



SHIP SAFETY BULLETIN

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Subject: Revision - FISHING VESSELS: Installation of hinged fin anti-roll devices on fishing vessels

This bulletin replaces [Ship Safety Bulletin No. 04/2010](#).

Scope

This bulletin applies to all small Canadian fishing vessels with hinged fin anti-roll devices. It also applies to owners and operators of small Canadian fishing vessels that are thinking of installing these devices.

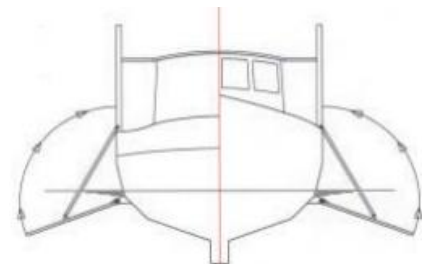
Purpose

To explain how these devices can affect a vessel's safety and the legal requirements for fishing vessels with these devices.

Background

Hinged fin anti-roll devices (hereafter referred to as 'fins') help reduce a vessel's rolling motion. Some vessels install these devices on only the port or starboard side.

Fins are fastened to a vessel's hull bilges with hinges and are lowered from the raised stowed position to the working position by a vertical sliding arm (see diagram).



This updated Bulletin renews attention to previously addressed safety concerns (SSB 04/2010) and summarizes the *Fishing Vessel Safety Regulations* requirements to be met when adding them to a newbuild or when modifying a vessel to install these devices.

Keywords:

1. *Fishing Vessel Safety Regulations*
2. Major Modifications
3. Stability
4. Anti-roll
5. Fin
6. Stabilizer

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What you need to know

While anti-roll devices can make a platform more comfortable to work on, **they do not improve a vessel's stability**. In some cases, they can make a vessel less stable or delay the crew from noticing a dangerous change in stability. A malfunction may also create an immediate stability risk.

Although these devices are common, they are still considered experimental and are not regulated by Transport Canada.

There are many safety risks related to using these devices, like:

- **vessel sinking:** Hull damage may occur if the fin hits something while underway. The risk is higher on composite or wooden hull vessels.
- **sudden vessel heel:** Damage to a fin or loss of a hinge may cause the fin to twist. If this occurs, particularly at speed, it may cause the vessel to heel sharply and suddenly.
- **reduced stability:** The dragging effect of the fins may decrease vessel stability in heavy seas, increasing the risk of capsizing.
- **loss of control:** A twisted fin may suddenly turn the vessel abeam to the sea or affect the ability to steer in other ways.

Before installing, make sure you understand how the fins could affect your vessel and that using the device, despite the risks, makes sense for your operation.

Fishing vessels of 15 GT or less

If you have installed, or are thinking of installing fins, Canadian law requires that you make sure your vessel can be safely operated and is seaworthy.

To ensure this requirement is met, you should have written proof that:

- the hull/watertight integrity will remain intact even if the fin fails,
- weak links have been established,
- design loads have been calculated and checked, and
- any other relevant information is provided.

Where the addition of fins will likely adversely affect the stability of an existing vessel the change is considered a “major modification” as per Canadian law. Your vessel's authorized representative should also have a competent person assess if installing fins adversely affects your vessel's stability characteristics.

If it does, complete a stability assessment for the vessel or have it updated if it was already assessed.

All documentation relating to the vessel's stability must be carried onboard and shown to Transport Canada Inspectors when asked.

Fishing vessels more than 15GT

If you have installed, or are thinking of installing fins, Transport Canada must review and approve the vessel plans before construction, if it is new, or before being modified or put into service, if it is an existing vessel.

Hull plans should include:

- the locations of the fin attachment points to the hull,
- details of expected forces,
- calculations and arrangements designed to accommodate extra loading, and
- an indication on the plan that failure of fins or any weak link will occur before any damage to the hull can occur.

As there are no specific design or construction requirements for these devices, details of the fin structure itself that appear on a plan will be noted by Transport Canada, but not approved.

Transport Canada may accept a separate plan for the fin assembly or a statement, prepared and stamped by a marine consultant indicating that a weak link is incorporated in a way that will not damage the hull in case of failure.

If your vessel is new, the effect of the fins must be included in its stability assessment.

Where the addition of fins will likely adversely affect the stability of an existing vessel, the addition is considered a major modification. You will need to update the vessel's existing stability assessment with the new information or, if the vessel did not undergo a previous assessment, one will need to be completed.

If the fins do not adversely affect stability, keep any calculations or documentation needed to demonstrate this on board the vessel to show that a new stability assessment is not necessary.

This means you may need to have a competent person assess the stability of the vessel and the effects of the fins sufficiently to determine their addition doesn't require a new or updated stability booklet or stability notice be produced.

Written procedures

On all small fishing vessels, the vessel's authorized representative and master must develop written safety procedures. If fitted with fins, procedures should be developed that include:

- operation to avoid flooding of the interior spaces of the hull;
- safely engaging and disengaging the fins while underway, and
- dealing with issues that could occur with the fins that may lead to potential vessel instability.

Crew training

On all small fishing vessels, the crew must be trained on written procedures, including any regarding hinged fin operation. You must ensure that the crew is familiar with all safety procedures by conducting drills. A record of these drills must be kept.

Related links

More information and guidance on the risks of adding anti-roll devices or making major changes to a vessel:

- [Fishing Vessel Safety Regulations: Stability, major modifications and record of modifications - SSB No.: 03/2019 \(canada.ca\)](#)
- [The Use of Passive Anti-Roll Tanks \(ART\) on Small Fishing Vessels – SSB No. 01/2005](#)
- [The use of roll damping paravane systems \(paravane stabilizers\) – SSB No. 15/2000](#)