

Marine pollution prevention pocket checklist Revision 5

Reducing the risk of port state control detentions

In conjunction with: **UK P&I CLUB** 



Introduction

MARPOL infringements, such as deliberate violation of requirements or falsification of records, are common causes of vessels being detained by port state control (PSC) officers and can result in company management and seafarers being criminally prosecuted or even imprisoned. There is also the risk of large fines, which can amount to millions of dollars.

In conjunction with an industry partner, the UK P&I Club, we have compiled this checklist following analysis of deficiencies relating to marine pollution prevention found by PSC officers on ships classed by Lloyd's Register (LR).

The checklist also includes an appendix covering ballast water management because, while not directly linked to MARPOL, this area is receiving increasing focus.

To help reduce the risk of your ship being detained we strongly recommend that you include, as a minimum, the items on the chart on page 4 as part of your final checks before voyage and port entry. These checks will help to ensure that the items continue to conform to international convention requirements. It is strongly advised that all other items in this checklist are checked on an ongoing basis.

This is the second in our series of pocket checklists to help you comply with international convention requirements. For information about the other checklists in the series please visit www.lr.org/psc or www.ukpandi.com

Latest news on classification and regulatory matters which affect you, including port state control, is published in our Class News bulletins. To subscribe to this service go to www.lr.org/classnews

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Are you prepared for a port state control inspection?

PSC Officers always commence their inspection in the Master's office. It is essential that certification is up-to-date, original and valid. All other necessary documents and manuals should, where required, be approved and on board.

If equipment is broken or missing, or the ship has suffered damage en-route, the Master must notify the port authorities prior to port entry. If the port authorities are informed of the problem and of any permanent or temporary remedies agreed with the flag administration, the vessel should not be detained. However, if notice is not given before entry, the port state has clear grounds for inspection, possibly leading to a detention.

If your ship is detained, or appears to be in the process of being detained, you should contact the nearest Lloyd's Register office immediately for assistance.

The major PSC organisations publish their criteria for targeting a ship on their web sites. Ship owners and operators should use these criteria to calculate the risk profile of their ships.

Paris MOU – www.parismou.org

Tokyo MOU – www.tokyo-mou.org

USCG – <http://homeport.uscg.mil/mycg/portal/ep/home.do>

Other MOUs include Abuja, Black Sea, Caribbean, Indian Ocean, Mediterranean, Riyadh and Vina del Mar.

A ship operator may disagree with the findings of the PSC authority and the majority of the regional PSC organisations have guidelines on how to appeal against a detention. These can also be found on the above websites.

The 2012 edition of IMO Procedures for Port State Control also provides guidelines on detentions. [ISBN: 978-92-801-1550-5]

Most common MARPOL deficiencies

Below are the most common MARPOL deficiencies (by number) found by PSC officers on LR classed ships during the period 2014 – 2016.



Sewage treatment plant (37)



Oil filtering equipment (27)



Garbage (20)



15 ppm alarm arrangements (14)



Other (MARPOL – Annex I) (14)



Incinerator (13)



Garbage Management Plan (13)



Sulphur oxides (12)




Retention of oil on board (7)





Oil discharge monitoring and control system (5)


1. Operational deficiencies


The following are some frequently occurring operational deficiencies.

1.  **Oil and oily mixtures from machinery spaces**
 - oily water separator (OWS) malfunctioning, inoperative alarm and auto stop, illegal bypass

2.  **Retention of oil on board**
 - quantity of oily water retained on board does not match Oil Record Book entries and/or IOPP Record of Construction and Equipment
 - quantity of oily water/sludge landed ashore or incinerated does not match quantity expected to be produced from machinery spaces


3.  **Discharge violation**
 - oil coating the inside of clean discharge pipes from OWS
[Note: pipes are often removed for inspection]
 - indications of discharge pipe/valve removal

4.  **Inconsistent entries in Oil Record Book Parts 1 and/or 2**

5.  **Garbage**

Inadequate garbage segregation:

 - garbage bins in accommodation/galley not of approved type (should be non-combustible)
 - inadequate Garbage Record Book entries
 - falsified Garbage Record Book entries
 - no receipts for garbage landed ashore

6.  **Cargo residues**
 - incorrect disposal of cargo residues
 - disposal not correctly documented

1. Operational deficiencies – continued

7. **Shipboard Oil Pollution Emergency Plans (SOPEP)**
– “List of National Operational Contact Points” not updated



Illegal pipe – sludge pump
to overboard



Oil found in
overboard valve

Note:

UK P&I Club Technical Bulletin No.19 “Oily Water Separator – maintenance/operational recommendations” contains further advice. Please go to www.ukpandi.com for your free copy.

2. Certificates and documents

The following certificates and documents must be carried on board.

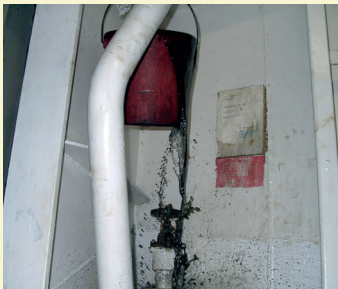
Certificates

- Oil Pollution Prevention Certificate**
 - valid for up to 5 years and endorsed at Annual and Intermediate Surveys
 - includes the Record of Construction and Equipment (FORM A or B)
- Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk or Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk (whichever applies)**
 - valid for up to 5 years and endorsed at Annual and Intermediate Surveys
 - includes the Cargo List
- Sewage Pollution Prevention Certificate**
 - valid for up to 5 years
- Air Pollution Certificate**
 - valid for up to 5 years and endorsed at Annual and Intermediate Surveys
 - includes the Record of Construction and Equipment
- Engine Air Pollution Prevention Certificates**
 - includes the Records of Construction and the approved technical files
- Statement of compliance for Condition Assessment Scheme (tankers only)**
- Anti-fouling Certificates**
 - valid until the anti-fouling system is changed

2. Certificates and documents – continued

Type Approval Certificates

- 8. Oily water separator
- 9. 15ppm alarm
- 10. Oil discharge monitoring and control system (tankers only)
- 11. Oil/water interface detector (tankers only)
- 12. Sewage treatment or comminuting system, if fitted
- 13. Incinerator, if fitted
- 14. Exhaust gas treatment system SO_x, if fitted
- 15. Exhaust gas treatment system NO_x, if fitted
- 16. Ballast water treatment system (see Appendix on page 17)



OWS test run



Illegal bypass

2. Certificates and documents – continued

Documents

Items 18, 23, 25, 27, 28, 29, 32, 33, 34, 35, 37 and 38 should be approved by, or on behalf of, the flag administration.

All ships

- 17. **Oil Record Book (Part 1)**
– must be retained for at least 3 years
- 18. **SOPEP**
- 19. **Garbage Management Plan**
- 20. **Garbage Record Book**
- 21. **Changeover Procedure and Records – SOx Emission Control Areas**
- 22. **Bunker Delivery Notes**
– must be retained for at least 3 years
- 23. **NOx Technical Files**
- 24. **Ballast Water Management Plan**
- 25. **Discharge Rate for Sewage (MARPOL Annex IV)**
- 26. **Material Safety Data Sheet (MSDS)**
- 27. **Ship to Ship Transfer Plan**

2. Certificates and documents – continued

Tanker specific (MARPOL Annex I and IBC/BCH Codes)

- 28. **Oil Discharge Monitoring and Control System (ODME) Manual**
– recordings/printouts from Oil Discharge Monitoring and Control Equipment to be kept on board for at least 3 years
- 29. **Crude Oil Washing Manual, if system fitted**
- 30. **Oil Record Book (Part 2)**
– must be retained for at least 3 years
- 31. **Access to shore-based damage stability and residual strength calculations**
- 32. **Dedicated Clean Ballast Tank Operation Manual**
- 33. **Damage Stability Approval**
- 34. **Vapour Emission Control Systems Procedure (Manual)**
- 35. **Volatile Organic Compounds (VOC) Management Plan**
- 36. **Ozone Depleting Substance Record Book**

Chemical Carrier specific (MARPOL Annex II)

- 37. **Shipboard Marine Pollution Emergency Plans (SMPEP)**
- 38. **Procedures and Arrangements (P and A) Manual**
- 39. **Cargo Record Book**
– must be retained for at least 3 years
- 40. **Product data sheets with IMO-recognised names for cargoes**

3. Annex I – Prevention of Pollution by Oil

The following equipment should be in good condition, properly calibrated, maintained and fully functional, with appropriate spares.

All ships

1. Oil filtering equipment
2. 15 ppm alarm arrangements
3. Standard discharge connection

Tanker specific

4. Oil/water interface detector
5. Crude oil washing system, if fitted
6. Oil discharge monitoring and control system (ODME)
7. Cargo and ballast pumping, piping and discharge arrangements
8. Engine room/bilge holding tank to slop tank pumping and piping arrangements
 - including spool pieces and notices

Notes:

1. It is recommended that any pipe or valve removals for maintenance purposes associated with the oily water separator should be well-documented and entries made in the Oil Record Book.
2. UK P&I Club Technical Bulletin No.35 "Oil Record Book Entries (amended)" contains further advice. Go to www.ukpandi.com for your free copy.

4. Annex II – Control of Pollution by Noxious Liquids in Bulk

The following equipment should be in good condition, properly maintained and fully functional, with appropriate spares.

1. **Pumping, stripping, underwater discharge outlet**
2. **Tank washing equipment**
3. **Cargo heating systems**
4. **Ventilation equipment/procedures**

5. Annex III – Harmful Substances in Packages

The following should be fully complied with when harmful substances are carried in packaged form.

- Packaging**
 - adequate to minimise hazard to the marine environment
- Marking and labelling**
 - marked with correct technical name and labelled with their IMDG Code number and/or UN number to indicate the contents are a marine pollutant
- Documentation**
 - documented on board in a special list, manifest or detailed stowage plan, which includes details of their location
- Stowage**
 - properly stowed and segregated as per the IMDG Code and secured to minimise hazards to the marine environment

Notes:

1. 'Harmful substances' are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code).
2. 'Packaged form' is defined as the forms of containment specified for harmful substances in the IMDG Code.
3. This Annex does not apply to ships' stores and equipment.
4. The UK P&I Club publication "Dangerous Goods Guides – Book it right and pack it tight" provides practical operational guidance and quick reference to the IMDG Code. Please go to www.ukpandi.com for details.

6. Annex IV – Prevention of Pollution by Sewage from Ships

The following equipment should be in good condition, properly maintained and fully functional, with appropriate spares.

1. **Sewage treatment plant, if fitted**
2. **Sewage comminuting system, if fitted**
3. **Holding tank, if fitted**
 - fitted with means of visually indicating the tank content level
4. **Sewage discharge connection**
 - suitable bolts and gaskets are available

Note:

The comminutor is a device for shredding solid sewage waste.

7. Annex V – Prevention of Pollution by Garbage from Ships

The following should be fully complied with to ensure the correct segregation, storage and disposal of garbage.

- 1. Placards (notices)**
 - must be displayed in the working language of the ship, and in English, French or Spanish, and inform the crew and passengers of the garbage disposal requirements
- 2. Incinerator (if fitted)**
 - must be in good condition, properly maintained and fully functional, with appropriate spares
- 3. Stowage of material prohibited from being disposed of at sea**
 - should be stowed in suitable receptacles before being disposed of in port facility
- 4. Segregation of garbage on board**
 - must be segregated into suitably marked receptacles of an approved type
- 5. Plans of cargo residue retention and disposal and records of disposal**

8. Annex VI – Prevention of Air Pollution from Ships

Equipment should be in good condition, properly calibrated, maintained and fully functional, with appropriate spares.

1. **Fuel samples**
 - must be retained on board until fuel is used or for 12 months, whichever is the longer period

2. **Ozone-depleting substances (ODS)**
 - deliberate emissions are prohibited, including emissions occurring in the course of maintaining, servicing, repairing and disposing of systems or equipment. ODS must be recovered from the systems before maintenance is carried out.

3. **NOx direct monitoring equipment (if fitted)**

4. **Exhaust gas treatment system NOx (if fitted)**

5. **Exhaust gas treatment system SOx (if fitted)**

6. **Incinerator (if fitted)**

7. **Vapour emission control system (VECS) (tankers only)**
 - 7.1 **Tank gauging**
 - 7.2 **Pressure monitoring**
 - 7.3 **Manifold markings**
 - 7.4 **Electrical continuity**
 - 7.5 **Means of isolating the VECS from the Inert Gas System**

Appendix

Future Legislation – Ballast Water Management

International Convention for the Control and Management of Ships' Ballast Water and Sediments.

Documents required by the Convention

1. **Ballast Water Management Plan**
2. **Ballast Water Record Book**
– may be electronic or paper-based

Notes:

1. This Convention entered into force on 8 September 2017.
2. A number of countries have national ballast water management regulations, including Argentina, Australia, Brazil, Canada, Chile, Israel (Red Sea), New Zealand and the USA (State and Federal). You should refer to each country's regulations for details: go to www.lr.org/bwm to download our National Ballast Water Management Requirements document.
3. Most national regulations require a Ballast Water Management Plan to be on board, as a minimum.
4. From January 2014, Canada and the USA will require a phased implementation of operational ballast water management systems on board vessels. Please refer to their national regulations for details.



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One of the world's largest P&I mutuals, the UK P&I Club currently insures around 225 million gross tons of owned and chartered ships in 60 countries.

The Club publishes loss prevention material through a wide range of media on topics such as hazardous cargo in containers, human error, personal injury and maritime security.

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