

## GEAR DOOR RETRACT CYLINDER INSTALLATIONS

Pages 181 & 287

Page 287 will illustrate this requirement best. When installing the nose gear door cylinder, the centerline of the cylinder must be perpendicular (90°) to the hinge line. If it is not perpendicular to the hinge line then the cylinder shaft will have a side load placed on it at some point in the travel range during retract. This can cause a malfunction of the cylinder or more likely will cause the cylinder to bind up and not allow the door to fully spring open.

We have had a few cylinders returned under the assumption that they were defective when in all likelihood the lack of perpendicularity was the problem.

Obviously, the door retract cylinders used on the hydraulic inner main gear door option will require the same perpendicular installation.

## NICO PRESS SLEEVE INSTALLATION

Page 274, fig. 265

It has become apparent that some discussion of nico press sleeves is needed since at least one builder did not know how to install them correctly.

They are actually very simple but they do **REQUIRE THE CORRECT TOOL**. You **MUST** have a nicopress swaging tool. The cheapest type works just as well as the expensive ones and costs only \$36.50 (Aircraft Spruce) vs. \$139.00 for the fancy ones. The tool simply applies smooth crimping pressure all around the sleeve thus squeezing it onto the rudder cables. Any other approach to setting these sleeves will likely result in failure. When the rudder cable slips loose, the pedal goes to the firewall, the brakes go with the pedal, the ability to steer goes away and the plane goes wherever it wants - not good!

## ELEVATOR BOB-WEIGHTS

One of the hardest aspects of any light, high performance airplane to get used to is the light touch requirements of the controls. And nearly always, the elevator is the lightest, our plane is no exception to this rule. I have come to enjoy this and view it as a quality but many of our builders are used to big heavy production "cans" so I've been working on a bob-weight system for the elevators. This merely inputs a "feedback" to the control stick. As you pull G's, the weights on the system try to return the stick (and the elevator) to the unloaded position.

I designed a set for the Lancair several months ago. Don Goetz, local guinne pig, decided to test them out for me on his aircraft, 43D. They have been "in test" for over a month now and all who fly it seem to like the input from the weights.

I have decided to make them standard on the model 320 and they will be available in either plans form or prebuilt for the 200 and 235's. Plans are no charge and a cost has not been determined yet for the prebuilt system.

I will provide a quick sketch to illustrate their installation, but do not use this as an installation guide. It should be a quick retrofit unless you have installed something (battery perhaps) in a position that interferes with the swinging arm of the bob-weight.

We will not have prebuilt bob-weight assemblies available for about 6-8 weeks.

