

ANNEX 4

**RESOLUTION MEPC.408(84)
(adopted on 1 May 2026)**

**AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE
INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS,
1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO**

Amendments to MARPOL Annex VI

**(Use of multiple engine operational profiles for a marine diesel engine,
including clarifying engine test cycles)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO article 16 of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocols of 1978 and 1997 relating thereto (MARPOL), which specifies the amendment procedure and confers upon the appropriate body of the Organization the function of considering amendments thereto for adoption by the Parties,

RECALLING FURTHER the adoption of amendments to the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (NO_x Technical Code 2008), by means of resolution MEPC.397(83), on the use of multiple engine operational profiles for a marine diesel engine, including clarifying engine test cycles,

HAVING CONSIDERED, at its eighty-fourth session, proposed amendments to MARPOL Annex VI concerning the use of multiple engine operational profiles for a marine diesel engine, including clarifying engine test cycles, which were circulated in accordance with article 16(2)(a) of MARPOL,

1 ADOPTS, in accordance with article 16(2)(d) of MARPOL, amendments to MARPOL Annex VI, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 16(2)(f)(ii) and (iii) of MARPOL, that the amendments shall be deemed to have been accepted on 1 March 2027 unless prior to that date not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have communicated to the Organization their objection to the amendments;

3 INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of MARPOL, the said amendments shall enter into force on 1 September 2027 upon their acceptance in accordance with paragraph 2 above;

4 ALSO INVITES the Parties to note that the said amendments shall enter into effect on the dates specified in operative paragraph 4 of resolution MEPC.397(83);

5 REQUESTS the Secretary-General, for the purpose of article 16(2)(e) of MARPOL, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to MARPOL;

6 ALSO REQUESTS the Secretary-General to transmit copies of the present resolution and its annex to Members of the Organization which are not Parties to MARPOL.

ANNEX

AMENDMENTS TO MARPOL ANNEX VI

(Use of multiple engine operational profiles for a marine diesel engine,
including clarifying engine test cycles)

ANNEX VI

REGULATIONS FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

Regulation 2

Definitions

- 1 Paragraph 1.19 is replaced by the following:

"1.19 *Irrational emission control strategy* means any strategy or measure that, when a marine diesel engine is operated under normal conditions of use, reduces the effectiveness of an emission control system to a level below that expected from the applicable emission test procedures".

Appendix I

Form of International Air Pollution Prevention (IAPP) Certificate (regulation 8)

Supplement to the International Air Pollution Prevention Certificate (IAPP Certificate)

- 2 New rows are to be added to the table in section 2.2.1, as follows:

.1 For Tier I (below 13.7.1.2) enter new row:

"

9f	Tier I	NTC 8 (Multiple Engine Operational Profiles)	☐	☐	☐	☐	☐
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"

.2 For Tier II (below 13.7.1.2) enter new row:

"

10g	Tier II	NTC 8 (Multiple Engine Operational Profiles)	☐	☐	☐	☐	☐
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"

.3 For Tier III (below 13.7.1.2) enter new row:

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11e	Tier III	NTC 8 (Multiple Engine Operational Profiles)	☐	☐	☐	☐	☐
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Appendix II

Test cycles and weighting factors (regulation 13)

3 The full text of appendix II is replaced by the following:

"The following test cycles and weighting factors shall be applied for verification of compliance of marine diesel engines with the applicable NO_x limit in accordance with regulation 13 of MARPOL Annex VI using the test procedure and calculation method as specified in the NO_x Technical Code.

- .1 For a fixed pitch propeller propulsion engine or a propeller-law operated non-propulsion engine, test cycle E3 shall be applied in accordance with table 1.
- .2 For a propulsion engine that does not operate with a fixed pitch propeller, including an engine fitted as part of a diesel-electric installation or an engine operated with a controllable-pitch propeller, test cycle E2 shall be applied in accordance with table 2.
- .3 For a non-propulsion engine that is a constant-speed engine, test cycle D2 shall be applied in accordance with table 3.
- .4 For a non-propulsion engine that operates as a variable-speed engine, not included above, test cycle C1 shall be applied in accordance with table 4.

Table 1 – Test cycle for a marine diesel engine as given by .1 above

Test cycle E3	Speed	100%	91%	80%	63%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

Table 2 – Test cycle for a marine diesel engine as given by .2 above

Test cycle E2	Speed	100%	100%	100%	100%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

Table 3 – Test cycle for a marine diesel engine as given by .3 above

Test cycle D2	Speed	100%	100%	100%	100%	100%
	Power	100%	75%	50%	25%	10%
	Weighting factor	0.05	0.25	0.3	0.3	0.1

Table 4 – Test cycle for a marine diesel engine as given by .4 above

Test cycle C1	Speed	Rated				Intermediate			Idle
	Torque	100%	75%	50%	10%	100%	75%	50%	0%
	Weighting factor	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.15

In the case of a marine diesel engine to be certified in accordance with paragraph 5.1.1 of regulation 13, the specific emission at each individual mode point shall not exceed the applicable NO_x emission limit value by more than 50% except as follows:

- .1 The 10% mode point in the D2 test cycle.
- .2 The 10% mode point in the C1 test cycle.
- .3 The idle mode point in the C1 test cycle".
