

# List of ACEA member company petrol vehicles compatible with using `E10' petrol

## 1. Important notes applicable for the complete list hereunder

The European Union Fuel Quality Directive (<sup>1</sup>) introduced a new market petrol specification from 1st January 2011 that may contain up to 10% ethanol by volume (10 %vol). Such petrol is commonly known as 'E10'. It is up to the individual country of the European Union and fuel marketers to decide if and when to introduce E10 petrol to the market and so far E10 petrol has only been introduced in Finland, France, Germany and Belgium.

For vehicles equipped with a spark-ignition (petrol) engine introduced into the EU market, this list indicates their compatibility (or otherwise) with the use of E10 petrol.

## 2. <u>Note</u>

In countries that offer E10 petrol, before you fill your vehicle with petrol please check that your vehicle is compatible with the use of E10 petrol.

If, by mistake, you put E10 petrol into a vehicle that is not declared compatible with the use of E10 petrol, it is recommended that you contact your local vehicle dealer, the vehicle manufacturer or roadside assistance provider who may advise that the fuel tank be drained. If it is necessary to drain the fuel from the tank then you should ensure it is done by a competent organisation and the tank is refilled with the correct grade of petrol for your vehicle.

Owners experiencing any issues when using E10 petrol are advised to contact their local vehicle dealer or vehicle manufacturer and to use instead 95RON (or 98RON) petrol that might be identified by 'E5' (or have no specific additional marking) in those countries that offer E10 petrol.

#### 3. <u>Other information</u>

The European Union Fuel Quality Directive (<sup>1</sup>) required that member states of the European Union that introduce E10 petrol should ensure that sufficient volumes of a lower ethanol content petrol (ie up to 5% ethanol by volume ('E5') is available for older vehicles that are not compatible with the use of E10 petrol.

Owners in a certain country of the vehicles indicated in this list that are not cleared for the use of E10 should therefore continue to have access to petrol that may contain up to 5 %vol

<sup>&</sup>lt;sup>1</sup> Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions and amending Council Directive 1999/32/EC as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC, Official Journal of the European Union L140, 5.6.2009, p 88.



ethanol content (E5), ie see table 2 of standard EN228: 2012 (2).

In addition, it is a general requirement that fuels containing metallic additives should not be used. The Fuel Quality Directive (1) requires that a label concerning the metallic additive content of fuel is displayed at any point where a fuel with metallic additives is made available to consumers and that the label shall contain the following text: "Contains metallic additives".

#### 4. <u>Additional note on petrol octane</u>

It is important to note that the compatibility of vehicle with petrol depends both on the petrol octane rating and its ethanol content. Depending on the fuel supplier, it may be the case that E5 is offered as either 95 RON (octane) or 98 RON (usually at a higher pump price). The recommended octane requirement for the vehicle must be met and the ethanol content of the petrol may not exceed the compatibility limit. In case of doubt, drivers are advised to contact their dealer and the recommended RON (octane) for any particular vehicle can normally be found in the driver's handbook.

#### 5. <u>Vehicle and fuel pump identifiers</u>

Article 3(3) of the Fuel Quality Directive (1) says, "[member states] shall ensure the provision of appropriate information to consumers concerning the biofuel content of petrol and, in particular, on the appropriate use of different blends of petrol". Therefore, if different petrol fuels are being sold, the customer must be able to distinguish each one. In this respect, where filling stations may offer both E5 and E10 petrol (meeting EN228), there should be distinctive labelling of the fuel pump to allow customers of new and older petrol vehicles to fill-up with the petrol that is compatible for use in their vehicle.

Addressing the concerns of customers regarding 'Which fuel can I put in my vehicle?', Article 7 of Directive 2014/94/EU (3) introduces new requirements for the labelling of new vehicles and fuel pumps to provide customers clear information on the compatibility of their vehicle to use certain fuels. On the basis of that legal requirement, European standard EN16942 (4) provides a new protocol for 'fuel identifiers' so the customer only needs to check for the same fuel identifier around the fuel filler flap/cap of his vehicle and on the fuel pump nozzle and body.

Please see the following website for information on the new fuel identifiers: <u>https://www.acea.be/press-releases/article/fuel-labelling-information-to-help-consumers-and-operators-choose-right-fue</u>

<sup>&</sup>lt;sup>2</sup> Automotive fuels - Unleaded petrol – requirements and test methods, EN228: 2012, approved by CEN on 1 September 2012.

<sup>&</sup>lt;sup>3</sup> Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure, Official Journal of the European Union L307, 28.10.2014, p 1.

<sup>&</sup>lt;sup>4</sup> European (CEN) standard EN16942, Fuels - Identification of vehicle compatibility - Graphical expression for consumer information.



# 6. <u>Update history</u>

9 March 2011	Updated with additional information on Skoda cars.
14 March 2011	Updated with additional information on Audi cars.
29 July 2011	Updated with additional information on GM Cadillac, Corvette and Hummer cars.
12 July 2012	Updated with additional information on GM Chevrolet cars
6 August 2012	Updated information on Ford cars.
30 October 2012	Updated information on Mazda cars.
29 March 2013	Updated information on Alfa Romeo cars and additional information on Fiat group (Chrysler) cars.
29 August 2018	Complete update of the E10 compatibility list.



## BMW Group

#### BMW:

All petrol engine BMW models are cleared for the use of E10 petrol regardless of their year of manufacture but the minimum octane required should be observed according to the owner's manual.

#### MINI:

E10 is cleared for use in all MINI models with petrol engine after the re-launch of the MINI brand in the year 2000.

## **Rolls Royce:**

E10 is cleared for use in all Rolls Royce models starting with model year 2003, the launch of the Phantom model.

## Daimler Group

#### Mercedes-Benz:

E10 petrol is cleared for use in the vast majority of all Mercedes Benz vehicles with petrol engines, except:

- First generation direct injection C200 CGI (W203), CLK 200 CGI series (C209) of the years 2002 – 2005;
- Models not equipped with three-way catalysts, models retrofitted with three-way catalysts or produced with a carburettor. These are mainly vehicles older than 25 years.

#### Smart:

E10 petrol is cleared for use in all petrol engine Smart vehicles.

#### Maybach:

E10 petrol is cleared for use in all Maybach vehicles.

## Fiat Chrysler Automobiles (FCA Group)

#### Alfa Romeo:

E10 petrol is cleared for use in all new Alfa Romeo models with petrol engines produced from 1st January 2011.

In addition, E10 petrol is cleared for use in the following Alfa Romeo models with petrol engines:



- MiTo (all engines)
- Giulietta (all engines)
- 159: 1.8 16V, 1.8 TBi 16V, 3.2 JTS V6
- Brera: 1.8 TBi 16V, 3.2 JTS V6
- Spider: 1.8 TBi 16V, 3.2 JTS V6
- 8C: 4.7 32V

## Fiat:

E10 petrol is cleared for all Fiat vehicles with petrol engines of Euro 3 emission levels or newer, starting from model year 2000, except the following vehicles:

- Barchetta: 1.8 16V
- Bravo/Brava (182): 1.6 16V
- Doblò: 1.6 16V
- Marea: 1.6 16V, 2.0 16V
- Multipla: 1.6 16V
- Palio: 1.6 16V
- Punto (188): 1.8 16V
- Stilo: 1.6 16V (1.596 cm3), 1.8 16V, 2.4 20V

#### Lancia:

E10 petrol is cleared for use in all Lancia vehicles with petrol engines of Euro 3 emission level starting from model year 2000, excluding the following vehicles:

- Lybra: 1.6 16V, 1.8 16V, 2.0 20V
- Thesis: 2.0 Turbo 20V, 2.4 20V, 3.0 V6 24V, 3.2 V6 24V

## Chrysler:

E10 petrol is cleared for use in the following Chrysler Group models with petrol engines:

- Chrysler 300 C (LX) all engines
- Chrysler 300 M (LR) all engines
- Chrysler Grand Voyager (RT) all engines
- Chrysler Neon (PL) all engines
- Chrysler PT Cruiser (PT) all engines
- Chrysler Sebring (JR) all engines
- Chrysler Sebring (JS) all engines
- Chrysler Stratus (JA, JX) all engines
- Chrysler Voyager (GS) all engines
- Chrysler Voyager (RG) all engines

## Dodge:

E10 petrol is cleared for use in the following Dodge models with petrol engines:



- Dodge Avenger (JS) all engines
- Dodge Caliber (PK) all engines
- Dodge Journey all engines
- Dodge Nitro (KJ) all engines

#### JEEP:

E10 petrol is cleared for use in the following Jeep models with petrol engines:

- Jeep Cherokee (KJ) all engines
- Jeep Cherokee (XJ) all engines
- Jeep Cherokee (KL) all engines
- Jeep Commander (WH) all engines
- Jeep Compass (PK) all engines
- Jeep Compass (MX) all engines
- Jeep Grand Cherokee (WH) all engines
- Jeep Grand Cherokee (WJ) all engines
- Jeep Grand Cherokee (WK) all engines
- Jeep Patriot (PK) all engines
- Jeep Renegade (BU) all engines
- Jeep Wrangler (JK) all engines
- Jeep Wrangler (TJ) all engines

## <u>Ford</u>

E10 is cleared for use in all petrol driven Ford models sold in Europe since 1992 excluding:

• Ford Mondeo 1.8 SCI from 2003 to 2007.

Personal imports not approved by Ford of Europe are not included in the above statement.

#### Jaguar - Land Rover

#### Jaguar:

E10 petrol is cleared for use in all Jaguar vehicles with petrol engines starting from model year 1992.

#### Land Rover:

E10 petrol is cleared for use in all Land Rover vehicles with petrol engines starting from model year 1996.

## <u>Honda</u>

E10 petrol is cleared for use in all European models with petrol engines equipped with



electronic control fuel injection system (HONDA PGM-FI).

## <u>Hyundai</u>

All Hyundai cars with a petrol engine can use E10 petrol without limitation.

All Kia cars with a petrol engine can use E10 petrol without limitation.

## **Groupe PSA**

## Peugeot, Citroën and DS:

All cars with petrol engines are E10 (EN228) compatible since 1st January 2000.

## Opel-Vauxhall:

E10 petrol is cleared for use in all Opel-Vauxhall vehicles with petrol engines, excluding:

• Models with the 2.2 litre direct injection petrol engine, motor code: Z22YH (Vectra, Signum, Zafira).

## **General Motors Group**

## Cadillac:

The following Cadillac models equipped with a petrol engine and regulated with catalytic converter and lambda probe can be used with E10 petrol:

- Cadillac BLS
- Cadillac CTS
- Cadillac CTS-V
- Cadillac Eldorado
- Cadillac Seville STS and SLS
- Cadillac SRX
- Cadillac STS
- Cadillac STS-V
- Cadillac XLR
- Cadillac XLR-V
- Cadillac Escalade
- Cadillac Escalade Hybrid

If in doubt please contact the Cadillac Customer Assistance Centre, e-mail <u>cadillac.europe@gm.com</u>, international free phone oo8oo 868o 88oo\*

\* Calls from mobile networks may be charged fees. Please consult your mobile phone provider.



# Chevrolet:

All Chevrolet vehicles produced from the model year 2006 with a Euro 4 emissions compliant engine can be run with E10 petrol:

- Aveo / Kalos 2005 onwards
- Captiva all
- Cruze / Orlando all
- Epica all
- Matiz 2006 onwards
- Nubira / Lacetti 2006 onwards
- Tacuma / Rezzo 2006 onwards
- Spark all

This information applies to vehicles in original condition. The suitability of E10 petrol may be affected, particularly in older Chevrolet cars, through the use of non-original Chevrolet parts or through conversions.

If fuel additives are used, please observe the instructions of the additive manufacturer.

## Corvette:

The following Corvette models equipped with a petrol engine and regulated with catalytic converter and lambda probe can be used with E10 petrol:

- Corvette C4
- Corvette C5
- Corvette C6
- Corvette Zo6
- Corvette Grand Sport
- Corvette ZR1

If in doubt please contact the Corvette Customer Assistance Centre, e-mail <u>corvette.europe@gm.com</u>, international free phone oo8oo 868o 88oo\*

\* Calls from mobile networks may be charged fees. Please consult your mobile phone provider.

#### Hummer:

The following Hummer models equipped with a petrol engine and regulated with catalytic converter and lambda probe can be used with E10 petrol:

- Hummer H<sub>2</sub>
- Hummer H<sub>2</sub>T
- Hummer H<sub>3</sub>
- Hummer H<sub>3</sub>T

If in doubt please contact the HUMMER Customer Assistance Centre, e-mail



Automobile Manufacturers Association

Hummer.europe@gm.com, international free phone oo8oo 868o 88oo\*

\* Calls from mobile networks may be charged fees. Please consult your mobile phone provider.

# **Renault Group**

## Dacia:

E10 is cleared for use in all petrol driven Dacia vehicles.

## Renault:

E10 petrol is cleared for use in all Renault petrol vehicles marketed since 1st January 1997, with the exception of the following models:

- RENAULT 19
- Megane 1 with 2.0 litre F5R 700 direct injection petrol engine
- Megane 1 with 2.0 litre F5R 740 direct injection petrol engine
- Laguna 2 with 2.0 litre F5R 782 direct injection petrol engine

and the following models marketed between 1st January 2000 and 31st December 2002:

- Laguna 2 with 2.0 litre F4R 764 Turbo engine
- Laguna 2 with 2.0 litre F4R 765 Turbo engine
- Espace 4 with 2.0 litre F4R 790 Turbo engine
- Espace 4 with 2.0 | F4R 794 Turbo engine
- Velsatis with 2.0 litre F4R 762 Turbo engine
- Velsatis with 2.0 litre F4R 763 Turbo engine
- Avantime with 2.0 litre F4R 760 Turbo engine
- Avantime with 2.0 litre F4R 761 Turbo engine

## **Toyota Motors Group**

## Toyota:

E10 petrol is cleared for use in all Toyota European petrol models made from January 1998, excluding:

- Avensis 2.0 litre with engine 1AZ-FSE made between July 2000 and October 2008.
- Avensis 2.4 litre with engine 2AZ-FSE made between June 2003 and October 2008.

#### Lexus:

E10 petrol is cleared for use in all Lexus European petrol models made from January 1998, excluding:

IS250 2.5 litre V6 with engine 4GR-FSE made between August 2005 and September



2007.

- GS300 3.0 litre V6 with engine 3GR-FSE made between January 2005 and September 2007.
- LS460 4.6 litre V8 with engine 1UR-FSE made between August 2006 and September 2007.

# Volkswagen Group

## Audi:

E10 petrol is cleared for use in all Audi petrol driven vehicles, excluding the following vehicles:

- First generation direct injection engines:
  - Audi A2 1.6 FSI, model years 2003-2005
  - Audi A<sub>3</sub> 1.6 FSI, model year 2004
  - Audi A<sub>3</sub> 2.0 FSI, model year 2004
  - Audi A4 2.0 FSI, model years 2003-2004
- Audi A4 Saloon petrol engine models with OEM parking heater, of model years 2001-2008. E10 is not suitable for use during the heating season in countries with colder climates.
- Audi A4 Avant petrol engine models with OEM parking heater of model years 2002-2008. E10 is not suitable for use during the heating season in countries with colder climates.

## Porsche:

E10 petrol is cleared for use in Porsche vehicles with petrol engines since the 1998 model year and all Boxster models with petrol engines since the 1997 model year. The Carrera GT is not cleared for use with E10 petrol.

## Seat:

With few exceptions, E10 petrol is cleared for use in all SEAT vehicles with petrol engines. The exceptions are the following models with the first generation of FSI engines:

- Toledo 2.0 FSI (110 kW) 'BLR' manufactured from September 2004 to November 2005 (model year 2005/6).
- Leon 2.0 FSI (110 kW) 'BLR' manufactured from July 2005 to November 2005 (model year 2006).
- Altea 2.0 FSI (110 kW) 'BLR' manufactured from May 2004 to November 2005 (model year 2005/6).

## Škoda:

E10 petrol is cleared for use in all following Škoda vehicles with petrol engines with the following exception:



• Felicia 1.3 litre OHV (40kw and 50kW) engines used in Felicia models in the production years 1994 to 2001 and in car models before. A retrofit option exists for these engines to make them compatible with the use of E10 petrol – owners are advised to consult their dealer.

#### Volkswagen:

With few exceptions, E10 is cleared for use in all Volkswagen vehicles with petrol engines.

The exceptions are the following models with the first generation of FSI engines:

- Lupo 1.4 (77 kW) made from August 2000 to November 2003 (model year 2001 2004).
- Polo 1.4 FSI (63 kW) made from February 2002 to June 2006 (model year 2002 2006).
- Golf IV 1.6 FSI (81 kW) made from November 2001 to May 2004 (model year 2002 2004).
- Golf IV Variant 1.6 FSI (81 kW) made from October 2001 to October 2006 (model year 2002 2006).
- Bora 1.6 FSI (81 kW) made from October 2001 to September 2005 (model year 2002 2005).
- Bora Variant 1.6 FSI (81 kW) made from October 2001 to September 2005 (model year 2002 2005).
- Golf V 1.4 FSI (66 kW) made from November 2003 to November 2004 (model year 2004 2005).
- Golf V 1.6 FSI (85 kW) made from August 2003 to May 2004 (model year 2004).
- Golf V 2.0 FSI (110 kW) made from January 2004 to May 2004 (model year 2004).
- Touran 1.6 FSI (85 kW) made from November 2002 to May 2004 (model year 2003 2004).
- Touran 2.0 FSI (110 kW) made from October 2003 to May 2004 (model year 2004).

## Volvo cars

E10 petrol is cleared for use in all Volvo cars with petrol engines introduced to the market since 1976 based upon servicing and other conditions according to the equipment and material with which the vehicle was originally equipped.

E10 petrol is not cleared for a limited number of S/V40 models with petrol engines produced in the mid-1990s with engine type 1.8 GDI.



## List of JAMA member company petrol vehicles compatible with `E10' petrol

(ie EN 228 with current volatility limits specified in EN228: 2012)

## <u>Daihatsu</u>

E10 petrol is cleared for use in the following models with petrol engines:

- Cuore L276: from production-date 25th April 2008\*.
- Trevis L651: from production-date 8th May 2008\*.
- Siroin M<sub>3</sub>#: from market introduction.
- Materia M<sub>4</sub>#: from market introduction.
- Terios J2#: from market introduction.
- Copen L881: from production-date 25th April 2008\*.

\* Contact Daihatsu dealers or distributor for confirmation of E10 compatibility of individual vehicle.

## <u>Nissan</u>

E10 petrol is cleared for use in all models with petrol engines from 1st January 2000.

## <u>Mazda</u>

E10 petrol is cleared for use in all models with petrol engines introduced in and from the year 2002, Mazda6 (GG/GY) and models with petrol engines introduced thereafter.

## <u>Mitsubishi</u>

E10 petrol is cleared for use in all models with petrol engines except those equipped with the GDI engine (gasoline direct injection) until 2007 models.

## <u>Subaru</u>

E10 petrol is cleared for use in all models with petrol engines manufactured from 1st January 1991.

## <u>Suzuki</u>

E10 petrol is cleared for use in all current production models with petrol engines.

For older models: Please refer to Owner's Manual.