



Document FEM CLE MC N 0521  
Frankfurt, 24.02.2013

Information  
FEM Product Group Cranes and Lifting Equipment  
Sub-Group Mobile Cranes

**Diesel Emissions – Retrofit of Particulate Filters**

*Legal Note: This paper should serve only as a reference and overview: it is meant to provide guidance in the assessment of risks related to the retrofit of particulate filters. It neither addresses each and every imaginable scenario, nor is it a binding interpretation of the existing legal framework. It does not and cannot replace the study of the relevant directives, laws and regulations. In addition, the specific features of different products and their various applications have to be taken into account. This is why the assessments and procedures referred to in this paper may be impacted by a large variety of circumstances. Accordingly, a number of other interpretations are also possible.*

This information is related to retrofit of mobile cranes with particulate filter. With the ongoing changes in limit values for diesel engine emissions some clarification is required.

**SITUATION:** In general engines on mobile cranes, which are used for operating the crane, fulfil the requirements of Directive 97/68/EC (Emission of gaseous and particulate pollutants from internal combustion engines).

The emission reduction of particle matter and NO<sub>x</sub> in relation to the different stages of legislations is shown in the graph below (diesel engines with power above or equal to 130kW and below or equal to 560kW):



If a significant modification of a machine is undertaken, this obligation of the manufacturer must be assumed by the person who is responsible for the significant modification within the meaning of product liability and the EC machinery directive.

NOTE - Retrofitting mobile cranes with particulate filters may affect significant safety requirements e. g. protective guarding of hot surfaces or operator's free view to hazardous areas.

## **CONCLUSION:**

**Any change affecting the system consisting of Diesel engine end exhaust bears the risk of losing:**

- **certificates, especially the emission certificate and**
- **warranties.**

### ***FEM***

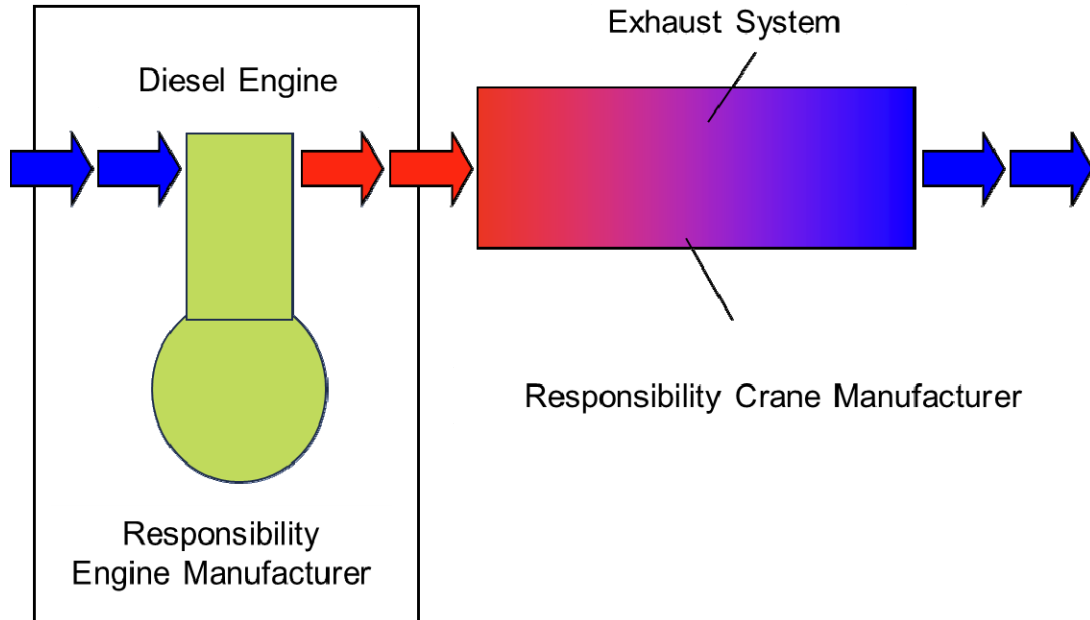
Created in 1953, the European Materials Handling Federation ([www.fem-eur.com](http://www.fem-eur.com)) represents, defends and promotes European manufacturers of materials handling, lifting and storage equipment including cranes and lifting equipment and particular mobile crane.

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### Annex:

#### Scope of engine manufacturer's certification for 97/68/EC Stage IIIa



#### Scope of engine manufacturer's certification for 97/68/EC Stage IIIb

