

**Comments on the proposed
Swiss Draft Ordinance CHE/95
(amendment of the Swiss LRV)**

The Euromot Position

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EUROMOT

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ENGINES IN SOCIETY

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Euromot would like to comment on the Swiss Draft Ordinance CHE/95 on measures to reduce particle emission from diesel engines on construction sites. The draft document aims for introducing new particle emission limits for engines above 37 kW from 1 May 2008 and for engines between 18 and 37 kW from 2010.

Our comments are as follows:

NRMM regulations need to be globally harmonised

With a view to facilitate rapid development of environmentally demanding and cost effective emission reduction measures and to minimise economic and administrative burdens for industry European, US and Japanese Nonroad Mobile Machinery (NRMM) standards have been harmonised. Other major emerging economies, such as China or Brasil, have recently aligned with this approach, most of them are following the EU NRMM Directive 97/68/EC and amendments.

International harmonisation of NRMM regulations, primarily concerning emission limits, introductory dates and sufficient lead time between stages are a prerequisite for NRMM industry as technically sound and robust solutions have to be provided to literally thousands of different applications of NRMM, i.e. the manufacturers are operating in a variety of niche markets with low sales volumes but highly specific technical demands, such as challenging ambient conditions, safety requirements, operating profiles, space and weight constraints.

Regarding forthcoming harmonised regulations, from 2011 EU Stage IIIB and US Tier 4 will be phased-in resulting in significant reduction of PM and NOx emissions against preceding Stages IIIA and Tier 3. Three years later, i.e. from 2014, phase-in of EU Stage IV and US Tier 4 will further reduce NOx emissions.

Concerns on the timeline

For many months now engine and equipment manufacturers have been devoting their technical resources to developing products for compliance with EU Stage IIIB and US Tier 4 Interim. The period between the Swiss notification date (December 2007) and its entry into force date (May 2008) leaves NRMM industry with insufficient lead time as development resources would have to be redirected within a couple of months to accomplish compliance with a standard with completely new and unique technical requirements.

Furthermore, there is a specific request for conducting 2000h durability runs. It will require several months to meet this demand, i.e. another time constraint that cannot be resolved.

To sum up, the NRMM engine and equipment manufacturers are not in a position to react on this new requirements within the given timeframe.

Concerns on the lack of alignment with international regulations

As the proposed standard is not aligned with any international NRMM regulation and as it will be applicable within a geographically limited area only, the development of unique technical solutions is regarded by NRMM industry as economically not justifiable. Manufacturers will rather focus their resources on developing global solutions for compliance with upcoming EU Stage IIIB and US Tier 4 Interim.

Concerns on the technical feasibility of engine and aftertreatment technology

The Swiss proposal includes a requirement to limit the NO₂ emission to maximum 30 % of the total NO_x emission. This requirement would basically eliminate the application of CRT filter technology widely used today, and significantly reduce the availability of filter systems. Consequently, new filter regeneration strategies would have to be developed.

As indicated above, engine and equipment manufacturers are highly occupied with the development of globally applicable technical solutions for EU Stage IIIB and US Tier 4 Interim. Short term re-direction of development resources for new DPF systems that meet the Swiss regulation is technically and economically impossible.

Concerns on the introduction of a number count based particle standard

The proposed particle standard is based on particle number count "according to the UNECE PMP-Method". Currently this method has only been approved by GRPE for passenger car applications. The test program for heavy-duty on-highway applications has recently been started and will only be completed by 2010.

An extension of the PMP protocol to NRMM engines (ECE R 96) has not been initiated yet and manufacturers are not aware of any test that has ever been applied to NRMM engines. Thus the Swiss proposal is apparently not based on actual NRMM test data and experience but seems to have taken over conclusions from on-highway test programmes which by themselves have not been fully completed and, additionally, are not including any NRMM engine and test cycles.

We have serious concerns on such an approach as it would require NRMM industry to develop aftertreatment solutions based on an immature test method thus completely neglecting the demands of industry and its customers for technically mature, well-proven and robust solutions.

Conclusions

- We propose Switzerland to continue with the current retrofit regulation for urban construction sites.
- NRMM industry is not prepared to develop engines and aftertreatment systems complying with the timeframe and technical requirements of Swiss notification CHE/95
- To facilitate rapid development and introduction of environmentally demanding, technically feasible and cost effective emission reduction measures we strongly ask to align with international NRMM regulations as given by the EU Directive 97/68/EC and amendments and to not introduce national regulations
- The application of the PMP protocol to NRMM engines and test cycles has never been investigated and should therefore not be used for judging particle emissions
- We would like to continue the dialogue between Swiss authorities and NRMM industry and are available for further discussions

Frankfurt/Main, 06 February 2008

Dr Peter Scherm
General Secretary