

Cozy IV Gear Leg Fairings

Cozy Forum

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Cozy N10CZ

The Problem

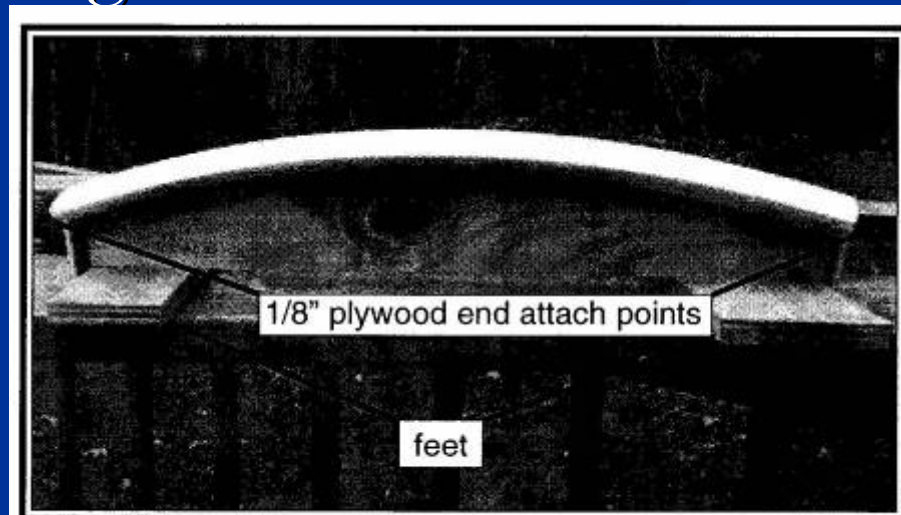
- Main gear struts are at a positive angle of attack when in a cruise configuration: 2 degree deck angle for 10CZ.
- Main gear strut profile is not a symmetrical, low drag airfoil.

The Solution

- Construct a main gear strut cuff that has a symmetrical airfoil.
- Install it over the existing strut so that it is at a zero AOA when the plane is off the gear at a 2 degree deck angle.

Detailed Construction Reference

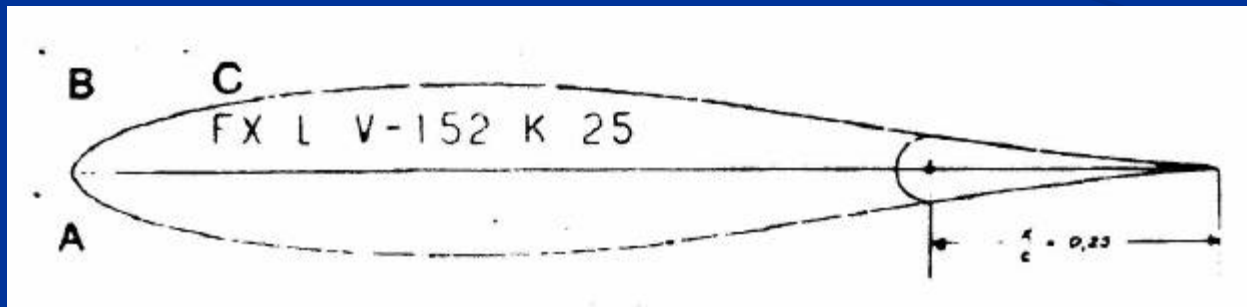
- See Central States Newsletter Issue #78 pps. 3-7; Author: Gary Hertzler
- I used the “Don Jones Method” using jigs, blue foam/hot wire to make plugs, then 2 ply bid to make fairings.



form set duplicates gear strut's curve

Airfoil Reference

- Central States; January, 1995; p. 32;
Author: Savier
- Scale it up, using “enlarge” on a copier, to an adequate thickness to fit the existing strut.



Results

- Plans



- Modified



Gear Strut AOA

Note the higher TE on modified

■ Plans



■ Modified



Strut/Fuse & Strut/Pant Fairings

- Small radius
- See 2007 Cooling/Drag Reduction by Schubert & Hertzler posted on:

<http://www.ez.org/downloads.htm>.



Performance Gain

- Long's and Vari's report +5 kts cruise
- I'm seeing +3 kts
- Is it worth 3 weeks on your knees? You decide.
Looks cool though, huh?