

The dual yoke: A safety consideration

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The earlier Beech aircraft that many of us fly—mine is a fantastic 1960 M35—had the very unique and innovative single throw-over control yoke system. This system offers improved space for the nonflying front-seat occupant while still providing the ability to fly the aircraft from either side. For years I thought this was the way to go. My mind has now changed and a dual yoke assembly was recently installed on my aircraft.

Several factors contributed to my decision. First, when my adult children visit they like to fly with me and a dual yoke provides the option of allowing them to “fly” the aircraft while I still retain immediate access to all controls. The same rationale is offered when taking a BFR or other training, as many CFIs will not instruct in a single yoke aircraft.

The single most important reason is a measure of increased safety for my wife. We frequently use the Bonanza as pleasurable transportation to visit friends and family. Should something happen to me in flight, the process required to move the hand-held GPS mount and then rotate the control arm assembly at a time of stress for her is now avoided. In this rare circumstance, the dual assembly can be called extra prepaid insurance.

Another consideration for this improvement is that, should I have to manually lower the gear, a right-seat occupant (pilot or not) could fly the aircraft while I reached back to “crank it down.” This would be especially helpful under an electrical power failure condition where the autopilot was unusable.

With all the above considered, the decision to put in a dual yoke (properly



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called a dual control arm assembly) was made. My next step was to find one. I checked around for availability and was amazed at the cost of a used factory part.

I then learned of Cygnet Aerospace Corporation and their new assembly, which is PMA'd as a direct replacement for the original Beechcraft system. I was able to see the system at the ABS Convention in San Antonio and was most impressed with its high quality construction. Less than a week later, it was on my airplane.

There are several key improvements in their product over the Beech system designed well over 30 years ago. First, instead of casting the arm, as Beech did, it is milled from a single piece of metal. Second, where the factory system has a small inspection port on the back to inspect, lubricate and adjust the chain system, the Cygnet unit allows you to remove the entire back side (attached by machine screws) to better perform the above functions.

As an aside, shortly after buying my aircraft, I inspected the chain on my original single yoke arm assembly because there was excessive play in the control wheel movement. I found three of the four chain adjustment nuts not safety-wired. When was the last time you or your A&P made this inspection on

your single or dual control arm chain?

Another reason I chose the Cygnet system was its finish, all powder-coated. Their system also is predrilled in the center for attaching hand-held GPS or chart holders. Lastly, their assembly, besides incorporating the factory collar as a mounting system, has two Allen screws that further rigidly mount the assembly to the center control tube.

All in all, I am happy with the new addition; my passengers do not mind the loss of space and they appreciate the ability to “fly the bird.” I feel much better that, should something happen to me in flight, the right-seat occupant will have controls immediately available, thus reducing the possibility of an out-of-control situation.

We have over the years improved other facets of our prized aircraft, such as calibrated fuel injectors, avionics, interiors and paint schemes. For those of you with the single throw-over yoke system, this is a worthwhile safety improvement for you to consider.

ABS member Jack Merrell is a retired Air Force fighter pilot with 4,000 hours in numerous aircraft. He has over 1,500 hours of instructor time and 650 hours of combat time. Trained as a Flight Safety manager and accident investigator, he has also developed a flying and flight simulator training syllabus. Jack owns and flies a 1960 M35 Bonanza.