JEFF SKILES
COMMENTARY / CONTRAILS

Design Competition

A challenge to aircraft manufacturers everywhere

BY JEFF SKILES

THE DAY IS GETTING LONG as the setting sun casts the landscape below in hues of purple and gold. From my perch far above an unfamiliar landscape unfolds before me. The occasional ridge of mountains stands tall separated by large expanses of gray, flat land. Prairie, steppe, heath, tundra, these are the many names used around the world for this land virtually bare of vegetation. Tumbleweeds seem to be the crop of choice in the high plains.

There is not much to distinguish the plains of eastern Idaho, just a vast nothingness stretching from horizon to horizon. I think I'm in Idaho anyway, although the invisible border with Wyoming must certainly be in view. The visibility in this dry western sky is incredible for one accustomed to more eastern climes. There certainly appears to be plenty of room to spread your shoulders as mile after mile of dusty unadulterated landscape passes below my wings. Fuel and overnight stops need to be carefully planned. Perhaps several hundred miles can separate suitable locations.

I have come a long way but have farther to go before I rest. Rock Springs, Wyoming, seems to be as good a place as any to call it a day. With the light quickly slipping away, I need to be on the ground soon.

Inside the airplane it is a cheery place. The multicolored glass cockpit brightens my mood. The airplane is cruising on autopilot at 9,500 feet, and I am listening to XM radio. The flight director displays an endless series of magenta boxes to mark my course, and all I have to do to arrive at Rock Springs is to fly through those boxes to the end. My seat is comfortable, and it has an extraordinary amount of elbow room. The cabin heater is keeping the airplane warm and draft-free. My contentment is complete, and I feel I could carry on almost forever.

A PEDESTRIAN PACE

There is only one discordant note in this symphony of satisfaction, however, and its regrettable influence is indicated right before my eyes. Atop the Garmin G3X Touch primary flight display is an unfortunate indication, a glowing 90. This is not normally an unpleasant number. It is certainly better than 89, if not quite as expansive as 91. But today it is representing my groundspeed—and that's in miles per hour! I gaze ahead hopefully. In the distance I pretend I can see Rock Springs, or at least where Rock Springs should be just beyond that small range of mountains. But, according to the Garmin it is still 132 miles distant; an hour and a half of flying lies ahead. For all the amazing technology at my fingertips inside this cockpit, the realities of time, distance, and place are unaffected. Glass cockpit or no it is my fate to crawl across the map like a lethargic fly making very slow progress.

There is no offending headwind responsible for this situation. In contrast to the modern avionics and comfortable surroundings, 95 mph is just about all the faster this Carbon Cub will go, particularly with the 29-inch Bushwheels this one sports. But a Carbon Cub is not designed for speed; it is designed for backcountry flying. We can't have everything apparently, and that is why I have budgeted a day and a half for this delivery flight from Yakima, Washington, to Denver.

WHAT'S YOUR PERFECT AIRPLANE

I wonder what would be the perfect airplane for me. Clearly, every airplane is but a

compromise, a give and take between speed and capability, price, fuel economy, and myriad other factors that might rise to note. A pilot who can authoritatively state that he or she has found the perfect airplane must be blessed with complete contentment.

While the Carbon Cub is certainly not a speed demon, it serves its purpose better than most. It's fun to fly, capable, and can obviously take off and land virtually anywhere. A while back I stopped for gas at Pocatello in winds that were charitably reported as 24 knots gusting to 35. I flew the airplane pretty much all the way to the ramp as the howling winds rocked the wings and the stall warning blurted out its warble. I chained the airplane to the ground lest it decide to depart on its own while I went in search of the fuel truck. On takeoff, I don't think it rolled more than 10 feet before clawing into the air. With a stall speed of 32 mph, the wind alone provided all the impetus necessary for flight.

Now though, here in cruise, I must pay the piper. My Cessna 185 would be racing along at 140-plus knots with that delightful feel of taking the bit in its teeth as it accelerates to cruise. But there is a price to pay for such splendid motility—17 gallons an hour. The Garmin before me shows that the Carbon Cub is delivering its pedestrian speed with an equally miserly fuel burn of 7.1 gallons per hour. I am envious!

YOU CAN'T HAVE IT ALL

In a few other things, however, the 185 is superior. In addition to raw speed, the Skywagon can almost carry its own weight. It only weighs 1,750 pounds yet has a 3,350-pound gross weight. The Carbon Cub? With a 175-pound me, the relatively little luggage I carry, and 25 gallons of gas, well, we're pretty much there.

It seems as if some airplanes are designed for a very specific purpose and others for a more general audience. My Skywagon isn't the fastest, the most fuel efficient, or the roomiest. It doesn't have the shortest takeoff and landing capability, nor will it empty out the FBO lobby when I taxi up to the pumps the way my old Waco would. But it does all those things relatively well. Maybe that's all I can ask.

If my Skywagon is a flying compromise—a mere saddle mare of the skies—this Carbon Cub is a thoroughbred excelling in its mission and purpose as no other. Maybe, however, the reason we can't have everything is that no one has thought to ask.

THE CHALLENGE

Supposedly the impetus behind the creation of one of history's most iconic aircraft was when Jack Frye, vice president of TWA, sent a letter to aircraft manufacturers asking them to design the next generation of airliners. The letter asked for an all-metal, tri-motored monoplane (biplanes would be considered) with a gross weight of 14,200 pounds, a range of 1,060 miles, and a cruising speed of 150 mph. It needed to carry 12 passengers plus two pilots and take off fully loaded on two engines at any airport TWA served. The DC-1 prototype was the result, leading to the first production model, the DC-2, which was eventually expanded into Douglas' masterpiece, the DC-3.

So, just like Jack Frye, I will provide a challenge to aircraft manufacturers' design teams everywhere for my perfect airplane. I need a four-seat airplane with an unusually large baggage area that is fully IFR-capable with a cruise speed of 160 knots. Single engine is okay, but it has to be rugged and capable of taking off and landing on unimproved strips in no more than 500 feet. It should have a glass cockpit, autopilot, and all-weather capability. A turbine or diesel powerplant would allow me to get gas anywhere, and it needs to be FAA-certified and absolutely must come in under $100,000. Oh, and it should burn no more than 5 gallons an hour. There is the challenge, now get to work. EAA

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