



ACEA

To: Mr Jean, Head of Unit D5, DG ENTR
Mr Steininger, unit D5, DG ENTR
Experts of the member states

Subject: ACEA proposal for Euro 6 reference fuels E10 and B7

1. Background:

The issue of the test reference fuels for Euro 6 emissions and CO₂ type-approval remains an important open issue that should be resolved in order to give vehicle manufacturers a stable base on which to develop and approve their future light-duty products according to Regulation 715/2007 (as amended).

The Fuel Quality Directive (FQD) provides a number of the key parameters, limits and test methods covering "E10" petrol and "B7" diesel. Other parameters, limits and test methods are provided by the relevant CEN standards - EN228 for unleaded petrol and EN590 for automotive diesel. The FQD does not mandate E10 or B7 but the Renewable Energy Directive (RED) (replacing the previous biofuels Directive (2003/30/EC) that was repealed on 1 April 2010) encourages the oil marketers to introduce biofuels to meet their Article 7a GHG reduction obligations and the member states to provide the conditions for introduction to help achieve future targets for renewable energy use in transport.

Availability of B7 and E10:

Presently, B7 diesel is relatively widely available, at least in the western EU. The present standard for EN590 (diesel) includes B7 and that will soon be updated with a technical revision.

E10 petrol remains only available in Germany, France and Finland. In these countries E10 was introduced based on national regulations that update the current EN228:2008 to include a maximum 10% v/v ethanol content. Due to recent decisions in CEN WG21 (dealing with unleaded petrol), a revised EN228 for E10 is now expected by end-2012 and countries would have to include that new standard in national legislation within 6 months. However, that does not mean that E10 will appear in more countries. Recently, the UK government advised fuel marketers that there was really no need to introduce E10 at this time.

The function of the reference fuel is to represent the market average fuels. At the present time, E10 and B7 are not widely available across the EU and the vehicle fleet is not all compatible with the use of E10. This will remain the case for some years yet until the member states make E10 and B7 widely available as general market fuels and the sales of such fuels make that fuel representative of a market average quality. Of course, particularly for E10, there is no single blending route and fuel marketers may take different approaches in blending E10. Apart from what we see in the German, French and Finnish markets, there is no clear picture of what an E10 grade will be across the EU27.

Current status in Euro VI and CEC:

Annex IX of Regulation 582/2011 (Euro VI emissions – first package of implementing measures) already includes specifications for B7 diesel and E10 petrol reference fuels. The CEC Reference

Fuels Group⁽¹⁾ prepared a non-validated update for B7 and E10 in April 2011 that was provided to the CEC stakeholders. The CEC RFG proposal in particular provides the correct test methods and the necessary precision of the performance limits.

ACEA has reviewed the FQD, the CEN standards, the CEC RFG update and Annex IX in Regulation 582/2011 and makes the following proposal to amend Annex IX in the Euro VI and Annex XI in Euro 5 & 6 Regulations.

2. Specifications for E10 and B7:

ACEA has reviewed the Euro VI reference fuels, the CEC RFG update, the FQD and the CEN standards and proposes the specifications for E10 and B7 shown in the supplementary document ANNEX I and II).

2a. Concerning the Euro 5 & 6 Regulation:

- The proposals for E10 and B7 should be added to Annex XI, keeping the E5 and B5 tables that will still be needed for approvals until the time E10 and B7 become mandatory.
- The proposal for E10 only covers the unleaded petrol reference fuel for the Type I emissions test and for CO₂ measurement.
- A Type 6 (cold start) E10 reference fuel would also be necessary and should be addressed at the same time as the development of an appropriate proposal for new Type 6 emission limits.
- The proposal for B7 covers the diesel reference fuel for Type I emissions and for CO₂ measurement and is also suitable for use as a cold start diesel reference fuel by virtue of the new cloud point limit - should the legislators decide to introduce a diesel cold start test for NO_x emissions.

2b. Concerning the Euro VI Regulation:

- The proposals for E10 and B7 should replace the existing B7 and E10 reference fuels in Annex IX.
- To ensure that existing Euro VI approvals on the current reference fuels do not need re-approval to these new reference fuels, either a new types date from when the revised E10 and B7 reference fuels should apply or some similar transitional provisions should be included in the Euro VI Regulation.

3. Dates and scope of application within Euro 5 & 6:

3a. Type I and CO₂ testing:

- E10 and B7 applicable from the Euro 6 Stage 2 all registrations date, i.e. Sept 2018 for passenger cars and N1 class I, one year later for N1 classes II and III and N2.
- Vehicle manufacturers may choose, for new types, to use the E10 or B7 reference fuels before the Euro 6 Stage 2 date for approval of Euro 6 vehicles.
- Vehicle manufacturers may choose to use the E10 or B7 reference fuels for on-going Euro 5 type approvals (until Euro 5 is replaced when Euro 6 becomes mandatory).

3b. Evaporative emissions testing:

- Euro 5 evaporative emission testing shall continue to be carried out on the current E5 reference fuel.

⁽¹⁾ CEC – The Coordinating European Council for the development of performance tests for fuels, lubricants and other fluids is a non profit-making industry stakeholder group whose current membership composes ACEA, ATIEL, ATC, CONCAWE and whose role is to develop performance tests for the evaluation of transportation fluids (fuels, lubricants, coolants, etc).

- Due to the development of a completely new evaporative emission test procedure, the use of the E10 reference fuel shall be integrated into the development of these new procedures.

4. Other amendments:

- The emissions calculations have been amended to include the hydrogen-carbon-oxygen ratios etc for petrol (E10) and diesel (B7).
- The table I.2.4 in Annex I has been amended to include petrol (E10) and diesel (B7) and the row evaporative emissions has been amended to reflect point 3b above.
- In paragraph 2.2 of Appendix 1 to Annex IV, reference to ethanol (E75) is deleted. The roadworthiness data in Annex IV does not consider the -7C cold start test (E75 was added by mistake – see page 9, point (3) of Regulation 566/2011).
- The full changes for the calculations task is not complete - similar changes are necessary for the Euro VI Regulation and the Commission's Euro VI experts group should address these issues.

ACEA, 14th September 2012