



MARITIME AND PORT AUTHORITY OF SINGAPORE

PORT MARINE CIRCULAR  
NO. 06 OF 2023

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Bunker Suppliers / Bunker Craft Owners and Operators  
Harbour Craft Community  
Shipping Community

## **GUIDELINES FOR PREVENTING POLLUTION DURING BUNKERING OPERATIONS**

This circular supersedes Port Marine Circular No. 13 of 2019.

2 This circular is a reminder to all vessels that are supplying and receiving bunkers in the Port of Singapore. Bunkering related oil spills are generally due to operational lapses and could be prevented if all the necessary precautions are taken. Please observe the revised guidelines (**ANNEX A**) and checks (**ANNEX B**) before and during bunkering operations.

3 MPA would also like to draw the attention of ship masters and bunker craft operators to Regulation 7 of the Prevention of Pollution of the Sea Act which states the following:

*Prohibition of discharge of oil and oily mixtures from ships*

*7(1) If any discharge of oil or oily mixture occurs from a Singapore ship into any part of the sea or from any ship into Singapore waters, the master, the owner and the agent of the ship shall each be guilty of an offence and shall each be liable on conviction to a fine of not less than \$1,000 and not more than \$1 million or to imprisonment for a term not exceeding 2 years or to both.*

4 To report any incidents related to bunkering operation including bunker oil pollution, please contact the Marine Safety Control Centre (Tel: 6325-2488/2489, VHF Ch 07).

5 Any queries relating to this circular should be directed to either Capt Andrew Leong (Tel: 6325 2478, email: andrew\_leong@mpa.gov.sg) or MPA Marine Safety Control Centre (Tel: 6325 2488/2489, email: pms@mpa.gov.sg).

CAPT CHONG JIA CHYUAN  
PORT MASTER  
MARITIME AND PORT AUTHORITY OF SINGAPORE

## **ANNEX A**

### **GUIDELINES TO BE OBSERVED FOR BUNKERING OPERATIONS**

1. Both bunker tanker and receiving vessel are to be securely moored taking into consideration the prevailing and expected sea/weather conditions. Moorings are to be tended to promptly throughout the entire operation.
2. Vessel at anchor shall ensure that a safe anchor watch is maintained and ensure that sufficient crew members are always available to attend to any emergencies.
3. The entire bunkering operation is to be supervised by a responsible person (i.e. Marine Engineering Officers).
4. During the entire bunkering operation, the mooring lines are to be regularly inspected and adjusted as necessary, supervised by a responsible deck officer.
5. An effective and reliable communication line is to be used and agreed between both bunker tanker and receiving vessel. (Alternatively, if the main communication fails on either ship, the agreed emergency signal is to be sounded and all bunkering operations are to be suspended immediately).
6. Prior to the commencement of bunkering operation, the maximum pumping rate and maximum pressure including starting and topping-up rate must be agreed upon by both bunker tanker and receiving vessel.
7. The emergency shut-down procedure is to be agreed upon by both vessels prior to the commencement of bunkering operation.
8. The bunker hoses/arms are to be in good condition and properly rigged and securely connected.
9. Before commencement of bunkering operation, the receiving vessel shall ensure the following:
  - a. All overboard discharge scuppers are to be effectively plugged and drip trays of adequate size are to be placed in position.
  - b. The cargo and bunker connections when not in use are to be securely blanked off.
10. During the entire bunkering operation, there should be sufficient personnel onboard in a state of readiness to deal with any emergency, including the use of main engine for unmooring should the need arises.
11. No other operation involving internal transfer of bunker is to be carried out onboard either vessel.
12. Firefighting, oil spill response equipment and dispersant are to be ready for immediate use.

13. A person should be in constant attendance at both the delivery and receiving hose connection during the bunkering operation.
14. A safe access between the bunker tanker and receiving vessel is to be provided. Personnel accessing between the vessels must wear appropriate personal protective equipment.
15. Day/night signal is to be exhibited clearly.
16. In event of an oil spill, the Master, owner or agent shall inform the Marine Safety Control Centre immediately (Tel: 6325-2488/2489, VHF Ch 07) and comply with any instructions that may be given.
17. For more detailed guidelines, refer to the Bunkering Pre-Delivery Safety Checklist as stated in Code of practice for bunker mass flow metering (SS 648) published by Enterprise Singapore as amended from time to time.

## ANNEX B

### BUNKERING CHECKLIST FOR BUNKER TANKER AND RECEIVING VESSEL

The vessel operator (both bunker tanker and receiving vessel) must establish bunkering procedures which should as a minimum include the following guidelines and checks.

#### Checks prior to bunker tanker going alongside receiving vessel

No.	Item to be checked	Remarks
1	The fenders have been checked, are in good order.	Yes / No

#### Checks prior to bunkering

No.	Item to be checked	Remarks
1	Is the vessel and the bunker tanker securely moored?	Yes / No
2	Is there safe access between the bunker tanker and receiving vessel?	Accommodation ladder / SOLAS-approved ladder
3	Is the vessel ready to move under its own power?	Yes / No
4	Has the maximum line delivery pressure on vessel side been agreed upon?	Yes / No State max pressure: _____ bar
5	Has the notice period required for completion of transfer been agreed upon?	State notice period: _____ Minutes
6	Has the procedure for draining delivery hoses on completion of transfer been agreed upon?	State procedure:
7	Has the vessel pre-loading plan, transfer sequence, rates, and volumes to be delivered been agreed upon?	a. Sequence of Grades to be supplied b. Initial pumping rate in Mt/hr c. Maximum pumping rate during bunkering Mt/hr d. Topping up pumping rate in Mt/hr e. Collect MSDS sheet from the supplier

No.	Item to be checked	Remarks			
		Grade	Initial Rate	Max Rate	Topping Rate
8	Are transfer hose in good condition, and properly rigged with all flange holes fully bolted?	Yes / No			
9	Are all bunker tank lids closed?	Yes / No			
10	Are unused delivery connections blanked?	Yes / No			
11	Are required delivery warning notices in position?	Yes / No			
12	Are all crew/staff members involved in the bunkering operations wearing the appropriate personal protective equipment including H <sub>2</sub> S and O <sub>2</sub> monitors?	Yes / No			
13	Are hand torches of an approved type?	Yes / No			
14	Are portable electronic devices of an approved type (for marine usage)?	Yes / No			
15	Are restrictions on smoking and the use of naked lights being observed?	Yes / No			
16	Is firefighting equipment positioned and ready for immediate use?	Yes / No			
17	Is emergency oil spill response equipment positioned adjacent to both hose connections?	Yes / No			
18	Is effective communication established between the bunker tanker and the vessel?	State method:			
19	Are there sufficient persons on board and at the delivery point to deal with emergencies?	State number of persons:			
20	Has the emergency signals and shut down procedure been agreed upon?	State procedure:			
21	Are the scuppers and drains on board properly plugged?	Yes / No			
22	Is adequate lighting available to perform operations during hours of darkness?	Yes / No			
23	Has all the involved crew from the receiving vessel been briefed on the bunkering plan such as the sequence of the receiving fuel tanks and the shipboard procedure.	Yes / No			

No.	Item to be checked	Remarks
24	Has the receiving vessel bunker plan been approved by Master/office prior commencing?	Yes / No
25	Has the receiving vessel confirmed the fuel tank will not be more than the tank safety limit.	Yes / No
26	Has the fuel oil tank high level alarm been tested by receiving vessel?	Yes / No
	Are there any defective sensors found?	Yes / No
	If applicable, what measures are placed when bunkering the affected fuel oil tanks?	

#### During bunkering operations

No.	Item to be checked	Remarks
1	Is a person in constant attendance at both the delivery and receiving hose connections?	Yes / No  Rank/Designation of responsible person:
2	Is adequate Bridge watch being maintained and is the weather being continuously monitored?	Yes / No
3	Are safety rounds, including deck rounds, mooring checks made regularly?	Yes / No  Frequency of safety, deck and mooring check rounds:
4	Are all external doors and ports in the accommodation closed?	Yes / No
5	Are the ship's bunker tanks being continuously monitored for filling level and is the tank filling plan available and discussed with bunker tanker prior commencing transfer?	Yes / No
6	Where simultaneous operations are underway the Master to ensure persons handling the bunkering operation are not assigned to multiple tasks that will distract from the bunkering operation?	Yes / No

#### Prior to upon completion of bunkering operations

No.	Item to be checked	Remarks
1	Has the bunker tanker been notified to reduce the pumping rate during final stages of tank filling?	Yes / No  Initial pump rate: Reduced pump rate for topping up:
2	Has the correct bunker tank(s) valve(s) opened in preparation for blow through? (Only two air blows are permitted).	Yes / No
3	Has all the sounding pipe lids been closed?	Yes / No
4	Has the maximum line clearing pressure from bunker tanker side been agreed for blow through?	Max line clearing pressure:  _____ bars
5	Crew member(s) standing by at the main deck to monitor for oil overflowing from the air vents?	State number of persons:

Please note that the above checklist is not exhaustive. The master and crew are still fully responsible for preventing any oil spills that may occur during bunkering operations, including those resulting from causes not included in the checklist above.