

# Jer's Workbench

## Tow Hook Location

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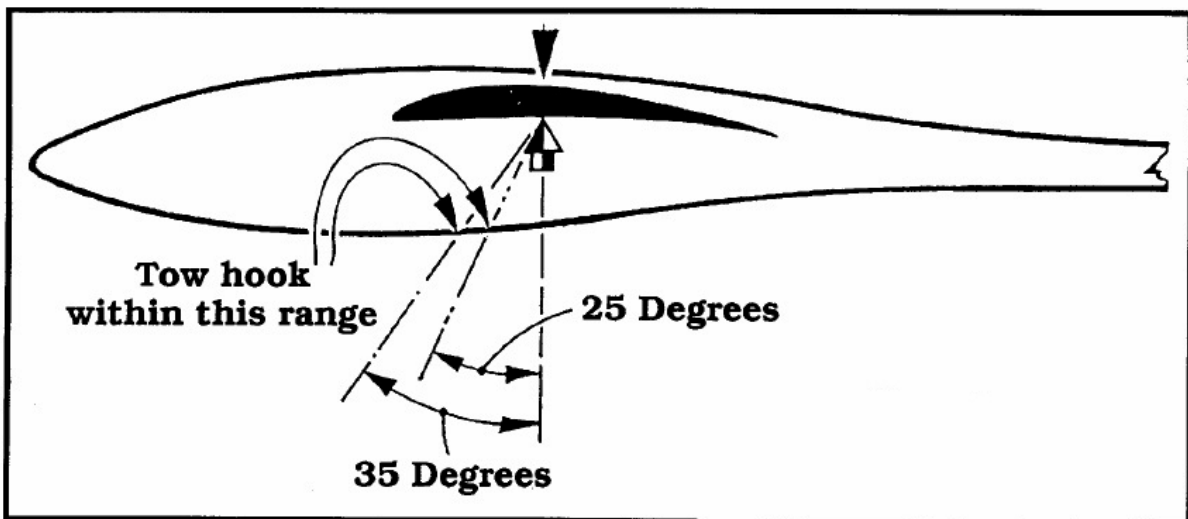
With permission from RCSD June 2001

Location, location, location... Any business person will tell you that to get the best performance out of any business is 'location', 'location', 'location'! Well, the same thing is true for the location of your tow hook. Its proper location will provide the best optimum launch one could wish for.

So, just where is the best location to install the tow hook? There is no rule of thumb, nor secret formula, or anything carved in stone. However, the tow hook should be installed somewhere just in front of the C.G. (center of gravity).

So, where am I going with this? The other day, while at the flying field, I overheard a newbie asking, "Where is the best location for my tow hook?" The answer was, "Just in front of the C.G." There was no explanation. As I recall, this was the same thing I was told some 40 years ago.

Well, this got me to thinking. I pulled some books from my library, searching for any information on the subject of tow hook location. It took several hours, but I located two articles. Both said pretty much the same thing. While they didn't provide the best location for the tow hook, they did provide a safe range, as shown in the picture.



O.K., let's assume we don't know where to install our tow hook, so let's start by installing the tow hook at 30 degrees, in front of the C.G. On launch, while watching the model go up, do you see only the trailing edge of the wing or can you see the top of the wing?

If only the trailing edge of the wing can be seen, the tow hook needs to be moved aft a bit. If the top of the *wing* is visible, this is good. But, if you feel that you can get a bit more out of the launch, then move the tow hook aft just a bit more. For the optimum

launch, the tow hook will be at its most aft position. There is, of course, a 'point of no return'. If you cross this point, you could lose some directional stability.

These test launches are intended to be done without the use of flaps and elevator. In order to attain the optimum launch, however, there is one more step to do. Let's call it the renowned modeler's 'Feel'. Meaning, "What do you feel that you can get away with?" So, let's add the use of flaps for a camber change and elevator to get an optimum launch. The 'feel' equates to exactly how much flap and elevator can be used before the model pops off the tow line, or the tow line breaks.

Once we identify the location, and feel comfortable with that location, the optimum launch will likely have been achieved. Oh, so high!

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