Stop Banging on That Rudder!

By: Leo Dringoli

Have you ever winced while you watched the wind slam your rudder forward? You could see the rudder horn force the cable thimble against the rudder surface and bend the cable to almost the point of kinking.

This kind of fatigue will certainly cause early failure of the cable. We all have our favorite system of gust locks for the rudder when the airplane is parked, but what about that long downwind taxi on a windy day when you hear both rudders banging back and forth?

Spam cans are designed with stops on the control surfaces to provide a limit on surface travel. Wanting my EZ to be at least as good as a Spam can I have installed stops for the forward motion of the rudders on my Long-EZ.

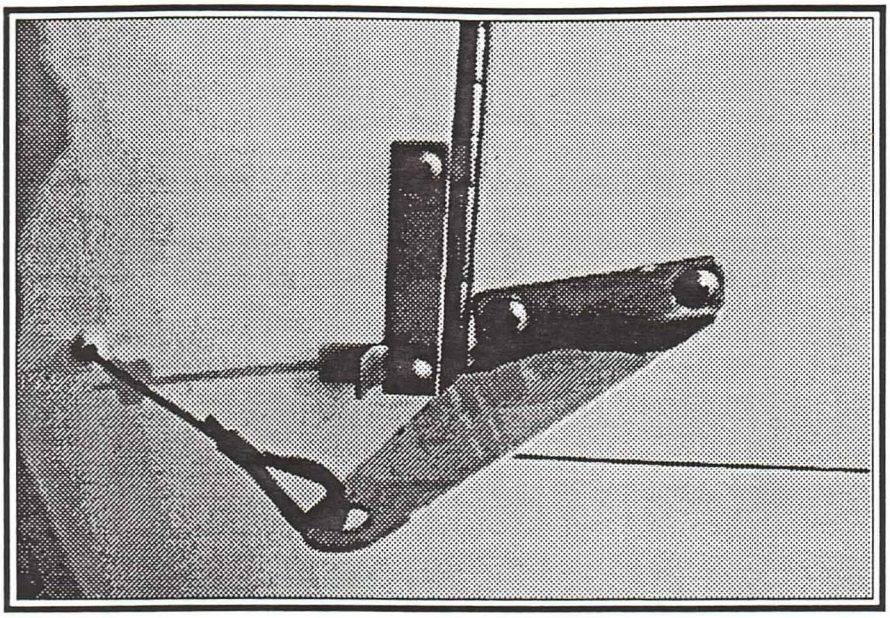
The purpose of this control stop is to prevent the extreme rudder travel from kinking the control cable at the thimble. The stop **must not limit** or interfere with the normal movement by the rudder pedals.

As you can see from the photo, the rudder stop should be long enough to mount under the existing rudder hinge screws. I made mine out of 1/16" aluminum 1/2" wide. Be careful when you bend up the little tab that contacts the rudder horn. That tab acts as the stop and may be highly loaded in a strong gust. The stop must have a generous bend radius to prevent cracking.

On my particular airplane one tab was 1/2" high while the other was 5/16" high. I initially made both about 1/4" too long and gradually trimed the tabs off. This required many trial fits until I had the tabs just the right length so the rudder travel was limited to stop just short of the thimble contacting the winglet surface. Before assembling for the last time, check the screw length. You may need to install the next longer size screws.

Simple, works great, lasts a long time.

Editor note: This idea is also good to thwart the observer who must "wiggle" your rudders while "looking" over your plane on the ground. An other way to "decrease" rudder cable damage is to install stronger rudder return springs that go in the aluminum tube in the winglet.



Wanted, Please Help

On another page in this newsletter David Orr has shared some hard to find information on large engine installation in EZs. He is in need of any information on a Mazda rotary engine installation in anything. Please send any information to:

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Inquiring Minds Want to Know!

By: Jesse Groh

Has anyone out there used a Prince Propeller? How did you like it? Have you compared it to anything else?

Are spinners a real aid to performance or are they just cosmetic?

If you have any answers to these important questions above please respond to:

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