

I had my Culver up on jacks last week to check out the retraction system. If I didn't learn much, I did at least come up with lots of questions. I certainly hope some one will be compassionate enough to try to answer them. The left gear, I discovered, is quite rigid when down even without the lock pins in the locked position. No play at all. The right gear has almost an inch and one-half lateral movement without the lock pin in place and about 3/8" with the pin in place. I noticed that the retraction link permitted this movement in the right gear, but the link in the left gear permitted no movement at all. Further, the adjustment (the length is adjustable by screwing it in or out) seems almost impossible to get to. In addition, it doesn't seem that the gear would fully retract if one did adjust the retraction link (and this brings up another problem). The "clicks" of the ratchet as the gear is retracted come out just wrong. That is, the last click I can get is an inch or so from the top leaving the wheels down just a little and creating a little extra drag. If I could get that last click, I'd be fine but it won't go quite that far. (Back to the link adjustment) adjusting the link in the direction required to reduce the lateral motion of the right gear would leave it hanging still further down. On the other hand, if one could adjust the stops (and I assume one can), I don't think the pin would go into place.

I do hope some one will bail me out. If the answer does involve adjusting the link, HOW do you get to it?

And how about that 3/8" play with the pin in place? Does that indicate (necessarily) that either the pin or the hole is worn? If so, what's the cure? Does ANYTHING need to be done?

Perhaps I should note at this point that the gear works fine. The pilot can detect no play, give, etc when operating the plane.

I did work out a solution to the problem of keeping the gear all the way up for minimum drag. Having the "clicks" come out right would be a lot better, but here is what I did: Out of 1/4" plywood which formed the jaws, I made a small vise or clamp. This clamp is screwed to the floor and grips the gear retraction wheel. Now, after the last click, I pull the wheel till the tires hit the top of the wheel wells and tighten up the clamp. I'm using a wingnut and bolt to pull the jaws together, this is not satisfactory. an "over-center", quick release/grip will have to be developed.

My drag reduction (and weight reduction) efforts seem to have paid off. The speed has not been adequately checked or the indicator verified, but at less than cruise rpm (prop is a 70 x 45) I seemed to be getting 125 - 130 indicated in fairly warm air at about 1500 - 2000'. It seemed as tho I could have indicated at full cruise power at least 135. Is this possible with an A80 Cont? It was kind of rough and my engine is kind of sick or I would have checked it out more thoroly.

My weight/drag reduction to date consists of removing the wind generator and mount, remove large retractable landing lite in wing, install very large spinner (10 1/2 x 12), replace air intake box with a small one that I faired in quite smoothly, remove all antennae, venturi, masts, OAT, tape (used vynl, same color as the plane) many of the seams that were a little rough, Lighter interior (about 10#)

One counter-productive thing I did was add a pneumatic (Maule) tailwheel. I had it and it was steerable so I put it on. It puts the tail up higher too which is another reason I put it on. It makes the Cadet almost a tri-gear it seems. But what I really want is a retractable tailwheel. Has anyone done, seen or heard of that? Other clean-up possibilities, I think, are flush nav. lite (possible?), small pitot tube, lighter gear springs and (previously mentioned) wheel doors.

can you answer me, mark?