightly due to temperature changes)...and also to hold extra oil and brake fluid bottles. I keep this tray in a low spot (cooler) and at the back of the vehicle and ALWAYS keep the heat/cooling system set on FRESH in order to keep air flowing thru.

I also use a 32 oz 2 cycle oil mixing bottle to accurately put together various fuel mixes...such as acetone...xylol...Torco GP7. If it won't mix OK in this bottle...it doesn't go into the tank.

Acetone Mix Aid

Here is a handy little chart including imperial and metric amounts, and an easy way to calculute (At the

pump) how much acetone to add, based on concentration and amount of fuel

added.

Acetone Ratios

$$\frac{1\text{ oz}}{10\text{ gallons}} = \frac{1\text{ oz}}{1280\text{ oz}} = \frac{1}{1280}$$

$$\frac{1.5\text{ oz}}{10\text{ gallons}} = \frac{3\text{ oz}}{20\text{ gallons}} = \frac{3\text{ oz}}{2*1280\text{ oz}} = \frac{3\text{ oz}}{2560\text{ oz}} = \frac{3}{2560}$$

$$\frac{2\text{ oz}}{10\text{ gallons}} = \frac{2\text{ oz}}{1280\text{ oz}} = \frac{2}{1280} = \frac{1}{640}$$

$$\frac{2.5\text{ oz}}{10\text{ gallons}} = \frac{5\text{ oz}}{20\text{ gallons}} = \frac{5\text{ oz}}{2*1280\text{ oz}} = \frac{5\text{ oz}}{2560\text{ oz}} = \frac{5}{2560}$$

$$\frac{3\text{ oz}}{10\text{ gallons}} = \frac{3\text{ oz}}{1280\text{ oz}} = \frac{3}{1280}$$

Metric Ratios

$$1\text{ Litre} @ \frac{1}{1280} = \frac{1000}{1280}\text{ ml} \simeq 0.78125\text{ ml}$$

$$1\text{ Litre} @ \frac{3}{2560} = \frac{1000*3}{2560}\text{ ml} \simeq 1.171875\text{ ml}$$

$$1\text{ Litre} @ \frac{1}{640} = \frac{1000}{640}\text{ ml} \simeq 1.5625\text{ ml}$$

$$1\text{ Litre} @ \frac{5}{2560} = \frac{5*1000}{2560}\text{ ml} \simeq 1.953125\text{ ml}$$

$$1\text{ Litre} @ \frac{3}{1280} = \frac{3*1000}{1280}\text{ ml} \simeq 2.34375\text{ ml}$$

Easy (Intuitive) Calulation [Metric]

$$\text{Millilitres of Acetone} = \left(\frac{0.78125\text{ ml Acetone}}{\text{Litre}}\right) * (\text{Litres put in})$$

Easy (Intuitive) Calulation [Imperial]

$$\text{Ounces of Acetone} = (\text{Number of ounces per 10 gallons}) * \left(\frac{\text{Gallons}}{10}\right.$$

Example [Metric]

To add the equivilent of $\frac{1.5\text{ oz}}{10\text{ gallons}}$ to a 37.86 litre fill : $\left(0.781\right.$

To add the equivilent of $\frac{1.5\text{ oz}}{10\text{ gallons}}$ to a 13.7 gallon fill : $\left(1.5 - \right.$

Pseudo Dyno Test

Pulling an engine from a car, attaching a calibrated fuel tank and dyno, is outside the budgetary and resource availability of most people. However, the following simple procedure can be used to give an objective measure of increased/decreased power from the addition of acetone.

- Begin with a fuel tank free of acetone.
- Find a steep hill road free of traffic and children. (You might consult the local sheriff department or highway patrol to come up with a good location.)
- Determine a start and "end" point (end point should be within short enough range that full acceleration for the full distance will not produce illegal or dangerous speeds; the longer the better)

    1. Pull car up to the "start" location
    2. On "go" press stopwatch and press accelerator all the way to the floor and keep it there.
    3. Upon reaching the "end" point, stop the stopwatch.

4. Release accelerator.

Compare "without" to increasing concentrations of "with."

- Repeat above procedure several times (e.g. 5) for each concentration of acetone added, using a calibrated amount.
  - Start with a low ratio, (e.g. 1 oz / 10 gallons)
  - Increase concentration of acetone (e.g. by 0.5 oz / 10 gallon increments) and repeat procedure.
- Allow enough drive time after each new acetone addition to ensure complete mixture in the tank.
- If traffic or other obstacles prevent a particular "full throttle" run for the full distance, then discard run and repeat.
- Average the results and determine the standard deviation or accuracy of the results.
- Plot the results: x axis = ratio of acetone; y axis = increase/decrease of duration of run.

Another alternative is to go along to your local performance automotive mechanic and get the car

measured on a "rolling road" dynometer. This does not entail pulling your car apart, and is more accurate then the above, but will cost some money. However, if you have to discard several sets of runs, you may find that it saves money overall.

Units Conversion

- **Units conversion, English to metric** - excel spreadsheet calculator package specifically prepared for this acetone project by Steven B. of Darwin, Australia.
- English to metric, etc - calculator

Standard Deviation Calculations

- Standard Deviation Calculator - by ASU.edu. Enter numbers from set, and it calculates SD for you. DRAWBACK: does not allow decimals.

Standard Deviation for finite set

square root of the sum of the square of the deviation from mean of each value, divided by the square root of (the number minus 1).

Basically, what this says is as follows:

1. Find the deviation "d" for each data point
2. Square the value of d (d times itself)
3. Sum (add up) all of the squares
4. Divide the sum by the number of data points (n) minus 1
5. Take the square root of that value

(ref)

Cost Saving Calculations

- Cost Savings Summary - savings calculation example for 4 oz / 10 gal. How much to add.

Considerations

Not All Gas Stations the Same

- **Not All Gas Stations are the Same** - In reporting your results from adding acetone to your fuel, be sure to note the gas station where you purchased fuel.

Laws of Thermodynamics

- **Acetone and the Laws of Thermodynamics** - Discussion / debate page about the laws of thermodynamics and the claims being made about acetone's effect on fuel efficiency.

Issues

- **Boosting Acetone's Improvement on Mileage** - Steve D. Gage gives the logic and data behind his conclusion that vehicle fuel efficiency can be improved 50% by adding 1 oz acetone per gallon and tricking the car's computer into detecting an excess of oxygen so it richens up the mixture. (*PESWiki*; July 19, 2008)

Lubricity Addressed

- **Lubricity of Acetone in Fuel; Ester's Solution** - Acetone's positive results in mileage, idle, emissions, power, come in part from its engine cleaning effect, removing the carbon build-up. Does acetone degrade lubricity, creating long-term wear issues? Data from years of acetone use do not show unusual wear. Esters purported to afford added protection.

Ethanol and Acetone

- **Alcohol Apparently Inhibits Action of Acetone in Fuel** - While inert in the fuel tank, under high temperature and pressure in the combustion chamber, acetone and alcohol are likely to react to form a ketone. (*PESN*; April 14, 2005) Check again. Acetone IS a ketone.

Skeptics

- **Click and Clack talk cars -- Don't do it** - By Tom and Ray Magliozzi. "...his company tested acetone in its own labs and found no

increase in mileage. None. And he said the equipment is precise enough to detect anything over a 1 percent difference" [contradicted by the above]; paint remover, "will dissolve all your rubber components" [false] (Helena *Independent Record*; Jan. 21, 2006)

- **Case Study: Acetone as a fuel additive** - from Tony's Guide to Fuel saving gadgets. (Oct. 2005)

Comments

See Discussion page

Acetone Discussion List

- **PES_Acetone** - Yahoo!Groups discussion list for this project.

Discussions around the net

This concept has been picked up by hundreds of forums around the interent. The following is a small sampling. Many of these are no longer active. Feel free to rearrange the sequence to

feature those first that have active discussion on this subject.

- Fuel Economy Tips, Home Brew Fuel Additives and more - Fuel Economy Tips
- MPG Research discussion of acetone and other additives - MPG Research
- Fark.com - Fark discussion thread.
- BetterMPG Yahoo!Group - search "acetone"
- 7 Zip Download - The 7 Zip file extractor.
- RV.net thread - At least one person tried it, and found it to increase mileage.
- FreeRepublic - extensive thread on this acetone concept.
- GodLikeProductions.com Forum - search "acetone"

- TimeBomb2000 - thread on this acetone concept. Hones in on "degrades some plastics" notion, with question on "what will it do to plastics in fuel system"; but does not pay enough attention to the tests that have been run on fuel system plastics soaked in acetone. Talking, but no Testing.

Articles

- Chemically Improving Your Gas Mileage in Your Car by David Maillie

Contact

- **Louis LaPointe** (has asked to not be contacted)
- PES Network contact page

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- Pass your ccna security on first attempt using comptia security+ and other resources. We offer 100% success in real exam with updated ccvp training prepared by experts. You can also find ccna voice pdf & Testking 640-461 on our site.

See also

- Directory:Fuel Efficiency Additives
- Directory:Fuel Efficiency

FUEL EFFICIENCY

- **Directory:Fuel Efficiency** - main index
- News:Fuel Efficiency
- Fuel Efficient Vehicles
  - Directory:Airships
- Directory:Energy from Roadways
  - Directory:Solar Pavement
  - Directory:Power-Generating Shock Absorber

FUEL TREATMENT TECHNOLOGIES

- Fuel Additives
- Directory:Alternative Fuels
- Directory:Fuel Pre-Heating for Mileage Improvement
- Hydrogen Injection
  - Directory:Hydroxy or HHO Injection Systems
  - PowerPedia:Hydroxy Generators for Fuel Efficiency
- Directory:Running Vehicles on Water
- Directory:Clean Fuel Conversions
- Directory:Spark Plugs
- Directory:Hypermiling -- Driving Tips for Better Mileage
- Directory:Boron Additive

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  - Directory:Hybrid Vehicles

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- Directory:Powertrains
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AWARDS

- Automotive X Prize