

SETTING BLADE PITCH USING AN AIRFOIL TEMPLATE

DOC#: *airfoil_template_instructions_Rev0*

Required Tools

Torque wrench

Airfoil Template appropriate for blade model

Digital Level/Protractor

Appropriate size socket for clamp bolt head

SETTING PITCH

For select propeller models, Sensenich has an airfoil template available for those who wish to obtain a specific propeller blade angle. This tool can be used to fine tune aircraft performance.

NOTE: Certain hub models do not include an integral pitch setting system, so an airfoil template and protractor provides the only means of setting blade angle.

1. Chock the aircraft wheels to prevent movement.
2. Rotate the propeller until it is parallel or level to the ground.
3. Note the general airfoil shape of the cutout on the template and the side marked "LE". The side marked "LE" matches the leading edge of the propeller blade. Match the shape of the cutout with the shape of the blade airfoil and gently slide the airfoil template onto the blade until it will not move any longer. Make sure the template is not aligned on the blade diagonally.

Note: Do not force the template too far onto the blade as it may damage the blade finish.

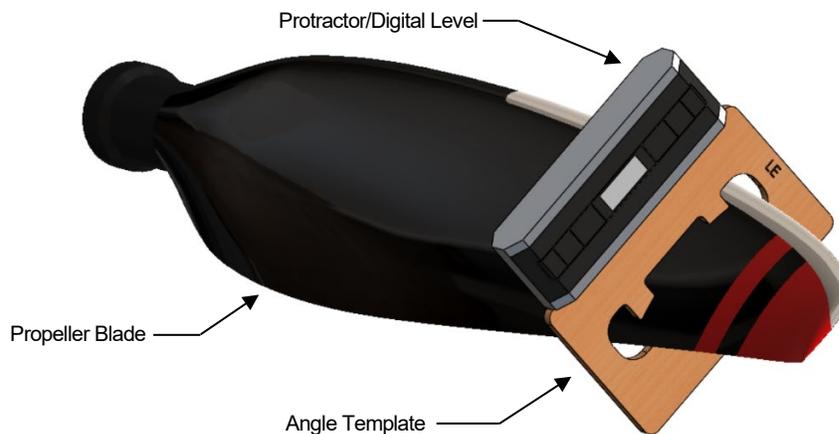


Figure 1. Blade, Template, and Protractor

4. Loosen the clamping bolts until the blades will just start to rotate in the hub. Ensure the blades do not wobble in the hub when rotating to a different blade angle.
5. Place the digital level/protractor on the template and rotate the blade until the desired angle is achieved.
6. Set the torque wrench to 50% of final torque. Tighten the corresponding (2) clamping bolts to keep the blade from rotating. Take care to maintain an even gap between hub halves by tightening the bolts a quarter turn by alternating back and forth. Stop at to 50% the final torque.
7. Remove the template from the propeller blade and rotate the propeller to bring the next blade around to the exact same location the first blade was measured.
8. Repeat steps 3 thru 6 for the corresponding blade.
9. When both blades are set to the intended angle, finish tightening all six hub clamp bolts to the specified torque contained in the instruction manual using a star pattern.