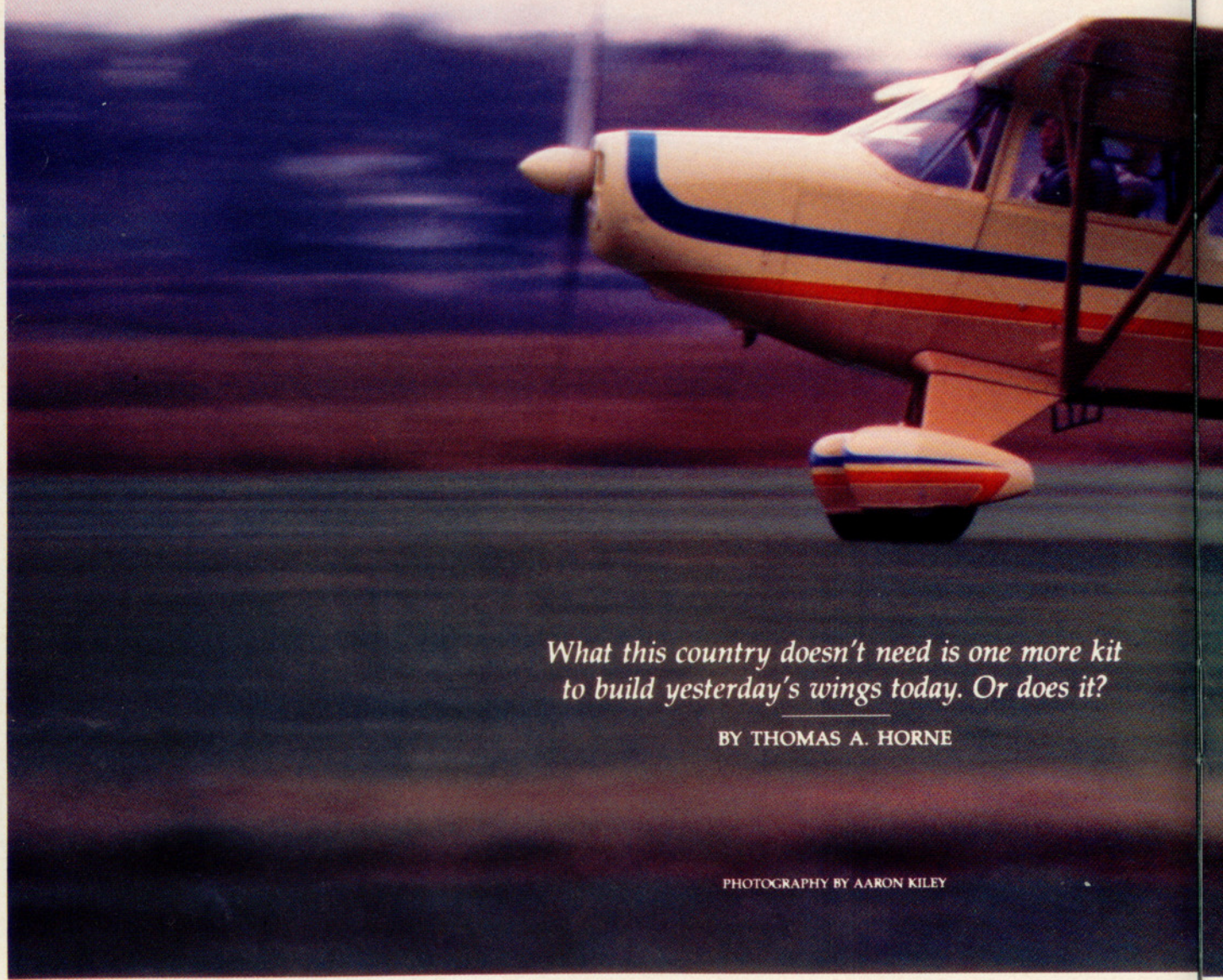
HOMEBUILT HATCHBACK

Let us say that you are in the market for a lightplane, but have very definite conditions that must be met. The airplane must be brand new, not cost more than $14,000, have excellent short-field characteristics, possess classic bloodlines *and* be able to carry four persons and a generous amount of baggage. This may sound like a fantasy, but such an airplane does exist—Wag-Aero's Chuby Cuby.

There is a price for this fantasy, even if it may not be measured in huge sums of money. The Chuby Cuby (Wag-Aero spells it CHUBy CUBy) is a kit, and you must be willing to put at least 1,250 hours of work into the



What this country doesn't need is one more kit to build yesterday's wings today. Or does it?

BY THOMAS A. HORNE

PHOTOGRAPHY BY AARON KILEY

project. In more palpable terms, this works out to be every minute of your spare time for two years, perhaps at the cost of your marriage.

If you do not have this much time to spare, then you can order a pre-welded fuselage for several thousand dollars more than the standard fuselage kit. (Wag-Aero could not quote us a price for the pre-welded fuselage, but it should cost about $3,600). The unassembled fuselage kit is $997.50, but requires that you build a jig and do a lot of time-consuming welding. The entire kit, sans engine and propeller, costs $8,900.

At the other end of the home-builder spectrum is the purist. He can buy an $89 set of plans for the Chuby Cuby, then have at it with the materials he buys, trades or otherwise scrounges on his own.

Whichever route you take, you end up with what at first glance looks like a replica of Piper's late-1940s classic, the PA-14 Family Cruiser. True, the fuselage is similar; but as with the rest of the airplane, there are many features that make the Chuby Cuby an improvement over the Piper original.

The Chuby Cuby has twelve and a half square feet more wing area than the PA-14. It also has Cleveland wheels and brakes, 8.00 × six-inch tires (larger, "tundra" tires are available as an option), gull-wing doors, an optional turtledeck hatch that allows access to the aircraft's large baggage compartment, and spoilers. None of these features is found on the Family Cruiser.

The hatchback cargo area can be found, however, in the U.S. Navy's versions of the wartime J-5 Cub—the HE-1 and the AE-1. They were used as hospital airplanes; the elongated cargo area was meant for transporting injured sailors.

The Chuby Cuby can accommodate any of the four-cylinder Lycomings currently on the market, from the

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118-hp O-235-L2C to the 180-hp O-360-A1A. The engine mount for the 150- and 180-hp engines can be disconnected and swung out, permitting easy access to the magnetos and accessory components.

The airplane photographed for this article, Wag-Aero's factory demonstration airplane, is equipped with a 150-hp Lycoming O-320 engine. Dick Wagner, president of Wag-Aero, has been showing N65WA off ever since the Chuby Cuby made its debut early in the summer of 1982.

Wagner is quick to point out that this airplane is a prototype. Lately he has been experimenting with a number of details, such as the shape and placement of the airplane's spoiler and elevator trim controls, and the design of the control stick. As Wagner sees the opportunity to make improvements, he will incorporate changes to the Chuby Cuby kits and plans.

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As of October 1982, 111 sets of plans and 14 kits had been sold. Not surprisingly, the first kit out the door went to a customer in Alaska, where lightplanes often must serve as aerial pickup trucks.

Wagner, a captain with Republic Airlines, has seen Wag-Aero through two other Piper-inspired kit offerings —the CUBy, a replica of the J-3 Cub (December 1980 *Pilot*, p. 35); and the Wag-A-Bond, a variation of the Piper PA-17 Vagabond (September 1981 *Pilot*, p. 87). The Chuby Cuby, with four seats and an 1,120-pound useful load, promises more utility than its predecessors. It is Wagner's response to the current dilemma plaguing Wichita.

"Cessna, Beech and Piper have all got themselves convinced that the only airplanes the public wants are those that they have been offering for the past 15 years or so," said Wagner. "These airplanes perform fairly well, but they cost too much. But mainly, they are no fun to fly. The Chuby Cuby *is* fun to fly. It's like it's always saying 'let's go flying.' Wichita has nothing like this, so they wonder why sales are down."

Well, so much for claims. How *does* the Chuby Cuby fly?

Wag-Aero's private strip is jokingly called "Wag-Aero International." It is a narrow (about 50 feet wide) strip, 2,000 feet long at most, and its grass covers portions of the runway that feel like a washboard surface.

The day I was to meet Wagner and the Chuby, I circled WAI in my Cessna 182RG. I thought about setting down, but a low pass revealed too many variables for my limited experience in and out of boondocks airstrips. So I landed at nearby Burlington Municipal Airport. The wind was blowing as it only can in the Midwest, so I used Burlington's Runway 19, a grass strip that was situated well into the 25-mph breeze. At an approach speed of 63 knots and full flaps, the RG used up about 1,800 feet of the 2,600-foot strip. No brakes were used because it had just rained and the ground was soft.

Then the Chuby Cuby arrived. Wagner landed it within the first 800 feet or so. The Chuby's landing speed is a tad under 35 knots.

After I climbed into the Chuby, I found the takeoff roll short, the controls light and responsive (thanks to

With a kit price of $8,900 and a remanufactured engine, the Chuby Cuby gives owners a lot for their money: four seats and 1,020 pounds useful load.

large wings and ailerons). The initial rate of climb came out to be 1,000 fpm with two aboard and near-standard conditions. The stall is docile and, at a power setting of 2,400 rpm, the airplane cruises at about 105 knots.

Soon I was on approach to the Wag-Aero field. At pattern altitude and 55 knots, the power was pulled back to idle, abeam the intended touchdown point. Two quirks soon revealed themselves.

The trim control, a vernier knob located on the floor just forward of the pilot's seat, must be operated without the benefit of seeing it. Wagner is accustomed to the arrangement, but I am not. I dialed in nose-down trim when I wanted nose-up, and vice versa.

The Chuby Cuby's spoilers, though small in area, are indeed effective. We hit our pre-designated spot on the runway five times out of five. The rollouts were as short, or shorter, than the one I had observed at Burlington. Deploying the Chuby's spoilers gives the impression of being on an express elevator. Obstructed-field approaches can be performed with minimal fuss.

You do yearn for a third hand, though. One for the stick, one for the trim and another for the overhead spoiler control—a lawn-mower-style recoil starter handle. Pulling down on the handle activates the spoilers.

Coasting towards the field, jockeying the stick and rudder against a crosswind and pulling on the spoilers, you feel like you are in charge of some kind of elaborate one-man-band ensemble.

Jumping out of a 182 and into the Chuby brought to mind some comparisons. The Chuby can carry a load comparable to the 182's, but its wing and spoilers grant better short-field manners. The 182 can cruise faster—it ought to on 235 hp—but when your routine flights are less than 200 nm, which is more important: the extra 50 knots of airspeed or the fuel savings? Does it really matter that much if you arrive 45 minutes later than you would in a 182?

The Chuby Cuby's most unusual feature is its hatchback, a $119.50 option. Just the right length for skis, snowshoes, fishing gear, firearms and other odd-shaped loads. It will be a surprise if most Chuby Cubys are built without one. There is a 40-pound load limit on the hatch's cargo area. Behind the rear seats, you may carry an additional 166 pounds of baggage, assuming you have four FAA-standard (170-pound) passengers.

If you have a need for much cargo hauling, the Chuby Cuby can be built as a two-place. This transforms what ordinarily would have been the rear-seat area into a large, cube-shaped cargo hold.

I always wanted to know the significance of the lower-case "y" that Wag-Aero tacks on the end of its Cub airplane trademarks. The little y is more than just a cutesy suffix. Wagner says that the "y" in the CUBy and

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CHUBy CUBy stands for "you. It means you build it."

The popularity of Wagner's kits and WTA, Incorporated's Super Cub has caused some confusion in the industry. WTA picked up the ball when Piper stopped marketing Super Cubs in 1981. Now, it sells Piper's Super Cub at a base price of $37,850. Based in Lubbock, Texas, WTA has an exclusive agreement with Piper of Lock Haven, Pennsylvania. According to WTA, it markets the Super Cub, and Piper builds them to WTA's order. The sales staff has changed, but the same people are building Super Cubs.

Some claim that Wag-Aero is ripping Piper off; first the Cub, then the Vagabond and Family Cruiser. Wagner asserts that the Cuby is a replica of an out-of-production design, and that the Wag-A-Bond and Chuby Cuby (he once considered naming it the "Tundra Bear," then changed his mind) have a sufficient number of design and construction differences to qualify them as unique.

One wonders whether Piper ever regrets having ended sales of the Cub and its derivatives. It seems the demand for these simple, utilitarian yet fun machines always has been there, but Piper's high ($28,000 for a barebones Super Cub when Lock Haven ceased selling) asking price put them out of the picture. One way or another, the market will be satisfied. What Wichita and Lock Haven cannot provide, you—and people such as Dick Wagner—can. □

HOMEBUILT HATCHBACK

WAG-AERO CHUBy CUBy

Base price as tested $14,000
Kit price $8,900 (w/o engine and prop)
Plans price $89
AOPA Pilot Operations/Equipment Category*: Cross-country

Specifications

Powerplant	Lycoming O-320-A1A, 150 hp
Recommended TBO	2,000 hr
Propeller	Sensenich 74-DM6-O-54
Length	23 ft 9 in
Height	6 ft 7.5 in
Wingspan	35 ft 9 in
Wing area	191.8 sq ft
Wing loading	10.5 lb/sq ft
Power loading	14 lb/hp
Seats	4
Cabin length	8 ft 6 in
Cabin width	3 ft 2 in
Cabin height	4 ft 1 in
Tailcone baggage area dimensions	
length	6 ft 11 in
width	2 ft 6.5 in (fore) 10 in (aft)
height	1 ft 8.5 in (fore) 9.6 in (aft)
Empty weight	1,080 lb
Gross weight	2,100 lb
Useful load	1,020 lb
Payload w/full fuel	786 lb
Fuel capacity	234 lb (233 lb usable)
	39 gal (38 gal usable)
Oil capacity	8 qt
Baggage capacity	
tail compartment	40 lb
aft cabin	to w/in weight and CG limits

Performance

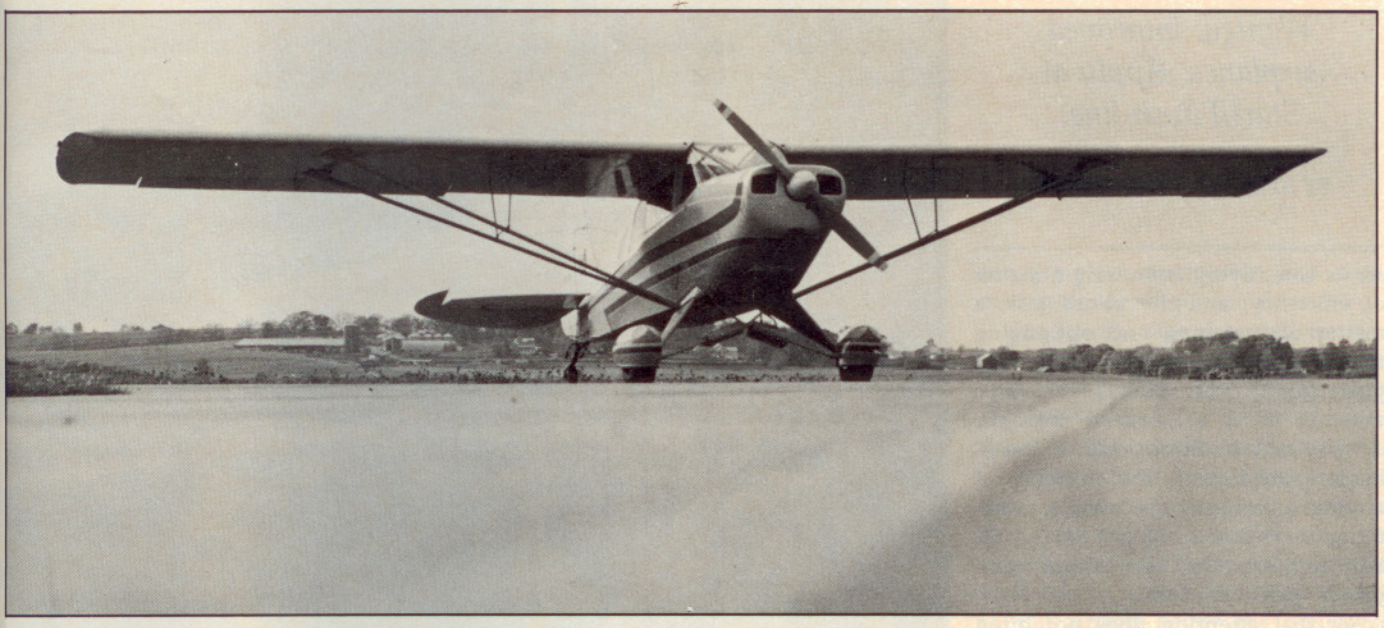
Takeoff distance, ground roll	361 ft
Takeoff distance over 50-ft obst	1,096 ft
Rate of climb, sea level	850 fpm
Cruise speed/Range w/45-min rsv (fuel consumption)	
@62% power, best economy	
3,000 ft	109 kt/625 nm (45 pph/7.5 gph)
Service ceiling	14,000 ft
Landing distance over 50-ft obst	712 ft
Landing distance, ground roll	385 ft

Limiting and Recommended Airspeeds

Vy (Best rate of climb)	65 KIAS
Va (Design maneuvering)	93 KIAS
Max spoiler extended	74 KIAS
Vno (Max structural cruising)	109 KIAS
Vne (Never exceed)	129 KIAS
Vs1 (Stall clean)	30 KIAS
Vso (Stall in landing configuration)	34 KIAS

All specifications are based on manufacturer's calculations. All performance figures are based on a standard day, standard atmosphere, at sea level and gross weight, unless otherwise noted.

**Operations/Equipment Category reflects this aircraft's maximum potential. See June 1982 Pilot, p. 93.*



Spoilers, gull-wing doors and a large wing area make this homebuilt a natural for short fields, floats and load hauling. As a floatplane, gross weight is 2,200 pounds.