

VESSEL REFUELLING SAFETY CHECKLIST



Refuelling, including transferring fuel between containers, is a potentially hazardous part of boating. It is important to take care and to follow the correct procedures:

- > **do not smoke at any stage.**
- > **do not allow yourself to be rushed by other people.**
- > **be alert to the smell of petrol.**
- > **do not allow people to remain on your boat when refuelling.**

General

- > Know the capacity of your fuel tanks and be aware of how much spare capacity you have. You should be able to reconcile the quantity of fuel that goes in with the capacity of the tank.
- > Make sure your vessel is securely moored when refuelling at a wharf, jetty or pier.
- > Do not 'raft' - do not tie up alongside another vessel that is refuelling and do not allow another vessel to tie up alongside yours while you are refuelling.

Before refuelling

- > Read any guidance provided where your vessel is moored, for example, marina instructions.
- > Ensure that engine bays have adequate ventilation.
- > Ensure that you have the correct fire-fighting equipment on board, that it is in good working order, that it is easily accessible and that you know how to use it.
- > Make yourself aware of other fire-fighting equipment that is close at hand at the service station or marina.
- > Make sure you know where the nearest spill kit is located and consider carrying a small kit with you.
- > Turn off all potential sources of flame such as pilot lights, gas refrigerators, electrical equipment and mobile phones.

- > Remove all passengers from the boat (regulation 91 of the *Marine Safety Regulations 2012* (Vic) prohibits an operator from refuelling a recreational vessel at a wharf, jetty or pier if there are passengers on board).
- > Close all hatches and doors.

Vessels with inboard petrol engines

Special care is needed when operating vessels with inboard petrol engines. Equipment including fuel tanks and lines should be checked regularly by a suitably qualified person.

Inboard petrol engines (particularly older ones or those using converted auto engines) pose particular hazards due to the potential for petrol fumes to gather in spaces and explode if there are any ignition sources present.

Petrol fumes are denser than air, therefore they migrate downward into the bilge area. In order to reduce the likelihood of explosion the following points should be noted:

- > do not smoke near the engine.
- > carry an intrinsically safe* torch for the inspection of engine spaces.
- > inspect the fuel system regularly, looking for any sources of leaking fuel. Pay particular attention to flexible hoses and any place where there is a connection.
- > if leaks are found, fix the leak source prior to any further operation of the vessel.
- > before starting the engines or operating the vessel, inspect the bilges in order to 'sniff out' any pockets of petrol vapour. If found, fully vent the space and then look for leaks in the fuel system.
- > ensure that there are no sources of ignition low in the vessel. In particular, move batteries and other electrical items out of enclosed spaces containing any part of the fuel system. Low voltage bilge pumps improperly wired can cause sparks.
- > remember that engine starter motors are a cause of sparks and a potential source of ignition.

Vessels with inboard petrol engines (continued)

> it is recommended that any electrical systems within a space containing inboard petrol engines or their fuel system should be intrinsically safe* to avoid sparks.

* 'Intrinsically safe' means designed for use in hazardous areas and so designed that it does not introduce sparks into the space.

During refuelling

- > Ensure that no-one is onboard the vessel when refuelling at a wharf or jetty.
- > If using a petrol engine, ensure it is properly grounded to prevent the build up of static electricity.
- > Ensure the hose nozzle is in the tank before starting the dispenser.
- > Operate the fuel dispenser by hand only - do not lock or jam the dispenser in the open position.
- > Don't overfill the tank: fuel expands in high temperatures and may overflow.
- > Maintain contact between the hose nozzle and the filler neck to avoid static sparks.
- > Ensure the dispenser is off before removing the hose nozzle from the tank.
- > Transferring fuel between containers when at sea is not recommended and should only be done if it is unavoidable. You should ensure that your chosen vessel has adequate fuel capacity for the voyage that you are undertaking.

After refuelling

- > If fuel has spilled into the bilges, manually pump the bilges out into a container or an onshore tank and vent the bilges to the stage where there has been a complete change of air.
 - > Only start the engine when you are satisfied that the boat is free of fumes - use your sense of smell and consider using vapour detectors that are designed to detect petrol fumes.
 - > Only allow passengers to board the vessel after you have started the engine and allowed it to run for an adequate time.*
- * 'Adequate time' means after there has been a complete change of air in the space and there are no fumes detected by either sense of smell or by use of vapour detectors.

Portable tanks

Portable fuel tanks should be filled on the ground away from the boat.

If using portable petrol tanks to supplement onboard fuel tanks, they should be kept in a position where they can be ejected quickly from the boat. Always use fuel lines to transfer fuel from portable tanks to inboard tanks or direct to the engine, in preference to pouring fuel through a funnel or spout.

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Where to get more information

- > **Phone:** 1800 223 022
- > **Website:** www.transportsafety.vic.gov.au
- > **Email:** information@transportsafety.vic.gov.au

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