

14. What Responsibilities Apply to Ship Owners and Operators?

In this final rule we are requiring ship owners and operators to maintain all records of maintenance, repair, and adjustment of the ship's engines as it relates to emission-control performance. We believe these records currently are kept by most ship operators as part of normal recordkeeping associated with engines of this magnitude, initial investment, and cost of operation. These records would be essential for both the ship operator and the Administration to determine compliance with the applicable requirements. This is especially important for Category 3 marine engines, because operators need to be able to make adjustments that significantly affect the engine's ability to control emissions. These records must be maintained on-board the vessel and be provided to EPA upon request. It is a separate violation of the record keeping and submission requirements to fail to meet the requirements with respect to each required submission or record. Penalties are assessed for each day of each such violation.

In order to maintain the proper emission-control performance of the engine, the ship owner and operator are responsible for maintaining all adjustable parameters within the certified ranges specified by the engine manufacturer, and for ensuring that the engine is rebuilt pursuant to the regulatory requirements. The regulations establish that any adjustment outside the range specified by the manufacturer for proper emission-control performance constitutes a violation of the regulations and the Clean Air Act. Additionally, the regulations require the ship owner and operator to correct any noncompliance within a two-hour period. Failure to correct the noncompliance within a two-hour period is a violation of the regulations, with each two-hour period considered a separate violation. These provisions, like the other maintenance-related provisions, are intended to ensure that owners and operators perform adjustments properly to avoid the significant increase in emissions associated with improper adjustments. In effect, the timely correction of the improperly adjusted parameter is considered a required maintenance event, and failure to properly perform this required maintenance is considered tampering. Given the significant emission increases that can occur with improper adjustments, the reasonable time needed to correct an improper adjustment, and the need for an effective deterrent, the regulations

establish a recurring two-hour period as the appropriate requirement.

As a minimum measure of compliance, the ship owner is required to comply with certain basic recordkeeping, as described above, and to review those records periodically to ensure compliance. Specifically, owners must perform an end-of-year review of the applicable maintenance and repair records and send us an annual statement confirming that they have met the emission-related requirements of the regulations for the previous year, or acknowledging any noncompliance, as appropriate. If the ship is operated by a company not controlled by the ship owner, then both companies are responsible to meet this reporting requirement. If EPA receives a valid compliance statement regarding a particular vessel from either the owner or the operator of the vessel, EPA will consider both the owner and the operator to have complied with the reporting requirement.

As described in Section I.E, the NO_x Technical Code Section 2.1 will require each engine covered by the Annex VI NO_x requirements to be surveyed to ensure that it complies with the NO_x limits (this requirement will apply once Annex VI goes into force). Two of the surveys, the pre-certification survey and initial certification survey, are required as part of a ship's initial survey and the issuance of an International Air Pollution Prevention certificate for the vessel. Section 2.1 also contains a requirement for periodic and intermediate surveys "to ensure the engine continues to fully comply with the provisions of the Code." The periodic and interim surveys are to occur every five and every 2½ years, respectively. Annex VI also requires additional unscheduled surveys unless the scheduled surveys are carried out on an annual basis. These surveys are required for engines installed on vessels of 400 gross tonnage or above, as specified in Regulation 5 of the Annex. For smaller vessels, it is up to each country to establish appropriate programs.

The periodic and interim surveys are somewhat similar to the annual compliance statement we are finalizing today. However, while the Annex VI surveys will be carried out by government surveyors, the annual compliance statement described in this section must be completed by the owner of the vessel and therefore creates a liability requirement for the vessel owner. In addition, it is not clear at this time whether the Annex VI survey will be designed only to inspect the engine to make sure it is in compliance at the

time of the survey or if it will be designed to ascertain whether the engine has been taken out of compliance (*i.e.*, if there has been tampering) during the interim period. This is because the U.S. Senate has not yet ratified Annex VI, so the implementing legislation and corresponding regulations for adopting the Annex VI and NO_x Technical Code requirements into U.S. law have not yet been adopted. For both of these reasons, we believe it is necessary to include this annual compliance statement requirement in this rule. However, it is possible that the additional documentation required by Annex VI and the associated surveys may be sufficient to ensure compliance. Therefore, in light of this possibility, EPA will reconsider the need for this annual compliance statement in the context of the development of the implementing legislation and supporting regulations for U.S. implementation of MARPOL Annex VI. If such reconsideration leads EPA to rely in the future on the Annex survey in lieu of the annual statement of the compliance, the owner and operator of the vessel would remain liable for all other compliance provisions of the regulations adopted today. This would include maintaining all records of maintenance, repair and adjustment of the ship's engines as it relates to emission-control performance, and maintaining the proper emission-control performance of the engine. The annual compliance certification requirement will remain in effect unless it is specifically rescinded.

C. Test Procedures for Category 3 Marine Engines

Engine manufacturers are currently testing according to the test procedures outlined in The Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (hereafter referred to as "NO_x Technical Code").³⁵ The new EPA standards are based on these Annex VI test procedures, with some modifications described below. These modifications are necessary to ensure that the test data used for certification are consistent with the requirements of the Clean Air Act.

1. What Duty Cycle Do I Use To Test My Engines?

The duty cycle used to measure emissions is intended to simulate operation in the field. Testing an engine for emissions consists of exercising it

³⁵ A copy of the conference version of the NO_x Technical Code can be found in Docket A-97-50, Document II-B-01. Copies of updated versions can be obtained from the International Maritime Organization (<http://www.imo.org>).