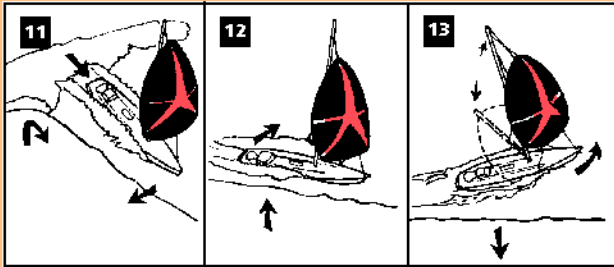


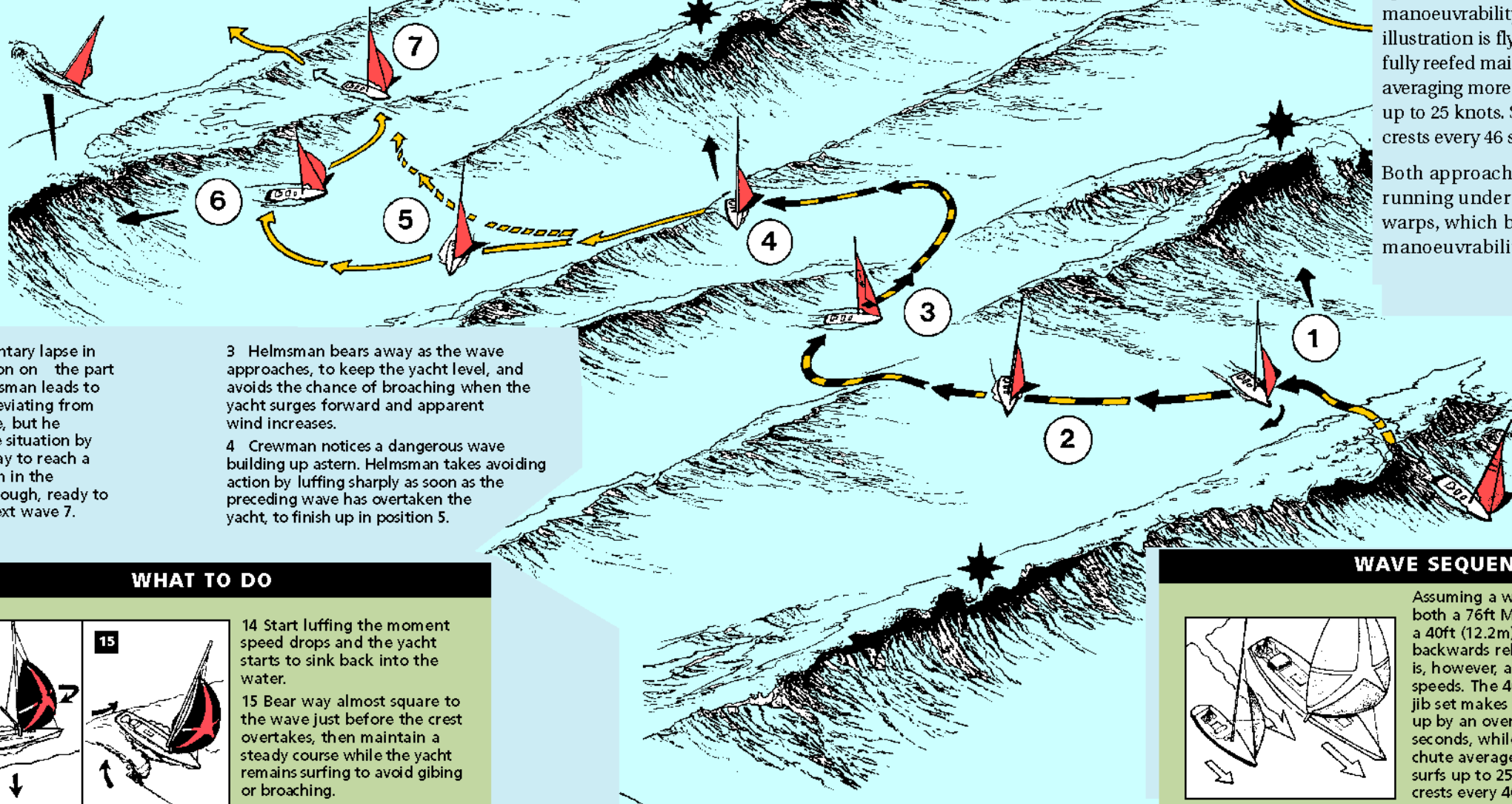
WHAT NOT TO DO



11 Never allow the yacht to luff up when surfing. This may result in a broach, leading perhaps to a dangerous knockdown.

12 The same applies as the wave passes. Luffing while the yacht is still surfing will throw her on her beam ends.

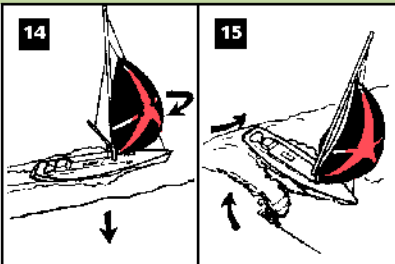
13 Never remain square to the wind once boat speed drops – the apparent wind will swing back and a Chinese gybe may result.



6 A momentary lapse in concentration on the part of the helmsman leads to the yacht deviating from the safe line, but he recovers the situation by bearing away to reach a safe position in the following trough, ready to meet the next wave 7.

3 Helmsman bears away as the wave approaches, to keep the yacht level, and avoids the chance of broaching when the yacht surges forward and apparent wind increases.

4 Crewman notices a dangerous wave building up astern. Helmsman takes avoiding action by luffing sharply as soon as the preceding wave has overtaken the yacht, to finish up in position 5.



14 Start luffing the moment speed drops and the yacht starts to sink back into the water.

15 Bear away almost square to the wave just before the crest overtakes, then maintain a steady course while the yacht remains surfing to avoid gibing or broaching.

Tactics when running before a storm

9 The helmsman then luffs up to main speed before bearing away again in readiness for a ride on the next wave 10.

8 Surfing down a very steep wave, modern yachts can reach 25 knots+ before slowing down rapidly in the following trough as the wave crest draws ahead.

Read from right to left

(as the waves move faster than the yachts)
This drawing illustrates two approaches to sailing safely down wind. One is a 40ft (12.2m) yacht which is picking her way through the worst crests with just a storm jib set to keep the yacht moving just fast enough to be manoeuvred quickly. Assuming a wave speed of 25 knots she is making eight knots and is picked up by an overtaking wave every 20 seconds.

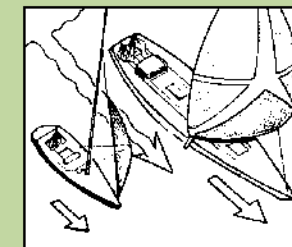
The second approach is to maximise on speed to maintain steerage and manoeuvrability. The maxi yacht in this illustration is flying a storm spinnaker and fully reefed mainsail. As a result, she is averaging more than 12 knots and can surf up to 25 knots. She meets up with the crests every 46 seconds.

Both approaches are much safer than running under bare poles or towing warps, which badly affect manoeuvrability.

1 Being overtaken by waves with a relative speed of 17 knots, the crew look out for the next crest, the moment the yacht begins to fall behind the overtaking wave.

2 The helmsman luffs up in the trough to maintain speed just as the crew spot a following wave building up on their port quarter.

WAVE SEQUENCE



Assuming a wave speed of 25 knots, both a 76ft Maxi (23.2m) (top track) and a 40ft (12.2m) race yacht are sailing backwards relative to the waves. There is, however, a big difference in their speeds. The 40 footer with just a storm jib set makes eight knots and is picked up by an overtaking wave every 20 seconds, while the Maxi under chicken chute averages more than 12 knots with surfs up to 25 knots. She meets up with crests every 46 seconds.