

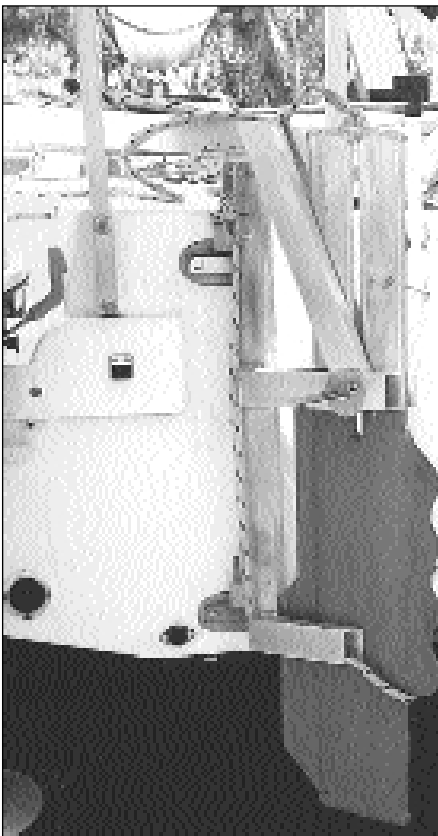
the Robb kick and dagger combination *rudder*

by ROBIN M ROBB

ONE of the difficulties that I have with most conventional kick up rudders is that when they do kick up you are left with either no steerage at all or a very heavy tiller with the rudder blade at an angle scraping the bottom making accurate manoeuvring next to impossible or at the least cumbersome. This becomes a problem if you sail a

Farrier based trimaran or other shallow drafted craft around Moreton Bay or similar waters and prefer not to become a slave to tide and time, needing sometimes to feel around or over a sand bar or river bend, (normally done with the centreboard in the unpinned or half up position.)

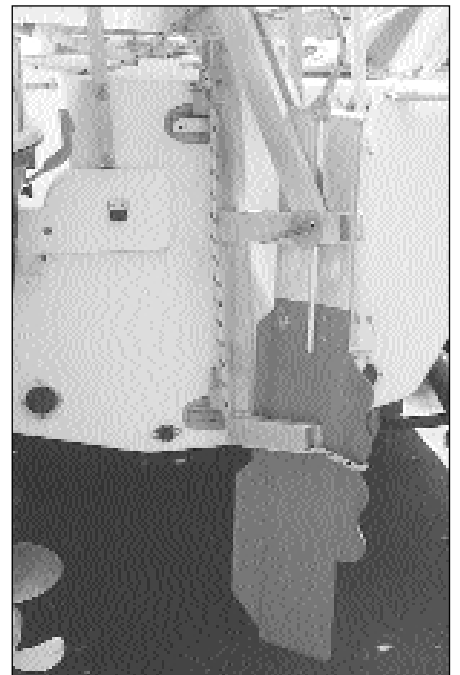
Heeding to the phrase 'necessity becomes the mother of invention' my kick up rudder evolved to become for me a convenient design. My requirements were to have a rudder that behaves as a conventional kick up system giving the protection from normal groundings, but



Blade in triling or launching position (maximum up position.)



Rudder blade in the maximum depth sailing position. Note slot in place of the more normal bolt hole allowing blade vertical movement as well as the pivot action, both now prevented by the rope cleated across trailing edge.



Blade in dagger mode. Can be set to any one of rope ident positions and still retain crash protection. Idents can be calculated to known hull or skeg depth to suit your craft. Note rope attached to top of blade to allow easy positioning or retrieval of blade.

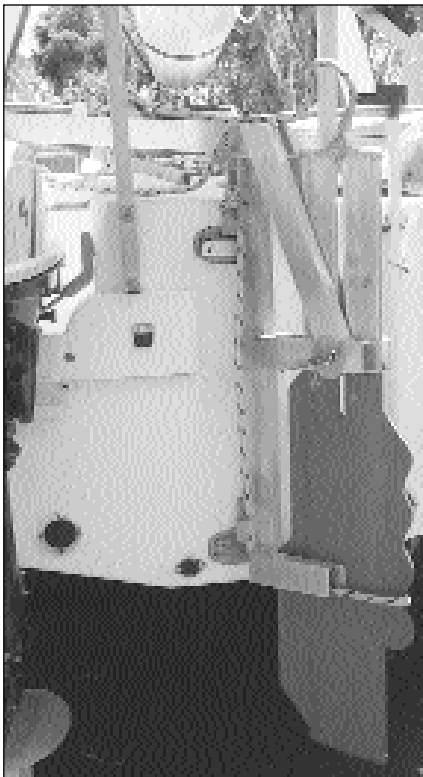
which also incorporates a dagger mode being careful not to lose the safety of the shear pin to let things move if a crash occurs.

With my rudder if you stray into shallow waters and start to drag or produce a kick up you can swiftly set the blade to a depth that enables normal sailing operations to continue. If you are smart and guessing ahead you can set the depth of the blade to the keel or skeg depth before the drag depth is reached, if kick up has occurred you will, just as in a conventional system, have to replace the shear pin to retain the safety of the system allowing movement upward and back in a crash. As you will see from the photos the depth of the blade is controlled by the scalloped trailing edge acting as a location for the securing rope, the number and positions of the scallops is up to you, just profile them smoothly to allow the rope when slack to let the blade slide from one to another, of course as you lift the blade the less kick back angle you will have available but you still retain the ability for the blade to be displaced upwards. Less rudder in the water means the helm will become lighter and lose some response, this is easily allowed for as KISS (keep it simple stupid) works every time.

It is also very desirable for the average trailer sailer to be able to cheaply convert a normal kick up system to this kick and dagger combination, I think with this design most systems and builders with a little ingenuity should be able to manage the conversion.

It is not my intention to supply drawings or dimensions as the scope of rudders available for modification is vast, but to show with a series of photos how my simple design functions leaving the individual to modify his or her own system. If you think about it first before actually cutting any material, you should be able to retain your original blade to use as a spare (you'll probably have it forever, never finding a use for it). At least use it, as a guide to the blade area you are aiming for the case does not require any modifications as only the new blade will be different. My blade is made from aircraft alloy streamlined tubing with 5mm plate leading and trailing edges. Tig welded together in the best amateur building tradition only because it was quick to assemble and alter and I have a tig welder, the materials were under the bench left over from a previous project, if I hadn't had them I would have made it out of ply and glass, in the future if I get time I will remake it from ply and glass to get a better streamlined shape. Just remember the trailing edge cannot be so sharp that it abrades the securing rope, I leave the material choice to you.

If by some chance I have reinvented the wheel I apologise in advance to the readers whom I am sure will inform me so. I have no excuse - only an inventive bent and the knowledge that nowadays there is nothing much new in this world. Perhaps I don't get around as much as I should. ■



Blade in shallow water mode.



Shallow water setting and general arrangement of transom.