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## Prop Guards

*The decision on whether or not to fit a prop guard is a personal one and one that should be made only once a full appraisal of the pros and cons of prop guards has been carried out.*















Prop guards are intended to serve 2 purposes:

1. To protect the propeller and gear box from damage in the event of a prop striking a rock or other hard object.
2. To protect a person in the event they come into contact with a moving propeller.

Some prop guards are designed with both purposes in mind whilst others are specifically designed for one or the other. There is very little data available as to the effectiveness of prop guards in achieving either of their intended objectives. This is not to say they are not effective, simply that there is little or no evidence to support an objective analysis. On this basis, the best one can do is to assess the facts and make a decision based on the information that is available.

### Prevention is better than cure

Essentially, the most effective way of avoiding prop strike injuries is by avoiding a person being in the water anywhere near a moving propeller in the first place. The RYA therefore believes that the focus should be on following several basic and essential good practices, including:

-  Keep a proper look out at all times
-  Check the area around the engine for hazards before starting the engine
-  Use a kill cord whenever the engine is running
-  Stop the engine when there is a risk of a person in the water coming into contact with the propeller
-  When swimming around a boat ensure the engine cannot be started inadvertently
-  Ensure passengers and crew are aware of the need to maintain good handholds whilst under way
-  Communicate changes in direction or speed to passengers
-  Warn passengers when approaching wash or areas of rough water
-  When operating at speed, ensure passengers are not positioned or seated in the bow where they can be easily thrown out of the boat if it stops suddenly
-  Operate at a speed appropriate to the conditions
-  Observe restricted or no go areas designated for swimmers
-  Utilise a spotter when towing water skiers or inflatables
-  Where dedicated seating is available have passengers use it in preference to sitting on gunwales or sponsons
-  Warn passengers of the hazard associated with falling in, in particular prop strike

### Factors to take into account

In making the decision on whether or not to fit a prop guard the owner / operator should take into account many factors, including but not limited to: the type of vessel you operate, the area in which you operate and the purpose for which you use it and the likely conditions you will face. However, in making your decision you should ensure that the preventative measures listed above remain your primary safety mechanism.

Rescue craft that are operating in surf conditions tend to be fitted with prop guards because they are likely to be around swimmers and need to be able to keep their engines running to avoid placing the vessel in danger whilst inside the surf break. Inshore rescue craft and vessels used for flood rescue will have prop guards fitted in order to protect their props and gear boxes from damage caused by rocks, floating debris and weed. In such cases, the boat operators have weighed up the advantages and disadvantages in relation to their particular operations before deciding that, on balance, prop guards should be fitted.

#### **Prop guards can alter characteristics of a vessel**

In some cases however a prop guard will alter the characteristics of the craft or the performance of the engine to such a degree that it may no longer be fit for the purpose intended. Vessels requiring rapid acceleration or a high degree of manoeuvrability will be adversely affected by the fitting of a prop – guard and therefore may no longer be able to perform to the required standard.

There has been some suggestion that prop guards can cause damage to gearboxes and prop shafts. The fitting of prop guards to some engines may have implications on the validity of the warranty for those engines. This question should be explored directly with your manufacturer or dealer.

#### **Make an informed decision**

Ultimately, the only person who is able to make an informed decision about the fitting of a prop guard is the person responsible for the vessel. Knowing its intended operation, area of operation and the skill and experience level of those likely to be driving the vessel will all assist in reaching a sensible and informed decision.

Discussions with prop guard and engine manufacturers are essential to ensure you are fully informed of the limitations of the prop guard as well as any implications with regards the operation of your engine and any impact on its warranty.

#### **A last resort**

There can be no substitute for the safe operation of a power boat and in the event that you do elect to fit a prop guard this should be seen as nothing more than a “last resort” in case all other measures have failed. You should fit a prop guard only once you have made a full assessment of the impact it will have on your vessel and the operation for which you intend to use it.

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