

Scenarios

Suggested solutions to flooding scenarios



Rubber Hose

Damage to hoses can be caused due to vibration, chaffing, cuts and lack of maintenance to old and worn out hoses.

Suggested Solution:

Bicycle Inner Tube wrapped tightly around hose.



Grease Tape wrapped tightly around hose.



Through Hull Fitting

Through hull fittings may flood a vessel because they are damaged by corrosion or because of improper hose connections.

Suggested Solution:

Conical soft wooden plug works well with this type of leak. Some fishing vessels have these plugs attached to lanyards adjacent to through hulls on the vessel. Inner tube is wrapped around base of through hull to



What if? What if conical plugs are not available? Can wedges be used to stop the leak? Look out! You're going to get wet with this one, but it will work!

Cut wedges into thinner pieces and drive into through hull fitting. Keep adding wedges to open areas. Eventually the leak will stop or at least slow to a manageable trickle.



Small Hull Breach (split seam/cracked weld)

Suggested Solution:

Soft wooden wedges with some kind of stuffing (oakum, manila line, rags, rain gear) driven into seam to stop the leak. Caution: Beware of cracking continuing to run. In a real scenario, if crack continues as wedges are installed, the ends of the crack must be drilled.



The use of some kind of stuffing is important. It seals small cracks and irregularities that the wedges can not plug. Using the same 2 wedges above but without the rain gear as stuffing, the efficiency is greatly reduced.



Split Piping/Wet Exhaust

Suggested Solutions:

Neoprene and manila twine may be used for a quick temporary patch depending upon the pressure of the line. Simply tightly wrapping the neoprene over the crack and tightly wrapping manila twine over the patch will stop the leak. The key is to lay wraps next to one another, not overlapping. Use constant pressure while wrapping.



Soft wooden wedges along with stuffing (oakum) may be used to make a tight seal. Place stuffing in the crack and drive wedges in with a hammer. Stuffing will help seal the leak. Wedges do not need to be placed next to each other, they can overlap in the middle. This is an advantage of using soft wood.



Bicycle inner tube is a little tricky but can be done. It may take several inner tubes to make a few revolutions around the pipe to get a tight seal.



Rudder Post

Suggested Solution:

This scenario is short on excitement, but still very important to demonstrate. Many vessels have been lost and fishermen killed from a leaky rudder post. This would be a great time to have the students provide ideas on techniques and solutions for this leak. See if a student suggests using a wedge and pounding it in with a hammer. So far in the demonstration, this has been a primary technique, but probably the last thing that should be used on the rudder post. This scenario points out to think before you act. Some ideas should include: Tightening the bolts holding the rudder post plate to the skin; using stuffing in the split with a wedge to hold it in place; fiberglass repair kit.



Propeller Shaft Packing

Suggested Solution:

Realize that most shaft packing systems are designed to drip/leak a little to provide lubrication and heat dissipation. But it isn't designed to gush. This becomes a maintenance item on a vessel. Every year or so a packing system must be replaced. Chronic shaft packing problems can compound into other problems that lead to a casualty. This is another great point of discussion. Ask the students how they would deal with this

problem. If the vessel has more than one shaft, locking this shaft in one position and stopping the leak with inner tube is not a problem. But most small fishing vessels are single screw and need the use of the shaft to make way in the water. Some shaft packing systems can be added or changed while the vessel is in the water, while others do not permit it. The main goal is that the operator recognizes the problem and fixes it at the dock.



Large Hull Breach/lost plank

Suggested Solution:

When a vessel loses a plank or has a hole this big, the operator must dive into action quickly. The goal is to stuff as much as possible into the crack to slow the rate of flooding. Here neoprene and lots of wedges are used to slow the leak.



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