Gasoline Ethanol Blends Coming to Hawaii

An Informational Workshop

for

The Motoring Public

Presented by:

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Downstream Alternatives Inc.

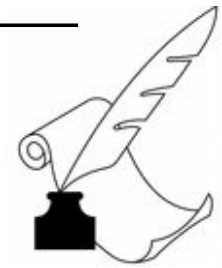
Slide 1 (title/DAI)

Good morning (afternoon), as most of you know, the State of Hawaii has passed legislation requiring the use of ethanol in gasoline. The State has now proposed regulations to achieve that legislative directive.

Slide 2

Hawaii State Law

Gasoline must contain 10% ethanol



My purpose today is to provide information about ethanol and gasoline ethanol blends that are of interest to the motoring public. I am not here to support or oppose the program or to debate its merits, but simply to provide information and answer any questions you may have. I would prefer if we could hold questions to the end of the presentation since the topics I cover will hopefully answer many of the questions you may have. However, if I am not making myself clear, feel free to interrupt me with questions or ask me to clarify myself.

Slide 3

Historical Ethanol Uses

Product extender

Octane booster

Carbon monoxide reducer - state

Carbon monoxide reducer - federal

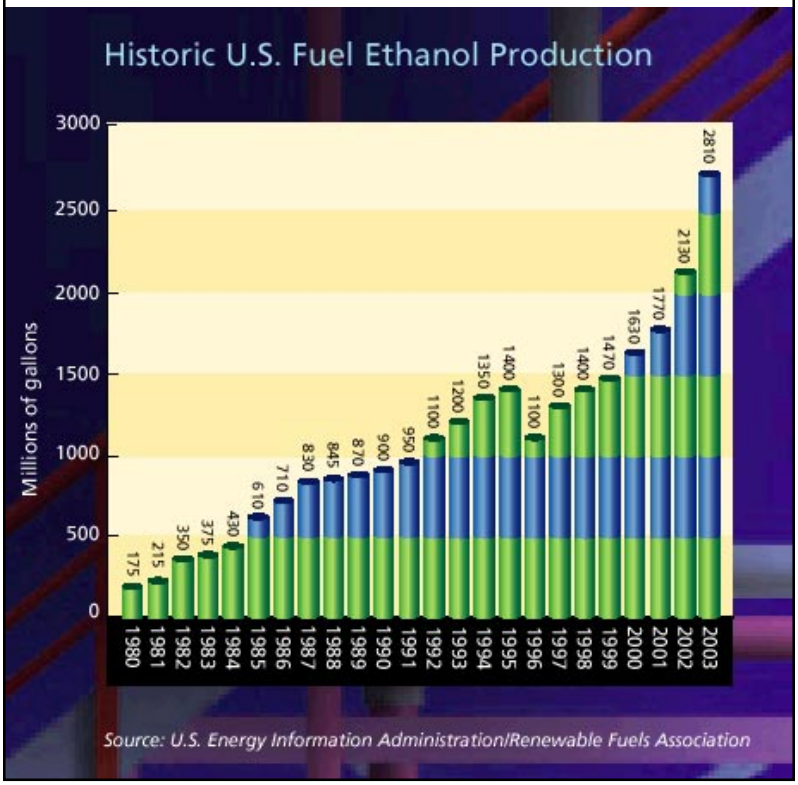
First, I want to provide some historical perspective. In the late 1970s, markets in the midwest United States began to market gasoline ethanol blends (with 10 v% ethanol), at that time calling such blends gasohol. Initially ethanol use grew as a patriotic "home grown" way to extend gasoline supplies. Later, as lead was phased out of gasoline, ethanol was used as an environmentally friendly octane booster, since it increases the octane of the gasoline to which it is added by 2.5 to 3.0 octane numbers. About this time these blends simply began being referred to as gasoline ethanol blends or simply E-10.

In the late 1980s, studies showed that ethanol and other oxygenates dramatically reduced automotive carbon monoxide (CO) emissions and to a lessor degree hydrocarbon emissions. As a result several western states adopted requirements to use oxygenated gasoline to reduce CO emissions. Before I throw the term oxygenate around any more, let me explain the term. Gasoline is comprised of components consisting of hydrogen and carbon (hydrocarbons). Oxygenates such as ethanol are comprised of hydrogen and carbon but also contain oxygen. They add chemically sourced oxygen to the fuel mixture, hence the term oxygenate. These western states programs were quite successful and in 1990 Congress, in the 1990 Clean Air Act Amendments, adopted requirements that all CO non-attainment areas use oxygenated fuels. The primary oxygenates used were ethanol and an ether called MTBE. This same legislation introduced the requirements that certain areas begin using reformulated gasoline (also oxygenated) in 1995. Initially, MTBE was more widely used than ethanol. However, MTBE began showing up in groundwater/drinking water sources and as a result, the use of MTBE use has been banned in 18 states. Ethanol is now the predominant oxygenate in the few remaining oxygenated fuels programs as well as in reformulated gasoline.

This has resulted in tremendous growth in the production and use of ethanol.

Slide 4

Historic US Fuel Ethanol Production



In fact, between 1980 and the end of last year, over 25 billion gallons of fuel grade ethanol have been produced meaning that over 260 billion gallons of gasoline ethanol blends have been sold. Put another way over 5.2 trillion miles have been driven on gasoline ethanol blends. For comparison, this is 650 times the amount of gasoline used annually on the islands.

Currently the federal government is looking at requiring expanded use of renewable fuels, including ethanol, due to their numerous public policy benefits.

Slides 5, 6, 7, 8

Ethanol - Public Policy Benefits

Trade Balance

- Reduces US imports of crude & gasoline
- Increases US exports (coproducts)

Less Energy Dependence

- Provides a domestic source of transportation fuel

Ethanol - Public Policy Benefits Con't.

Environmentally Friendly

- Clean source of octane
- No major risk to ground water
- Reduces CO emissions
- Reduces HC emissions in some cases
- Reduces particulate emissions

Ethanol - Public Policy Benefits Con't.

Consumer Friendly/Seamless Integration

- Liquid fuel
- More easily handled in current infrastructure
- No adjustments required to vehicles
- Low to no consumer cost impact
- Economic stimulus

Ethanol - Public Policy Benefits Con't.

Agricultural Income Increases

Provides High Paying Jobs In Plants

Economic Multiplier Effect 7x

- Suppliers/vendors (e.g., enzymes, transportation, construction)

Net Gain to US Treasury

These same public policy benefits apply, or will apply, to Hawaii. While some ethanol may initially come to Hawaii from plants on the mainland, the state's goal is to develop an ethanol production industry here, deriving the economic benefits such a program would offer. The state has various tax incentives in place to promote the use of alternative fuels. Some proposed ethanol plants are already in various stages of planning and analysis.

While the motoring public, and consumers in general, support sound public policy objectives, they also want to know what it means to them. In the case of ethanol these questions usually take the form of - "Will it cause gasoline prices to go up and if so, how much?" and secondly "Is it really OK to use this fuel in my car and other gasoline engines?"

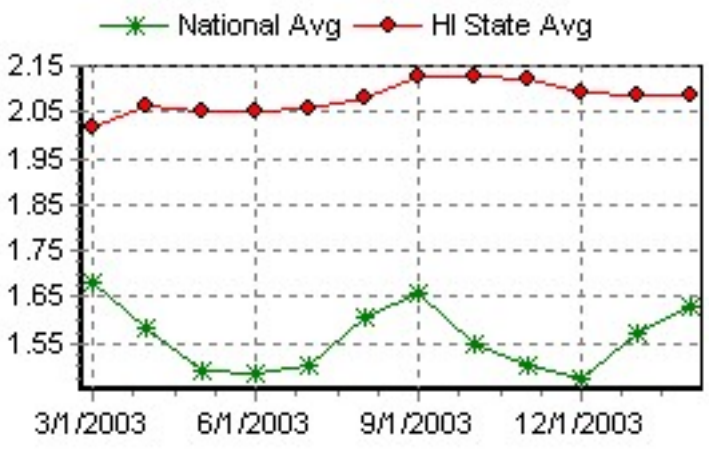
Let's look at the first consumer issue-cost. Gasoline ethanol blends in the US currently receive a credit against the federal motor fuels tax that equates to 52¢ for each gallon of ethanol used. If ethanol is $1.52, after taking the available tax credits, the net cost to the refiner/blender is only $1.00. In this example, if gasoline at wholesale is over $1.00, ethanol lowers the cost. If gasoline were less than $1.00 it would raise the cost.

Historically ethanol producers have set their ethanol price so there is little or no impact on price. In a 10% blend , if ethanol is 10¢ higher than gasoline this translates to only 1¢ per gallon on the finished blend. I'm sure its no surprise to you that, due to the unique logistics and distribution costs here on the islands, as well as the relatively small volumes, gasoline prices in Hawaii are much higher than on the mainland.

This graph shows the national average retail gasoline price compared to the average retail gasoline price here in Hawaii over the most recent 12 month period.

Slide 9

12 Month Average for Unleaded Regular



I want to cover some of the economics of ethanol. This is purely from an economic perspective and does not take into account the state's price cap laws.

Over the past three years, ethanol prices on the mainland have averaged about $1.32 but have been closer to the $1.50-$1.60 range recently due to higher gasoline prices. Ethanol landed in Hawaii equates to the West Coast price, plus additional freight charges, putting it most likely in the $1.60-$1.70 range landed in Hawaii. Local plants would price their product similarly. So, regardless of where the ethanol comes from, the price will be similar.

If we use the high side of $1.70 and subtract out the credit, this equates to $1.18 net at wholesale. The wholesale rack price of regular unleaded gasoline in Hawaii in December 2003 was $1.334 per gallon. So in this particular case, ethanol is cheaper than gasoline and would lower the cost.

Slide 10

Wholesale Cost

	Unleaded Regular Gasoline	Gasoline Ethanol Blend
Wholesale gasoline price	$1.334	$1.201 (90%)
Addition of 10v% ethanol	0	$.118
Net price before transportation and taxes	$1.334	$1.319

Price advantage 1.5¢ per gallon prior to 4% state sales tax exemption and volatility adjustment at the refinery.

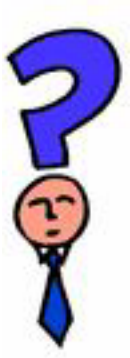
If we put all this together using these recent prices, we see that based on recent prices, gasoline ethanol blends would be 1.5¢ per gallon cheaper at wholesale. There will be some costs in adjusting the base fuel for ethanol addition and these costs typically cost the refiner about 1¢ per gallon. Additionally, some companies may need to add storage tanks and blending equipment which could add another penny or so to the blend cost. However, gasoline ethanol blends are exempt from the state's 4% sales tax through the end of 2006 which would help to offset these costs. So the bottom line is that if the economics are passed on to the consumer, the cost of gasoline might actually be lower than it otherwise would have. More importantly, you can see that any price impact of using ethanol, whether positive or negative, is very minimal and far less than the many other factors, such as crude oil price increases and supply imbalances, that impact gasoline prices. Other studies of ethanol use in Hawaii have also found that the impact on gasoline prices is estimated to be minimal and those studies were conducted when crude and gasoline prices were lower than today.

The second consumer issue - will there be any impact on the automobile or other gasoline powered equipment? In particular questions are often asked about the following:

Slide 11

Ethanol Related Questions

- What is ethanol?
- Gasoline quality
- Materials compatibility
- Engine performance
- Fuel economy
- Oxygen enleanment
- Solvency effect
- Water tolerance
- Marine & power equipment use



Slide 12

What is Ethanol?

- Highly refined (~200 proof) beverage alcohol

- Denatured with hydrocarbon to render it non-potable

So what happens when you mix ethanol into gasoline?

Slide 13

Gasoline + Ethanol

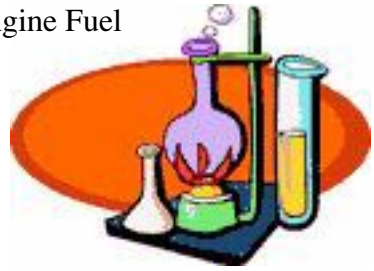
- Ethanol raises octane about 2.5-3.0 numbers
- Increases volatility slightly
- Refiners adjust base fuel for volatility change
- Energy content drops about 2.5 to 3.0%
- Water tolerance changes
- Increased solvency effect

Importantly, gasoline specifications and properties are governed by a number of factors.

Slide 14

Gasoline Specifications & Properties

- ASTM D 4814
  Standard Specification for Automotive Spark-Ignition Engine Fuel
- Federal regulations
- State regulations
- Petroleum company standards



Gasoline ethanol blends should meet all of the standards applicable to other gasolines. Let's cover some of the specific consumer issues.

Octane: Refiners will most likely alter the gasoline so that the octane of the finished fuel stays the same, otherwise it would increase by 2.5 numbers. Always refer to the octane decal on the dispenser as compared to owner's manual recommendations. Basically, octane will be a none issue.

Materials Compatibility: Auto manufacturers have, for many years, used materials that are compatible with oxygenated fuels. However, with the widespread use of oxygenated fuels and reformulated gasoline, certain myths have resurfaced, so they warrant mention here.

Most metal components in automobile fuel systems will corrode or rust in the presence of water, air or acidic compounds. The gasoline distribution system usually contains water, and additional moisture may collect in the automobile tank from condensation. Gasoline may also contain traces of sulfur and organic acids. Gasoline has always been recognized as potentially corrosive.

Alcohols are soluble in water. The addition of ethanol will increase a gasoline's ability to hold water. Therefore, an ethanol enhanced gasoline may have a slightly higher moisture content than non-blended gasoline. Several tests have been reported on ethanol enhanced gasolines. Vehicle fuel tanks and fuel system components from autos operated for extended periods on these blends were removed, cut open, and examined. These tests have generally concluded that ethanol does not increase corrosion in normal, everyday operation.

Auto manufacturers have indicated they do not have major concerns about metal corrosion, provided that all fuels contain effective corrosion inhibitors at the proper treatment levels. Responsible ethanol producers recognize that not all commercial gasolines are adequately treated for blending, and have, for some time, included a corrosion inhibitor in their ethanol. Additionally, there are ASTM specifications to ensure that fuel grade ethanol is suitable for addition to gasoline. Many manufacturers utilize guidelines even more stringent than those established by ASTM. Due to these controls and the addition of corrosion inhibitors, you should not encounter ethanol-related corrosion problems.

Elastomer (plastic and rubberlike components) compatibility is more difficult to generalize. A number of gasoline ingredients can have an effect on elastomer swelling and deterioration. For instance, aromatics, such as benzene, toluene, and xylene (all gasoline components), have been shown to have

detrimental effects on some fuel system elastomers. Gasolines sold today have a higher level of aromatics than those sold prior to the 1980s.

The addition of alcohols or ethers to gasoline can also cause swelling in fuel system elastomers. Swelling can be severe with methanol, but relatively insignificant with other alcohols. Ten percent volume ethanol contributes less swelling than the amount of additional aromatics needed to obtain the same increase in octane number.

Automobile and parts manufacturers have been responsive to the changes occurring in today's gasolines. Materials problems are less likely to occur with newer vehicles because of the upgrading of fuel system materials that has occurred since the introduction of higher aromatic unleaded gasolines and the addition of alcohols and ethers. All major automobile manufacturers have indicated that their late model vehicles are equipped with fuel system components upgraded for use with these fuels.

While all auto manufacturers warrant the use of 10 percent ethanol blends, their upgrading of fuel systems occurred at different times. In general, 1980 and later model years should not experience problems with 10 percent ethanol blends. Fuel systems in the 1975 to 1980 model years were upgraded, but not to the same extent as later models. Pre-1975 models may have fuel system components that are sensitive to high aromatic gasolines, alcohols and ethers. Specific documentation of the effect fuel components have on older fuel system parts is often lacking. However, if these systems have handled the aggressive gasoline components in the unleaded gasolines made since the 1980s, they should encounter no problems handling ethanol.

Engine Performance: Since gasoline ethanol blends must meet the same requirements as other gasolines, consumers should notice no difference in vehicle performance if their car is in a proper state of tune.

Fuel Economy: The energy content of ethanol is less than that of the gasoline to which it is added.

Slide 15

Energy Content of Gasoline Ethanol Blends (when blended with 114,000 btu/gal base fuel)

Ethanol (btu/gal)	Finished Blend 2.0 wt% oxygen (btu/gal)	Finished Blend 2.7 wt% oxygen (btu/gal)	Finished Blend 3.5 wt% oxygen (btu/gal)
78,300	111,965	111,251	110,430

As the slide demonstrates, this lowers btu content about 3.1% at the 10% blend level. However since the gasoline engine does not transfer all available energy to the drive wheels, the fuel economy impact is usually less than 3%. On a vehicle getting 20 miles per gallon (mpg), this equates to 0.6 mpg. Such a vehicle traveling an average of 12,000 miles per year, might experience an increase in gasoline used by about 12 gallons per year. These are, of course, generalities based on averages. Some vehicles have actually shown fuel economy improvements while others have shown slightly greater fuel economy penalties.

Oxygen Enleanment: Gasoline ethanol blends contain approximately 3.5% oxygen. For non-computerized vehicles, this level of oxygen should not normally require any adjustments to the air/fuel ratio. However, you may occasionally encounter an auto which has the air/fuel ratio set lean. Since an increase in oxygen further enleans the fuel charge, these autos may display symptoms of excessive enleanment (improper idle, engine dies). This can usually be easily corrected by minor adjustments to enrich the air/fuel mixture.

Newer vehicles are equipped with onboard computer control systems. These systems include oxygen sensors, installed in the exhaust manifold, to determine the oxygen content of the exhaust gases. Vehicles equipped with onboard computers will compensate for the oxygen content of the fuel when operating in the closed loop mode. The maximum level of oxygen permitted in gasoline is within the authority range of the sensor.

Solvency Effect: Although its not much of an issue today, I do want to briefly mention ethanol's solvency effect. The ethanol in gasoline tends to clean out dirty fuel systems. In vintage vehicles, this will sometimes clear out gums and lacquers that have deposited in the fuel lines over the life of the vehicle, especially in vehicles that were originally operated on leaded fuels. If this happens, it may cause the fuel filter to plug, necessitating filter replacement. This is a onetime occurrence and once the system is clean would not reoccur.

This is not generally an issue for late model vehicles since gum and lacquers are not normally present in the fuel tank or lines.

Water Tolerance: Water in gasoline can have different effects on an engine, depending on whether it is in solution or a separate phase. Hydrocarbon gasoline cannot hold much water and the water quickly separates and, being heavier than gasoline, goes to the bottom of the tank.

A gallon of gasoline comprised solely of hydrocarbons can hold about a half teaspoon of water (at 60˚F) before the water will separate. A gasoline blend containing 10 volume percent ethanol would require about 4 teaspoons of water before phase separation would occur. Therefore in routine operations, ethanol will suspend moisture and carry it out of the fuel system. In fact in colder climates alcohols are used as a gasoline antifreeze due to their ability to remove moisture from the system.

However, care must be taken to ensure against excessive moisture contamination. If water content gets too high, the blend could separate. This is simply a matter of properly maintaining the vehicle.

The auto manufacturers have approved of the use of gasoline ethanol lends under warranty coverage for a couple of decades now. Let me just offer a sampling.

Slide 16

WHY WAIT?

CLEANER GASOLINE IS HERE TODAY.

AND EVERY GM CAR OR TRUCK

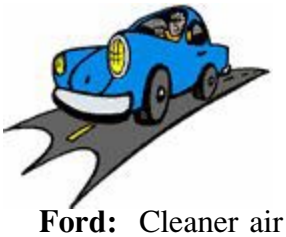
ON THE ROAD CAN USE IT. WITHOUT EVER MISSING A BEAT.

We led the advance to unleaded gasoline and gasoline blended with MTBE and ethanol to reduce carbon monoxide emissions. And we're out in front on other fuel alternatives, like alcohols, compressed natural gas, and electricity. In the past we've recommended improved fuels far in advance of federal regulations. Now we're doing it again.

GM

MARK OF EXCELLENCE

Slides 17, 18, 19



Auto Manufacturer Warranty Excerpts

Ford: Cleaner air - Ford endorses the use of reformulated "cleaner-burning" gasolines to improve air quality.

GM: Gasolines containing oxygenates, such as ethers and ethanol, and reformulated gasolines, may be available in your area to contribute to clean air. General Motors recommends the use of such gasolines, particularly if they comply with the specifications described previously.

Chrysler: Gasoline/Oxygenate Blends - Some fuel suppliers blend unleaded gasoline with oxygenates such as 10% ethanol, MTBE, and ETBE. Oxygenates are required in some areas of the country during the winter months to reduce carbon monoxide emissions. Fuels blended with these oxygenates may be used in your vehicle.

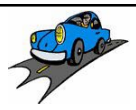
Auto Manufacture Warranty Excerpts Con't.

BMW: Fuels containing up to and including 10% ethanol or other oxygenates with up to 2.8% oxygen by weight (i.e. 15% MTBE or 3% methanol) plus an equivalent amount of co-solvent) will not void the applicable warranties with respect to defects in materials or workmanship.

Honda: ETHANOL (ethyl or grain alcohol) - You may use gasoline containing up to 10 percent ethanol by volume.

Hyundai: Gasohol (a mixture of 90% unleaded gasoline and 10% ethanol or grain alcohol) may be used in your Hyundai.

Mazda: Gasoline blended with oxygenates such as alcohol or ether compounds are generally referred to as oxygenated fuels. The common gasoline blend that can be used with your vehicle is ethanol blended at no more than 10%.



Auto Manufacture Warranty Excerpts Con't.

Mercedes: Unleaded gasoline containing oxygenates such as Ethanol, IPA, IBA, and TBA can be used provided the ratio of any one of these oxygenates to gasoline does not exceed 10%, MTBE not to exceed 15%.

Toyota: Toyota allows the use of oxygenate blended gasoline where the oxygenate content is up to 10% ethanol or 15% MTBE. If you use gasohol in your Toyota, be sure that it has an octane rating no lower than 87.

VW/Audi: Use of gasoline containing alcohol or MTBE (methyl tertiary butyl ether)
You may use unleaded gasoline blended with alcohol or MTBE (commonly referred to as oxygenates) if the blended mixture meets the following criteria: Blend of gasoline and ethanol (grain alcohol or ethyl alcohol) -Antiknock index must be 87 AKI or higher. -Blend must not contain more than 10% ethanol.

So as you can see, the automakers approve of, and in some cases, recommend the use of gasoline ethanol blends.

Occasionally, questions arise about a number of myths dating back to the early 1980s. Invariably, someone points out there were problems with alcohol blends back in the early 1980s. However,

there were two alcohol used in that time frame, ethanol and methanol. Methanol dramatically increases gasoline volatility, is very sensitive to water, and is aggressive to the materials used in vehicle fuel systems. Methanol was usually the culprit associated with problems. Methanol, to my knowledge, is no longer used in gasoline. In fact, most vehicle owners manuals prohibit the use of methanol or limit it to a very low level.

This is not to say that at least a few of the problems from that era were not ethanol related. When ethanol was first introduced, there were no standard industry specifications for ethanol, nor were there any guidelines for proper preparation of tanks and dispensers. This led to some isolated problems. However, ASTM set specifications for ethanol in the 1980s. Additionally, the industry trade associations prepared guidelines and recommended practices for proper retail conversion. These procedures, when properly followed, eliminate the potential for any problems.

Non-Automotive Engines: The last topic I want to cover is non-automotive engines such as those in motorcycles, recreational vehicles, watercraft, and power equipment. We often get questions about using ethanol in such applications. Gasoline is designed for its primary intended use, the automobile. In fact, the standard industry specification for gasoline is titled *Standard Specification for Automotive Spark Ignition Engine Fuel*. Little consideration is given to the needs of the small engine manufacturer and they find themselves designing around whatever fuels are made for automotive use.

Manufacturers of gasoline powered non-automotive equipment fall into one of four general categories. These include motorcycles, boats, recreational equipment (snowmobiles and ATVs), and lawn/garden power equipment.

Manufacturers in these four categories have various fuel related issues when designing their products or when developing recommendations for their use. For instance, all of these categories are usually subject to seasonal use and extended storage periods. Gasoline deteriorates in storage which tends to contribute to more engine deposits and gumming of carburetors and fuel injectors. Therefore, most manufacturers recommend either draining all gasoline, or treating it with a fuel stabilizer, when equipment is to be stored for long periods. Additionally, compared to an automobile, much of this type

of equipment is relatively inexpensive and consumers do not exercise the same degree of care that they would with the family car.

Since boats operate, and are often stored in, a marine environment, fuel moisture content is an issue. Lawn and garden equipment is often designed to be light weight for ease of handling. Consequently, the fuel systems of such equipment may be fitted with different metals, plastics, and elastomers than those utilized in an automobile's fuel system. The lawn and garden equipment category is also subject to the greatest degree of consumer neglect, since it is usually relatively inexpensive.

Manufacturers are currently confronted with a growing amount of environmental regulations designed to lower emissions from their products. These regulations are in addition to an extensive array of laws pertaining to noise levels and safety.

Consequently then, these manufacturers are confronted with the need for extremely low production costs, specialized considerations, and limited research and development budgets. Yet they must produce equipment that is safe, reasonably quiet, durable, consumer friendly, capable of operating on today's fuels, and with increasingly lower exhaust emissions.

Initially, during the early 1980s, the predominant oxygenate was ethanol. During this time frame, gasoline ethanol blends comprised only a few percent of the gasoline marketplace and were viewed as somewhat of a novelty. Small engine/equipment manufacturers were slow to conduct tests on a fuel with limited marketshare and an uncertain future. Little technical data about the use of gasoline ethanol blends was available and, of course, there was little field experience upon which to base decisions regarding its use in such applications. These factors led to the majority of manufacturers recommending that gasoline ethanol blends not be used in their products in that time frame.

By the mid 1980s manufacturers began to indicate that gasoline ethanol blends could be used in their products provided certain storage precautions were followed. The degree of approval often varied with some simply stating ethanol blends could be used while others stated such use was permitted but not recommended or required special storage procedures or other precautionary steps.

I don’t want to engage in a lengthy technical presentation on this topic because I’m sure it would bore most people. I’ll simply state that gasoline ethanol blends are used throughout the US. In some states

or areas, it is the only fuel available and obviously all gasoline engines in these markets use gasoline ethanol blends without problem. Beyond that, I'll briefly cover a sampling of what the major manufacturers say.

Slide 20, 21, 22, 23

Non-automotive Warranty Excerpts

Marine

Honda: ETHANOL: ethyl or grain alcohol; 10% by volume -You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name "Gasohol".

Outboard Marine: Using alcohol-extended fuels is acceptable ONLY if the alcohol content does not exceed: 10% ethanol by volume or 5% methanol with 5% cosolvents by volume.

Yamaha: Gasohol - There are two types of gasohol: gasohol containing ethanol and that containing methanol. Gasohol containing ethanol can be used if ethanol content does not exceed 10% and the fuel meets minimum octane ratings.

Motorcycles

Non-automotive Warranty Excerpts Con't.

Harley Davidson: ETHANOL is a mixture of 10% ethanol (Grain alcohol) and 90% unleaded gasoline. Gasoline/ethanol blends can be used in your motorcycle if the ethanol content does not exceed 10%. Reformulated gasolines use additives to "oxygenate" the gas. Your motorcycle will run normally using this type of gas and Harley-Davidson recommends you use it when possible, as an aid to cleaner air in the environment.

Honda: ETHANOL (ethyl or grain alcohol) 10% by Volume - You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name "Gasohol".

Kawasaki: Gasoline/Alcohol Blends – Gasoline containing up to 10% ethanol (alcohol produced from agricultural products such as corn), also known as "Gasohol" is approved for use.

ATV

Non-automotive Warranty Excerpts Con't.

Kawasaki: Gasoline/Alcohol Blends – Gasoline containing up to 10% ethanol (alcohol produced from agricultural products such as corn), also known as "Gasohol" is approved for use.

Power Equipment

Non-automotive Warranty Excerpts Con't.

Honda: ETHANOL - (ethyl or grain alcohol) 10% by volume - You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name "Gasohol".

LawnBoy: Use only clean, fresh, lead-free gasoline (including oxygenated or reformulated gasoline) with an octane rating of 87 or higher.

Kohler: Gasoline/Alcohol blends - Gasohol (up to 10% ethyl alcohol, 90% unleaded gasoline by volume) is approved as a fuel for Kohler engines. Other gasoline-alcohol blends are not approved.

Tecumseh: Reformulated gasoline that is now required in several areas of the United States is also acceptable.

Before going to the Question and Answer session I would also like to offer some additional information resources. A number of documents pertaining to gasoline ethanol blends can be found on the Renewable Fuels Association (RFA) website, http://www.ethanolRFA.org.

Slide 24

RFA
Renewable Fuels Association

http://www.ethanolRFA.org

This includes a service technicians manual entitled "Changes in Gasoline III - The Service Technician's Gasoline Quality Guide"

Slide 25

The State of Hawaii also has an ethanol related website at: http://www.Hawaii.gov. For those of you wishing more detailed information or new information that becomes available, you might wish to check these two websites.

With that I would like to open it up to questions from the audience.

Q & A Session

Closure