

# MPC 53 Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines

(July 2004)  
(Rev.1  
Nov 2019)

(NOx Technical Code 2008, Chapter 4, Paragraphs 4.1.1 to 4.1.4)

Paragraph 4.1.1

Paragraph 4.1.2

Paragraph 4.1.3

Paragraph 4.1.4

## Chapter 4 Approval for serially manufactured engines: Engine Family and Engine Group concepts

### Section 4.1 General

#### Paragraph 4.1.1 reads as follows:

*To avoid certification testing of every engine for compliance with the NOx emission limits, one of two approval concepts may be adopted, namely the Engine Family or the Engine Group concept.*

#### Paragraph 4.1.2 reads as follows:

*The Engine Family concept may be applied to any series produced engines which, through their design, are proven to have similar NOx emission characteristics, are used as produced, and, during installation on board, require no adjustments or modifications which could adversely affect the NOx emissions.*

#### Paragraph 4.1.3 reads as follows:

*The Engine Group concept may be applied to a smaller series of engines produced for similar engine application and which require minor adjustments and modifications during installation or in service on board.*

#### Paragraph 4.1.4 reads as follows:

*Initially the engine manufacturer may, at its discretion, determine whether engines should be covered by the Engine Family or Engine Group concept. In general, the type of application shall be based on whether the engines will be modified, and to what extent, after testing on a test bed.*

---

#### Note:

1. This UI is to be uniformly implemented by IACS Societies from 19 May 2005.
2. Rev.1 of this UI is to be uniformly implemented by IACS Societies when an application for certification of an engine is dated on or after 1 July 2020.

**MPC****53**

(cont)

**Interpretation:**

The Engine Family concept shall be interpreted as applicable to mass produced small bore engines (generally high speed) that, for design purposes, include adjustable features but are generally dispatched with the intent that no 'installation' or 'in service' setting modifications are undertaken.

For marine engine applications the Engine Group concept shall be interpreted as applicable to any engine intended for main propulsion or auxiliary duties, where adjustment and modification following installation (and through the service life of the engine) is considered routine.

For application of the Engine Family or Engine Group concepts it shall be interpreted that engines within an Engine Family may have different cylinder bore and stroke dimensions (within the defined limits – see paragraph 4.3.8.2.3) and that engines within an Engine Group concept effectively have identical bore and stroke dimensions as a result of only one of the parameters defined under paragraph 4.4.6.2 being permitted to vary within the defined engine group.

An Onboard NO<sub>x</sub> Verification Procedure shall be included within the Technical Files of all engines irrespective of whether they are included within an Engine Family or Engine Group.

|                    |
|--------------------|
| End of<br>Document |
|--------------------|