
The Clean Marine Fuels working group

# Bunker Checklist

## Alcohol Based Series

Single Truck to Ship bunker operations

Version T

Bunker operations that are supervised by
a Bunker Facility Operator at a terminal

The different versions of the IAPH Truck to Ship bunker checklists are based upon the number of involved trucks, location and supervision during the alcohol based fuel bunkering as per table below:

| Bunker operation | Supervision | Location | Checklist to be used |
|---|---|---|---|
| Single Truck to Ship | BFO | Bunker facility | TTS version A |
| Single Truck to Ship | Receiving vessel | Site outside a terminal | TTS version B |
| Multiple Trucks to Ship | BFO | Bunker facility | TTS version M |
| Single Truck to Ship | BFO | Terminal | TTS version T |

This document is the Single Truck to Ship bunker checklist version T for alcohol based fuels

## Content

## Who is this checklist for?

This document is **version T** of IAPH's Truck to Ship bunker checklist series for alcohol based fuels using a single truck. This checklist is suitable for flammable and toxic liquids, among others methanol, bio-methanol, e-methanol, ethanol and bio-ethanol.

This version is for a Bunker Facility Operator (BFO), the receiving vessel and the terminal operator. It has been developed specifically for bunkering of vessels at a terminal under supervision of a Bunker Facility Operator. The terminal has a role in controlling land-based activities but is not involved in the safety management of the bunker operation.

Safe bunker operations depend on good closed-loop communication between all parties involved in the bunker operation, and on compliance with the agreed safety procedures at all stages. This bunker checklist helps to ensure that all appropiate checks are formally agreed, carried out and recorded.

The checklist has been developed in coöperation with maritime industry partners that have expertise on Single Truck-To-Ship bunkering of vessels with alcohol based fuels. The checklist mitigates the risk of the flammable and toxic nature of the liquid fuel.

The bunker process is devided into six phases and the checklist has therefore six main parts:

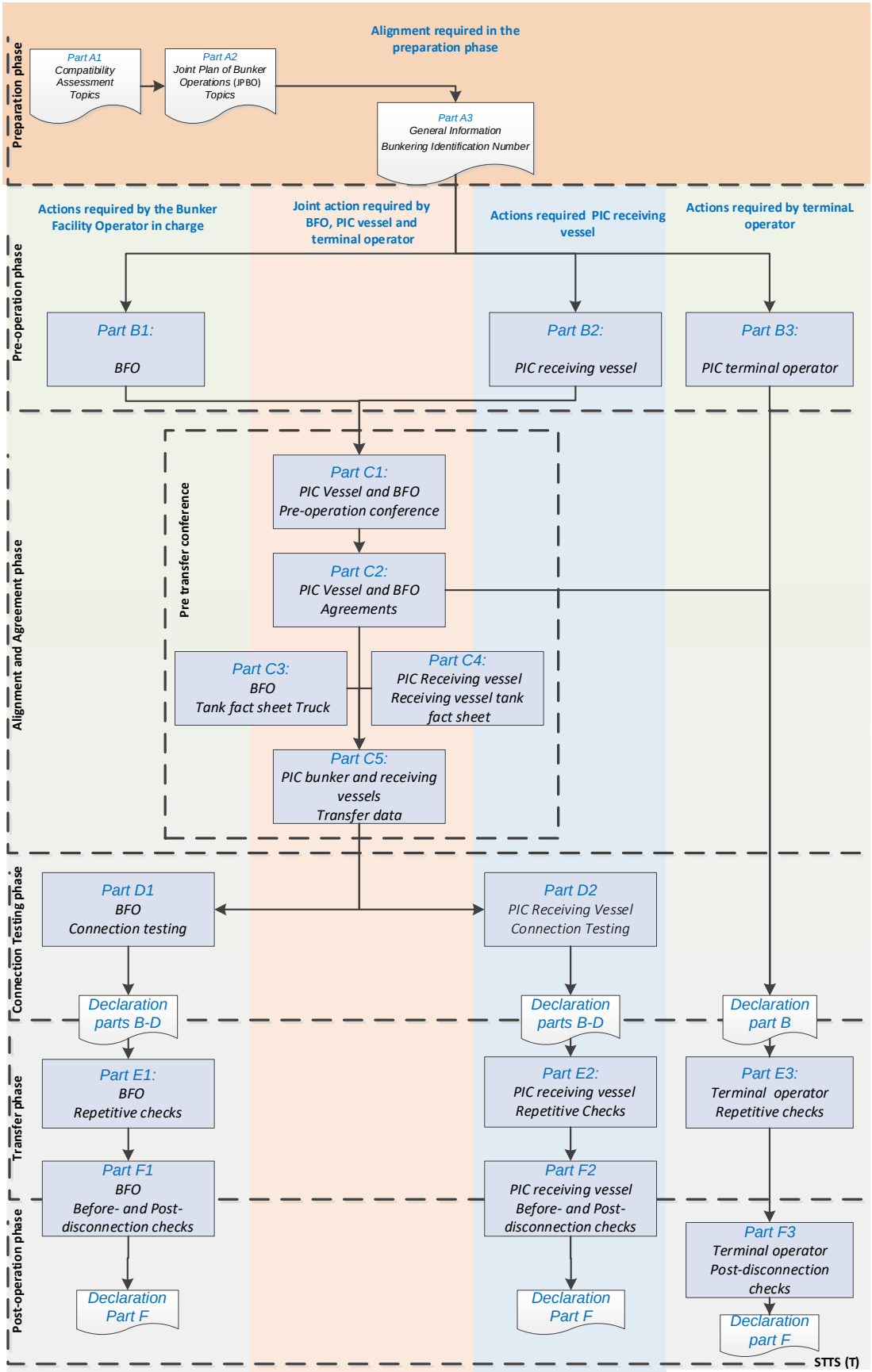
Part A – Preparation phase;
Part B – Pre-operation phase;
Part C – Alignment and agreement phase;
Part D – Connection testing phase;
Part E – Transfer phase;
Part F – Post-operation phase

## Used abbreviations

| | |
|---|---|
| BFO | Bunker Facility Operator |
| BIN | Bunker Identification Number |
| JPBO | Joint Plan of Bunker Operations |
| BMP | Bunkering Management Plan |
| ESD | Emergency Shut Down |
| (P)ERC | (Powered) Emergency Release Coupling |
| PIC | Person in Charge |
| PPE | Protecting Personal Equipment |
| QCDC | Quick connect and disconnect coupling |
| SIMOPS | Simultaneous Operations |
| TTS | Truck to Ship |

## Schematic overview of the bunker process

Below is an overview of this specific STTS bunker process in in which which the Bunker Facility Operator has supervision.



# Instructions for completing the truck-to-ship bunker checklist

The checklist consists of six main parts, A - F. The main parts are divided into multiple sub-parts for individual completion by either the bunker facility operator (BFO), the person in charge (PIC) of the receiving vessel, or the terminal operator. In Part C the sub-parts are completed together during the pre-transfer conference.

## Part A: Preparation phase

In the preparation phase the BFO and the receiving vessel operator shall start a compatibility assessment. **Part A1** with topics for the compatibility can be used to check if all issues are addressed. The receiving vessel operator and BFO then agree on who will draft the Joint Plan for Bunker Operations (JPBO). The agreed party will draft the JPBO based on the operation manual of the truck operator, the bunker management plan of the involved vessel, the site- and local specific information from the terminal, and the agreements made during the compatibility check. **Part A2** with topics for the Joint Plan of Bunker Operations can be used to check if all issues are addressed. The agreed party shall send the JPBO to all parties involved.

*If there are any outstanding issues this should be explained in the communication for pre-arrival review by the representatives.*

Upon receipt of the JPBO, parties involved shall complete **part A3** with the general bunker information and an agreed unique 'Bunker Identification Number' (BIN). This BIN shall be entered in the top right corner on each sub-part throughout the checklist.

## Part B: Pre-operation stage

The person in charge (PIC) of the BFO shall complete **part B1**. The PIC of the receiving vessel shall complete **part B2.** Copies of part B1 and B2 shall be exchange with the other party a.s.a.p., but not later than the pre-transfer conference. The terminal operator shall complete **part B3.**

## Part C: Alignment and agreement phase

Before the operation starts the PIC of the BFO and the PIC of the receiving vessel shall meet to conduct a pre-transfer conference. They shall jointly complete **part C1** and the agreement sheet **part C2**. The PIC of the BFO shall exchange relevant operational information to the terminal operator. The PIC of the BFO shall complete **part C3** and share it with the PIC receiving vessel. The PIC of the receiving vessel shall complete **part C4** and share it with the BFO. To finalize the pre-bunkering phase the PIC of the receiving vessel and the BFO shall jointly complete **part C5.**

## Part D: Connection and testing phase

Before the operation starts the PIC of the BFO shall complete **part D1** the PIC of the receiving vessel shall complete **part D2**.

## Pre-transfer declaration

Before transfer, the PICs of the bunker vessel and the receiving vessel shall undersign the items checked in parts B - D. Before transfer, the terminal operator shall undersign the items checked in parts B.

### Part E: Transfer phase

The BFO shall complete the repetitive checks in **part E1** at the agreed intervals. The PIC receiving vessel shall complete the repetitive checks in **part E2** at the agreed intervals. The terminal operator shall complete the repetitive terminal/site checks in **part E3** at the agreed intervals. Each involved party shall have the record available for review by another party.

### Part F: Post-operation phase

At the end of the transfer, before disconnection, the PIC of the BFO shall complete the checks "Before disconnection" of **part F1**, and the PIC of the receiving vessel shall complete the checks "Before disconnection" of **part F2**. When they have confirmed to eachother that their pre-disconnection checks are satisfactory, they may disconnect. After disconnection the PIC of the BFO shall complete the **part F1** checks "Completion of operation", the PIC of the receiving vessel shall complete the **part F2** checks "Completion of operation". The terminal operator shall complete **part F3**.

### Post-operation declaration

After transfer the PICs of the bunker vessel, receiving vessel and site operator shall undersign the items checked in part F.

## Special notes

#### Checklist code

The codes that are used in the checklist columns indicate:

| | |
|---|---|
| A | To be entered in the agreement sheet: Part C2 |
| R | Subject to a repetitive check: Part E1, E2, E3 |
| JPBO | See the Joint Bunker Management Plan for details |

If the "☐ *Not applicable"* tick box is used, then all the involved parties must agree that the relevant safeguard is not applicable.

#### When unable to check the Yes box

If during the use of the checklists in phase B – F it isn't possible to satisfactorily tick a "Yes" box while the check is applicable, then the issue shall be brought to the immediate attention of the other parties and corrected before the start of the operation. If it is not possible to correct the issue, then a further joint review should be undertaken to confirm whether the bunkering can safely proceed and whether additional mitigations are required to be agreed.

#### Agreed Physical Quantity

To avoid any confusion during the operation, in Part C5 an agreed decision shall be made on the physical quantity unit:

| Agreed Physical Quantity Unit (PQU) |
|---|
| Note the agreed Physical Quantity Unit (PQU): ☐ $m^3$ or ☐ tonnes or _____ |

In this block the agreement is noted on the unit for quantity or volume that will be used during the exchange of information on the quantity or volume.

# Part A1
## Preparation - Compatibility assessment topics

The list of topics is an unlimited open guidance and can be expanded with other topics.

**Local and Site requirements:**
- Local regulations and approvals
- Site electrical equipment in the Hazardous zone
- Control zones and safety measures
- Controlled access to safety and hazardous zone
- Approved safety distance to public (external safety)
- Maximum permitted load of the quay or jetty

**Mooring:**
- Mooring analyses
- Mooring points
- Mooring loads
- Mooring lines
- Mooring gear load limits (bollards, chocks, rollers etc.)
- Fendering
- Hull form flat side
- Overall dimensions
- Bridge wing
- Freeboard

**Equipment:**
- Approved transfer equipment
- Electrical insulation
- International shore connection
- Crane and crane reach
- Hoses
- Hose support equipment
- Vessel bunker manifold
- Deluge System
- Drip trays, gutters

**Manifold:**
- Distancing
- Spacing, orientation
- Height and strength
- Layout
- Instrumentation
- Connections, size and design
- QCDC
- Spill containment

**Connection:**
- Lifting arrangements
- Bunker hose configuration
- Distancing (between manifold and bunkerstation - height and length)
- ESD, ESD interlink
- (P)ERC / Dry break away coupling

**Bunkering and safety measures:**
- Freebooard differences during bunkering
- Draft and tidal changes
- Weather and Wave conditions
- Bunkering procedures including purging and tests
- Transfer data
- Maximum allowable parameters
- Vapour management
- Hazardous area classification and control
- Exposure distances conform Industrial standards
- SIMOPS
- Supervision by BFO

**Truck:**
- Routing at the site
- Shore bunker location arrangement
- Bonding of truck
- Engine switch off
- Pump
- Weels chock measures

**People:**
- Personnel Instruction
- Incident response instruction and training
- Familiarity of personnel with safety areas and safety measures during bunkering
- Emergency stop signal and shutdown procedures
- Organisation
- Roles and Responsibilities
- PIC appointment

**Incident response:**
- Fire control plan
- Emergency Response procedures
- Contingency planning

**Communication:**
- Joint Plan of Bunker Operations (JPBO)
- Means of communication
- Communication procedures and contact
- Details involved parties
- Language
- Communication PICs Truck(s) and Ship
- Data communication between safety and ESD systems

# Part A2
## Preparation - Joint Plan of Bunker Operations topics

The list of topics is an unlimited open guidance and can be expanded with other topics.

| | |
|---|---|
| **General**<br>- Unique Bunker Identification Number (BIN)<br>- Purpose and scope of the JPBO<br>- Report of the Compatibility check<br><br>**Transfer system**<br>- ESD link<br>- ESD test<br>- Emergency Release System<br>- Spill /gas detection and control systems<br><br>**Roles and Responsibilities**<br>- Organization<br>- Responsibilities BFO-PIC vessel, truck driver and manifold crew in charge<br>- Mandatory permissions<br><br>**Bunker operation**<br>- Approach<br>- Mooring<br>- Shore bunker location arangement<br>- Handling and connection of bunker hose and vapor return hose (if applicable)<br>- Hose Saddle, Deluge System, Manifold Connection, Drip trays, gutters.<br>- Connection, pressure test, purging, cooling down, gassing up<br>- Environmental Operating Limits<br>- Sequence of actions in case of a spill<br>- PPE, personal safety<br>- Draining, purging disconnecting, inerting<br>- Post transfer procedures<br>- Unmooring | **Vessels details**<br>- Description of the involved vessel<br>- Specification of the ships<br>- Access to the vessel and access control of safety zones (including supervision)<br><br>**BFO and truck details**<br>- Description of the BFO<br>- Description of the involved truck<br>- Specification of the involved truck<br>- Access control of safety zones (including supervision) around the truck<br><br>**Bunker preparation**<br>- Mooring analyses report, mooringplan<br>- Description of location, bunkering zones<br>- Description of the truck routing on the site<br>- Description of safety zones<br>- Fendering / mooring<br>- Checklist to be used, latest version<br>- Safety meeting<br>- Bunker transfer: equipment and procedures<br>- Energy carrier supply specification<br>- Volumes (Quantities and characteristics)<br>- Communication (e.g. language), contact details<br>- SIMOPS<br>- Control zones, safeguards<br><br>**Emergencies**<br>- Emergency preparedness and response<br>- Emergency shutdown system<br>- Dry break away coupling |

# Part A3
## General information and bunkering identification number

Bunker Identification Number (BIN): _____

JPBO version number: _____

Planned date and time: _____

Port and Berth: _____

Energy carrier: Methanol / _____

Receiving vessel: _____

Bunker Facility Operator: _____

Terminal: _____

BIN: _____

# Part B1
## Pre-operation - Bunker Facility Operator

| B1 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 1 | Required permissions (including terminal permission ) are granted and observed | ☐ Yes | | |
| 2 | Firefighting equipment is ready for use | ☐ Yes | | |
| 3 | Sufficient area illumination | ☐ Yes | A - R | |
| 4 | The truck is able to move under its own power in a safe and non-obstructed direction | ☐ Yes | R | |
| 5 | Access to the terminal is controlled | ☐ Yes | R | |
| 6 | The bunker location is accessible for the truck | ☐ Yes | | |
| 7 | A safe emergency escape route is established | ☐ Yes | | |
| 8 | Terminal personnel is acquainted with the restricted area and applicable restrictions | ☐ Yes | JPBO | |
| 9 | Appropriate personal protective equipment is identified and available | ☐ Yes | | |
| 10 | Terminal's emergency response team is instructed. | ☐ Yes | | |
| 11 | Underground or subterranean waterdrains in the quay surface in the hazardous and safety zone are closed | ☐ Yes | | |
| 12 | JPBO, supervision and responsibilities are known by the involved truck driver | ☐ Yes | JPBO | |
| 13 | Allocation for bunkering and arrangement of the truck and equipment is conform to JPBO | ☐ Yes | R-JPBO | |
| 14 | The restricted area is free of unauthorized persons, objects, and ignition sources | ☐ Yes | R-JPBO | |
| 15 | Means to avoid backfilling are in place | ☐ Yes | R | |
| 16 | Bunker pumps are ready for use | ☐ Yes | | ☐ *Not applicable* |
| 17 | The truck is electrically grounded and the wheels are chocked or mechanically blocked | ☐ Yes | R | |

| | | | | |
|---|---|---|---|---|
| 18 | Truck engine is switched off during the connection, purging and disconnection of the bunker hoses | ☐ Yes | | ☐ *Not applicable* |
| 19 | Control valves are well maintained and in good working order | ☐ Yes | | |

BIN: _____

# Part B2
## Pre-operation - PIC receiving vessel

| B2 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 1 | Mooring arrangement is effective | ☐ Yes | R | |
| 2 | Firefighting equipment is ready for use | ☐ Yes | | |
| 3 | Fire control plans are readily available | ☐ Yes | | |
| 4 | International Shore Fire Connection is available. | ☐ Yes | | |
| 5 | Sufficient area illumination | ☐ Yes | A - R | |
| 6 | The receiving vessel can sail under its own power in a safe and non-obstructed direction | ☐ Yes | R | |
| 7 | The restricted area is free of other ships, unauthorized persons, objects, and ignition sources | ☐ Yes | R | |
| 8 | Vessel entrance is controlled, and proper safety information is provided at the gangway | ☐ Yes | R | |
| 9 | Safety measures within the safety area are observed | ☐ Yes | R | |
| 10 | External doors, portholes and accommodation ventilation inlets are closed as per operations manual | ☐ Yes | R | |
| 11 | Appropriate personal protective equipment is identified and available | ☐ Yes | | |
| 12 | Safety shower and eyewash are ready for use | ☐ Yes | | |
| 13 | Spill arrangements are effective and suitable for the applicable fuel | ☐ Yes | | |
| 14 | Scuppers and save-alls are plugged, spill trays are empty and drains are closed. | ☐ Yes | | |
| 15 | Inert gas system is in good working order | ☐ Yes | | |
| 16 | Control valves are well maintained and in good working order | ☐ Yes | | |
| 17 | Unused bunker connections are blanked and fully ~~s~~ecured | ☐ Yes | | |

| | | | | |
|---|---|---|---|---|
| 18 | Planned SIMOPS are in accordance with the safety procedures and risk mitigation in ship's operational documentation and JPBO | ☐ Yes | R - JPBO | ☐ *Not applicable* |
| 19 | SIMOPS will be compliant with local regulations and restrictions | ☐ Yes | | ☐ *Not applicable* |
| 20 | Mandatory signalling for bunkering is shown | ☐ Yes | A | ☐ *Not applicable* |

BIN: _____

# Part B3
## Pre-operation - Terminal Operator

| B3 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 1 | Join Plan of Bunker Operation received | ☐ Yes | JPBO | |
| 2 | Access to the terminal is controlled | ☐ Yes | R | |
| 3 | Sufficient area illumination | ☐ Yes | A - R | |
| 4 | The vessel is capable and allowed to take berth at the planned location | ☐ Yes | | |
| 5 | The bunker location is accessible for the truck | ☐ Yes | | |
| 6 | The total truck weight does not exceed the maximum permitted load of the quay or jetty | ☐ Yes | | |
| 7 | The truck is able to move in a safe and non-obstructed direction | ☐ Yes | R | |
| 8 | A safe emergency escape route is established for the truck | ☐ Yes | | |
| 9 | Access to the restricted areas is controlled | ☐ Yes | R | |
| 10 | Terminal personnel is acquainted with the restricted area and applicable restrictions | ☐ Yes | JPBO | |
| 11 | Terminal's emergency response team is instructed. | ☐ Yes | | |
| 12 | Underground or subterranean waterdrains in the quay surface in the hazardous and safety zone are closed | ☐ Yes | R | |
| 13 | JPBO, supervision and responsibilities are known by involved terminal personnel | ☐ Yes | JPBO | |
| 14 | Allocation for bunkering and arrangement of the truck and equipment is conform to JPBO | ☐ Yes | R - JPBO | |
| 15 | Safety area around the truck is established conform to JPBO | ☐ Yes | JPBO | |

BIN: _____

# Part C1
## Alignment and Agreement -
## Bunker Facility Operator and PIC receiving vessel

| C1 | Check | BFO | Vessel | Code | Remarks |
|---|---|---|---|---|---|
| 1 | Present weather and wave conditions are within the agreed limits | ☐ Yes | ☐ Yes | A - R | |
| 2 | JPBO procedures are known by personnel involved | ☐ Yes | ☐ Yes | JPBO | |
| 3 | Access between the ship and shore is safe and controlled | ☐ Yes | ☐ Yes | R | |
| 4 | Operation supervision and watchkeeping is adequate | ☐ Yes | ☐ Yes | | |
| 5 | Means of communications agreed upon | ☐ Yes | ☐ Yes | A - R | |
| 6 | Emergency stop signal and shutdown procedures have been agreed upon, tested, and explained to all personnel involved. | ☐ Yes | ☐ Yes | A | |
| 7 | Emergency procedures and plans and the contact numbers are known to the persons in charge | ☐ Yes | ☐ Yes | | |
| 8 | Predetermined restricted areas are established and appropriate signs marking these areas are in place | ☐ Yes | ☐ Yes | A - R | |
| 9 | Agreed safety measures within the safety area are in place including the use of proper PPE | ☐ Yes | ☐ Yes | R | |
| 10 | Measures for the prevention of falling objects are observed | ☐ Yes | ☐ Yes | | ☐ *Not applicable* |
| 11 | Safety Data Sheets are available | ☐ Yes | ☐ Yes | | |
| 12 | Requirements concerning ignition sources and toxicity are observed | ☐ Yes | ☐ Yes | R | |
| 13 | Bunker system gauges, high level alarms and high-pressure alarms are agreed upon | ☐ Yes | ☐ Yes | R | |
| 14 | Sampling tools agreed upon | ☐ Yes | ☐ Yes | | ☐ *Not applicable* |
| 15 | Vapour management agreed upon | ☐ Yes | ☐ Yes | | ☐ *Not applicable* |
| 16 | ESD system agreed upon. Vessel PIC can activate ESD trucks, BFO PIC can activate ESD vessel | ☐ Yes | ☐ Yes | A | |

| | | | | | |
|---|---|---|---|---|---|
| 17 | Emergency release system agreed upon | ☐ Yes | ☐ Yes | A | ☐ *Not applicable* |
| 18 | Adequate electrical insulation for the bunker transfer equipment is in place | ☐ Yes | ☐ Yes | A | ☐ *Not applicable* |
| 19 | Competent authorities are notified of the start of bunker operations as per local regulations | ☐ Yes | ☐ Yes | | ☐ *Not applicable* |
| 20 | Safety procedures and risk mitigation for SIMOPS are conform to the ship's operational documentation and the JPBO | ☐ Yes | ☐ Yes | JPBO - R | ☐ *Not applicable* |

BIN: _____

# Part C2
## Alignment and Agreement - PICs BFO and receiving vessel

| C2 | Reference to check | Description | Agreement |
|---|---|---|---|
| 1 | A3 | Latest version of the JPBO | Reference:<br>Date / version: |
| 2 | C1-20 | Electrical insulation | Method: |
| 3 | C1-8 | Control zones | Reference:<br><br>Agreed signs: |
| 4 | C1-1 | Weather and wave limitations | Limits: |
| 5 | B1-3<br>B2-5<br>B3-3 | Bunker area illumination | Method: |
| 6 | C1-5 | Communication | VHF / UHF Channel: _____<br><br>Language: _____<br><br>Primary System: _____<br><br>Backup System: _____ |
| 7 | C1-6 | Emergency stop signal and shutdown procedure | Reference:<br><br>Alarm signal: |
| 8 | C1-16<br>C1-17 | ESD system | System:<br>Link:<br><br>Closing time ESD valve receiving ship: _____ seconds<br>Closing time ESD valve Truck: _____ seconds<br><br>ERC ☐ Yes<br>Dry Break Coupling ☐ Yes |
| 9 | B2-20 | Signaling | Mandatory signaling during bunkering: |

BIN: _____

# Part C3
## Alignment and Agreement - PIC Bunker Facility Operator

### Tank factsheet truck

| C3 | | Status prior to bunker operations | | |
|---|---|---|---|---|
| | | Tank truck ID: | | |
| 1 | Quantity per tank: | | | $m^3$ |
| 2 | Temperature: | | | °C / °F [1)] |
| 3 | O2 % | | | % |

[1)] delete as appropriate

BIN: _____

# Part C4
## Alignment and Agreement - PIC receiving vessel

### Tank factsheet receiving vessel

| C4 | | Status bunker tanks prior to bunker operations | | | | |
|---|---|---|---|---|---|---|
| | | Tank: | Tank: | Tank: | Tank: | |
| 1 | Present fuel quantity bunker tank(s): | | | | | $m^3$ |
| 2 | Temperature: | | | | | °C / °F [1)] |
| 3 | O2% | | | | | % |
| 4 | Remaining capacity for bunkering: | | | | | $m^3$ |
| 5 | Inert gas: | ☐ Nitrogen | | Other: | | |

[1)] delete as appropriate

BIN: _____

# Part C5
## Alignment and Agreement - PICs BFO, receiving vessel and terminal

### Transfer Data

| C5 | Agreed Physical Quantity Unit (PQU) |
|---|---|
| 1 | The agreed Physical Quantity Unit (PQU): ☐ $m^3$ or ☐ tonnes or _____ |

| C5 | Agreed transfer data | Bunker Facility Operator | Receiving vessel | |
|---|---|---|---|---|
| 2 | Temperature of the fuel during bunkering: | | | °C / °F [1] |
| 3 | Volume of fuel to be bunkered: | | | $m^3$ |
| 4 | Filling limit bunker tanks: | | | % |
| 5 | Available tank capacity is sufficient for bunker volume: | ☐ Yes | ☐ Yes | |
| 6 | Starting rate: | | | PQU per hour |
| 7 | Max transfer rate: | | | PQU per hour |
| 8 | Topping up rate: | | | PQU per hour |
| 9 | Work pressure at manifold: | | | bar / psi [1] (rel) |
| 10 | Max pressure at manifold: | | | bar / psi [1] (rel) |
| 11 | Bunker line work pressure: | | | bar / psi [1] (rel) |
| 12 | Max pressure bunker line: | | | bar / psi [1] (rel) |

1) delete as appropriate

## Simultaneous operations

| C5 13 | Agreed simultaneous bunker operations (SIMBOPS) [1)] | Bunker Facility Operator | Receiving vessel |
|---|---|---|---|
| | ☐ *Not applicable* | ☐ Agreed | ☐ Agreed |

[1)] Note that for oil bunker operations a separate bunker checklist should be completed

| C5 14 | Agreed simultaneous operations during bunkering (SIMOPS) | Bunker Facility Operator | Receiving vessel |
|---|---|---|---|
| | ☐ *Not applicable* | ☐ Agreed | ☐ Agreed |

| C5 15 | Restrictions in Bunker / Cargo operations due to SIMBOPS or SIMOPS | Bunker Facility Operator | Receiving vessel |
|---|---|---|---|
| | ☐ *Not applicable* | ☐ Agreed | ☐ Agreed |

BIN: _____

# Part D1
## Connection Testing - PIC Bunker Facility Operator

| D1 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 1 | All means of communication are tested | ☐ Yes | R | |
| 2 | Bunker transfer equipment is confirmed:<br>- in good condition<br>- of the appropriate type<br>- sufficiently supported<br>- properly fitted with gaskets/seals<br>- lined-up correctly<br>- properly rigged<br>- secured to the manifolds<br>- sufficiently supported | ☐ Yes | | |
| 3 | Gas detection systems are tested and operational | ☐ Yes | | |
| 4 | Emergency stop signals and shutdown procedures are tested | ☐ Yes | | |
| 5 | Bunker system gauges, high level alarms are operational | ☐ Yes | | |
| 6 | Safety and control devices on fuel installations are checked and working properly | ☐ Yes | | |
| 7 | Truck ESD arrangements, including automatic valves, are tested and ready for activation | ☐ Yes | | |
| 8 | ESD inter-linked connections are established and tested conform the JPBO | ☐ Yes | JPBO | ☐ *Not applicable* |
| 9 | ESD's manual activation is tested | ☐ Yes | | |
| 10 | Control valves are in the correct initial positions | ☐ Yes | | |
| 11 | Vapour return system tested and ready for use | ☐ Yes | | ☐ *Not applicable* |
| 12 | Transfer system tested and ready for use | ☐ Yes | | |
| 13 | Truck engine is switched off for bunkering | ☐ Yes | | ☐ *Not applicable* |
| 14 | Other parties informed on ready to bunker | ☐ Yes | | |

BIN: _____

# Part D2
## Connection Testing - PIC receiving vessel

| D2 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 1 | All means of communication are tested | ☐ Yes | R | |
| 2 | Bunker transfer equipment is confirmed:<br>- in good condition<br>- of the appropriate type<br>- sufficiently supported<br>- properly fitted with gaskets/seals<br>- lined-up correctly<br>- properly rigged<br>- secured to the manifolds<br>- sufficiently supported | ☐ Yes | | |
| 3 | Gas detection systems are tested and operational | ☐ Yes | | |
| 4 | Emergency stop signals and shutdown procedures are tested | ☐ Yes | | |
| 5 | Bunker system gauges, high level alarms are operational | ☐ Yes | | |
| 6 | Safety and control devices on fuel installations are checked and working properly | ☐ Yes | | |
| 7 | Ship's ESD arrangements, including automatic valves, are tested and ready for activation | ☐ Yes | | |
| 8 | ESD inter-linked connections are established and tested conform the JPBO | ☐ Yes | JPBO | |
| 9 | ESD's manual activation is tested | ☐ Yes | | |
| 10 | Control valves are in the correct initial positions | ☐ Yes | | |
| 11 | Vapour return system tested and ready for use | ☐ Yes | | ☐ *Not applicable* |
| 12 | Transfer system tested and ready for use | ☐ Yes | | |
| 13 | Other parties informed on ready to bunker | ☐ Yes | | |

BIN: _____

# Declaration on parts B - D

We the undersigned have checked the items in the applicable parts B – D as marked and signed below:

| | Bunker Facility Operator | Receiving vessel | Terminal |
|---|---|---|---|
| JPBO received | ☐ | ☐ | ☐ |
| Part B - Pre-operation | ☐ | ☐ | ☐ |
| Part C - Alignment and agreement | ☐ | ☐ | |
| Part D - Connection testing | ☐ | ☐ | |

We have satisfied ourselves that the entries we have made are correct to the best of our knowledge and that the parties involved agree to undertake the bunker operation.

We have also made arrangements to carry out repetitive checks as necessary and agreed that those items coded 'R' in the checklist, and noted in part E, which should occur at intervals not more than _____ hours.

If, to our knowledge, the status of any item changes, we will immediately inform the other party.

| Bunker Facility Operator | Receiving vessel | Terminal |
|---|---|---|
| Name | Name | Name |
| Position | Position | Position |
| Signature | Signature | Signature |

BIN: _____

# Part E1
## Transfer - PIC Bunker Facility Operator

Repetitive checks

Note interval: _____ hrs.

| E1 | Check | Time | Time | Time | Time | Time | Time | Remarks |
|---|---|---|---|---|---|---|---|---|
| - | Time of check | | | | | | | |
| 1 | Access ship shore is safe and controlled | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 2 | Communication is functioning | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 3 | Illumination is sufficient | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 4 | The restricted area and safety zone requirements are observed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 5 | Ignition source and toxicity restrictions are observed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 6 | Back filling protection is operational | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 7 | Truck cannot move unintentionally | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 8 | SIMOPS restrictions are observed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ *Not applicable* |
| 9 | Fuel level has been checked | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| - | Initials | | | | | | | |

BIN: _____

# Part E2
## Transfer - PIC receiving vessel

### Repetitive checks

Note interval: _____ hrs.

| E2 | Check | Time | Time | Time | Time | Time | Time | Remarks |
|---|---|---|---|---|---|---|---|---|
| - | Time of check | | | | | | | |
| 1 | Weather / wave conditions within limits | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 2 | Mooring arrangement is effective | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 3 | Access ship shore is safe | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 4 | Communication is functioning | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 5 | Illumination is sufficient | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 6 | Ship can sail under its own power | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 7 | Accommodation's external doors and ports are closed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 8 | The restricted area and safety zone requirements are observed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 9 | Vessel entrance is controlled, and proper safety information is provided at the gangway | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 10 | Ignition sources and toxicity restrictions are observed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 11 | SIMOPS restrictions are observed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ *Not applicable* |
| 12 | Fuel levels have been checked | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| - | Initials | | | | | | | |

BIN: _____

# Part E3
# Transfer - Terminal

## Repetitive checks

Note interval: _____ Hr.

| E3 | Check | Time | Time | Time | Time | Time | Time | Remarks |
|---|---|---|---|---|---|---|---|---|
| - | Time of check | | | | | | | |
| 1 | Access to the terminal is controlled/closed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 2 | Access to the restricted areas is controlled | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 3 | Underground or subterranean waterdrains in the quay surface in the hazardous and safety zone are closed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 4 | Communication is functioning | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 5 | Illumination is sufficient | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 6 | Allocation for bunkering and arrangement of the truck and equipment is conform JPBO | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 7 | The restricted area and safety zone requirements are observed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 8 | Ignition source restrictions are observed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | |
| 9 | SIMOPS restrictions are observed | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ *Not applicable* |
| - | Initials | | | | | | | |

BIN: _____

# Part F1
## Post-operation - PIC Bunker Facility Operator

### Post-transfer - Before disconnection

| F1 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 1 | Relevant bunker hoses, vapour return lines, fixed pipelines and manifolds are:<br>- purged<br>- inerted<br>- depressurized<br>- liquid free<br>- ready for disconnection | ☐ Yes | | |
| 2 | All remotely and manually operated valves are closed as required for safe disconnection | ☐ Yes | | |
| 3 | Receiving vessel is notified on “ready to disconnect” | ☐ Yes | | |

### Post-disconnection - Completion of operation

| F1 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 4 | Bunker and restricted areas on the shore are cleared and restored to standard condition | ☐ Yes | | |
| 5 | Relevant documents are signed and exchanged | ☐ Yes | | |
| 6 | Competent authorities are notified on the completion of the bunker operation | ☐ Yes | | |
| 7 | Near misses and incidents are reported to competent authorities | ☐ Yes | | ☐ *Not applicable* |

BIN: _____

# Part F2
# Post-operation - PIC receiving vessel

## Post-transfer - Before disconnection

| F2 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 1 | Relevant bunker hoses, vapour return lines, fixed pipelines and manifolds are:<br>- purged<br>- inerted<br>- depressurized<br>- liquid free<br>- ready for disconnection | ☐ Yes | | |
| 2 | All remotely and manually operated valves are closed as required for safe disconnection | ☐ Yes | | |
| 3 | BFO is notified on “ready to disconnect” | ☐ Yes | | |

## Post-disconnection - Completion of operation

| F2 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 4 | Bunker and restricted areas on the vessel are cleared and restored to standard condition | ☐ Yes | | |
| 5 | Relevant documents are signed and exchanged | ☐ Yes | | |
| 6 | Near misses and incidents are reported to competent authorities | ☐ Yes | | ☐ *Not applicable* |

BIN: _____
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# Part F3
## Post-operation - Terminal

| F2 | Check | Status | Code | Remarks |
|---|---|---|---|---|
| 1 | Bunker and restricted areas on the shore are cleared and restored to standard condition | ☐ Yes | | |
| 2 | Relevant documents are signed and exchanged | ☐ Yes | | |
| 3 | Near misses and incidents are reported to competent authorities | ☐ Yes | | |

BIN: _____

## Declaration on part F

We the undersigned have checked the items in parts F as marked and signed below:

| | Bunker Facility Operator | Receiving vessel | Terminal |
|---|---|---|---|
| Part F - Post-operation | ☐ | ☐ | ☐ |

We have satisfied ourselves that the entries we have made are correct to the best of our knowledge and that the parties involved agree to have completed the bunker operation.

| Bunker Facility Operator | Receiving vessel | Terminal |
|---|---|---|
| Name | Name | Name |
| Position | Position | Position |
| Signature | Signature | Signature |
| Date and time | Date and time | Date and time |