

Turbo Commander 680/695

Fast, fuel efficient, good payload and strong product support

By Fred George

By the early 1960s, the Twin Commander aircraft line had reached the limits of available piston-engine power, so Rockwell Standard, the aircraft manufacturer, elected to upgrade to turbine power. The 1965 Rockwell Model 680T Turbo Commander was first in a new family of turboprops based on the Twin Commander design. Powered by two 575-shp Garrett AiResearch TPE331 engines, it offered a 50-percent horsepower boost compared to a Lycoming-powered Twin Commander, plus more range, considerably greater reliability and almost triple the time between overhauls.

Operators praised the aircraft for its 250-plus KTAS cruise speed, fuel efficiency, payload capacity and short-field performance, along with handling ease. Early Model 680-series airplanes, though, were handicapped by relatively low MTOWs, short range and severe range-payload tradeoffs. All Turbo Commanders are known for excellent cockpit/cabin visibility. They also have relatively high cabin noise levels and comfortably long, but somewhat narrow cabin cross-sections. Active noise reduction headsets for passengers are a must.

In 1971, the Model 690 made its debut, featuring 717.5-shp TPE331-5 engines, 650 pounds more fuel capacity and a 10,250-pound MTOW. The airplane could carry 727 pounds of payload with full tanks and had a range of 750-plus nm, but it was limited to a 25,000-foot maximum altitude. The Model 690A arrived in 1973, and it was capable of climbing to 31,000 feet and cruising at 270 KTAS in the high twenties. The higher cruising altitude improved fuel efficiency, enabling the aircraft to fly about 950 nm and land with IFR reserves. MTOW was boosted to 10,335 pounds in 1976 with the introduction of the Model 690B.

These early 680/690 aircraft have aluminum spar caps with stainless steel straps that are prone to dissimilar metal corrosion, so they are subject to 12- to 36-month repetitive inspections or total replacement of the wing spar — a \$100,000 upgrade. There's also a repetitive upper center wing skin inspection or retrofit upgrade to cope with dissimilar metal corrosion.

In the late 1970s, Rockwell stretched the



wing by six feet and added small winglets, added integral wet wing fuel cells that boosted fuel capacity by 275 pounds and improved the systems. The interior configuration was changed and an optional aft lavatory was incorporated. The resulting 1979 Model 690C, marketed as the Turbo Commander 840, could fly 1,100 nm with standard tanks or 1,350 nm with optional long-range tanks. But its 200-pound heavier empty weight slashed tanks-full payload. These models and newer aircraft have all-aluminum wings, so they're exempt from the corrosion-related inspections and spar cap retrofit issues.

Rockwell also introduced the 1979 Model 695 or Turbo Commander 980, a companion product fitted with 733-hp -10 engines. It still had range-payload tradeoffs, but it had much better climb performance and it could cruise 30 knots faster.

When Rockwell was acquired by Gulfstream in 1981, the Turbo Commander line underwent more changes. The 1981 Model 695A, known commercially as the Jet Prop 1000, was powered by 820-shp -10 engines, equipped with standard long-range fuel tanks and could fly as high as 35,000 feet. It's the most advanced and capable variant of the family, having an 11,200-pound MTOW. A limited number of Model 695B Jet Prop 1000 aircraft, having 11,750-pound MTOWs, were produced between 1984 and 1985.

The Model 690D or Jet Prop 900, also arrived in 1981, accompanied by a lower price tag than the Jet Prop 1000. Its MTOW was boosted by 225 pounds compared to the Turbo Commander 840, but its 748-shp -5 engines provided a lackluster power-to-weight ratio.

Scheduled maintenance costs are reason-

able, by turboprop standards. Twelve-month/150-hour checks cost about \$15,000 to \$16,000 at well-respected shops, such as Mid-Continent Airmotive at Clarence Page Airport in Oklahoma City. Starter/generators have 900-hour overhaul intervals and they cost \$2,100 to rebuild. Landing struts and actuators are due for overhaul at five-year/3,000-hour intervals, a \$12,500 expense. Props also are due then with a price tag of \$9,700 to \$13,000. Engine overhauls cost about \$160,000 per -5 or \$180,000 for a -10.

Twin Commander Aircraft LLC also initiated the nose-to-tail Grand Renaissance upgrade program. Virtually every part of the aircraft was replaced or reworked at a cost of nearly \$1.5 million. Today, the GR modification adds about \$200,000 to \$300,000 to resale value.

The Dash 10 engine upgrade program for legacy -5 powered aircraft increases cruise speed by 30 knots, but it also costs about \$575,000 to \$600,000. But the cost of overhauling a couple of -5 engines is about \$350,000, so if the upgrade is done at TBO, the net cost is about \$225,000 to \$250,000, according to Mike Hudgins of Oklahoma City-based Genesis Aircraft Marketing.

Prices for Model 690A/B aircraft range from \$450,000 to \$675,000, assuming compliance with all Service Bulletins and mid-life engines. The long-wing Jet Prop series command higher prices, with Model 840 aircraft commanding \$800,000 to \$900,000, perhaps \$1 million or more for Grand Renaissance upgraded aircraft. Top-of-the-line Model 1000 aircraft go for \$1.4 million to \$1.8 million.

The Turbo Commanders are fast, fuel efficient, economical to operate and they sell for rock-bottom prices. ■