



THE BASIC TAILDRAGGER LIVES!

BY ROGER ROZELLE

AOPA 537321

Forrest Barber, a 36-year-old, part-time test pilot for Taylorcraft Aviation, pushed another log into the wood stove that warmed his office and fought off the early morning chill in Alliance, Ohio. Outside, three new Taylorcraft Sportsman F-19's were parked in the grass and glistened in the rain, while waiting for their owners to fly them away from Barber Airport (elev. 1,062 feet). Coffee cup in hand, Barber, who owns the airport, settled into a chair, eager to share his recollections of Taylorcraft.

"Well, the way I hear it, C.G. Taylor and William T. Piper were having some disagreements, although their Cub operation was proving to be successful," he said. "Anyway, Piper bought Taylor out in 1935.

"C.G. went right to work building another airplane that he claimed was designed to outperform the Cub. He got five or six other folks to help him and together they built an airplane — the Taylor-Young Model A — in three months, from start to finish."

The aircraft was constructed of welded steel 4130 tubing covered with fabric. It incorporated side-by-side seating for two and a strutbraced wing that included a spruce spar. The original 40-hp version boasted a gross weight of 1,050 pounds and a maximum speed of 79 knots (91 mph). Cruising range was 200 nm (230 sm). Most important, people liked it.

It received a lot of good publicity, mostly because of C.G.'s reputation with the Cub. In fact, the city of Alliance thought it would be an asset to the community if the Taylorcraft plant was built there, so it offered free facilities to start building airplanes. Model A Taylorcraft, forerunners of today's F-19 Sportsman, started rolling off the production line in 1937 with an initial price of about \$1,500 for the 40-hp Continental version,



followed by 50 hp and 65-hp models using Franklin and Lycoming engines. Today, a new F-19, powered by a 100-hp O-200A Continental engine, goes for \$15,995.

Barber's father, Al, was operating a mechanic's shop in Cleveland, Ohio, during those years, and serviced airplanes as well as automobiles. In 1940, the elder Barber went to Alliance on a job-hunting trip.

"He came here planning to go to work for a Ford dealership, but that job didn't pan out," recalled his son. "Since he had an interest in airplanes, he decided to stop by the Taylorcraft plant and visit. Well, he was an A & E, as well as a pilot, and the company needed both, so it hired my dad. He became one of the company's six test pilots."

Although Al Barber had a job in Alliance, he continued to live in Cleveland for several months. In the meantime, World War II broke out and Taylorcraft rode the industrial war-boom, with many of the airplanes being used to train pilots in the Civil-

ian Pilot Training Program. Along the way C.G. Taylor lost control of the company and moved aside.

"Dad was commuting between Cleveland and Alliance in a Piper Cub for about a year," chuckled Barber. "He kept passing over a farm on those trips and decided to buy it. He also built an airport on it and called it Barber Airport. This is it, where we are today.

"He stayed pretty busy during those years and flew about 3,500 to 4,000 airplanes on test hops until November of 1946, when he didn't get a paycheck. The company ended up filing for bankruptcy a few months later. The boom was over, not just for Taylorcraft, but everybody — except my dad. He turned his airport into an FBO and did a lot of work on Taylorcrafts."

The company was revived in 1948. C.G. Taylor, at the helm once again, announced that Taylorcraft, Inc., was relocating to Conway, Pa. A company press release quoted Taylor as saying that he was "confident of a greater business expansion than can be taken care of here in Alliance . . . with more than 16,000 Taylorcrafts in the air, they must have service parts without delay if we expect to maintain our good name."

While a new two-place, no-frills 65-hp Taylorcraft was then selling for \$1,995, Taylor also announced plans to build a four-place airplane. Not long afterward, Taylor moved aside and Ben Mauro, operator of the Conway-Pittsburgh Airport, became president of Taylorcraft, Inc.

Promotion of aviation was big business during the 1950's, and press releases compared the public's need for personal airplanes with automobiles. One of those attention-getting publicity efforts nearly landed Forrest Barber in the *Guinness Book of*





World Records for being the youngest person to solo an airplane.

"Al Bennett, a vice president at Taylorcraft, talked to my dad about an idea that he had to show how easy it was to fly a Taylorcraft," said Barber. "My dad had me flying Cubs since I was six years old, so airplanes weren't new to me. Bennett wanted me to solo the airplane. And I was only about 11 years old.

"But the project was going to cost my dad some money, so he didn't do it. But Bennett didn't give up."

No, he didn't. He taught his 10-year-old daughter to fly, and on January 4, 1952, she soloed in an 85-hp Taylorcraft Sportsman. The record stands today.

"They had to do it in Cuba, since it was legal there for her to solo at age 10," explained Barber. "I saw her a few years back and she told me that she flew a couple of times after that, but she never got her license."

The Taylorcraft line mushroomed into four-place airplanes that sported

145-hp engines, as well as a special ag-sprayer that was powered by a 225-hp Continental. The company ballyhooed slotted wings and a fiberglass body, and there was a brief flurry about an experimental diesel-powered two-placer, which flew but never went into production. The innovations and the promotions couldn't keep Taylorcraft in business, however, and at the close of the 1950's once again the financial death blow came.

The company changed hands a few times after that. Although the buyers built no airplanes, parts continued to be manufactured and sold for the existing fleet. It wasn't until the late 1960's that a possibility that production would resume arose.

"Charlie Feris was the last person to buy Taylorcraft — parts, jigs and fixtures," said Barber. "He came to Alliance around 1968 and bought a small plant, but it didn't have an airport. So my dad made a deal with him that allowed final assembly of his airplanes to be done here in a one-airplane



**Time has not
dulled the
appropriateness
of this ageless
taildragger**



hangar, and then test-fly them off our grass strip.

"Charlie's first airplane flew here in 1972. He and my dad are gone now, and Dorothy Feris is running the company, but the airplanes still make their maiden flights from this airport. That's why folks see a truck with an airplane wing tied to the roof, pulling the rest of the airplane behind it, once or twice a week. It's about three miles from the plant over here to the airport, and that is the best way we have to get them here."

Times have changed, but the Taylorcraft, so many times an orphan, has remained much the same.

"Sure, the engine is bigger and there is a tailwheel instead of a tailskid and the airplane carries more fuel, but it really hasn't changed much," sighed Barber, as he pushed his coffee aside and walked to the window.

"It is a good little airplane, for any pilot from student to bush flier. It's a fun airplane. So pick one and you can find out for yourself."

"Well," I began, "it looks to me as if there are swimming pools forming on the grass, so maybe we ought to put this flight check off until the rain slows down."

"Heck, these airplanes can fly in the rain," he answered, with a big grin across his face as he pointed out the window at the airplanes parked in the wet grass. "Besides, how many weeks can you stay in Alliance, Ohio? This rain and overcast are part of normal, good, everyday Ohio flying weather. So, pick an airplane and let's go."

MMMMmmmmmm. The red one or the white one or the yellow one — the basic colors available from Taylorcraft. "The yellow one," I said, "N2002Y."

Preflight was relatively simple. I stood under the high wing and carefully watched Barber do it. The six-gallon fuel tank inside each wing was drained through a sump at each wing root. The main fuel tank, which holds 12 gallons of 80 octane (9 gallons usable), is located aft of the firewall

and just beneath the windshield in the forward compartment.

Draining the main tank sump, which is mounted in the lower left side of the engine compartment, wasn't quite so easy. Opening either side of the hinged metal cowl, to allow some daylight in the compartment, was easily accomplished by unsnapping four Dzus fasteners with a coin. Putting a fuel sampler into position against the drain wasn't so simple. "Takes practice, that's all," offered Barber. The engine compartment, occupied primarily by the Continental engine, allowed for lots of elbow room.

An aluminum door on each side of the fuselage makes entrance to the cabin fairly easy — if you know the right technique. Pull up into the cabin, rear-end first, then swing your legs around and settle into the bench seat. Four bolts hold the seat in place, although they can be repositioned to adjust the seat forward or aft.

I was confused by seeing six seatbelt straps dangling from the seat, but Barber answered my question before I asked it: "Naw, it's not for three people," he said. "It's another seatbelt rigged up as a shoulder harness. It was the easiest thing to put in the airplanes when shoulder harnesses became required equipment."

The other ends of the harnesses lacked storage points and dangled from the cabin sides and hung over the small 12-volt battery mounted in the rear section of the baggage compartment in an enclosed case. The cargo area, accessible only over the bench seat, seemed adequate for several suitcases, although a placard limited baggage area weight to a maximum of 72 pounds. The baggage area was lined on the floor and fuselage sides with thin plywood.

The panel of N2002Y is back to basics, with five instruments mounted across the upper section of the panel: turn and bank (optional at \$250), vertical speed (also optional at \$150), airspeed, tachometer and altimeter. Below those instruments, in the center of the panel, were smaller, standard gauges for oil temperature, oil pressure and alternator. A Genave Alpha B 200B nav/com was the only concession made to the age of modern-day radio equipment.

Some of the other options included a landing light in the left wing (\$125) and an overhead cabin light (\$35).

As equipped, N2002Y weighed in at 915 pounds and carried a price tag of \$17,585. Barber and I, along with 16 gallons of fuel, brought the gross weight up to 1,411 pounds, 89 pounds under its 1,500-pound gross weight.

Startup was routine, although Bar-



ber cautioned me to be sure of the mixture control's location to the right of the throttle. They are separated by the engine primer and cabin heat controls, but the cabin heater control is virtually identical in shape, size and color to the mixture control. Small print on the heater and mixture controls clearly identifies them, and a red clip surrounded the mixture knob, but "you can't be too careful," said Barber.

Taxiing across the wet grass to the marked runway called for S-turns; there was just no way to see over the engine cowlings. The steerable tailwheel made the job relatively easy. Fortunately, no braking was required until I eased the airplane into position for a runup: I was not used to the tiny heel brakes that are mounted on the floor, aft of the rudder pedals.

I pushed the throttle forward and eased the tail up; the airplane quickly accelerated and lifted off the 2,200-foot grass strip in less than 300 feet at 48 knots (55 mph). Airspeed was allowed to increase to 65 knots (75 mph) and the initial rate of climb registered 700 fpm, although it dropped to 500 fpm by the time we leveled off at 3,000 feet msl.

Once established in level flight, the engine tach was set for 2,525 rpm — 75% power by Barber's reckoning — and it netted an indicated airspeed of 96 knots (110 mph) for a true air-



Taylorcraft F-19 Sportsman

Basic price: \$15,995

Price as tested: \$17,585

Specifications

Engine	Continental O-200A 100-hp @ 2,750 rpm TBO 1,800 hr
Propeller	McCaughey 1A105SCM 69 in
Wing span	36 ft
Length	22 ft 1 in
Height	6 ft 6 in
Wing area	183.7 sq ft
Wing loading	8.17 lb / sq ft
Power loading	15 lb / hp
Passengers and crew	2
Empty weight	900 lb
Equipped empty weight (as tested)	915 lb
Useful load (basic aircraft)	600 lb
Useful load (as tested)	585 lb
Payload with full fuel (basic aircraft)	474 lb
Payload with full fuel (as tested)	459 lb
Gross weight	1,500 lb
Fuel capacity (standard)	24 gal (21 usable)
Oil capacity	6 qt
Baggage capacity	72 lb

Performance

Takeoff distance (ground roll)	300 ft
Takeoff over 50 ft	375 ft
Rate of climb (gross weight)	775 fpm
Maximum level speed (sea level)	110 kt (127 mph)
Service ceiling	18,000 ft
Stall speed (clean)	37 kt (43 mph)
Landing over 50 ft	375 ft

speed of 100 knots (115 mph), with a 50° F outside air temperature. It was also noisy, requiring Barber and me to shout at each other.

Throttling down to 2,200 rpm — 55% and the lowest cruise rpm recommended in the operator's manual — resulted in an IAS of 78 knots (90 mph); 82 knots TAS (94 mph). Said Barber: "You don't burn much fuel like this."

Barber claimed that the indicated airspeeds would have been increased 3 to 4 knots (4 to 5 mph) if the optional wheelpants (\$300) had been installed. However, N2002Y's purchaser deemed that expenditure would not be necessary at the airplane's future home base in Alaska.

A series of power-on stalls consistently produced a slight buffet at 36 to 37 knots (41 to 42 mph) indicated, followed by a slight pitch-down. Releasing the yoke was all that was needed to recover.

Power-off stalls produced a buffet and slight pitch-down at 41 knots (47 mph). Once again, releasing the yoke was all that was required to recover.

Aggravating the stalls by holding the yoke full aft created no difficulties, other than keeping the flight controls coordinated as the airplane oscillated about the roll axis during descents that never exceeded 500 fpm.

Barber, who wanted to emphasize

the airplane's docile manner, suggested that I set up 1,000 rpm and crank in full-up elevator trim on the overhead trim control. Hands-off, the airplane settled into a 700-fpm descent, that fluctuated slowly down to 500 fpm and back again, while the airspeed ranged from 52 to 61 knots (60 to 70 mph).

After climbing back to 3,000 feet, Barber told me to set the rpm at 1,800. When the airplane's airspeed settled at 48 knots (55 mph), he instructed me to cross control the airplane. I did, and with some increase in pitch, held altitude; we made some very interesting turns that way. They were abrupt and sharp, but the airplane was well under control.

Barber, a certified flight instructor, suggested that perhaps I might want to get current in spins, since in the utility category — 1,380 pounds max gross weight — the F-19 is approved for spins. We figured that we had burned off a sufficient amount of fuel to get us within weight limits, so spins seemed like a good idea. Setting up the entry with power off required only full rudder as the airplane signaled an impending stall. With the yoke full aft, the airplane wrapped up nicely and developed a rate of descent that pegged the vertical speed indicator at the bottom of its scale — 2,000 fpm — after three turns. Recovery was straightforward and called for opposite rudder to stop the turn and forward yoke to regain airspeed and recover from the descent.

Barber apparently likes spins, because he wanted to "demonstrate" a few himself, and it wasn't long before we had an unspoken contest going, to see who stopped turning on line with the road we were using for orientation. Frankly, the F-19 made it fun.

WOMAN AT THE REINS

"Somebody must have kicked my brains out," said Dorothy Feris, who inherited the top spot at Taylorcraft Aviation Corp. after the death of her husband, Charlie. "But I can't conceive of closing the doors and walking out.

"Charlie loved the airplane and believed that it filled a void as a low-cost airplane for the little man. But when he first bought the original dies, fixtures, jigs and parts, I'm not sure that even Charlie knew what he would do with them."

The Alliance Chamber of Commerce responded positively to Charlie Feris's overtures in the late 1960's to return Taylorcraft to the city that had given birth to thousands of airplanes in earlier years. He wanted to bring the airplane home.

"Charlie felt that the former employees and parts suppliers would be a big help to him," explained Dorothy, who seemed comfortable with first names and a minimum of formality. "He was right. He couldn't have done it without them. They walked right in and went to work as if they had never left. In fact, if I count noses, 15 of my present 25 employees worked for the original company back in the 1940's."

"I don't know what I'll do when some of the older employees can't work for me any longer," she said with concern. "They are craftsmen who have developed very special skills over the years. In a company this small there just isn't anyone to take their place. Today, so much is done by machine that people just haven't been able to develop the skills to shape an aluminum cowling by hand or carefully lay-up a spruce wing spar."

If concern about her work force isn't worry enough, there is also rapidly rising inflation to battle along with a growing

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When we finally returned to level flight, Barber showed me the procedure for getting fuel from the wing tanks into the main fuselage tank. A lever for each wing tank is located under the panel on the appropriate side. When it is turned to the "on" position (no markings on this control), in line with the fuel line, fuel flows by gravity to the main tank, which feeds the engine. The float-type fuel gauge, mounted on the top of the instrument panel, measures only the fuel in the main tank. The manual cautions against allowing fuel to drain into the main tank until it is $\frac{3}{4}$ empty to prevent fuel from overflowing. According to Barber, that is equally important for refueling on the ground. Anyone who manages to put 30 gallons of fuel in a Taylorcraft might suspect an open valve in the transfer system.

Landing the airplane is simple enough. Reduce power to 1,600 rpm on downwind, and aim for an airspeed just under 70 knots (80 mph). Barber suggested that power be pulled off and airspeed maintained at 61 knots (70 mph) on base. There are no flaps, and altitude adjustments were made by slipping the airplane and easing over the fence at 52 knots (60 mph). "Three-point landings are the name of the game" according to Barber.

Taxiing N2002Y back to its place alongside the other Taylorcrafts parked in the grass, I found myself thinking back to the days when most pilots didn't have radios, and transponders for the masses hadn't arrived. The Taylorcraft was in its heyday. Times have changed, but the Taylorcraft hasn't. It remains an airplane, within financial reach, that is built for fun or work. □



scarcity of some essential supplies.

"Our first twenty airplanes went out the door for \$7,500 each in 1973," emphasized Dorothy. "The same airplane costs double that today, and I'm still not making enough profit. Everything costs so much.

"Aluminum prices seem to rise each day. And the recent trucker's strike caused problems in shipping steel tubing to us. Finding good spruce for the wing spar is becoming a problem, too. Just today we returned some spruce because it wasn't suitable, and I wouldn't be surprised if the company tells us to buy our next batch from somebody else."

One way to reduce costs would be to use fiberglass for some parts, rather than aluminum. But Dorothy says that some of her customers don't want her to make the switch, especially pilots operating airplanes in Alaska. And Alaskan pilots are important to Taylorcraft.

"Aluminum requires so much time — and skill — to shape," she said. "So I would like to use fiberglass on the cowling and the doors, but the Alaskan pilots say that fiberglass cracks in the cold climate. *They want me to stick with aluminum.*

"And I guess I will, as long as I can, because most of the airplanes I sell go to Alaska. If that will help sell airplanes, then I'll do it, especially for the bush pilots. They use our little Taylorcraft as if it's a pick-up truck and always have stories to tell me about the ruggedness of the airplane, whether it's equipped with floats, skis or oversized tires."

The woman-at-the-top is never too busy to hear those stories.

"I really enjoy talking with my customers," she said, proving it by answering the telephone each time it rang. "It is interesting to talk to folks on the telephone and imagine what they look like. Usually, when I meet them in person, I find out that I imagined wrong.

"I encourage Taylorcraft owners to join the T-craft Club so they can meet other people who share their interest. And the big fly-in every July at Barber Airport is always fun. I like people, especially people who fly."

Frankly, it seems amazing that the president of Taylorcraft has any time to spend with people. She wears so many company hats, there don't seem to be enough hours in the day to take care of business, let alone listen to Taylorcraft tales.

"I am bookkeeper, secretary, telephone operator, janitor or anything else that the moment demands," she laughed. "I just can't afford to hire someone to do a job that I can do myself, such as answer the phone or type letters. Maybe later.

"Of course, I put in some long hours, seven days a week, but when things begin to aggravate me, I take some time off. Right now the business means hard work."

Hard work is something that Dorothy is accustomed to. Managing a unique aviation business has also required a great deal of on-the-job training.

"I was a waitress for ten years before I married Charlie," she easily revealed. "After Charlie and I were married, I was a lineboy for another ten years. I'm used to

hard work and being with people.

"When we started Taylorcraft, Charlie made it a point to let me know what the business was all about. Of course, I have had to learn a lot on my own, and I have made some mistakes, but things move slowly enough to keep things straight — partly because we don't have lots of money. I really miss Charlie, though."

She doesn't feel any prestige by being one of the few females in aviation's management hierarchy. She loves her job and doesn't flaunt her position.

"I can't imagine what I would do if I walked aboard an airliner and saw a woman in the cockpit," she said as her head shook from side to side. "I don't know if I would walk off, but I might think about it. I guess I'm not a liberated woman."

She isn't even a pilot.

"I have our prototype out at Barber Airport," she admitted with a groan. "But I haven't had time to learn to fly. I keep saying that I will, but there always seems to be so much work to be done here at the plant.

"I do remember the last time I flew with Forrest, and I was amazed at how complicated it had become. Charlie in his wildest dreams would never have imagined so many transponders and radios going in these airplanes."

Although aviation has grown more complex over the years, there has been little change in the basic design of the Taylorcraft, other than progressively more powerful engines. Taylorcraft fans have urged some specific changes, but Dorothy says some of them are unwarranted.

"The wing has been beefed up, the spar is bigger and the baggage compartment has more room," she said. "Aside from that, not much has been changed.

"We get more requests from people to add flaps to the airplane than any other change. But the T-craft is so small, I don't think it would be worth the tremendous

amount of engineering time and expense to add them.

"A few others have asked us to put a 150-hp engine in it, but that really wouldn't increase performance. Sure, it might take off straight up, but its present takeoff isn't far from that anyway.

"There have been a few requests for us to certify the airplane in the aerobatic category, but I don't think that would pay off for us. And I would be worried about someone suing us in the aftermath of an accident."

The shortage of 80-octane fuel, coupled with the fact that she is a low volume purchaser of the O-200A Continental engine — and its cost is increasing — has prompted her to select another engine to power the Taylorcraft.

"By the fall we will be installing O-235L2C Lycoming engines that will operate on 100-octane fuel," she said. "We aren't sure how much horsepower we will be able to settle on, but we hope it will be 112 to 115 hp.

"I have worried about Continental stopping production on the O-200, because, as far as I know, I am the only buyer of those engines. And I just don't buy enough of those engines to afford the proposed price increases.

"We have also considered removing the fuselage fuel tank and going to 18-gallon wing tanks. And we have considered adding more soundproofing, as well as changing from mechanical brakes to hydraulic ones.

"But those are things that take time, especially in a small company such as ours."

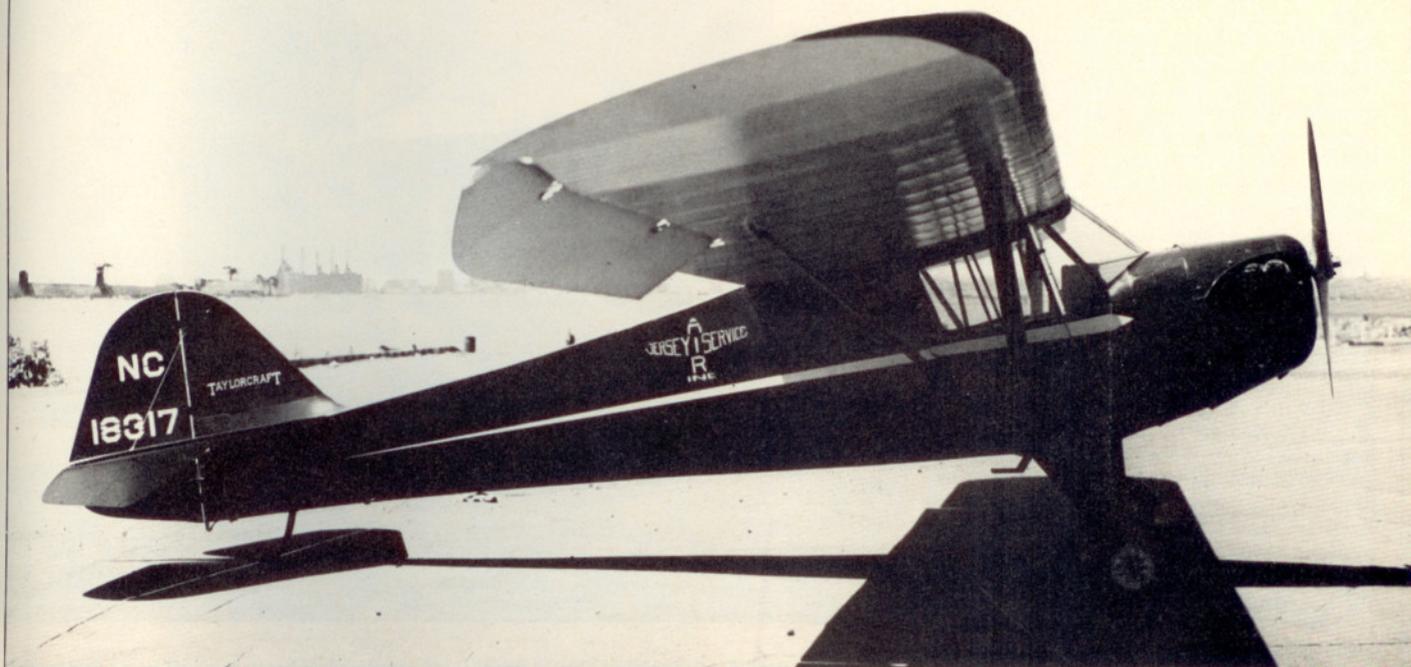
In the meantime, two or three Taylorcraft airplanes will continue to roll out the doors each month, built much the same way they were 40 years ago, and will still find loyal followers.

Said Dorothy: "Everybody ought to own a T-craft."



Handed the helm abruptly, Dorothy Feris runs Taylorcraft with quiet practicality.

YESTERDAY'S WINGS



The T-Craft

BY PETER M. BOWERS

AOPA 54408

The Taylorcraft A/B series, popularly referred to as the T-Craft, was destined to become one of the Big Three of low-powered general aviation designs in the years immediately preceding and following World War II. It had rather unusual beginnings, spanned an era of significant light-plane design refinement and experienced a number of corporate name changes.

C. Gilbert Taylor's experience as an airplane designer goes back to the 1920's—he formed Taylor Brothers Aircraft Co. in 1928 and introduced a side-by-side two seater that he called the "Chummy." The depression wiped out the market for this type of plane, so in partnership with William T. Piper he reorganized as Taylor Aircraft Co. in 1931 and quickly designed the ultra-light airplane that was to become known as the "Cub" (see "Mr. Taylor's Cubs," October 1971 *Pilot*). Piper was a wealthy oil man, whose bankroll and abilities as a salesman made

up for his lack of aeronautical knowledge and made the Cub the leading lightplane of the middle and late 1930's.

The firm prospered, but the partnership wasn't satisfactory to Taylor. He sold out to Piper in 1935 and formed a new company of his own, Taylorcraft Aviation Co., at Butler, Pa. There he introduced the Taylorcraft Model A, a side-by-side design similar in weight and power to the contemporary tandem-seat Cub. Taylor's departure soon created an identity crisis among the Cubs, for Piper changed the old firm name to Piper Aircraft in 1937. There were by that time a lot of Taylor Cubs flying around, but those built from 1937 on were Piper Cubs. It took a while for the name change to be accepted by the public.

Taylor's new firm, meanwhile, had identity problems of its own. After only a short stay at Butler he moved to Alliance, Ohio, in 1937 and reor-

ganized as the Taylor-Young Airplane Co. with himself as president and W. C. Young as vice president. This name, too, was short-lived, and the firm became Taylorcraft Aviation Corp., which it remained through 1946.

Sometime during the war years it became the Taylorcraft Division of Detroit Aircraft Products. Civil production resumed in 1945 but, in spite of selling a phenomenal 3,151 T-Crafts in 1946, the firm went bankrupt in November. Production had actually reached a rate of 50 units a day, but a shortage of engines slowed deliveries.

The firm was sold at auction in March 1947; Taylor was able to buy it himself and reorganized it as Taylorcraft, Inc. A further reorganization was undertaken in 1950, but the name remained the same. Through all of these changes the airplane in its several variants was marketed as the Taylorcraft.

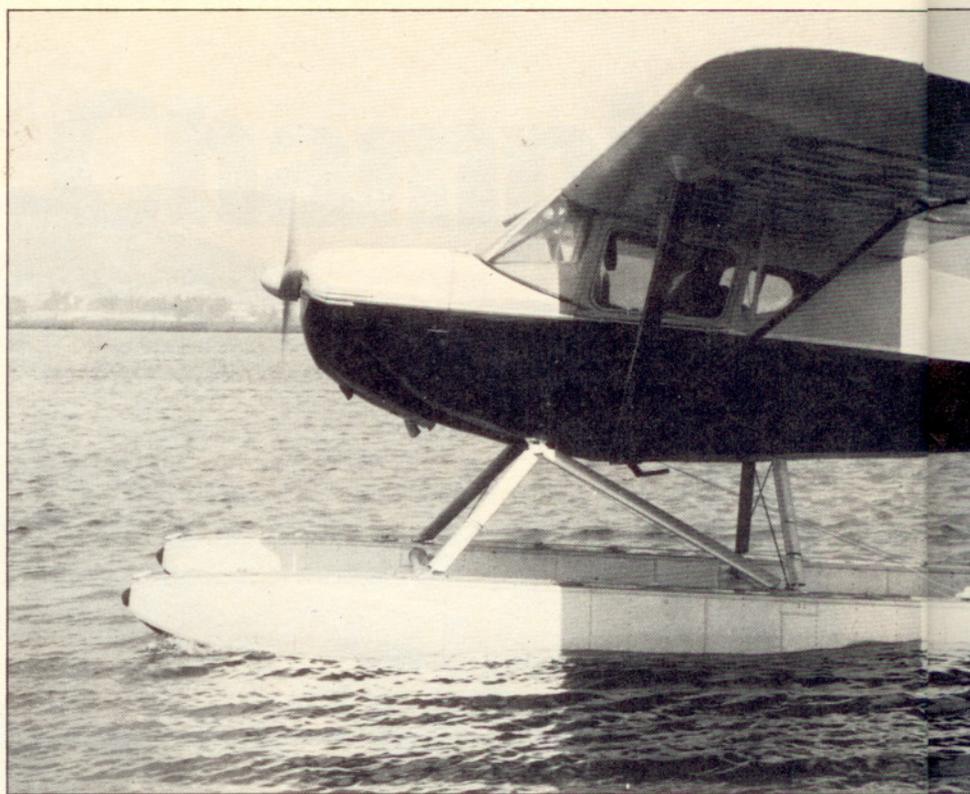
The ultra-light and bare-minimum Taylorcraft Model A of 1936-37 had hard-metal tail skid, single cabin windows, and exposed cylinders on the 37-hp Continental A.40 engine. Welded steel tubing was used for fuselage and tail.

When it was introduced in mid-1936, there was nothing unconventional or even innovative about the Model A; its good performance and appealing appearance were mainly the result of putting the prevailing state-of-the-art into a notably neater package. It closely followed conventional construction, with welded steel tubing for fuselage and tail. The wing used wooden spars, but departed from Cub practice in using stamped sheet aluminum for ribs instead of riveted metal frames. Even the use of Taylor's old preference for side-by-side seating was not an innovation, since both the Aeronca C-3 and the heavier Monocoupe were then using it. However, the T-Craft used wheels instead of sticks for the full dual controls. When wheel brakes were added, the heel pedals were initially installed only on the left, or pilot's, side.

Also in keeping with current practice, the door was on the right of the cabin, but a left-side door had to be added per government regulations when the design was approved as a seaplane. Side visibility was through a single window on each side; later deluxe models had a second window on each side behind the pilot.

The tripod landing gear supports pivoted at the longerons, and rubber cord was bound into the fuselage centerline to serve as the shock absorber. Early models had a steel-tube tailskid, but this was replaced by a steerable tailwheel as operation on pavement became more widespread.

The powerplant for the Model A was the single-ignition Continental A-40, an air-cooled, flat-four that delivered 37 horsepower but was commonly (and erroneously) called the "40 horse." Later A-40's did deliver a full 40, but they were not plentiful. On the A's and the early B's only the central part of the engine was cowled; the cylinders were exposed directly to the airstream. Although having four



cylinders, the A-40 looked like a two-cylinder design because the two cylinders on each side, and their removable heads, were cast as single units. The later B's with bigger engines went to fully enclosed engines along with their contemporaries.

Initial fuel capacity was 10 gallons in a tank between the instrument panel and the firewall. As power increased, so did the requirement for fuel; nose tankage was increased until space limitations decreed the addition of wing tanks.

Early T-Crafts did not have a longitudinal trim system, but an option was available in the form of a pair

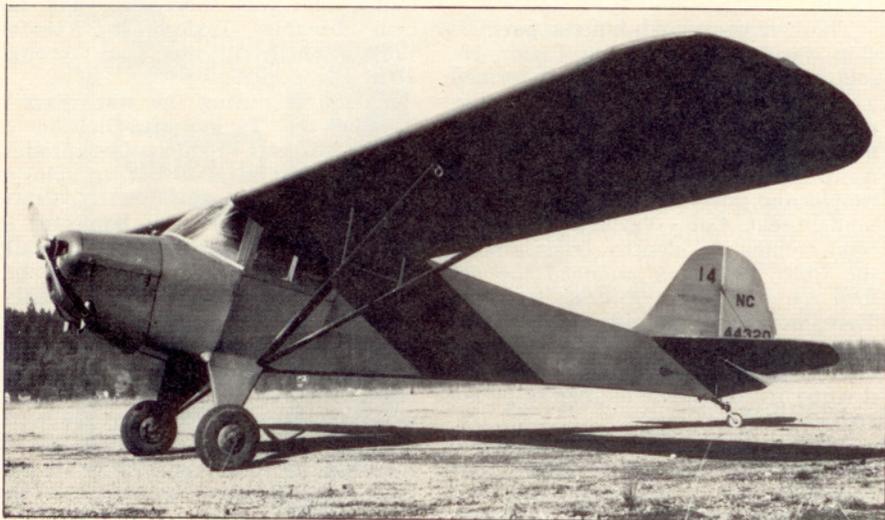
of external tabs that was installed just above the lower longerons and ahead of the rudder post. Later models had conventional tabs in the trailing edges of the elevators.

As produced in Butler in 1936, the Model A did not qualify for a full Approved Type Certificate. Instead, it got the lesser Memo Approval 2-259 in December, which was superseded by ATC 643 in June 1937.

The single-ignition engine became illegal for new production aircraft in 1938, so new powerplants were introduced in the slightly refined Model B. The BC appeared with the 50-hp, 170-cubic-inch, Continental A-50 engine that soon worked its way up to 65 horsepower as the A-65, with a few going to 75 horsepower via the conversion route. The BC model got ATC 696 in August 1938, and at first looked like the A because the cylinders were still out in the open. When the 65-hp engine was installed in the BC, it was fully cowled.

The BC series was paralleled by the BF (50-to-65-hp Franklin 4A-176 engine, ATC 699, dated Sept. 19, 1938) and the BL (50-to-65-hp Lycoming O-145 engine, ATC 700, dated Sept. 22, 1938). These all adopted the same state-of-the-art refinements as their contemporaries and sold well; however, the BC was the most popular and the others were dropped in 1941.

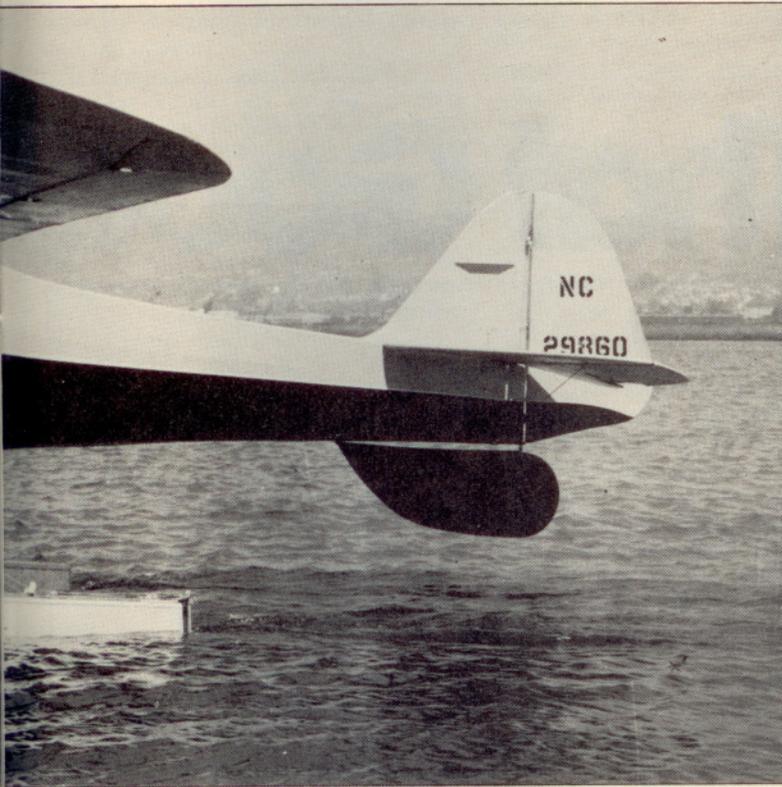
A bewildering array of subdesignations soon appeared, such as BCS-65 for the 65-hp, Continental-powered seaplane to reflect the structural difference of the second door (which was later standardized on some landplanes)



The stripped-down Taylorcraft Ace trainer of 1946 had no left side door or extra cabin windows. The author soloed all-red NC44320 on February 29, 1948.

The T-Craft

BCS-12 seaplane of 1941 had extra fin area, second door on left, and deluxe model had extra windows.



SIDE-BY-SIDE TAYLORCRAFTS

Specifications

	Model A	BC-12D-65	Model 19 Sportsman
		Continental	Continental C
Powerplant	Continental A-40 37 hp @ 2,550 rpm	A-65 65 hp @ 2,350 rpm	85 hp @ 2,575 rpm
Span	36 ft	36 ft	36 ft
Length	22 ft	22 ft	22 ft 4 in
Wing area	169 sq ft	183 sq ft	186 sq ft
Wing loading	6.6 lb/sq ft	6.6 lb/sq ft	8.0 lb/sq ft
Power loading	28.4 lb/hp	18.4 lb/hp	17.6 lb/hp
Empty weight	586 lb	730 lb	860 lb
Gross weight	1,050 lb	1,200 lb	1,500 lb
	Performance		
High speed	91 mph	105 mph	120 mph
Cruising speed	80 mph	95 mph	110 mph
Landing speed	35 mph	35 mph	38 mph
Initial climb	390 fpm	575 fpm	700 fpm
Service ceiling	14,000 ft.	15,000 ft	17,000 ft
Range	230 sm	375 sm	300 sm

and other letters and numbers to identify other special features. Altogether, 16 separate identifications appeared under ATC 696, culminating in the 19 and F19 variants of 1950. Actually, the true differences were less, since most were duplicated by addition of the S-for-Seaplane. BC-12 was the most common designation in 1941; BC-12D in 1946.

Production of the purely civil Model B ended after Pearl Harbor, but the tandem-seat variant developed for the Civilian Pilot Training Program (CPTP) and identified as Model D was tested by the U.S. Army as the O-57 light observation plane in 1941 and was in large-scale production as the L-2 Liaison type into 1944. Although the production L-2's were all tandem-seaters, the Army acquired a few side-by-side B's from private owners and fitted them into the L-2 series as L-2F through L-2L.

Earlier, the popularity of the early B-models resulted in Taylorcraft Aeroplanes Ltd. being formed in England early in 1939. The B was built there as the British Taylorcraft Model C with the 55-hp Lycoming. The British firm then went on to produce a redesign with the 90-hp British Cirrus Minor inverted in-line engine as its own Model D. At 1,400 pounds gross, this airplane was heavier than the American model; it also took on wartime military changes and became the "Auster" line of Aerial Observation Posts (AOP's), the general equivalent of the U.S. Army L-for-Liaison series. The British firm severed its affiliation with the U.S. firm in 1946, reorgan-

ized as Auster Aircraft Ltd., and resumed production of the civil Model D in several variants into the 1960's.

Postwar American production of the T-Craft resumed with the BC-12D and the use of names in addition to numbers, still under the prewar ATC. There was the Ace, a stripped trainer model, then such things as the BC-12D-65 Traveller, the 85-hp BC-12D-85 Sportsman and Special Deluxe, and the final F-19 Sportsman.

While it looked for a while as though the T-Craft would vanish along with some of the other models that went out of production shortly after the war, Taylor's personal takeover

after the bankruptcy sale kept the firm and the basic 1936 design going for a few more years while he turned his attention to agricultural and other workhorse designs. Production of the faithful old side-by-side two-seater effectively ended during the Korean War, but the company kept going. It then shut down, but was reactivated under new management in 1968, mainly to supply spares to existing models, but it also put the F-19 back into production on a custom basis.

FAA figures show that 5,113 T-Craft A and B models were registered in 1952; the latest figures show 31 A's active, 2,180 B's, and four F-19's. □



The postwar J/1 Autocrat (above), with 100-hp Blackburn Cirrus engine, was built by Auster Aircraft, Ltd., successor to British Taylorcraft, which had a 90-hp model.