

Calibration intervals

Permissible deviations and validity, NTC 2008 Appendix 4

WHAT THIS IS

Calibration intervals and permissible deviations for the instruments used in onboard emission and performance measurements on an engine that is already pre-certified. For these measurements MEPC.398(83), section 6.4.5.1, refers to NTC 2008, Appendix 4, tables 3 and 4.

NTC 2008 APPENDIX 4, TABLE 3: ENGINE-RELATED PARAMETERS

No.	Measurement instrument	Permissible deviation	Calibration validity (months)
1	Engine speed	± 2 % of engine's maximum value	12
2	Torque	± 5 % of engine's maximum value	12
3	Power (where measured directly)	± 5 % of engine's maximum value	12
4	Fuel consumption	± 4 % of engine's maximum value	12
5	Air consumption	± 5 % of engine's maximum value	12
6	Exhaust gas flow	± 5 % of engine's maximum value	12

NTC 2008 APPENDIX 4, TABLE 4: OTHER ESSENTIAL PARAMETERS

No.	Measurement instrument	Permissible deviation	Calibration validity (months)
1	Temperatures up to and including 327 °C	± 2 °C absolute	12
2	Temperatures above 327 °C	± 15 °C absolute	12
3	Exhaust gas pressure	± 5 % of engine's maximum value	12
4	Charge air pressure	± 5 % of engine's maximum value	12
5	Atmospheric pressure	± 0.5 % of reading	12
6	Other pressures	± 5 % of reading	12
7	Relative humidity	± 3 % absolute	6

Source: IMO NOx Technical Code 2008, Appendix 4, tables 3 and 4, and Resolution MEPC.398(83). Check the current text of the rule for your project.

WHAT THIS IS

Emission analyzers are calibrated and checked in accordance with MARPOL Annex VI and the NOx Technical Code 2008. Some checks are valid for three months, others for one year.

EVERY THREE MONTHS

Check	NTC 2008 reference	Validity
Linearization (multi-point calibration) of each analyzer	Appendix 4, section 5.4.1	3 months
NO2 converter efficiency check	Appendix 4, section 7	3 months

EVERY YEAR

Check	NTC 2008 reference	Validity
CO analyzer interference check (CO)	Appendix 4, section 9.1	1 year
NOx analyzer CO2 quench check (NOx)	Appendix 4, section 9.2.1	1 year
NOx analyzer water quench check (NOx)	Appendix 4, section 9.2.2	1 year
HFID hydrocarbon response factors (THC)	Appendix 4, section 8.2	1 year
HFID oxygen interference check (THC)	Appendix 4, section 8.3	1 year

The interference and quench checks are performed before initial use, after major service, and at least once per year. The HFID response factors and the oxygen interference check are determined on introduction to service and after major service.

WHAT YOU RECEIVE

A certificate for each analyzer and instrument, with the result of every calibration point.

The date of calibration and the date until which it is valid, traceable to reference sensors with accredited calibration.

Source: IMO NOx Technical Code 2008, Chapter 5 and Appendix 4. Check the current text of the rule for your project.