



**Euromot**

Brussels, Frankfurt, Paris, 28 April 2006

**Quality and availability of low sulphur diesel for Non-Road Mobile Machinery (NRMM) in order to meet Stage IIIB requirements.**

Dear Ms Klingbeil

CECE, CEMA and Euromot would like to express their concerns about the amendment of Directive 98/70/EC regarding the sulphur content of liquid fuels. We fear that a late introduction of low sulphur diesel will have a major impact on the technical review of Directive 2004/26/EC regarding emissions from engines for NRMM.

CECE is the European Committee for the Construction Equipment Industry, co-ordinating the European activities of 11 national trade associations. CECE represents 1,200 companies, most of them SMEs, with 140,000 people employed in Europe and with a turnover of 21 billion Euro.

CEMA is the European Committee of associations of manufacturers of agricultural machinery. CEMA is the European body that brings together 13 national associations active in the domain of agricultural machinery, representing approximately 4,500 production sites of industrial standing with nearly 270,000 employees and a total turn over of 19.7 billion Euro.

Euromot is the European Association of Internal Combustion Engine Manufacturers representing the leading manufacturers of internal combustion engines used in a broad range of nonroad and marine applications.

The decisions about the fuel quality for non road equipment have a major impact in terms of product reliability , customer operating costs and good performance of the respective equipments.

In November a joint CECE-CEMA-Euromot position was sent to the Commission (see Annex). A after a meeting with you and Mr Hodgson and Mr Ericsson, you asked us for more detailed information. After a survey within our associations we can provide more technical details. This letter is aimed at being an addition to the original joint position paper. Our main concerns presently are:

**1. 10 ppm sulphur fuel is needed for Stage IIIB**

The technologies foreseen by the NRMM manufacturers for Stage IIIB are :

- C-EGR = Cooled Exhaust Gas Recirculation
- SCR = Selective Catalytic Reduction
- DPF = Diesel Particulate Filter
- NOx adsorber.

Considering the complexity of NOx adsorber, the probability that such a technology is used with stage IIIB is very low.

SCR and cooled EGR can easily cope with a sulphur fuel content of 50 ppm without significant adverse effects.

But a significant portion of equipment manufacturers will use DPF technology, and in that case, 50ppm S fuel could likely shorten the lifetime of the Diesel Particulate Filter, increase customer downtime and operating costs such that larger, more cumbersome systems would be required with the risk, for many manufacturers, to have developmental time exceeding the Stage IIIB introduction date.

Moreover, the added cost and effort to reach 10ppm fuel sulfur will be a minor cost compared to the customer aftertreatment life cycle cost, plus optimizing the life the DPF system will provide further benefit to the environment.

The equipment manufacturers cannot say that machines equipped with DPF to fulfil Stage IIIB cannot operate with 50 ppm fuel but very likely, in many cases, it will not permit the non-road equipment manufacturers to meet their customer's expectations. That's why we request 10 ppm S fuel for Stage IIIB.

## **2. The 10ppm Sulphur fuel should have the EN590 specifications.**

### **3. Flushing issue.**

The most conservative way to reach a final concentration of 10 ppm S by January 2011 in the large job site remote fuel tanks should be to start distributing 10 ppm S fuel from January 2009.

Starting the flushing process with 50 ppm fuel in January 2009 would be acceptable to us, provided we get 10ppm fully available by mid 2010 ( 6 months before Stage IIIB introduction ). This 50 ppm S fuel doesn't correspond to an intermediate technology phase for engine and equipment manufacturers, but is only aimed at facilitating the transition of the petroleum industry from 2000 ppm to 10 ppm.

### **4. A European harmonisation of the fuel dye colour**

There should be one single European dye colour for each purpose (heating, "off-road" and "on road") to avoid possible misunderstanding when equipment circulates across EU internal borders (e.g. European tenders for construction sites and cross-border farming).

We would really appreciate to receive positive indications from you with regard to our concerns on the amendment of the Fuel Directive.

Yours sincerely,

Ralf Wezel  
CECE Secretary General  
(signed electronically)

Jacques Dehollain  
CEMA Secretary General  
(signed electronically)

Peter Scherm  
Euromot Secretary General  
(signed electronically)

Copy to: Ms M. Spiliopoulou-Kaparia, Mr M. Ericsson, Mr L. Montoya, Mr A. Krasenbrink ,  
Mr I. Hodgson

ANNEX

The logo for Euromot, featuring the word "Euromot" in a white, serif font centered within a dark green rectangular background.

**Review of Fuels Directive 2003/17/EC:  
Response to EC DG Environment's  
Non-Paper No. 8 on Nonroad Mobile  
Machinery Fuel Requirements**

***The CECE - CEMA - EUROMOT Position***

as of November 2005

The European Association  
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**EUROMOT 2005**  
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**EUROMOT**  
Engine-in-Society

Euromot is the **European Association of Internal Combustion Engine Manufacturers**.

We represent the leading manufacturers of internal combustion engines used in a broad range of nonroad and marine applications (construction, mining and material handling equipment, trucks and buses, agricultural and forestry equipment, lawn/garden and recreational equipment, commercial marine and seagoing vessels, workboats and pleasure boats, rail traction, power generation).

Euromot has been working for many years with international regulatory bodies, eg European Union, the UN Economic Commission for Europe (UNECE), the UN International Maritime Organizations (IMO) and the Central Commission for the Navigation on the Rhine (CCNR). In addition, we are seeking an open and fair dialogue with national governments to provide reliable know-how on advanced internal combustion engine technologies in general and, in particular, on the feasibility of environmental as well as cost-effective product regulations. To achieve a pro-active engagement of all stakeholders in international harmonisation of regulations affecting engines and equipment, we coordinate our activities worldwide with trade associations of the nonroad and marine industry sector.

For further information about our Association please pay us a virtual visit at <http://www.euromot.org> – your bookmark for engine power worldwide.

CECE is the **Committee for European Construction Equipment**.  
<http://www.cece-eu.org>

CEMA is the **European Committee of Associations of Manufacturers of Agricultural Machinery**.  
<http://www.cema-agri.org>

**Fuel Position Paper**  
**by Euromot, CECE and CEMA**

**Response to EC DG Environment's Non-Paper No 8 on NRMM Fuel Requirements**

The current DG ENV proposal of introducing ULSD fuels for NRMM presented in non paper 8 during the fuel review stakeholders meeting on 6 October 2005 is as follows:

- 50 ppm S by 31 December 2009
- 10 ppm S and EN590 alignment by 31 December 2011

Euromot, CECE and CEMA are of the opinion that the DG ENV proposal will

- delay an early introduction of environmentally advanced Stage IIIB technologies
- prevent PM filters and aftertreatment components from working with highest efficiency and over a long period of time
- create unnecessary burdens for NRMM small and medium enterprises due to its misalignment with the US EPA regulations.

Therefore Euromot, CECE and CEMA are objecting this proposal with respect to both, the introduction of an intermediate 50 ppm S step and the introductory date of end of 2011 for 10 ppm S fuel.

The Euromot, CECE and CEMA position is as follows:

**By January 2009**

- the fuel Sulfur level shall be restricted to 10 mg/kg
- the fuel specifications shall be aligned with the on-road quality according to EN590

Furthermore based on the discussions during the stakeholders meeting on 6 October 2005 Euromot, CECE and CEMA are raising three new issues regarding the non-availability of high-Sulfur fuel, the specification of Biodiesel used for blends and the harmonization of fuel dye colours.

**1 Request for 10 ppm S vs. 50 ppm S Fuel**

Stage IIIB technologies will require 10 ppm S due to

- extended passive regeneration mode of PM filters and CRT systems. Contrary to 50 ppm S fuel the 10 ppm S fuel will allow for or extend the period of passive regeneration modes. Being able to avoid active regeneration components will significantly reduce systems costs and also enable a 3-5% lower fuel consumption.

Based on a joint Euromot-EMA study approx. 50% of all NRMM applications will use passive regeneration modes.

- extended lifetime and durability of the catalytic components in PM filters. Lower S contents are directly correlated with less S-poisoning of the catalytic active sites. This will result in longer maintenance intervals and less frequent complete replacement of filters thus reducing the operational and life cycle costs of the equipment significantly.
- alignment with US EPA regulation introducing 15 ppm S by 1 June 2010. NRMM manufacturers are mostly SME's and are required to produce one product for the global market. 18 months delay (Dec 2011 vs. June 2010) between EU and the US in introducing ULSD fuel puts an unnecessary burden on the manufacturers as the misalignment will result in additional development work and require different product placement strategies.
- in-use compliance as the Stage IIIB reference fuel requires < 10 ppm S. The longer a misalignment between the test fuel specifications and the NRMM market fuel exists the higher will be the probability that engines in the field will not comply to the limits as they have to operate under significantly higher S contents.

## **2 Introductory Dates Jan 2009 vs. Dec 2009**

As Stage IIIB technologies can earliest be placed on the market by 31 December 2009 we are striving for Jan 2009 as the introduction date of 10 ppm S fuel.

This is due to the special infrastructure for supplying fuel to NRMM. Our experience shows that it is required to introduce new fuel qualities two years prior to the introduction dates of new stages.

In most of the case Construction and Agriculture machinery cannot use the road fuel distribution network. Because of the remote location of most of the job sites those machines are filled from fuel stored in large to very large job sites fuel tanks. A quick calculation shows that whatever is the size of the job site fuel tanks, it will take 5 fillings of the job site fuel tank at 50 ppm sulphur (90% of the tank capacity each time) to move the sulphur concentration from 2000 ppm to 50 ppm. It will take 3 other fillings of the job site fuel tank at 10 ppm sulphur to reach a final concentration of 10ppm sulphur in the fuel tank.

Furthermore the time to clean the whole fuel chain from high sulphur fuel to 10 ppm will vary a lot depending on how frequently end users will fill up their job sites fuel tanks or "home site" fuel tanks. In many cases this frequency is linked to the structure and size of the enterprise of the machine owner that varies from few machines to large fleet of

hundred units. It will also take much more time in case of seasonal works such as agricultural harvesting machines.

Another aggravating factor comes from the fuel tax systems of some countries where it is common that the users fill up their home site fuel tanks just before end of the year. Some regions in Europe have quite long distance to a fuel depot and therefore machine owners could have large enough home site fuel tanks that last for at least half a year before refilling.

### **3 Non-Availability of High-Sulphur fuel qualities**

Euromot, CECE and CEMA are of the opinion that once ULSD has been introduced measures shall be put in place that prevent high S fuel from being used for Stage IIIB NRMM engines. High-S fuel will be incompatible with Stage IIIB technologies and its use will result in fatal engine and machinery failure.

### **4 Biodiesel blends**

Biodiesel that will be used for blending shall meet the EN 14214 specification in order to guarantee the oxidation stability of the blended fuel.

### **5 Dye Colour**

European harmonization of the fuel dye colour is required to avoid possible misunderstanding when equipment circulates across EU internal borders. Due to the various fuel tax policies the risk of misfueling would be eliminated which would result in severe fines for our customers.

Our suggestion is to use three different colours, i.e. one colour for heating oil, one colour for NRMM use and one colour for onroad use.

Frankfurt/M. - 11 November 2005