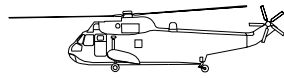


Belcher Bits No. BB28: H-21 Wooden blades 1/48

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Kit blade



Wooden blade

Background

Wooden blades? Not as low tech as it may sound these days. The early helicopters nearly all had wooden blades which were more durable than metal blades. Helicopters have been known as 'flying fatigue machines', the many cyclic reversals seen by each blade being particularly damaging.

However, the Special Hobby kit of the H-21 helicopter missed the dimensions of the blade. Even early wooden blades were 18" chord width, the kit blades are only 11". These resin replacements are made to the correct chord width.

Installation

Although the blade has the cylindrical tube moulded in place, I would strongly recommend that you remove this, drill out the hub and use a length of brass rod instead. The result will be more durable.

Another problem is the white metal rotor hub. The kit parts are very nice. Unfortunately, the distance from the center to the blade hub mounting bolts measures out to 36", but the real aircraft was only 29.8". This means the entire rotor assembly will be about 0.25" bigger in diameter than it should be. If this bothers you, you can cut back the rotor head a little bit just outboard of the mounting bolts, especially if you are going to be drilling that part out a bit to accept a brass rod.

One final point to consider. On the real machine, the blades had a bit of a twist built in. With the tips flat, the root had about 5 degrees of attack (up) angle, this twist gradually diminishing to the tip. You could try to represent this by warming the resin parts and gently twisting them, but frankly, I wouldn't bother. First, it would be difficult to do this evenly and consistently. Also, modelling is an art form and correctly twisted blades will simply look funny when built.

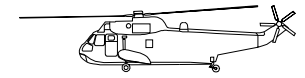
References

1. Various structural repair manuals Vertol H-21A/B/C, H44

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