

ACEA Position Paper EU petrol and diesel fuel specifications during the COVID-19 crisis



April 2020

A) Possible extension of the winter-summer petrol switch date (1 May to Class A)

Since petrol demand has fallen during the COVID-19 crisis we understand there may be requests to extend the date of 1 May in EU member states that normally apply Volatility Class A (60 kPa vapour pressure) during the summer period.

We are sympathetic to extending the switch over date to allow fuel suppliers to reduce the stock of winter petrol built up during the COVID-19 crisis, but we draw attention to the fact that the EPA has given a time-limited waiver to allow the extension of the respective date in the United States only from 1 May to 20 May. See link: <https://www.epa.gov/newsreleases/epa-announces-steps-protect-availability-gasoline-during-covid-19-pandemic>.

In saying that, the European Automobile Manufacturers' Association (ACEA) must also draw attention to the following concerns regarding the impact on vehicle operation that drivers and operators may face:

- Engines and evaporative emission control systems are designed around the understanding that the correct petrol grade will be available when the customer fills up throughout the year.
- Use of winter grade petrol in warmer temperatures may result in drivers experiencing hot fuel handling problems such as vapour lock, engine stumbling or stalling, inability to restart, and overall vehicle drivability issues.
- Higher volatility petrol used in warmer temperatures can lead to increased evaporative emissions due to carbon canister overload.
- Vehicle evaporative emission control systems will purge (operate) more frequently than calibrated. If the evaporative system becomes saturated or purge events occur more frequently than calibrated, the vehicle on-board diagnostic system may recognise this as a fault and activate the malfunction indicator light (MIL) on the vehicle dashboard. This would cause the owner to either call out roadside assistance or take their vehicle to the repair shop.

In the current crisis, there are recommendations to stay at home as far as possible and avoid all but essential travel, so the frequency of such MIL events may be relatively low if any extension of the switch over date would be relatively short (eg as per the EPA waiver). However, if the extension period would be longer into the warmer early-summer months, the consequences for vehicles and customers may become greater.

But, in accepting the need for a time-limited extension, the automotive industry can take no responsibility for vehicle non-compliance during that period (and beyond with winter grade petrol still in vehicle fuel tanks) or cases where the fuel is seen to be the reason for MIL activation.

Articles 3(4) and 3(5) of the Fuel Quality Directive put some conditions on member states regarding the vapour pressure of petrol they permit to be sold in the summer period. We think the question of extending the sale of winter gasoline beyond 1 May should be reviewed in relation to the points mentioned in Article 3(5) of the Fuel Quality Directive.

The internal market for motor fuel quality must be respected so we would urge the European Commission to take a view on this in coordination with member states that are already considering measures. If such time-limited extensions are granted, ACEA would request authorities create a consumer education website to explain the need for allowing winter grade petrol to be sold for longer than normal and to explain the potential impacts to customers and their vehicles.

Note that the winter-summer switch over date is 1 June in the case of member states¹ that normally apply the volatility Class B (70 kPa vapour pressure) during the summer period. Since that is nearly two months away, we believe there is no need to extend this date and fuel suppliers can manage their petrol stocks accordingly.

B) Reduced demand for aviation jet fuel

The COVID-19 crisis is having a major impact on air travel, hence a big drop in demand for jet fuel. We are hearing in certain countries that questions are being asked about the possibility of blending jet fuel with road diesel fuel to help clear stocks of jet fuel.

Jet fuel has higher sulphur content than road diesel. The sulphur content of road diesel is at levels that protect important vehicle exhaust aftertreatment systems. Pretty much all diesel engine cars, vans, trucks, buses and coaches throughout the EU have exhaust aftertreatment systems that depend on the use of diesel fuel with a sulphur content no higher than 10 mg/kg (Fuel Quality Directive and EN 590).

The engine – aftertreatment – fuel is a system optimised for fuel efficiency and low CO₂ and pollutant emissions, so it is vitally important to maintain proper engine operation and the efficiency of the complete chain starting at the engine and through the various components of the exhaust aftertreatment system.

Jet fuel may contain sulphur up to a level of 3,000 mg/kg (ppm). The blending of jet fuel into diesel would:

- Lead to irreversible damage to exhaust catalysts, filters, sensors, and fuel injection systems and sulphur poisoning will disable the functioning of exhaust aftertreatment

¹ The Fuel Quality Directive defines member states with low ambient summer temperatures being Denmark, Estonia, Finland, Ireland, Latvia, Lithuania, Sweden and the United Kingdom.

systems designed to minimise emissions of NOx and particles.

- The vehicle on-board diagnostic system will recognise this as a fault and activate the malfunction indicator light (MIL) on the vehicle dashboard. This would cause the owner to either call out roadside assistance or take their vehicle to the repair shop. This would be an unacceptable consequence at any time, let alone during the COVID-19 crisis.
- Jet fuel also has a lower flash point than diesel (EN 590 sets a minimum flash point for diesel for safety reasons).
- Jet fuel has poorer lubricity than diesel (risk of damaging moving parts in fuel systems).
- Jet fuel boils at a lower temperature range than diesel (in modern diesel injection systems with high injection pressures this may lead to damage to fuel injectors due to cavitation).

The use of a diesel fuel blended with jet fuel would not be covered by vehicle warranties so any operational consequences would land customers and operators with potential repair bills of hundreds of Euros.

Therefore, the automotive industry does not support any measures to change, even for a limited time, the important operational characteristics of road diesel fuel as required essentially through the Fuel Quality Directive and EN 590.



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ABOUT THE EU AUTOMOBILE INDUSTRY

- 13.8 million Europeans work in the auto industry (directly and indirectly), accounting for 6.1% of all EU jobs.
- 11.4% of EU manufacturing jobs – some 3.5 million – are in the automotive sector.
- Motor vehicles account for €428 billion in taxes in the EU15 countries alone.
- The automobile industry generates a trade surplus of €84.4 billion for the EU.
- The turnover generated by the auto industry represents over 7% of EU GDP.
- Investing €57.4 billion in R&D annually, the automotive sector is Europe's largest private contributor to innovation, accounting for 28% of total EU spending.

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