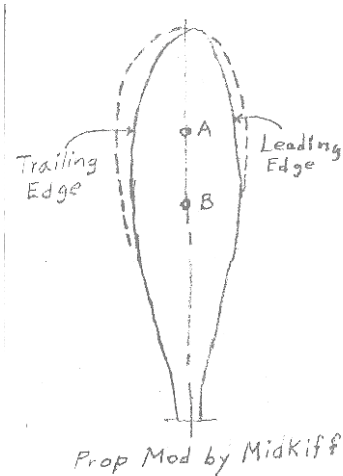


TRIMMING PLASTIC PROPS TO IMPROVE PERFORMANCE

by Mike Nassise

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Mike Nassise, Editor*

According to noted FAC'er Mike Midkiff, trimming away excess plastic from paddle wheel style props, such as the frequently used Peck Polymers "silver" models, can improve their performance dramatically. The diagram below shows how he cut off material from a 9 1/2" Peck to produce the solid-line blade shape from the original contour indicated by the dotted line (my guess is that similar modification of smaller diameter Peck props should yield similar results - Editor).



Mike believes that the center of blade area should be closer to the 40% distance from the hub that is considered to be the point of maximum efficiency. Beyond that he thinks that the propeller actually becomes less efficient. In fact, there are theories that say that the thrust at the very tip of a prop tends to be negative with a resulting backward push on a model. (Ed. Note: You might want to reread the Larrabee prop article in the July/August 08 issue of the PFFT rag) By cutting down the blade area as shown, Mike says the center of area moved from point "A" to point "B" which is closer to the hub and nearer the point of maximum efficiency. In addition, Mike says that the trimming process puts some washout at the tip, and that this also increases efficiency by countering the air swirl that occurs there much in the same fashion as it does at the wing tips.

To be sure, there are many excellent modelers, Chris Starleaf for example, who think that a paddle-shaped plastic prop such as the Peck Polymer design functions beautifully just as it is. He uses them without significant modification on his rubber scale ships, and the superb results he gets are hard to argue with. I'm the type of guy who likes to experiment, however, so I'll probably give the Midkiff modification a try. If it improves the performance of my models even a little bit, it certainly will be worth the minimum effort and expense required to test it out

Adapted from a piece that appeared In *Windy Sock*, edited by Joe Joseph