

REPITCHING WOODEN PROPELLERS

If a newly purchased or constructed wooden propeller does not allow the engine to attain the desired rpm, it can be easily modified, or “tweaked” by decreasing the pitch at the tip.

This procedure is much preferable to reducing the diameter by clipping the tips, as it results in a net increase in *thrust*.

The first step in the procedure is marking a wedge-shaped area at the trailing edge of the blade from $0.75 \times \text{Radius}$ to the tip. A rule of thumb for the width at the tip is $\frac{1}{4}$ inch per 50 rpm increase.



This picture shows the area to be bandsawed off each tip.



Sawing off the splinter and planing the edge leaves the trailing edge looking like this.



Now plane and sand the bottom surface to reduce the trailing edge to its former dimensions.



Balance and refinish the tips. I do it on an ancient Shopsmith, with propeller installed on the hub.