Euromot

California ARB Airborne Toxic Control Measure for Stationary Compression-Ignition Engines – Public Availability of Modified Text and Additional Documents

The Euromot Position

as of June 2004

The European Association
of Internal Combustion
Engine Manufacturers
President:
Horst Dekena
General Secretary:
Dr Hartmut Mayer

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Lyoner Strasse 18
60528 Frankfurt/Main

fon 0049 69 6603-1354
fax 0049 69 6603-2354
eMail euromot@vdma.org
web www.euromot.org

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, marine and stationary applications (construction, mining and material handling equipment, trucks and buses, agricultural and forestry equipment, commercial marine and seagoing vessels, workboats and pleasure boats, rail traction, lawn/garden and recreational equipment, power generation).

Euromot has been working for many years with international regulatory bodies, eg European Union, the UN Economic Commission for Europe (UN-ECE), 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 non-road and marine industry sector.

For further information about our Association please refer to our Annual Report 2003 or pay us a virtual visit at **http://www.euromot.org** – your bookmark for engine power worldwide.

Introductory Remark

In November 2003, Euromot submitted a Position Paper on the proposed "Airborne Toxic Control Measure for Stationary Compression-Ignition Engines - Staff Report: Initial Statement of Reasons for Proposed Rulemaking (CARB Stationary Source Division Emissions Assessment Branch, September 2003)"[1)]. Within our Working Group “Stationary Engines”, we carefully evaluated the latest version "Airborne Toxic Control Measure for Stationary Compression Ignition Engines", for which the deadline for Public Comment is 1 June 2004 and we unfortunately have to conclude that our concerns expressed in our previous position have not been taken into consideration. Therefore, we have to highlight once again the misperceptions and misunderstandings we find in the text.

Comments on the text

1 Applicable standards (Tier 1 or Off-road CI certification standard) to be followed:

New stationary prime diesel-fuelled CI engines (> 50 BHP) are proposed to be regulated according to values presented in table 3 and in-use stationary prime diesel-fuelled CI engines (> 50 BHP) according to table 4.
For HC, NO_X, NMHC+NO_X and CO standards (g/bhp-hr) it is said: "Off-Road CI engine Certification Standard for an off-road engine of the same year and maximum rated power, or Tier 1 standard for an off-road engine of the same maximum rated power."
As stated in our above referred Position Paper, diesel engines are nowadays available up to 40 ... 50 MWth (or 18 ... 22 MWe output) in single unit sizes. For these bigger engine sizes we are not aware of any existing off-road CI certification standard. On page 6 in the referred Euromot Position Paper it is mentioned that the US EPA near-term Tier 1 limits for engines 3000 ... 100000 hp (equivalent to 2500 ... 70000 kW output) will be similar to the IMO (International Maritime Organization) NO_X levels. To be noted is that NO_X is the only emission regulated in the current IMO regulation.

2 No commercial secondary flue gas particulate cleaning equipment are existing in order to reach the proposed limit value:

The particulate reduction techniques referred to in the paper suit only small engine types burning an ultra fine diesel oil (fuelled to be virtually sulphur free). For big engines the only secondary particulate reduction techniques available are some of those used in the boiler plant industry, e.g. electrical precipitators and bag filters. Proposed particulate limit of 0.01 g/bhp-hr equals to about < 2 mg/Nm^3 (dry, 15 % O_2), which is a much stricter limit compared to values found in other existing regulations for bigger stationary engines. Today, there exists no commercial secondary emission abatement technique for bigger diesel engines to achieve the proposed very strict particulate limit. Therefore the proposed particulate limit is **not representing BACT (Best Available Control Technology) nor LAER (Lowest Achievable Emission Rate)**.

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1) http://euromot.org/download/news/positions/stationary/US_CARB_ATCM_Sep03_Euromot_position_181103.pdf

3 Measurement standards:

Bigger diesel engine power plants are fuel flexible and are sometimes equipped with SCRs and FGDs (Flue Gas Desulphurization). Some of the proposed emission standards e.g. ISO 8178 are not suitable for this kind of application. In ISO 8178 part 1 on page 3 section 3.1 it is said "Particulates measurement as described in this part of ISO 8178 is conclusively proven to be effective for fuel sulphur levels up to 0.8 %".

In the power plant industry (boiler, gas turbine plants, etc.) it is common practice to measure emissions at normal loadings, test cycles as described in ISO 8178 Part 4 are usually not applied. Same emission measurement methods and prime mover loadings should also be used for the other stationary plant techniques (e.g. diesel-fuelled stationary engines) in order to get comparable results between the different techniques.

Conclusion

We herewith briefly expressed our main concerns about the misunderstandings and misperceptions found in the proposal. For more information, please see the Euromot Position[1)]. A standard shall be reasonable and give the industry a chance to comply, unfortunately the CARB proposal does not fulfil these criteria.

Therefore we propose the following:

- Stationary diesel-fuelled engines with a rated output from 50 (about 37 kW) horse power up to 560 kW should be subject to the proposed emission rules. For this power range, secondary abatement techniques for the particulate emission will exist and fuel in use is appropriate. These engines are also widely used in the off-road industry and have an off-road certificate.

- Larger (above 560 kW output) stationary diesel-fuelled engines should be exempted from the proposed rules and adequate separate rules should subsequently be worked out (see e.g. US EPA marine sector approach in above mentioned Euromot Position Paper). **Proposed CARB limits do not represent BACT nor LAER for the bigger engine category (> 560 kW)** and are therefore **not in line with** "State of California AIR RESOURCES BOARD resolution 03-30, dated February 26, 2004, Agenda Item No: 03-9-2" (page 5): "In accordance with Health and Safety Code section 39666(c), the ATCM has been designed, in consideration of the factors specified in Health and Safety Code section 39665(b), to reduce emissions to the lowest level achievable **through application of BACT**".

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