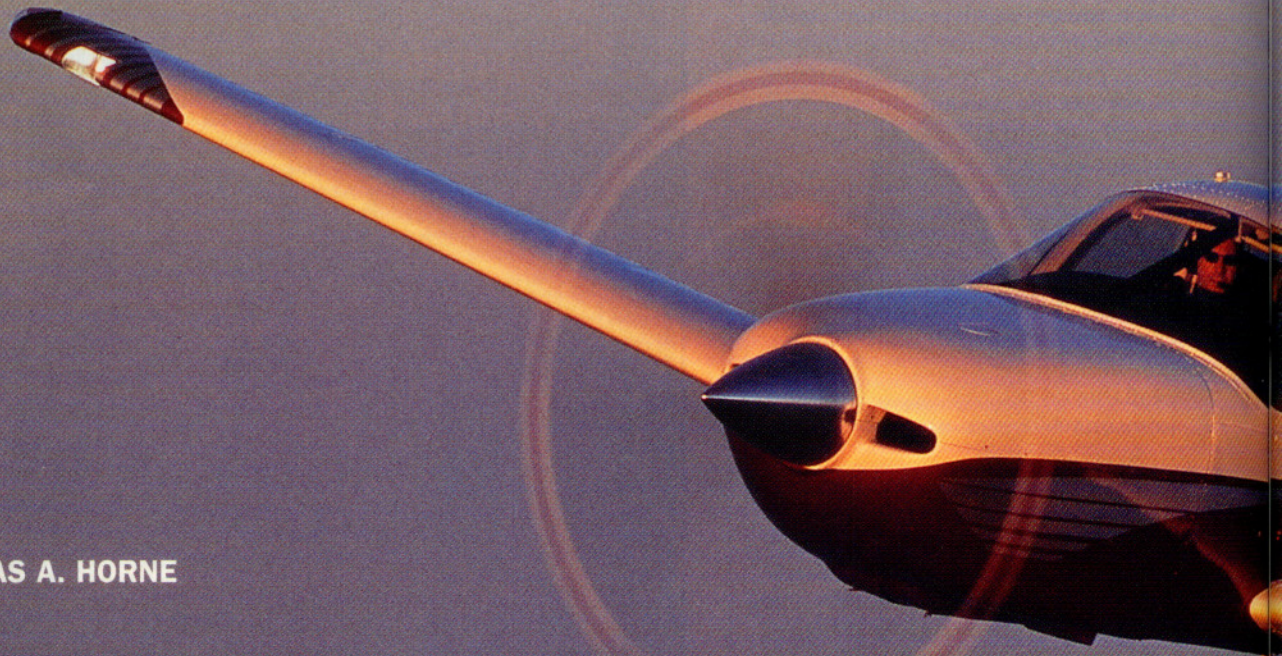


COMMANDER 115

STYLE and



BY THOMAS A. HORNE

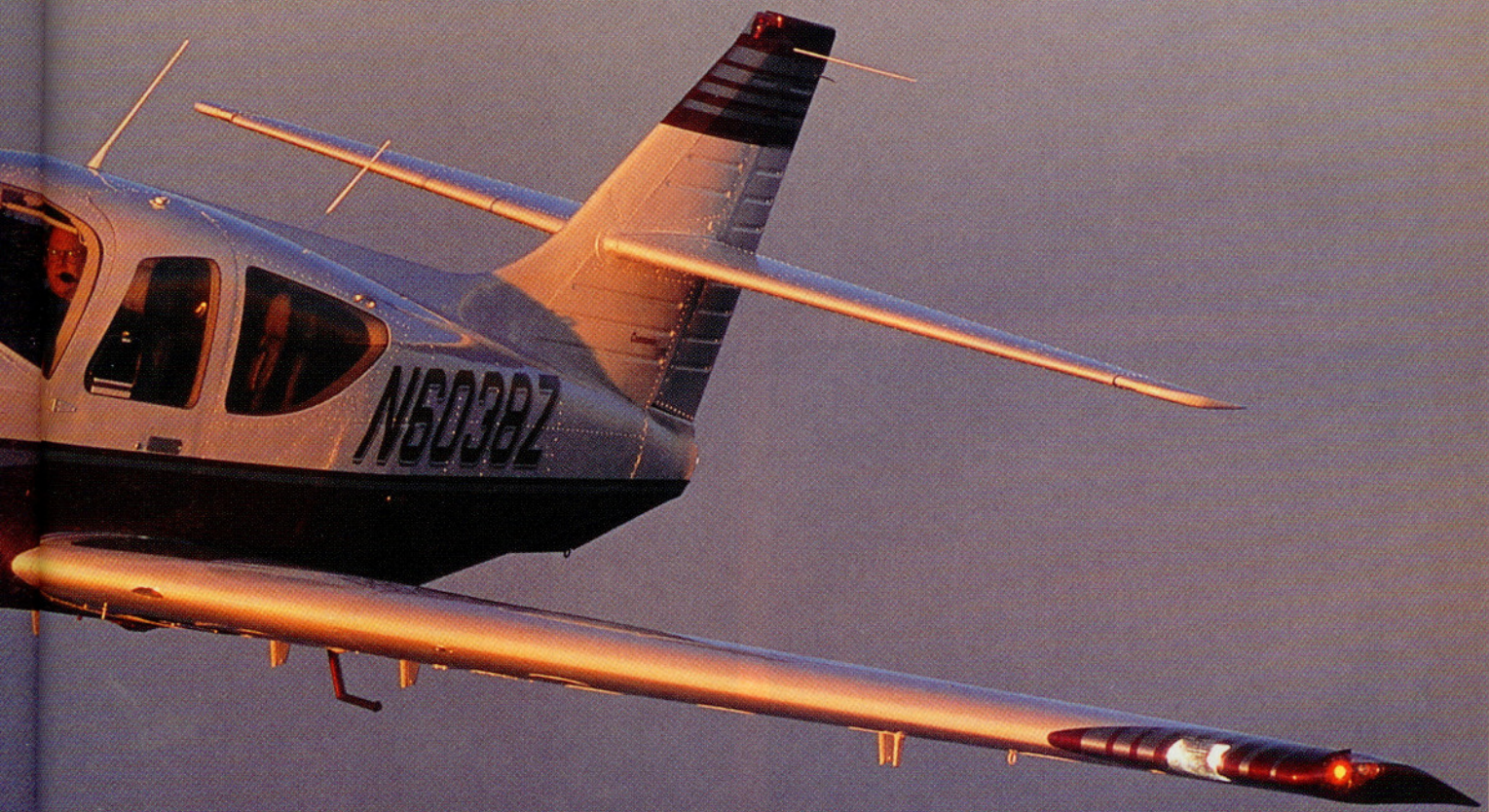
For the past nine years the Commander Aircraft Company (CAC) has been mining—and refining—its successful niche in the new piston-single market. From

its beginnings as a general aviation branch of Rockwell International in 1972, through its tenure as part of Gulfstream Aerospace Corporation, and since its sale to CAC, the Commander line has carried on a

PHOTOGRAPHY BY MICHAEL P. COLLINS

SUBSTANCE

More comfort, features, and capability from Bethany







This fully equipped Commander 115 has just about everything on the avionics options list, including a dual Garmin GNS 430/530 installation, a Sandel EHSI, copilot instruments, and air conditioning.

tradition of comfort, quality construction, and capability. The latest refinement to the basic Commander 114 design came in January 2000 with the introduction of the new Commander 115 (type designator: AC-11) series. This consists of two airplanes—the 260-horsepower, Textron Lycoming IO-540-powered, normally aspirated Commander 115 and the 270-hp TIO-540-propelled turbocharged Commander 115TC.

While outwardly similar to their 114 and 114TC predecessors, the big news with these latest models includes standard-issue 90-gallon fuel tanks (the 114s have a standard fuel capacity of 70 gallons; 90-gallon tanks were available as an option), loads of standard and optional avionics, and the addition of a TKS ice protection system to the

The typical customer may spring for a wide range of extra avionics, but the standard panel is by no means a slouch.

options list. And yes, the TKS equipment—colloquially known as the *weeping wing* system—is certified for flight into known icing conditions. For that matter, all the Commander 115's options are factory certified. This makes it easy for customers to custom-design their instrument panels without having to go through the hassle of obtaining one supplemental type certificate (STC) here, another STC there, for each black box on his or her wish list.

Though the typical customer usually springs for a wide range of extra avionics, the standard panel is by no means a slouch. Far from it. In keeping with its luxury image, 115s come with a full stack of Garmin equipment: dual Garmin GNS 430 nav/com/GPS units (a GNS 430/GNS 530 combination is available); a GMA 340 audio panel; and a GTX 327 transponder. Dual vacuum pumps are also standard, as are a Shadin Micro-Flo fuel totalizer and leather seats—complete with pilot's and copilot's inflatable lumbar sup-







ports. Backseat passengers will appreciate the increased legroom, made possible by a redesign of the seat cushioning.

From there, the sky—or your bank balance—is the limit. Popular panel options include your choice of a Bendix/King KFC 225 digital three-axis flight control system and flight director with a slaved HSI, yaw damper, altitude preselect, and automatic electric trim (\$47,500); or an S-Tec System 55 two-axis flight control system—which also includes a slaved HSI and flight director functions (\$35,500).

In the weather avoidance department, you can have one of BFGoodrich's Stormscopes, or an Insight Strikefinder. Cockpit displays? You bet. The Argus 5000CE and 7000CE, the Bendix/King KMD 150 (\$5,750), and the Avidyne FlightMax 440 (\$19,900) flight displays are available, as are the Sandel electronic HSI (\$7,500), and the BFG Skywatch (\$32,500) or Ryan 9900B TCAD (\$18,500) collision avoidance systems. Stormscope and collision avoidance information is displayed on dedi-



Commander 115s sport new, electrically actuated cowl flaps that have an in-trail position.

cated navigation pages by the Garmin 430s or 530s. Popular engine-monitoring displays include the GEM engine analyzer (\$3,500) and JPI EDM-800 engine monitor (\$4,000).

Another increasingly popular option is a full copilot flight instrument group (\$7,500)—popular because so many Commander customers are low-time pilots who spend a lot of time flying with instructors on longer trips, or working on advanced certificates or ratings. Many just plain like the idea of flight instrument redundancy.

The electrically operated, R-134A air conditioning system (\$19,500) has been offered for several years and is still high on the priority list of owners based in warmer climates, but the new TKS system—even at \$48,500—is installed, on average, in two new airplanes per year,

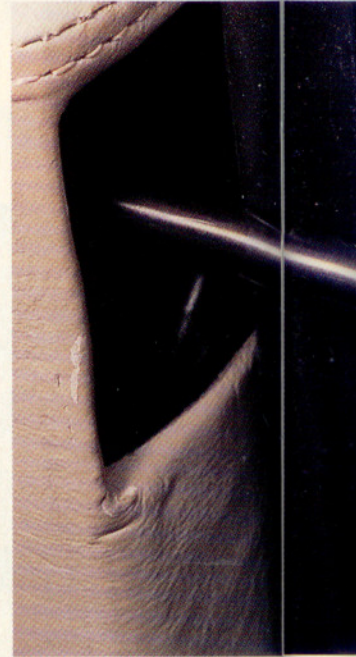
Both the 115 (on the right) and the turbocharged 115TC have comfy leather interiors and three-blade propellers. Backseaters will like the increased legroom, made possible by a seat redesign.

With two aboard, full fuel, and minimal bags, we cli

and has been retrofitted on eight others. Concerns over the weight of the air conditioning and TKS options run high, not just because of the component weights themselves, but because they require a second alternator. And at nine pounds per gallon, the TKS' 7.5-gallon fluid reservoir eats up 67.5 pounds of useful load alone.

Commander officials say that after a typical 115 is all decked out with air

conditioning, TKS, and the usual avionics options, useful loads run approximately 975 to 980 pounds. Subtract the weight of a 90-gallon top-off and you're left with some 440 pounds of carrying power. Compared to some other piston singles that's not much. But Commander owners, like many of us, simply don't need to haul big loads long distances. A pilot and one or maybe two others, plus bags for a three-day trip, is



The new 115's dual doors have gas-piston extenders, and in back, there's room for 200 pounds of cargo.

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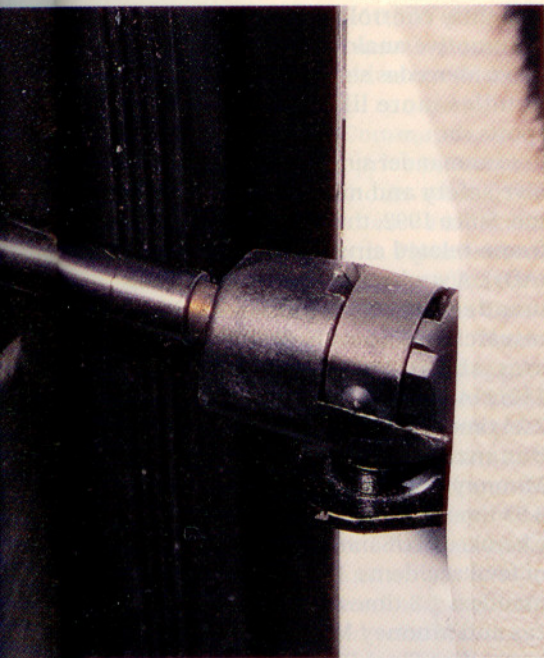
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more like it. Using this model, a carefully loaded Commander can usually manage this mission.

As for airframe improvements, Commander 115s sport new, electrically actuated cowl flaps that have an in-trail position. This definitely comes in handy when flying the turbocharged 115. The engine has a tendency to run hot in climbs and at high altitudes with high power settings. At times like these, you could see cylinder head tem-

e climbed at 1,200 fpm into the 40-degree F skies.



and the wastegate automatically keeps the manifold pressure just a hair below redline. With two aboard, full fuel, and minimal bags, we climbed at 1,200 fpm into the 40-degree Fahrenheit skies over AOPA's home field at the Frederick Municipal Airport in Maryland. We levelled off at 17,500 feet and settled into a 140-KIAS cruise. With an OAT of minus 17 Celsius, a manifold pressure set at 33 inches, propeller at 2,500 rpm, mixture

set at a turbine inlet temperature of 1,600 degrees F (comfortably rich of the 1,650-degree maximum), and a resultant fuel flow of 18 gph, our true airspeed worked out to be 185 knots. Of course, we used the built-in oxygen system, which is standard on the TCs, and includes four masks and four overhead jacks for the masks' bayonet fittings. At this power setting, we were told, the Commander 115TC could cruise

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peratures on their way to redline. But we put the cowl flaps in trail, and watch temperatures stay a good 25 to 30 degrees away from the danger zone.

The Commander 115TC flown for this article has a fairly standard complement of options, which included air conditioning but no TKS system. Engine start and runup is conventional, and the automatic wastegate saves workload during takeoffs. You simply shove the throttle all the way forward,

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The cockpit feels like a Mercedes sedan, but

for some 670 nm and land with IFR reserves.

For the descent back to Frederick, power was pulled back to 29 inches of manifold pressure and 2,400 rpm. The mixture was leaned to keep CHTs at 450 degrees, to prevent shock cooling. At 150 knots, 10 to 20 degrees of flaps can be selected, and this can produce 1,500-fpm, slam-dunk descents. Below 130 knots, the sturdy trailing-link land-

ing gear can be deployed for an even steeper descent profile.

Landings are easy, thanks to that landing gear design. Simply adjust power for 80 knots on final, put out the rest of the flaps, bleed off airspeed as you come into ground effect, and then raise the nose ever so slightly for consistently pleasing greasers.

Fly a Commander, and the overall impression is one of solid comfort, yet

sprightly control response. To use an automotive analogy, the cockpit feels like a Mercedes sedan, but the airplane handles more like a slightly trucky sports car.

Commander singles have an impressive safety and maintenance record, too. Since 1992, there have been no airframe-related airworthiness directives (ADs). A study commissioned by Commander and conducted by accident researchers Robert E. Breiling Associates shows that the Commander 112/114 series has a total accident rate 2.24 times better than that of the Beech Bonanzas, 2.4 times better than the Mooney M20 series of airplanes, and 3.53 times better than Piper PA-32s (the Cherokee Six/Saratoga series). In terms of fatal accidents, Breiling found Commanders 1.8 times better than Bonanzas and Mooney M20s and 2.89 times better than Piper PA-32s.



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SPECSHEET

Commander 115TC

Base price: \$497,500

Specifications

PowerplantTextron Lycoming TIO-540-AG1A, 270 hp
Recommended TBO	.....2,000 hr
Propeller	.....McCaughey, three-blade, 77-in dia, constant-speed
Length	.....24 ft 11 in
Height	.....8 ft 5 in
Wingspan	.....32 ft 9 in
Wing area	.....152 sq ft
Wing loading	.....21.7 lb/sq ft
Power loading	.....12.2 lb/hp
Seats	.....4/5
Cabin length	.....75 in
Cabin width	.....47 in
Cabin height	.....49 in
Standard empty weight	.....2,152 lb
Maximum gross weight	.....3,305 lb
Standard useful load	.....1,152 lb
Standard payload w/full fuel	.....624 lb
Maximum landing weight	.....3,140 lb
Fuel capacity, std	.....90 gal (88 gal usable)
Baggage capacity	.....200 lb, 22 cu ft

Performance

Takeoff distance, ground roll	.....1,408 ft
Takeoff distance over 50-ft obstacle	.....2,223 ft
Maximum demonstrated crosswind component	.....19 kt
Rate of climb, sea level	.....1,050 fpm
Cruise speed/distance w/45-min rsv (fuel consumption)	.....@75% power and 25,000 feet
	.....187 kt/670 nm (73.8 pph/16.3 gph)

the airplane handles like a **trucky sports car.**

At base prices of \$450,500 (115) and \$497,500 (115TC) the new Commander singles are pricey. Add some of those options and the price can easily surpass \$700,000. But Commander customers don't exhibit price resistance, spokesmen say. Those who have owned other airplanes—and these include everything from Piper Archers to Cessna Citations—know what they want, can afford it, and like the Commander style and philosophy. Those who are new to flying especially appreciate the four days of transition training (included in the airplane's purchase price) offered to the owner and his flight instructor at the company's facilities at the Wiley Post Airport in Bethany, Oklahoma. CAC also has a trade-in program, and an ambitious new turbine-oriented acquisition, sales, brokerage, and refurbishment subsidiary—Strategic Jet Services Inc.

For those who don't fly at all, yet want to realize the benefits of owning a business airplane, Commander's Turnkey Ownership Program has been set up. This provides customers with pilots through Commander's network of service centers.

With annual sales running at 24 to 29 airplanes, Commanders are not mass-produced airplanes. And that's just fine with CAC. The company is profitable, is

expanding incrementally, and does a great job of catering to its very special clientele. The 115s represent yet another step in the evolution of a fine airplane, and a company that's built a reputation of excellent one-on-one relationships with its current and prospective customers.

ACPA

E-mail the author at tom.horne@aopa.org

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V _A (design maneuvering)118 KIAS
V _{FE} (max flap extended)109 KIAS
V _{LE} (max gear extended)186 KIAS
V _{LO} (max gear operating)	.....130 KIAS
Extend	.....130 KIAS
Retract	.....130 KIAS
V _{NO} (max structural cruising)	.....162 KIAS
V _{NE} (never exceed)	.....186 KIAS
V _R (rotation)	.....70 KIAS
V _{S1} (stall, clean)	.....66 KIAS
V _{S0} (stall, in landing configuration)	.....59 KIAS

For more information, contact Commander Aircraft Company, Wiley Post Airport, 7200 Northwest 63rd Street, Bethany, Oklahoma 73008; telephone 405/495-8080; fax 405/495-8383; or visit the Web site (www.commanderair.com).

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