



Focus on Internal Oil Transfers

Spill Prevention, Preparedness, and Response



Why it matters

Internal transfers are often done routinely as part of normal engine room watch functions. Because of their routine nature, internal transfers are not always given the same level of care and attention as transfers of petroleum cargo or bunker operations. This lack of attention can result in a tank overflow and spill.

What are internal transfers?

Internal transfers are the movement of liquid cargo, fuels, lubricants, slops, dirty ballast water, oily bilge water, or hydraulic fluids from one tank to another within the hull structure of the vessel.

Internal transfers include movements from:

- Fuel tank to fuel tank;
- Bilge to holding tank;
- Fuel tank to service tank or settling tank;
- Cargo tank to cargo tank;
- Cargo tank to slops tank;
- Fuel and lube oil sludge to holding tank or incinerator waste oil tanks;
- Cylinder lube oil storage tank to cylinder lube oil day tank;
- Lube oil storage tanks to engine sumps; and
- Other lube oil transfers to auxiliary equipment.



Fuel Oil Purifiers on a cargo vessel.

Common problems

The following are common problems that can lead to a discharge during an internal oil transfer.

Planning problems

- No clear delegation of duties for the watchstander.
- Lack of time dedicated exclusively to the transfer.
- Insufficient personnel to cover all watch duties and conduct internal transfers.
- No plan or standard operating procedure for the transfer.
- Miscommunication or misunderstanding about which tanks are to be filled or emptied.
- Unqualified or untrained personnel assigned to the task with inadequate supervision.
- Misjudgment of the receiving tank capacity.
- Misjudgment of the supply tank liquid volume.

Internal transfer problems:

- Inadequate tank level gauging during transfer.
- Continuous vessel operations that can cause distractions from the transfer.
- Insufficient supervision of transfer by the Person-in-Charge.
- Valve misalignment.
- Miscommunication between watchstanders or watches.
- Transfer rate underestimated or undetermined.

Follow-up problem:

- No documentation that the transfer occurred or transfer volume recorded incorrectly.

Internal Transfer Checklist

A checklist can help avoid common internal transfer problems. The following is a sample checklist for internal transfers that can be adapted for various internal transfer types.

Time Completed	Before Transfer	Initials
	<ul style="list-style-type: none"> Transfer Plan completed by the Person-in-Charge (PIC). Dedicated transfer team selected from crew 	
	<ul style="list-style-type: none"> Qualified crew assigned transfer duties, including deck rover watch. On-coming watch standers assigned duties. 	
	<ul style="list-style-type: none"> Training session conducted for crew members with transfer duties. Supervisor assigned to new crew members. 	
	<ul style="list-style-type: none"> Piping diagrams and checklists posted and provided as needed. 	
	<ul style="list-style-type: none"> Procedures for watch change discussed. 	
	<ul style="list-style-type: none"> Valve and vent systems aligned and checked by PIC. 	
	<ul style="list-style-type: none"> Emergency shutdown and response procedures discussed. 	
	<ul style="list-style-type: none"> Transfer, communication, and tank level alarm systems tested. 	
	<ul style="list-style-type: none"> Ullages and tank levels checked, re-checked, and recorded. 	
	<ul style="list-style-type: none"> Pollution prevention equipment in place (scupper plugs, etc.). 	
	<ul style="list-style-type: none"> Other departments notified of internal transfer. 	
Time Completed	During Transfer	Initials
	<ul style="list-style-type: none"> Log start time and record tank levels. 	
	<ul style="list-style-type: none"> Transfer started at low flow rate. 	
	<ul style="list-style-type: none"> Flow rates, pressures, and tank levels continuously monitored and checked against the plan. 	
	<ul style="list-style-type: none"> Periodic communications checks made. 	
	<ul style="list-style-type: none"> Flow rate slowed when topping off tank(s). 	
	<ul style="list-style-type: none"> Log stop time and record final tank levels. 	
Time Completed	After Transfer	Initials
	<ul style="list-style-type: none"> Valves and vent system set. Inert gas integrity maintained. 	
	<ul style="list-style-type: none"> Re-check and log final tank levels in the Engine Room Log, Sounding Log, and Oil Record Book as required. Levels compared with transfer plan. 	
	<ul style="list-style-type: none"> Secure from transfer operations and close all associated valves. Notify other departments of completion. 	



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