

MARINE POLLUTION PREVENTION POCKET CHECKLIST

Reducing the risk of Port State Control detentions

In conjunction with:



UK P&I CLUB



**Lloyd's
Register**

LIFE MATTERS

Introduction

MARPOL infringements can result in both company management and seafarers being liable to criminal prosecution and imprisonment for deliberate violation of MARPOL requirements or falsification of records. In addition, there are risks of large fines amounting to millions of dollars.

In conjunction with an industry partner, the UK P&I Club, we have analysed data including deficiencies found by Port State Control Officers relating to marine pollution prevention. The result is this convenient and re-usable Checklist, highlighting the most common deficiencies listed by the MARPOL Annexes.

An Appendix covering Ballast Water Management is included as this is an area, that, while not directly linked to MARPOL is receiving increasing focus.

To help reduce these risks, as a minimum, the items on the chart on page 4 should be included as part of your final checks prior to voyage and port entry to ensure they continue to conform to international convention requirements. It is strongly advised that all items in this *aide memoire* are checked on an ongoing basis to supplement your own operational and maintenance procedures and your flag State's requirements.

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

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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 onboard.

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 State, 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 Group 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 target rating of their ships.

Paris MOU - www.parismou.org

Tokyo MOU - www.tokyo-mou.org

USCG - www.uscg.mil/hq/gm/pscweb

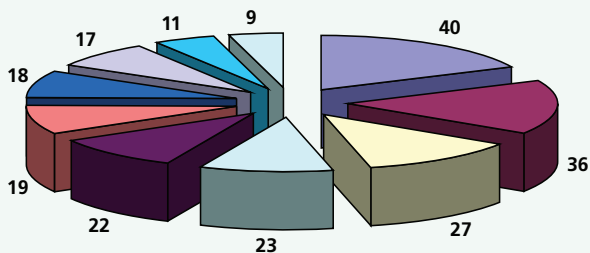
Other MOUs include Abuja, Black Sea, Caribbean, Indian Ocean, Mediterranean, Riyadh and Vina del Mar.

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 web sites.

IMO Procedures for Port State Control, Appendix 1 also provides guidelines on detentions [ISBN: 92-801-5099-5].

MARPOL deficiencies

The following are the most common MARPOL deficiencies (by number) found by Port State Control Officers on Lloyd's Register Group classed ships in 2005



- 1730 oil filtering equipment [40]
- 1705 shipboard oil pollution emergency plan (SOPEP) [36]
- 1710 oil record book [27]
- 1745 15 PPM alarm arrangements [23]
- 1721 retention of oil on board [22]
- 1799 other (MARPOL - Annex I) [19]
- 0150 prevention of pollution by oil (IOPP) [18]
- 2330 garbage record book [17]
- 2320 garbage management plan [11]
- 1740 oil discharge monitoring and control system [9]

1. Operational deficiencies

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 agree with Oil Record Book entries and/or IOPP Record of Construction and Equipment
 - quantity of oily water/sludge landed ashore or incinerated does not reconcile with quantity expected to be produced from machinery spaces
3. **Discharge violation**
 - actual discharge violation noted by oil coating inside clean discharge pipes from OWS
[Note: pipes are often removed for inspection]
 - indications of discharge pipe/valve removal
4. **Inconsistent entries in Oil Record Books 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 Logbook entries
 - falsified Garbage Logbook entries
 - no receipts for garbage landed ashore
6. **Cargo Residues**
 - cargo residues not correctly disposed
 - 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

Certificates and documents that must be carried onboard.

Certificates

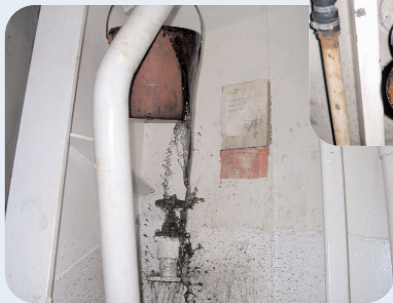
- Oil Pollution Prevention Certificate**
 - valid for up to 5 years and endorsed at Annual and Intermediate surveys
 - includes the Record of Construction and Equipment (FORM A or B)
- Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk or Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk** (whichever is appropriate)
 - 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)**

2. Certificates and documents, continued

Type Approval Certificates

- 7. Oily Water Separator
- 8. 15PPM Alarm
- 9. Oil Discharge Monitoring and Control System (Tankers only)
- 10. Oil/Water Interface Detector (Tankers only)
- 11. Sewage Treatment Comminuting System, if fitted
- 12. Incinerator, if fitted
- 13. Exhaust gas cleaning system SO_x, if fitted
- 14. Exhaust gas cleaning system NO_x, if fitted

OWS test run



Illegal bypass

2. *Certificates and documents, continued*

Documents

Items 16, 21, 23, 24, 27, 28, 29, 30 and 31 should be approved by or, on behalf of, the Flag Administration.

All ships

- 15. **Oil Record Book (Part 1)**
 - must be retained for at least 3 years
- 16. **SOPEP**
- 17. **Garbage Management Plan**
- 18. **Garbage Record Book**
- 19. **Change over procedure and Records – SO_x Emission Control Areas**
- 20. **Bunker Delivery Notes**
 - must be retained for at least 3 years
- 21. **NO_x Technical Files**
- 22. **Ballast Water Management Plan**

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

- 23. **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
- 24. **Crude Oil Washing Manual, if System fitted**

2. *Certificates and documents, continued*

- 25. **Oil Record Book (Part 2)**
 - must be retained for at least 3 years
- 26. **Access to shore based damage stability and residual strength calculations**
- 27. **Dedicated Clean Ballast Tank Operation Manual**
- 28. **Damage Stability Approval**
- 29. **Vapour Emission Control Systems Procedure (Manual)**

Chemical Carrier specific (MARPOL Annex II)

- 30. **Shipboard Marine Pollution Emergency Plans (SMPEP)**
- 31. **Procedures and Arrangements (P and A) Manual**
- 32. **Cargo Record Book**
 - must be retained for at least 3 years
- 33. **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, as required.

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

Note

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.

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

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

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

1. **Packaging**
 - adequate to minimise hazard to the marine environment
2. **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
3. **Documentation**
 - have a special list or manifest or a detailed stowage plan of harmful substances on board including details of their location
4. **Stowage**
 - properly stowed & 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, fully functional with appropriate spares, as required.

1. **Sewage treatment plant, if fitted**
2. **Sewage comminuting system, if fitted**
 - the comminutor is a device for shredding solid sewage waste
3. **Holding tank, if fitted**
 - fitted with means of visually indicating the tank content level
4. **Sewage discharge connection**
 - check suitable bolts and gaskets available

7. Annex V Prevention of Pollution by Garbage from Ships

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

- Placards**
 - ships must display placards (notices) in the working language of the ship and in English or French or Spanish, which inform the crew and passengers of the disposal requirements of garbage
- Incinerator (if fitted)**
 - equipment should be in good condition, properly maintained, fully functional with appropriate spares, as required
- Stowage of material prohibited from being disposed at sea**
 - material should be stowed in suitable receptacles prior to the material being disposed of in port facility
- Segregation of garbage on board**
 - garbage to be segregated into suitably marked receptacles of an approved type
- 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, as required.

1. **Fuel samples**
 - must be retained on board until fuel is used or for 12 months, whichever is greater
2. **Ozone Depleting (OD) substances**
 - 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 prior to maintenance
3. **NOx Direct Monitoring Equipment (if fitted)**
4. **Exhaust gas cleaning system NOx (if fitted)**
5. **Exhaust gas cleaning system SOx (if fitted)**
6. **Incinerator (if fitted)**
7. **Vapour Emission Control System (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 I Future Legislation: Ballast Water Management

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

Documents

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

Notes:

1. This Convention is not yet in force.
2. There are a number of countries that have national Ballast Water Management regulations. These include Argentina, Australia, Brazil, Canada, Chile, Israel (Red Sea), New Zealand and USA State (and Federal). You should refer to the actual country's regulation for detail. Please go to www.lr.org for detail.
3. As a minimum, most national regulations require a Ballast Water Management Plan to be onboard.

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The UK P&I Club is the world's largest mutual P&I club currently insuring over 150 million gross tons of owned and chartered shipping in sixty 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.

The full range of Club activities can be viewed at www.ukpandi.com

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