



MG TF 1955

- James Cogan
- MG owner and engineer
- Industry analyst at Clonbio Group Ltd
- Maker of ethanol, proteins and biomethane
- Nine years in E10 business





E10 petrol

- Petrol with up to 10% alcohol in it
- E10 reduces greenhouse gas emissions of petrol by 6%
- Ireland has a million petrol cars so E10 is like taking 60,000 off the road
- Need 120,000 EVs for same impact
- Low-cost way to cut emissions





Ethanol fuel

- Model T ran on it as well as fossil
- Used during WWII shortages and 1970s crisis
- E5 in Brazil since 1931: average 28% today
- E10 approved 1978 in USA for all vehicles
- E10 is EU standard since 2011
- Rolled out in UK, Belgium, France, Sweden, Bulgaria, Denmark, Estonia, Finland, Germany, Hungary, Latvia, Lithuania, Luxembourg, The Netherlands, Romania, Slovakia
- Ireland, Norway, Austria in 2023
- E85 on sale in a third of French petrol stations

*A billion vehicles of every
make model and age
have run on E10.*



- 1978 USA EPA approved E10 for all vehicles. Data submitted in approval process demonstrated that vehicles would operate on E10 without harm from emissions, performance or safety standpoints. All car makers agreed.
- 1984 Coordination Research Council (American Petroleum Institute, Chrysler, Daimler, Ford, General Motors, Honda, Mitsubishi, Nissan, Toyota, and Volkswagen) studied impact of ethanol fuel blends on drivability under cold and warm start-up conditions and found no concerns. They've conducted many other test programs since, also finding no concerns.
- Society of Automotive Engineers has studies dating back to the 1950s that effectively investigate and show 'lack' of negative effects of E10 on vehicles.
- 2006-8, collector car insurance agency Hagerty, with Kettering University Advanced Engine Research Laboratory conducted comprehensive study and determined there was no difference in performance between carburetor engines running E10 and those with more modern direct injection systems.
- 1981 U.S. Army published paper showing no adverse effects from ethanol use.
- 2012 Germany's ADAC carried out search for examples of E10 compatibility incidents in Germany and found none.
- 2022 US Dept of Energy report (<https://lnkd.in/eVnT8TBC>) finds "The history of E10 use in the US shows no reliability or operability issues...fuel chemistry and property differences between E0 and E10 are so small that any vehicle made to international standards in the last 50 years has very high probability of being fully compatible with E10".

<https://www.sae.org/publications/technical-papers/content/811199/>

<https://www.hagerty.com/articles-videos/articles/2009/03/02/ethanol-demonic-or-devine>

www.focus.de/auto/ratgeber/e10/ein-jahr-nach-einfuehrung-adac-kein-schaden-durch-e10-bekannt_aid_743169.html



- Only material used in 10-20-year old cars with potential to exhibit E10 compatibility limitations is polyurethane.

All metals, plastics and polymers* used in engines (i.e. HDPE, PTFE, NBR, POM, AEM, CPE, CSPE, HNBR, FKM and TPV), with exception of polyurethane, are deemed suitable for application with E10.

Polyurethane common in mounting brackets and adhesives in machinery, but unlikely in components in contact with fuel. In any case, a detailed assessment not necessary because polyurethane was used in car engines sold in North America up to the mid 1990s to same extent as European cars, with no issues arising.

Same conclusion as for old cars generally: No car with polyurethane parts has ever been known to exhibit problems resulting from E10. Nor are there any known laboratory or bench tests which have shown up issues arising from E10. Indeed, when tests are done today to investigate effects of higher ethanol blend fuels (E15 and up) on older vehicles in the USA, E10 is used as control fuel, i.e. blend known to be benign.

* Jones B., Mead G., Steevens P. (2011a). The effects of E20 on plastic automotive fuel system components AND The effects of E20 on elastomers used in automotive fuel system components, Minnesota Center for Automotive Research, Minnesota State University, Mankato, Minnesota. Emissions 2011, Proceedings Volume 62, Ann Arbor, Michigan, USA, June 2011.



E10 compatibility checker

- It's wrong
- Based on ACEA car maker legal positions when E10 was introduced
- No technical basis
- Every example in it disproven by real world evidence
- No equivalent in US or Brazil
- Misinformation needing revision

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Check if your vehicle can run on E10 petrol

Check online if your car, van, motorcycle or moped can use E10 petrol.

You'll need to know the vehicle manufacturer to use the service. You may also need the vehicle model, engine size and year it was manufactured. Most petrol vehicles will be able to use E10.

If you're not sure of any of this information, check the log book (V5C) for your vehicle. You also might be able to [get vehicle information online](#).

This service is also [available in Welsh \(Cymraeg\)](#).

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on the E10 checking service



My plan

- Continue enjoying my car
- With E10
- There are additives for folk who aren't convinced

For more:

- IPRA Forecourt News (several articles)
- <https://www.euractiv.com/section/agriculture-food/opinion/e10-safe-in-all-petrol-cars/>
- jcogan@eerl.com

