

## **Gordy's Travels #7**

### **ARGH, Fixed Stabs!**

ARGH!! It gets sort of confusing, like following the Who's on First thing!!!

But here's some thoughts to get you at a starting point...

First the toss test.

The basis of my toss test is to see if gravity finally overcomes the stab/elevator's ability to hold the nose up. IF the nose is NOT being held up by the stab (just enough lead to set the wing where we want it to 'rest'), then the first thing that touches is the tow hook at the end of the toss. (Keep in mind that is with some up trim in the beginning)

I believe it still tells you the same thing with a fixed stab, because full flying or not, the stab still runs out of 'power' with a lack of airspeed.

So once you get your model to land on the toss tow hook touches first, THEN you can consider decalage.

A certain indication that there is too much lead in the nose of a model would be if you have to fly with some up elevator (Fixed Stab)

But if the elevator is neutral to the stabilizer, its not so easy to physically SEE the decalage compensation for the lead in the nose.

So back to tossing, you toss till the model flies LEVEL to the ground, NOT on a declining path.. That means some up trim on a full flying stab.

You pull lead till the model lands tow hook first. Now you give the model a really good toss and it pushes its nose way up into the air!!!! What does a smart, long time RC pilot do? Add some lead.....argh!!!!!!

The fast toss, gave the stab which has some up incidence, lots of POWER, to drive the tail down and the nose up on the launch.

See where I am going with this? You can tell real decalage with airspeed! You can understand how stupid the dive test really is.... it doesn't take into account tail boom flex, stab tip deflection, pushrod slop... all things affected by high airspeed/air FORCE.

It shows us nothing of value to TD soaring.

It is the reason that DHLGs balanced properly and STRAIGHT will always 'tuck' in a dive, increasing the tuck as speed builds. You trim models to fly, not to dive!

Bruce Davidson asked me; how come my plane flies great but tucks severely in a dive, is it decalage or balance... the answer is both!!! Both are perfect, but airframe was not designed for diving. He got happy :-)

Airspeed uncovers decalage/incidence; high airspeed voids any valid information. Decalage/incidence are bandages for unbalanced models.

So how about when Wurts said, "I fly my planes with a neutral balance point but most guys would be uncomfortable flying their planes that way".....

1. He doesn't owe anybody anything, so why give them 'advantages' in soaring?
2. He's right, it is 'uncomfortable' to fly a balanced Sailplane...SOOOO WHAT???. Where has anything 'comfortable' been a value other than a rocking chair? Flying RC in the beginning was comfortable! We got sick to our stomachs after each flight.

BUT when you learn to control RC Sailplanes and stop letting things go along and occasionally give them a bump on the stick to bring them back on the field..... It starts getting fun.

You have to admit it is full house planes that really get our blood pumping!

To 'hobble' all that performance you guys designed into the plane is crazy, like tying a rope around the back legs of a Race Horse you paid a million for, so that he wasn't so 'twitchy'.

I say, GET off our butts, get some guts and learn to use the planes we paid for! And then and only then will the playing field get more level.

And that's not all I have to say about that :-)

Gordy