

## **Who Can Use E-15?**

*Responses from the Environmental Protection Agency and auto manufacturers*

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In 2001, the EPA approved the use of E-15 fuel in light duty cars, trucks and SUVs model year 2001 and newer and all flex-fuel vehicles. Vehicles older than 2001, small engines, boats and motorcycles were not approved for E-15 use.

Here is the EPA's response to WGN in December 2014 on why it made that determination:

### **EPA:**

"EPA relied on several sources of information when it made its determination on E15 and vehicles, including a test program study conducted by the Department of Energy (DOE) (<http://www.osti.gov/scitech/servlets/purl/1035578>) and over 30 studies conducted by industry, government, and academia. These studies tested hundreds of vehicles representing the national fleet and covered E15's impact on emissions and emissions controls as well as materials compatibility and the driveability/operability of vehicles, engines, and equipment. EPA also consulted with the major auto companies, the small engine manufacturers, universities and government entities that were conducting or had conducted research on how E15 affects automobiles and non-road vehicles, engines and equipment. In the end, EPA made its decisions on the best available science and data."

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WGN reached out to 16 auto manufacturers to see whether E-15 is recommended for use in their vehicles and if warranties will cover damage caused by the use of E-15. The following are responses WGN received in December 2014:

### **BMW:**

"BMW does not recommend the use of E-15 in any of its engines. BMW gasoline engines are designed to operate normally with gasoline with ethanol content up to ten percent. Use of gasoline with concentrations of ethanol higher than ten percent could damage the engine. As stated in our new-vehicle warranty, customers will be responsible for repairs to the engine for damage caused by the use of gasoline with ethanol concentrations higher than ten percent."

### **CHRYSLER:**

"Chrysler Group recommends E-10 fuel for its vehicles that are not Flex-Fuel Vehicles (FFVs). More than half of Chrysler Group's current light-vehicle lineup offers flex-fuel powertrains, which are compatible with gasoline-ethanol blends up to and including E-85. Using fuels that are not recommended may void vehicle warranties."

## **FORD:**

“In January 2011, the U.S. Environmental Protection Agency (EPA) approved a waiver allowing the use of E15 (a blend of 85 percent gasoline and 15 percent ethanol) in 2001 and later model year vehicles, after previously issuing a waiver allowing E15 to be used in 2007 and later vehicles. Ford’s owner manuals are the source for our consumers to identify recommended fuels for use in their particular vehicle. As of the 2013 model year, Ford vehicles are capable of using E15, while prior model years are limited to E10.

On the one hand, we recognize the potential benefits of expanded use of E15 fuel in helping to build markets for renewable fuels in some countries. In addition, since ethanol has an octane rating greater than today’s gasoline, blends with higher levels of ethanol have the potential to produce a higher octane fuel, which can enable further improvements in engine efficiency. On the other hand, the implementation of the EPA’s E15 waiver presents a number of concerns. In particular, customers should be advised to consult their owner guides, as the use of E15 in vehicles not designed for it has the potential to create problems and void warranties. There is also a need to develop a robust program of regulation to prevent the “misfueling” of older vehicles not authorized by EPA to use E15. We are concerned that the operation of such vehicles on E15 will result in various quality, durability and performance problems, leading to customer dissatisfaction.”

## **GM:**

“Since the 2012 model year, all GM vehicles are compatible with the E15 ethanol blend fuel. That means the engine hardware, engine controls and various components of the vehicle were specifically designed and engineered for E15 fuel and the higher level of ethanol contained in it. These modifications were made to ensure a safe and trouble-free driving experience for our customers in preparation for the growing availability of E15 fuel in the marketplace.

We urge our customers to refer to their owner’s manuals for the proper fuel designation for their vehicle. To avoid any unintended consequences, ethanol blends greater than E10 should not be used in any GM vehicle prior to the 2012 model year without a FlexFuel designation, because they were not designed to run on gasoline consisting of more than 10 percent ethanol-blend volume.”

-If drivers use E-15 in model years before 2012, would warranties be void?

“No clear cut answer to that – many different issues are involved. For the most part, the engine just will not run properly and may keep having the “service engine” light going on indicating that service is necessary. In extreme instances, the improper fuel may eventually cause the engine to fail completely. E15 is not a total replacement for E10 though. E10 should still be available in the marketplace for owners of older model year vehicles that have it as the designated fuel in their owner’s manual. “

## **HONDA:**

“Increased Use of Ethanol in U.S. Gasoline/ Background: U.S. law requires the increased use of renewable fuels, such as ethanol, in U.S. gasoline. There also are proposals to mandate flex-fuel vehicles. The EPA has approved an increase in the concentration of ethanol in gasoline from 10% (E10) to 15% (E15) for MY2001 and newer passenger cars and light trucks. It did not approve E15 use in older model vehicles, motorcycles off-road vehicles or small general-purpose engines.

Honda is very concerned that E15 has been approved for older model vehicles even though it has been demonstrated that engines and environmental control systems are harmed by higher ethanol blends. Having approved E15, EPA should put in place strong misfueling countermeasures to assure that only E10 is used in small engines and other vehicles for which E15 has not been approved.

Honda believes the EPA-approved countermeasures to prevent customers from misfueling their products with E15 are inadequate, essentially only requiring an EPA-developed fuel pump label to disclose the E15 blend.

Honda is currently evaluating the implications on its products of gasoline blended with higher levels of ethanol (above 10%), particularly with any product using a Honda small engine.

Honda’s vehicles and products operate well on blends up to 10% (E10), and blending at this level is probably the best use for ethanol that is being produced today. Many 2014 and later Honda and Acura models are compatible with E15 as indicated in the owners manual. Beginning with MY2015, all Honda and Acura models will be compatible with E15.

Ethanol products blended with gasoline above E10 present serious concerns, including: Potential negative impact on small-engine performance and emissions. Impact on fuel efficiency and range – reduced about 28 percent with E85. Accordingly, Honda supports blends up to 10% and further R&D for the production of drop-in fuels that are fully compatible with all engines and infrastructure.”

## **HYUNDAI:**

“Hyundai does not recommend E-15 in any of its vehicles.”

## **JAGUAR/LANDROVER:**

“ALL CURRENT Jaguar and Land Rover VEHICLES ACCEPT E-15 (since this model year):

13MY XF, XJ and F-Type

13MY Range Rover

14MY RR Sport

14MY Evoque, LR2 and LR4

Except: All Jaguar XK are not OK with E-15

Damage to components attributed to the use of unapproved fuel is not covered under the vehicle warranties. Recommended fuels vary by model and model year. Owners should consult their owner's manual and be familiar with their vehicle's approved fuels."

**MAZDA:**

"Mazda only authorizes the use of E10 in our vehicles. The use of any higher concentrations of ethanol in the fuel may void the Mazda factory warranty. "

**NISSAN:**

"E-15 is not recommended for use in Nissan vehicles. Consistent with the policy of numerous manufacturers, the Nissan warranty does not cover damage resulting from the use of E-15 or any other fuel not approved for use as outlined in the owner's manual."

**SUBARU:**

E-15 is not recommended for use in Subaru vehicles and Subaru does not cover E-15 under warranty.

**TOYOTA/LEXUS/SCION:**

"Toyota strongly supports the development of alternative fuels to help reduce dependence on foreign oil and potentially reduce vehicle emissions. However, along with many other automobile manufacturers, Toyota is concerned about the EPA waivers approving use of E15 for 2001 model year and newer vehicles.

Toyota is a member of the Alliance of Automobile Manufacturers and the Association of Global Automakers, and these trade associations have joined with the National Marine Manufacturer's Association and the Outdoor Power Equipment Industries to challenge EPA's E15 waiver decisions.

In addition, Toyota recognizes that ethanol and other renewable fuels will continue to play an important role in US energy policy. But, rather than pursue a retrospective solution that carries substantial risks for consumers, automakers, equipment makers and fuel providers, we need a prospective solution that provides adequate lead time for vehicle development, fueling infrastructure modifications and misfueling prevention measures. In support of this notion, and to avoid a continually moving target, Toyota stands ready and willing to develop E20 compatible vehicles in the future provided these issues are addressed.

We welcome the opportunity to work with key stakeholders in Congress, the regulatory agencies, the auto industry, the fuel industry and others to examine a practical pathway forward.

Q: Will your cars and trucks from model year 2001 and later be damaged by or wear more quickly from use of E15?

A: With the exception of the Flexible Fuel Vehicle (FFV) versions of our Tundra and Sequoia (which were designed specifically for the higher ethanol-based fuel), all Toyota, Lexus and Scion models on the road today have only been designed for fuels with up to 10% ethanol (E10). Moving from E10 to E15 represents a 50% increase in the alcohol content of the fuel compared to what the vehicles were designed to accept. Unfortunately, the data considered in connection with EPA's E15 waivers does not adequately determine the effect of this change on Toyota's legacy fleet. Accordingly, Toyota cannot recommend the use of fuel with greater than E10 (10% ethanol) for Toyota vehicles currently on the road, except for the FFV's.

Q: Will your current warranty cover potential problems stemming from the use of E15 in cars and trucks from model year 2001 and later?

A: The vehicle owner's manual for Toyota, Lexus and Scion vehicles clearly recommends against using fuels with ethanol content greater than 10%, except for the FFV's, which can use fuels up to 85% ethanol. Our policy remains that we will not provide warranty coverage for issues arising from the misuse of fuels that exceed specified limits.

Q: Will E15 affect the fuel efficiency of your engines?

A: Because a gallon of ethanol has lower energy content than a gallon of gasoline, higher level ethanol blends will generally result in lower real-world vehicle fuel economy. "

## **VOLKSWAGEN:**

All gasoline engine cars model year 2014 and later can use E-15.

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## **INTERESTED IN USING E-15?**

Here are the stations in Illinois that currently sell E-15:

Qik-n-EZ	301 S Poplar	Pana	IL
Qik-n-EZ	1995 W Monroe St.	Springfield	IL
Qik-n-EZ	430 N Grand Ave. E	Springfield	IL
Qik-n-EZ Convenience Store	1101 Stevenson Dr.	Springfield	IL
Petro Truck Stop	900 Dement Road	Rochelle	IL
Zephyr Fueling Station	1110 E. Broadway	Alton	IL

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## **FOR FURTHER RESEARCH:**

Find details on cost, environmental impact and fuel efficiency below:

[American Petroleum Institute Fact Sheet](#)

[Growth Energy Fact Sheet](#)

[Environmental Protection Agency on E-15](#)