Technical Circular

No.: 032/2025 Date: 27th November 2025

Subject: Most Common MARPOL Annex VI Deficiencies during PSC Inspections

1. This Circular provides a compilation of common PSC deficiencies noted pertaining to MARPOL Annex VI along with the relevant requirements / guidance to the Owners/ Managers to ensure that similar deficiency/ies are avoided.

Items with Most Common Deficiency	Requirements / Guidance to the Owners/ managers
Technical files and if applicable, monitoring manual (MARPOL Annex VI/Reg. 13)	Each diesel engine which is certified to NOx Tier I, II or III must be issued an Engine International Air Pollution Prevention (EIAPP) Certificate and a NOx Technical File approved by the vessel's RO on behalf of the Administration. The EIAPP and NOx TF are to be maintained on board the vessel. The IMO ID number of fuel injection nozzles and other spare parts are to match those in the NOx technical file. If an engine uses the Direct Measurement and Monitoring method, this is to be documented in an Onboard Monitoring Manual, approved by the vessel's RO on behalf of the Administration.
Record book of engine parameters (MARPOL Annex VI/Reg. 13 and NOx Technical Code/6.2.2.7))	A ship equipped with a marine diesel engine requiring to undergo an Engine Parameter Check method is to maintain on board: 1. A Record Book of Engine Parameters; 2. An engine parameter list of an engine's designated components and settings and/or the documentation of an engine's load-dependent operating values approved by the Administration; and 3. Technical documentation of engine component modification when such a modification is made to any of the engine's designated engine components.
Record book of engine parameters (NOx Technical Code/6.2.2.8)	A record of the component identification numbers of engine parts that affect NOx emissions are to be made in the "Record book of engine parameters" and ensure they match the official "NOx Technical File" and "EIAPP Certificate". Key components include fuel injectors, pumps, camshafts, charge air coolers, pistons, and turbochargers, all of which need to be logged with their original and replacement ID numbers when a change is made.

Approved method (MARPOL Annex VI/Reg. 13.7.1 to 13.7.5)	A marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or 90 L installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 shall comply with the Tier I emission limits standards, provided that an approved method for the engine has been certified by an Administration of a Party and notification of such certification has been made to IMO. Section 2.2.1 of vessel's IAPP Supplement is to be completed appropriately depending on the ship-specific application of this regulation.
Exhaust Gas Recirculation (EGR) (MARPOL Annex VI/Reg. 13)	Ships equipped with EGR to comply with NOx levels shall: 1. Meet the EGR bleed-off water discharge standards. 2. Have on board a manual for EGR bleed-off discharge system and EGR Record Book approved by the RO on behalf of the Administration. 3. Have on board certificates of type approval and operating and maintenance manuals of oil content meters (15 ppm alarm).
EGR or Selective Catalytic Reduction (SCR) (MARPOL Annex VI/Reg. 13)	Ships installed with EGR or SCR and unable to comply with relevant NOx Tier III levels prior to entering a NOx ECA **shall immediately notify the relevant Coastal State(s) and the Administration.**
Diesel engine air pollution control (MARPOL Annex VI/reg. 13.6)	Ensure that the tier and on/off status of marine diesel engines installed on board a ship which are certified to both Tier II and Tier III or which are certified to Tier II only are recorded in the engineering log book or electronic record book approved by the Administration, suitable for that purpose at entry into and exit from an emission control area designated under regulation 13.6 of MARPOL Annex VI, or when the on/off status changes within such an area, together with the date, time and position of the ship.

Fuel Sulphur Content and Fuel Oil change-over procedure and SOx Records (MARPOL Annex VI/Reg. 14)	The Sulphur content of any fuel oil carried for use on board a ship when operating outside a designated SOx ECA shall not exceed 0.50% m/m. The Sulphur content of any fuel oil used on board ships when operating within a designated Sox ECA shall not exceed 0.10% m/m. Current ECA's are North American, United States Caribbean Sea, the Baltic Sea, the North Sea, and the Mediterranean Sea, and on 01 March 2026, the Canadian Arctic and the Norwegian Sea. The maximum Sulphur content of marine fuels for use while at berth in EU ports is 0.10% m/m. Vessels using separate fuel oils when entering or leaving an ECA must carry a written procedure showing how the fuel oil change-over procedure will be done, allowing sufficient time for the fuel oil service system to be fully flushed of all fuel oils exceeding the applicable Sulphur content prior to entry into an ECA. The use of a "fuel oil change over calculator" is one way of ensuring the change-over is done in time. The volume of low Sulphur fuel oils in each tank as well as the date, time, and position of the ship when any fuel-oil-change-over operation is completed prior to the entry into an ECA or commenced after exit from such an area, are to be recorded in the engineering log book or in a record book or log book in electronic format (electronic record book) approved by the Administration.
Alternative arrangements (SOx) - EGCS (MARPOL Annex VI/Reg. 14)	An exhaust gas cleaning system (EGCS) used as an equivalent or alternative arrangement to achieve the relevant Sulphur limit must be approved by the Administration. Ships operating with EGCS shall have on board an EGCS record book approved by the vessel's RO on behalf of the Administration.
Incinerator, including operations and operating manual (MARPOL Annex VI/Reg. 16)	Shipboard incinerators are to be approved by the vessel's RO on behalf of the Administration and issued with a Type Approval certificate. Incinerators are to be provided with a manufacturer's operating manual which is to be retained on board the vessel and which specifies how to operate the incinerator within its applicable limits.

Bunker delivery notes (BDN) (MARPOL Annex VI/Reg. 18)	Details of fuel oil delivered to and used on board ships are to be recorded by means of a Bunker Delivery Note provided by the supplier, which may be in electronic format. The BDN is to include, among other things, Sulphur content (% m/m), flashpoint (°C) specified in accordance with acceptable standards, or a statement that the flashpoint has been measured at or above 70ºC, and a declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with regulation 18.3 of MARPOL Annex VI and that the Sulphur content of the fuel oil supplied does not exceed the applicable regulatory limit or the purchaser's specified limited value.
IEEC & Statement of Compliance	Ensure that there is a valid Statement of Compliance related to fuel oil consumption reporting and operational carbon intensity rating, and International Energy Efficiency Certificate and a Ship Energy Efficiency Management Plan on board.

2. Vessel owners and managers are advised to take note of the above and ensure that these deficiencies are not present on board their vessels. Where a deficiency/ies is/are identified, they are to be rectified as quickly as possible using the referenced materials and other applicable guidance.

3. Liberia Maritime Administration has issued Marine Advisory No. 35/2025 on the above. Copy of the Advisory is attached.

Enclosure:

1. Liberia Maritime Authority-Marine Advisory 35/2025

THE REPUBLIC OF LIBERIA
LIBERIA MARITIME AUTHORITY

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21 November 2025

Marine Advisory: 35/2025

SUBJECT: Most Common MARPOL Annex VI Deficiencies during PSC Inspections

Reference:

(a) **Appendix 18 of the Procedures for Port State Control, 2023, IMO Assembly Resolution A.1185(33)**

(b) **Paris MOU PSCC INSTRUCTION 58/2025/16 GUIDELINES ON MARPOL ANNEX VI**

(c) **Marine Notice POL-009**

Dear Shipowners/Operators/Masters/Crew:

The purpose of this Marine Advisory is to draw the attention of shipowners, operators, inspectors, masters and crew to the most common MARPOL Annex VI deficiencies raised during Port State Control (PSC) inspections of Liberian flagged vessels.

From the PSC reports, the Administration has compiled a list of most common MARPOL Annex VI deficiencies and has included in the table below Guidance to avoid these deficiencies:

Most Common Deficiency	Comments and Guidance
Technical files and if applicable, monitoring manual (MARPOL Annex VI/Reg. 13)	Each diesel engine which is certified to NOx Tier I, II or III must be issued an Engine International Air Pollution Prevention (EIAPP) Certificate and a NOx Technical File approved by the vessel's RO on behalf of the Administration. The EIAPP and TF are to be maintained on board the vessel. The lMO ID number of fuel injection nozzles and other spare parts are to match those in the NOx technical file, If an engine uses the Direct Measurement and Monitoring method, this is to be documented in an Onboard Monitoring Manual, approved by the vessel's RO on behalf of the Administration. Refer to Liberia MN POL-009/Applicability, Section 7.0 and 12.2.13.
Record book of engine parameters (MARPOL Annex VI/Reg. 13 and NOx Technical Code/6.2.2.7))	A ship equipped with a marine diesel engine required to undergo an Engine Parameter Check method shall maintain on board: 1. A Record Book of Engine Parameters; 2. An engine parameter list of an engine's designated components and settings and/or the documentation of an engine's load-dependent operating values approved by the Administration; and 3. Technical documentation of engine component modification when such a modification is made to any of the engine's designated engine components.

Record book of engine parameters (NOx Technical Code/6.2.2.8)	A record of the component identification numbers of engine parts that affect NOx emissions shall be made in the "Record book of engine parameters" and ensure they match the official "NOx Technical File" and "EIAPP Certificate". Key components include fuel injectors, pumps, camshafts, charge air coolers, pistons, and turbochargers, all of which need to be logged with their original and replacement ID numbers when a change is made.
Approved method (MARPOL Annex VI/Reg. 13.7.1 to 13.7.5)	A marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or 90 L installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 shall comply with the Tier I emission limits standards, provided that an approved method for the engine has been certified by an Administration of a Party and notification of such certification has been made to IMO. Section 2.2.1 of a vessel's IAPP Supplement is to be completed appropriate depending of the ship-specific application of this regulation. Refer to Liberia MN POL-009/12.2.6 to 12.2.8.
Exhaust Gas Recirculation (EGR) (MARPOL Annex VI/Reg. 13)	Ships equipped with EGR to comply with NOx levels shall: 1. Meet the EGR bleed-off water discharge standards 2. Have on board a manual for EGR bleed-off discharge system and EGR Record Book approved by the RO on behalf of the Administration 3. Have on board certificates of type approval and operating and maintenance manuals of oil content meters (15 ppm alarm) Refer to Liberia MN POL-009/12.2.9.
EGR or Selective Catalytic Reduction (SCR) (MARPOL Annex VI/Reg. 13)	Ships installed with EGR or SCR and unable to comply with relevant NOx Tier III levels prior to entering a NOx ECA shall immediately notify the relevant coastal State(s) and the Administration. Refer to Liberia MN POL-009/12.2.9 and 12.2.10.
Diesel engine air pollution control (MARPOL Annex VI/reg. 13.6)	The tier and on/off status of marine diesel engines installed on board a ship which are certified to both Tier II and Tier III or which are certified to Tier II only shall be recorded in the engineering log book or electronic record book approved by the Administration, suitable for that purpose at entry into and exit from an emission control area designated under regulation 13.6 of MARPOL Annex VI, or when the on/off status changes within such an area, together with the date, time and position of the ship. Refer to MN POL-009/12.2.5.

Fuel Sulphur Content and Fuel Oil change-over procedure and SOx Records (MARPOL Annex VI/Reg. 14)	The Sulphur content of any fuel oil carried for use on board a ship when operating outside a designated Sox ECA shall not exceed 0.50% m/m. The Sulphur content of any fuel oil used on board ships when operating within a designated Sox ECA shall not exceed 0.10% m/m. Current ECA's are North American, United States Caribbean Sea, the Baltic Sea, the North Sea, and the Mediterranean **Sea**, and on 01 March 2026, the Canadian Arctic and the Norwegian Sea. The maximum Sulphur content of marine fuels for use while at berth in EU ports is 0.10% m/m. Vessels using separate fuel oils when entering or leaving an ECA must carry a written procedure showing how the fuel oil change-over procedure will be done, allowing sufficient time for the fuel oil service system to be fully flushed of all fuel oils exceeding the applicable Sulphur content prior to entry into an ECA. The use of a "fuel oil change over calculator" is one way of ensuring the change-over is done in time. Refer to Liberia MN POL-009/12.3.8. The volume of low Sulphur fuel oils in each tank as well as the date, time, and position of the ship when any fuel-oil-change-over operation is completed prior to the entry into an ECA or commenced after exit from such an area, shall be recorded in the engineering log book or in a record book or log book in electronic format (electronic record book) approved by the Administration. (The Administration's Marine Sulphur Record Book may also be used for this purpose.)
Alternative arrangements (SOx) - EGCS (MARPOL Annex VI/Reg. 14)	An exhaust gas cleaning system (EGCS) used as an equivalent or alternative arrangement to achieve the relevant Sulphur limit must be approved by the Administration. Refer to POL-009/12.3.9 and 12.3.10. Ships operating with an EGCS shall have on board an EGCS record book approved by the vessel's RO on behalf of the Administration.
Incinerator, including operations and operating manual (MARPOL Annex VI/Reg. 16)	Shipboard incinerators are to be approved by the vessel's RO on behalf of the Administration and issued a Type Approval certificate. Refer to Liberia MN POL-009/12.3.8. Incinerators are to be provided with a manufacturer's operating manual which is to be retained on board the vessel and which specifies how to operate the incinerator within its applicable limits.

Bunker delivery notes (BDN) (MARPOL Annex VI/Reg. 18)	Details of fuel oil delivered to and used on board Liberian flag ships shall be recorded by means of a Bunker Delivery Note provided by the supplier, which may be in electronic format. Refer to Liberia MN POL-009/Section 14.0. The BDN is to include, among other things, Sulphur content (% m/m), flashpoint (°C) specified in accordance with acceptable standards, or a statement that the flashpoint has been measured at or above 70ºC, and a declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with regulation 18.3 of MARPOL Annex VI and that the Sulphur content of the fuel oil supplied does not exceed the applicable regulatory limit or the purchaser's specified limited value.

It is recommended that shipowners, operators, masters and crew inspect their vessels to ensure that these deficiencies are not present on board their vessels and if it is found that one or more exist, to resolve this as quickly as possible, using the noted references and other guidance.

If you have any questions or concerns, please contact the Regulations and Standards Department at RegsAndStandards@liscr.com.

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