

They call it the TB 20 in France, but some people already think of it as a Mooney stalker.

BY EDWARD G. TRIPP

The Helicopter Association International convention seems an unlikely time to focus on fixed-wing aircraft, but *Pilot* news editor Mark Twombly and I did just that this past January in Las Vegas, when Jean-Marc Eloy, chairman of Sky West of California, and Dean Castang, Sky West's head of Trinidad marketing, flew the aircraft—the first TB 20 in the country—to McCarran Field to meet us.

It was the first opportunity to fly the Trinidad and to discuss plans for the latest of several attempts to market the light aircraft products of Aerospatiale, the French government-owned aerospace conglomerate, in North America.

The best-known predecessor to the

Trinidad, or TB 20, in this country is the Rallye series of fixed-gear, low-wing singles (see January 1980 *Pilot*). The Rallye and attempts to sell it here were not successful.

However, many things have changed in the past four years. Aerospatiale's light aircraft division (Societe de Construction d'Avions de Tourisme et d'Affaires, or Socata) has a new line of aircraft that made their debut at Paris in 1977: the TB series, which currently includes the TB 9 Tampico, fixed gear with 160 hp available with either fixed- or controllable-pitch propeller; the TB 10 Tobago with 180 hp; and the TB 20, a retractable version with 250 hp. The

TB 20 is powered by a Lycoming IO-540-C4-D50 and a Hartzell constant-speed, two-blade propeller. For more on the Tobago, see November 1981 *Pilot*.

Of equal importance to a program to market light aircraft in North America is the shrinking number of models available and the significant increase in price of those products that remain.

The TB series share some interesting design, construction and operational features—they also share a common production line—that make them among the most modern light aircraft in the world. If the goals for U.S. certification, distribution and pricing are achieved, Aerospatiale could



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become a significant factor in general aviation in this country.

The basic price for the Trinidad is \$76,000. The equipped price of the aircraft we flew, F-GDBT, is just under \$106,000. That price includes a full set of King Silver Crown avionics (including DME) and Century Flight Systems Model 31 autopilot. According to Castang and Eloy, the maximum price increase for 1985 would be seven percent.

There are a great many ifs yet to be resolved before the goals can be tested in the market place, but that would make the TB 20 the lowest cost four-seat retractable on the market except for Cessna's 180-hp 172RG. Considering the standard equipment on the Trinidad, including corrosion proofing, it may be the least expensive.

I asked Eloy if the price reflected a subsidy by the French government. His response was that Aerospatiale, Socata, his company and the dealers would all make money at that price.

Eloy's attempts to convince Aerospatiale management to market the aircraft in this country, which went on for five years, make an interesting

story. He finally succeeded just before the Reno Air Races last fall, rushed to the factory in Tarbes, picked up F-GDBT and flew to the United States to put it on display in Reno. At the time we met in Las Vegas, he said he had flown more than 180 hours of demonstration flights.

Five more TB 20s were scheduled to arrive here last month, by which time FAA certification was to have been granted. They are part of Eloy's initial order for eight. (Socata production capacity could be increased to supply as many as 150 to the United States in the first 12 months of the program.)

His marketing plan includes locating a demonstrator within two hours flying time of any prospect in the continental United States.

At the end of 1983, Socata had built a total of 400 aircraft in the TB series, 80 of which were TB 20s. The company claims that the aircraft were designed for higher-than-normal automation both to ease production scheduling and to reduce the man hours of labor involved in construction. It reportedly takes 600 hours to build a Trinidad, which makes it a far less work-

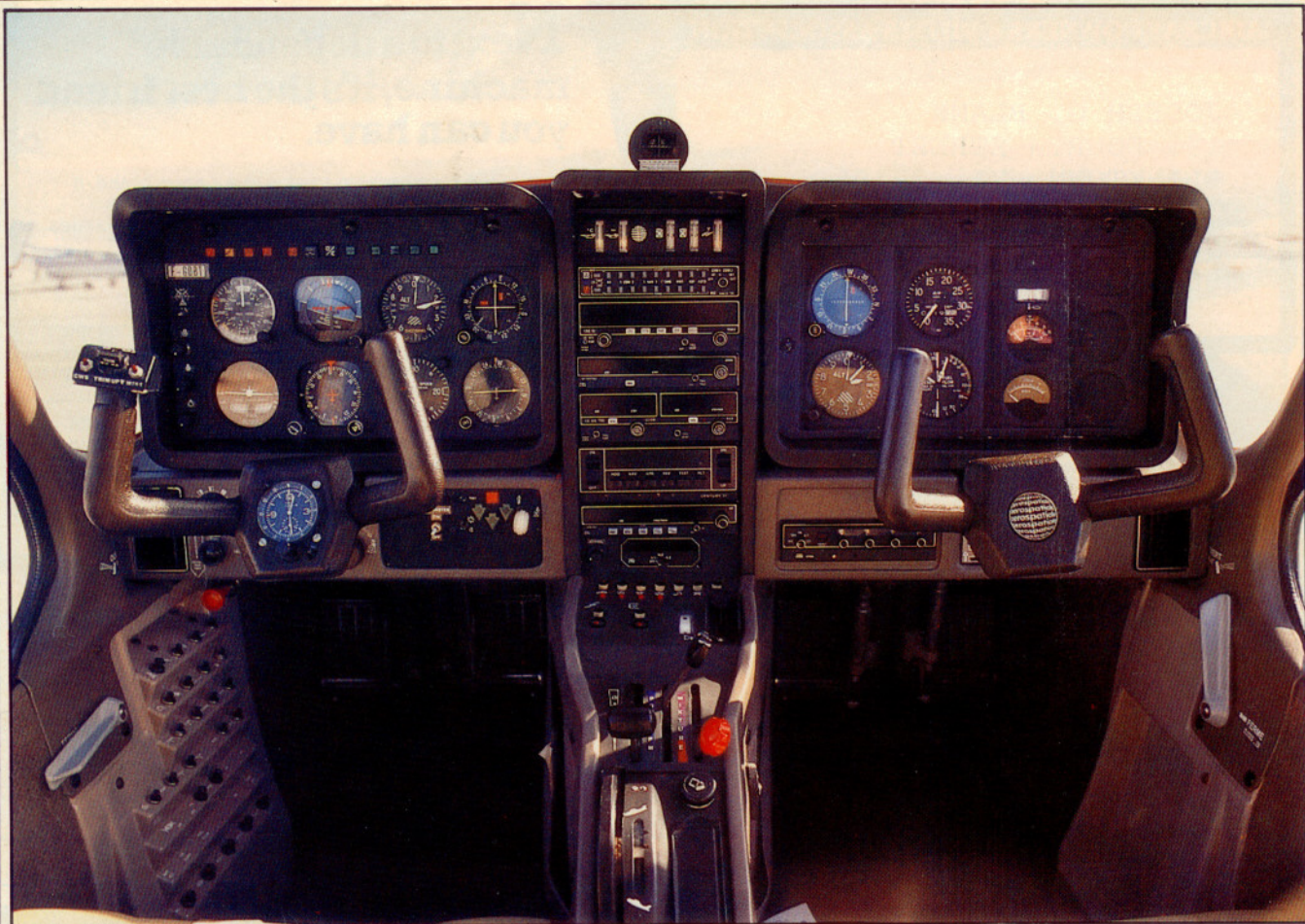
intensive airframe than any comparable aircraft currently in production here.

The semi-monocoque fuselage is a large tub, much in the manner of formula racing cars, built with a few large skin panels. Most of the cabin skin is reinforced glass fiber bonded to the tub. The gull-wing door openings are cut through the cabin skin, above the top rail of the primary load-bearing structure.

The one-piece spar is milled rather than built up. Large skins and flush riveting are used on the wings. Wide-span, slotted flaps and stubby ailerons are attached to the trailing edge. All control actuators are push rods. The main landing gear is trailing beam.

The combination of simplified manufacturing and commonality among the current models of the TB series of aircraft permits reduced parts count and the ability to make significant changes to product mix and number of units without production disruptions or cost pressures.

There are quite a few obvious differences that pilots will notice beyond the gull-wing doors. The interior looks



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more like a sample of European luxury automotive design than it does typical light aircraft, from the design and rake of the seats to the modular instrument panel.

It is in three basic segments, with the flight instruments and annunciators on the left, avionics in the center and engine instruments on the right. The latter are canted toward the pilot. A center console separating the two front seats contains accessory switches, throttle quadrant, elevator and rudder trim controls and microphone and headphone jacks. Pictographs are used as placards (the Federal Aviation Administration is requiring that most of them be changed to conform to U.S. practice to meet FAR 23 certification standards). The arrangement and location of instruments and controls conforms to the standard configuration of light aircraft in this country (the operating manual is organized to meet the standard format, as well).

Passengers in the rear seats have as much room as the crew up front, and

visibility from all positions is excellent. The rear seat backs fold to expand the luggage space and to place large objects in the bay. The exterior baggage door is too small for large bags. The rear seats also can be removed to provide a good sized cargo bay—for a light single—with a load limit of 573 pounds.

There are quite a few less obvious touches as well, such as a courtesy cabin light that is actuated automatically by the left door handle.

Attention was paid to maintenance and accessibility concerns. The instrument panels can be released quickly to tilt forward, making service simple. Access to engine accessories is simple and direct, too, once the large upper cowl is removed.

According to Eloy, the strongest operational points of the Trinidad are its ease of operation, good flying manners, good rate of climb and low speed maneuverability and control.

The empty weight of F-GDBT is 1,752 pounds. Eloy, Twombly and I

departed McCarran with half fuel, which made our takeoff weight approximately 2,575 pounds, 384 pounds below the gross of 2,959. Payload with full fuel is 790 pounds.

A flap setting of 10 degrees is used for normal takeoff. According to the operating manual, takeoff roll is 968 feet and distance to clear a 50-foot obstacle is 1,571 feet (the figures for landing are 755 and 1,740 feet, respectively).

Eloy demonstrated a normal departure and climb to cruise altitude on our way to a small strip on the edge of Lake Mead for takeoffs and landings. Temperatures averaged 10° above standard. With climb power set (2,500 rpm and 24 inches MP), at 4,500 feet at an indicated airspeed of 115 knots, the aircraft indicated rate of climb was 900 feet per minute. Best angle of climb speed is 65 KIAS; best rate is 80 KIAS.

Noise level was about average. Eloy established the aircraft in cruise configuration at 7,500 feet. With power set at 2,300/22, approximately 70 percent,

the indicated airspeed was 133 knots; approximate true airspeed was 152 knots.

The company claims a 75-percent cruise at 8,000 feet of 164 knots and a 65 percent at 12,000 feet of 160 knots.

Eloy, who has thousands of hours as a flight instructor both in France and the United States, demonstrated a variety of potential problems: severe cross control in the stall, balked landings in a variety of configurations and some pilot-induced botches. The Trinidad seemed docile throughout the demonstration.

After demonstrating a few landings and takeoffs, Eloy let me fly a few. My initial impression of the aircraft is that it is indeed docile and manageable and can be flown to match both low and high performance traffic patterns. It is nimble and responsive, with a bit more effort required for lateral control than for pitch and yaw.

When Twombly's turn came, I moved to the rear seat. The comfort is good, even for my large frame, and the visibility for sightseers is surprisingly good for a low wing aircraft.

Eloy has promised to make a more extensive evaluation possible when the next batch of Trinidads arrive in this country. At that time, we will be able to comment more thoroughly on the aircraft, including its behavior in

night and IFR flight.

The TB 20 should find a responsive market in the United States. It is much closer to being a state-of-the-art light single than most of the products currently available. It has sufficient range and performance to make it competitive, particularly at the price. It should be an interesting alternative aircraft for business and pleasure use.

Should Eloy succeed with his plans for this aircraft, including convincing Aerospatiale management that its light aircraft products can succeed in North America, there are some intriguing additional products that could follow.

A turbocharged version of the Trinidad is undergoing tests in France, as is an aerobatic version. Eloy also is evaluating the market for the 160-hp TB 10 Tampico with a controllable pitch propeller.

He also is considering the potential market for a smaller, 100 or 130 hp two- to three-place basic airplane that could be sold here for approximately \$45,000.

Quite frankly, we hope he succeeds. As *AOPA Pilot* has noted time and again, the market for light aircraft exists in this country. All that the pilots who comprise that market need are modern products that provide more value for the price than are currently available. □

