

# MAX EBB

length of the tie bar in-flight, and there are tons of ways to do this. Shorter tie bar . . ."

Lee held her hands at right angles to each other and rotated her wrists to check.

"Shorten tie bar and the stern lifts up. Lengthen tie bar and the rudders pull the stern down. Voila, two degrees of freedom, two axes of control, yaw and pitch, just like the V-tail Bonanza."

"Wouldn't there be a change in heeling force every time you steered with a setup like that?" asked the stockbroker.

"For sure," confirmed Lee. "I mean, like, no one said this would be easy. We'll need a way to get hydrodynamic control of roll moment to resist heeling force and the yaw-roll coupling of the V-tail. Anyway I have to serve the main course, be back in a sec."

The main course was a choice of roast pork loin or seared swordfish with Portobello mushrooms stuffed with cau-

working on our meal. "The RC recently approved daggerboards that are hinged at the bottom of the hull instead of sliding up and down through a slot."

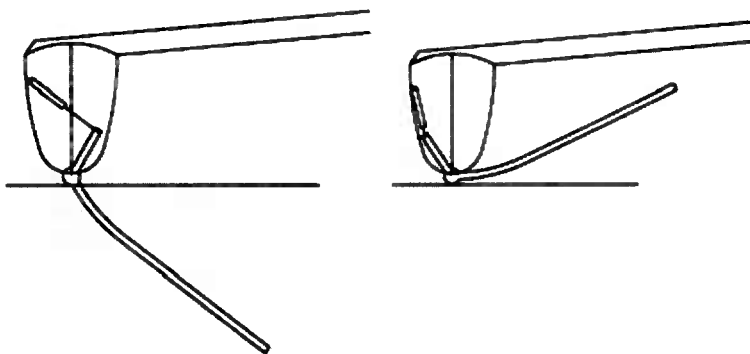
She paused for a reaction, but no one seemed to realize the significance.

"Okay, what happens if the hinge is not parallel to the longitudinal axis of the boat? Get it?"

"The swordfish is perfect," said the stockbroker.

Then Lee did the unthinkable: She took out a marking pen and drew a diagram of the new allowable daggerboard configuration on a fancy cloth napkin, a napkin that had the outline of the America's Cup embroidered on one corner.

"Oh, I get it now," the software engineer finally responded. "Set the hinges cattywampus, and the angle of attack changes as the foils hinge up and



Hinged daggerboards at the hull bottom are now legal for the AC72 class. If the hinge axis isn't parallel to the boat's longitudinal axis, then adjusting the foil position also changes the foil's angle of attack. With both foils down, this allows the foils to generate righting moment far beyond what can be achieved with weight and buoyancy.

liflower, spinach and ricotta cheese.

"Here's how we get at the heeling forces," Lee proposed after we were all



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