

## Combined Recreational Marine Diesel Engine Task Force Industry Position - EU Stage 2

April 08, 2008

### 1. Introduction

The Combined Recreational Marine Diesel Engine Task Force of IMEC (ICOMIA's Marine Engine Committee) and EUROMOT (European Association of Internal Combustion Engine Manufacturers) represent the interests of the majority of recreational marine diesel engine manufacturers in Europe. This paper outlines their position on future emission requirements, as expressed in desired amendments to limit values in EU Directive 1994/25/EC amended by 2003/44/EC.

### 2. Objectives

The primary objectives of the recreational marine diesel engine industry are:

- Global alignment for exhaust emission regulations (including test cycle protocol and procedures) for engines over 37kW and
- Flexibility provisions for SME's.

#### 2.1 Alignment

The European diesel engine industry for recreational craft is the world leader. The export ratio of these engines is 3:1 in favour of European based companies in trans-Atlantic trade. The industry is highly internationalised and continues to grow. Aligned exhaust emission requirements on both sides of the Atlantic reduce technical barriers to trade, which will promote the growth of the industry. The Progress Report on Economic Initiative at the EU – US Summit in Vienna on 21 June 2006 states: “*US and European authorities aim to build effective mechanisms to promote better quality regulation, minimize unnecessary regulatory divergences to facilitate transatlantic trade and investment and increase consumer confidence in the transatlantic market.*” In support of this initiative, international alignment is the highest priority objective of our industry.

#### 2.2 Mitigation measures for small manufacturers

Some manufacturers exclusively trading on the EU market may not gain from the economical benefit of alignment. Such enterprises have a significant amount of their production at the smaller engine size. In order to ensure competitiveness, provisions need to be established that protect them from unnecessary burden.

### 3. Proposal

#### 3.1 Emission limits

We envisage alignment being achieved through the limit values in table 1 below, which are derived from US EPA's **Control of Emissions of Air Pollution from Locomotive Engines and Marine**



**Compression-Ignition Engines Less than 30 Liters per Cylinder** Final Rule, passed on March 14, 2008. This table takes account of mitigation measures for SME's by maintaining current EU emission levels for engines below 37kW and the timing of the EU legislative process.

Table 1 – Industry proposed emission limits and timing

Year	Engine category		PM in g/kWh	HC+NOx in g/kWh
	Disp.<0,9 l/cyl	P<18kW	RCD stage 1	RCD stage 1
	Disp.<0,9 l/cyl	18kW<P<37kW	RCD stage 1	RCD stage 1
2012	Disp.<0,9 l/cyl	37kW<P<75kW	0.3	7.5
2014 <sup>1</sup>	Disp.<0,9 l/cyl	37kW<P<75kW	0.3	4.7
2014 <sup>1</sup>	Disp.<0,9 l/cyl	37kW<P<75kW	0.2	5.8
2012	Disp.< 0,9 l/cyl	P>75 kW	0.15	5.8
2013	0,9 l/cyl <Disp.< 1,2 l/cyl	P>75kW	0.14	5.8
2014	1,2 l/cyl< Disp.< 2,5 l/cyl	P>75kW	0.12	5.8
2013	2,5 l/cyl <Disp.< 3,5 l/cyl	P>75kW	0.12	5.8
2012	3,5 l/cyl <Disp.< 7,0 l/cyl	P>75kW	0.11	5.8

<sup>1</sup>: Engines with 2014 model year, a displacement below 0.9 L/cyl and maximum engine power above 19kW and at or below 75kW may be certified to **either** PM 0.3 g/kWh and HC+NOx 4.7 g/kWh **or** PM 0.2 g/kWh and HC+NOx 5.8 g/kWh.

### 3.2 Equivalent certificates

Certificates for engines complying with the Non-Road Mobile Machinery Directive 97/68/EC as amended referring to Stage III A (industrial engines) – or On-Road Directive 2005/55/EC Row A or later and valid at the date when the marinised engine is placed on the market, shall be recognised to demonstrate conformity under EU stage 2.

### 3.3 Flexibility

To ensure competitiveness of all concerned Enterprises on the market, but especially protection of SME's, our proposal is to maintain EU Stage 1 below 37 kW. Additionally we propose flexibilities adapted from the EU's Non Road Machinery Directive (NRMM) but applied to engine manufacturers. This flexibility scheme limits the number of Stage I engines placed on the market to:

- 50% of the manufacturers annual sales in each engine category or
- A fixed number of engines not exceeding in each engine category the number of engines below:

Engine category		Number of engines
Disp.<0,9 l/cyl	37kW<P<75kW	500
Disp.< 0,9 l/cyl	P>75 kW	150
0,9 l/cyl <Disp.< 1,2 l/cyl	P>75kW	150
1,2 l/cyl< Disp.< 2,5 l/cyl	P>75kW	100
2,5 l/cyl <Disp.< 3,5 l/cyl	P>75kW	100
3,5 l/cyl <Disp.< 7,0 l/cyl	P>75kW	50
Over a period of seven years from introduction date		

Additionally to simplify the emission compliance by allowing the use of assigned deterioration factors as well as exemption of production line testing will significantly lower the administrative burden.

The logo for EUROMOT, featuring the word "EUROMOT" in white, bold, uppercase letters on a dark green rectangular background.

#### 4. Conclusion

Alignment is the highest priority of the international marine diesel engine manufacturing industry, of which the majority is located within the European Union. However, European SMEs require protection from additional burden. Therefore, IMEC and EUROMOT proposing provision that will align with EPA but at the same time will protect SME's through maintaining current emission limits below 37 kW in combination with flexibility provisions.