

Cessna's Citation 500 will officially make its debut as a production model late this month. Silhouetted against a hilly, forested area, pilots can see its straight-out wing design. Wingspan is three inches wider than the aircraft is long. Cessna photo

■ ■ What contemporary male who feels he has the blood of Icarus pulsing through his veins could pass up an invitation to buckle himself into the left seat of the newest of the new business jets—Cessna Aircraft Company's *Citation 500*?

I could, that's who. Why? Because I'm a low-time pilot who is still struggling to comprehend and master all the mysteries and vagaries of the single-engine versions of the wings of man. And, for the most part, they've been the smallest versions at that.

Based on this fact, along with a gut feeling, possibly fear, that someone, everyone, might find out exactly how little—more accurately nothing—I know about actually flying one of the high-powered twin-turbined jobs, I was all prepared to beg off a "Come see for yourself" invitation from Cessna's *Citation* people.

I didn't though. I went. I saw. I flew. And, though I certainly can't add "I conquered," I can say truthfully I believe there's a measure of substance to claims made by one Cessna official that he could take a Cessna 172 pilot and, with only seven hours of compact flight instruction, have that pilot landing and taking off by himself in the new twin-turboprop *Citation*.

As an aside, and though it has absolutely nothing to do with a report on the way the *Citation* performs or can be used as an effective business tool by time-pressed individuals, readers might be interested in knowing about a (ahem) forbidden carrot dangled by *Citation* officials. Maybe only unintentionally, it helped ensure a sizable turnout of writers and potential customers for a recent three-day *Citation* seminar. The seminar began in the Fort Worth-Dallas area and ended in Wichita, Kan.

Keeping in mind the old saw about evil being in the beholder's eyes, an initially intriguing part of the invitation to attend the *Citation* seminar was an offer by the hosting officials to arrange for the billeting of out-of-town attendees, all males, in the dormitories of American Airlines' Stewardess College near Greater Southwest (Tex.) Airport.

There may be some grains of truth in the unsubtle hints about airline stewardesses that are contained in the book, "Coffee, Tea, Or Me?" However, one night's stay in American's stewardess (or is it stewardess?) college failed to produce any material on which to base an "I Spent The Night In An Airline Stewardess College" novel. Incidentally, apropos of nothing, "Coffee, Tea, Or Me?" reportedly was written by a former American Airlines' public relations writer.

From all outward appearances, and there was no reason to believe there was anything else, the stewardess college, resembled a well organized, and



Low-Time Pilot Views The Citation

172 jockey flies Cessna's entry in the bizjet field after a few hours' instruction. He doesn't have much trouble, but a little help now and then is appreciated.

'Rollout' of first production model of new twin-turboprop plane planned for April 29

by LEW TOWNSEND / AOPA 376636

well run private boarding school for young ladies. It was completely equipped with matronly chaperons and live-in female instructors. But, enough of that, on with the purpose for being there in the first place.

Cessna's *Citation* is now within about four months of completing its flight tests and paperwork for final FAA certification. Flight testing is scheduled to be finished in June. The plane is being certificated under Part 25 of the FARs, the same standards used in FAA's certification of commercial jets.

Cessna has shown its confidence in projections that the *Citation* will gain immediate acceptance in the marketplace in the most tangible way. Tooling up for actual production of the aircraft was accomplished some time ago and "rollout" of the first production model has already been set for April 29. Cessna's Military and Twin Aircraft Divi-

sion in Wichita will produce the aircraft. First customer deliveries are scheduled to commence this fall.

The *Citation* would seem to have at least three major things going for it, as far as its making an immediate impact on the bizjet market is concerned. These are: comparatively low cost—\$695,000 for the "complete package," which includes training at American Airlines Flight Academy in Texas (next to the stewardess college) for two of the customer's pilots and one mechanic; simplicity of operation (I'll vouch for that.); and, by contemporary bizjet standards, exceptionally good short-field takeoff and landing capabilities, as well as slow-flight characteristics. Its ease of control and slow-flight characteristics make even a Cessna 172 pilot feel comfortable in the left seat.

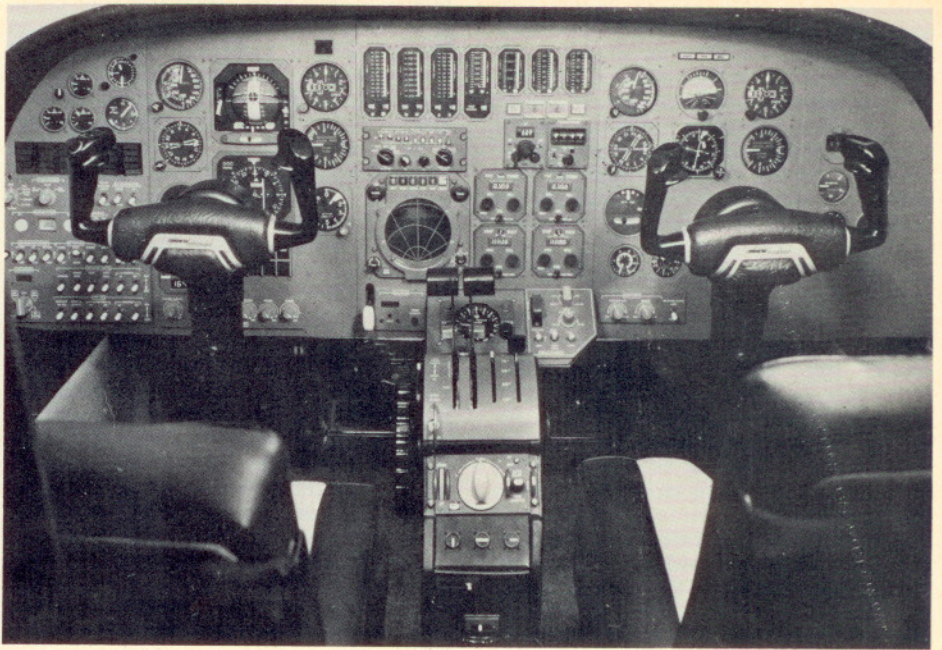
Sweetening the pot is a radically new, at least for U.S. general aviation

bizjet manufacturers, support program that involves construction of strategically located "Citation Sales and Service Centers" around the country. They are to be manned by factory-trained Cessna employees. The doors of the first such center, located adjacent to Cessna's Military and Twin Aircraft Division at Wichita Municipal Airport, were officially opened in February. Immediate plans are to establish two others—one on the East Coast, one on the West Coast. All will be staffed by salesmen, parts servicemen, and mechanics who are directly employed by, and responsible to, Cessna.

Cessna said that initially the two coastal service centers might have to be established at temporary locations while awaiting construction of completely new facilities. Additional factory-owned and factory-manned service centers reportedly will be set up at different locations as the Citation sales program progresses. At the beginning, however, besides the two coastal facilities and the one in Wichita, Cessna plans to designate four "authorized service centers" in the United States to round out the initial service center network. One authorized service center also is to be established in Canada and one in Europe prior to delivery of the first Citation to a customer this fall. Each of the new service centers will maintain an adequate inventory of parts for the new business jet, and their mechanics and flight demonstration pilots will be trained by American Airlines, which is providing all maintenance and pilot training for the Citation.

For all practical purposes, Cessna's Citation program is being run as a separate subsidiary of the company. Formally, it has been named Cessna's Commercial Jet Marketing Division. Honchoing the division is James B. Taylor (AOPA 11528), a former Pan American Airways Fan Jet Falcon executive, and now a vice president of Cessna. Taylor is a personable cuss, which may account for his reportedly receiving an almost free hand in getting the Citation program under way. He swears by the marketing concept that service to a product is of extreme importance to the customer, especially when it involves something as costly as a business jet. He says Cessna will concentrate on this aspect of the Citation program. With Cessna's blessings, he already has formed the skeletal structure of a regional sales and service organization that Cessna anticipates will make the Citation an "instant success" in the bizjet field.

"Although we will offer two airplanes—one with avionics and one without—we believe we can sell the complete aircraft to over 90% of our customers," Taylor stated. In line with this belief, Cessna is concentrating on selling what it calls a "Complete-Package/Complete-Program Concept." The "complete package" includes a Citation with a standardized package of factory-installed avionics and a standardized interior. The "complete program" includes pilot and mechanic training, computerized



Cessna's standardized avionics package for its new twin-turboprop Citation consists of 18 different items. Included is RCA's AVQ-21 radar, in the lower center of the panel, and Bendix's FGS-70 "Bullseye" flight guidance system, located directly in front of the pilot's seat.

Cessna photo

maintenance recordkeeping services, a single warranty for the aircraft and all factory-installed avionics, and the Citation Sales and Service Center facilities.

Selling a "standardized" product, Cessna naturally points out, will allow the company to purchase parts in quantity to keep costs down, and enable customers to reap the benefits of factory-level workmanship in the installation of equipment. Standardization of the Citation "fleet," when coupled with the nationwide support program, also will make it easier for bizjet operators to obtain parts and reduce costly downtime, Cessna said.

"Commonality among all of the aircraft in the fleet guarantees much better service and support at a much lower cost and Cessna's technical servicemen and all mechanics will be much more efficient and effective," Taylor said. "Standardization of panels and avionics will undoubtedly lead to lower insurance rates. Anything that simplifies an airplane, will eventually be reflected in the rates." Further insurance rate reductions are anticipated, he added, because of the arrangements to have American Airlines provide all pilot and maintenance training for the aircraft.

Computerized maintenance service, to be handled by each Citation service center for the aircraft within its boundaries and to be included in the basic sales price, will also allow Cessna to keep customers up to date automatically on time logged on major parts, and to inform them when parts or components should be replaced or overhauled in accordance with good preventive maintenance procedures.

Most pilots are aware that Cessna has been building small military jets for a number of years and the Citation reflects the engineering and design ex-

pertise gained from that experience. The Citation is not, however, merely a Cessna military jet in civilian dress.

The Citation first flew Sept. 15, 1969. Two prototypes have been built and they have logged a combined total of about 800 hours flying time during approximately 600 separate flights. The aircraft's Pratt & Whitney JT15D-1 turboprop powerplants (two) have logged about 10,000 hours of running time and the first production engines were delivered to Cessna in March. Extensive ground evaluation programs—cyclic and static testing—were nearing completion at press time and FAA had already accepted results of the company's major structural tests.

In general, the Citation, which is being touted as the first in a series, is a six- to eight-place, pressurized, twin-turboprop-powered aircraft. It has an IFR range of approximately 1,300 n.m. (1,500 s.m.) and has operationally certified limits of 35,000-foot altitude and .7 Mach speed. "A 403 m.p.h. maximum cruise speed is achieved at approximately 26,000 feet," according to training manuals developed by the American Airlines Flight Academy for Citation pilots and mechanics.

Primary flight controls are conventional cable-operated control surfaces and trimming is provided by tabs on the left aileron and right elevator and rudder. Hydraulically operated speedbrakes, called "spoilers" by some, are installed on the upper and lower wing surfaces. The flaps, which are slotted, are electrically powered. The Citation has a retractable tricycle landing gear, and brakes and gear extension can be pneumatically actuated in an emergency.

The standard Citation has the normal complement of panel instruments that

are associated with most business jets, including weather radar, and transponder. The Bendix FGS-70 Flight Guidance System, a gadget with which any single-engine pilot could rapidly fall in love, is also included as standard equipment. The *Citation* boasts two independent oxygen systems, one for normal use, the other as a backup for emergencies.

Fuel is carried in two wing tanks, one for each engine, and each of the tanks holds 534 gallons (1,793 pounds). Due to the low-wing configuration, the company claims each tank can be filled within four minutes. The two Pratt & Whitney turboprops are located on the rear of the fuselage, slightly forward of the tail section. The powerplants are rated at 2,200 pounds static thrust and are twin-spool, front-fan gas turbines.

Cessna feels its *Citation*, in both performance and cost, will fill a void that it says now exists in the corporate aircraft market between the turboprops and the pure jets. This void, the company states, basically represents that area of performance and cost between the average 280 m.p.h. speed, \$580,000 cost of Beech Aircraft's *King Air*, and Mitsubishi's MU-2 and MU-3s and the 500 m.p.h., \$800,000 Gates *Learjet* and North American Rockwell *Jet Commanders*. The *Citation*, with its approximate 400 m.p.h. cruising speed and \$695,000 price tag, will fill the gap between the turboprops and pure jets and give bizjet operators the best of both worlds, according to Cessna marketeers.

The new aircraft's landing and take-off capabilities are among the major selling points emphasized by Cessna in an advertising campaign that is already under way. "The new Cessna *Citation* lands and takes off from 828 airports where no other corporate jet can," the company proudly proclaims. "It can fly you directly to hundreds of airports where the runways are too short for all other corporate jets. It can save you time by avoiding overburdened urban jetports and flying you into smaller fields located closer to major business districts. Chicago alone has seven such fields, all closer than O'Hare."

According to Cessna, the *Citation* needs only 2,535 feet in which to land after clearing a 50-foot obstacle. That's at a maximum landing weight of 10,350 pounds and 990 pounds sea level pressure. Takeoff run at sea level is 2,950 feet. Vmo, operating limit speed, is 260 knots (299 m.p.h.) from sea level to 14,000 feet and 287 knots (330 m.p.h.) from 14,000 to 26,000 feet. Mmo, maximum operating limit speed, is Mach .7, and it can be reached when flying at 26,000 feet or higher. To extend the flaps 15°, the *Citation* has to be slowed to no more than 200 knots (230 m.p.h.). Speed has to be reduced to no higher than 174 knots (200 m.p.h.) to extend them to 40°. Maximum speed for landing gear extension is also 174 knots.

Wingtip to wingtip, the *Citation* measures 43 feet 9 inches. Overall height is 14 feet 4 inches and it is 43

feet 6 inches long. Width of the cabin is 4 feet 11 inches and cabin height, in the passenger aisle area, measures 4 feet 4 inches. Landing wheelbase is a little over 15 feet and the main landing gear wheels are 12 feet 7 inches apart.

Gene C. Swartz, chief pilot for the Dana Corporation in Ohio, Arthur Hailand, Jr., an Illinois financier, and this writer formed a trio of visitors who received a familiarization flight in the *Citation* during Cessna's recent three-day seminar. Bob Leonard, a *Citation* test pilot, was in charge of the flight, which took off from Wichita Municipal Airport. Swartz and Hailand, both jet-rated, appeared to have little difficulty mastering the *Citation* during the approximately one-hour flight in the prototype. Both pilots had complimentary words for the *Citation* after flying it, with Hailand particularly impressed with its stall-handling characteristics. Hailand called them "dramatic." After



PILOT staffer Lew Townsend, who readily admits his unfamiliarity and inexperience with high-powered corporate jets, takes the left seat of Cessna's new *Citation* bizjet prototype and, with a slight "Gee whiz" expression, says you don't have to be a "superman" to fly it.

Photo by Arthur Hailand, Jr.

stalling the *Citation* out in both a dirty (about 86 m.p.h.) and a clean (about 95 m.p.h.) configuration, Hailand compared the aircraft with some other bizjets he has been flying. "You couldn't get yourself in an inverted stall situation with this plane if you tried," he said, and explained some jets are reportedly placarded against practice stalls, because of their almost uncontrollable stall characteristics. Hailand reported no problems when stalling the *Citation* clean and "only a slight wing flutter" when stalling in dirty configuration.

Swartz, who included a one-engine-out touch-and-go at Hutchinson (Kan.) Municipal Airport during his turn at the controls, contended the *Citation* is unique in that "you've got full control of the plane at all times." He seemed particularly pleased with the Cessna's approach speed for landing. It is in the 100-knot range, considerably lower than

other bizjets now flying, he stated.

The Ohio corporate pilot also reported that he experienced only a slight pitching down of the nose when he raised the speed brakes at the 200 knots indicated airspeed. He did express concern, however, over the amount of fuel required on climbout and said this, coupled with the overall fuel capacity of the aircraft, "could be a limiting factor." On the initial takeoff from Wichita Municipal Airport, Swartz closely monitored the vertical fuel gauges and said "climbout required about 900 pounds on both sides, or a total of 1,800 pounds per hour." Estimating that many climbouts from airports require up to 20 minutes to reach cruise altitude, Swartz said trip lengths between refueling stops might have to be shorter than alluded to in the aircraft's performance specifications. He summed up his overall feelings about the plane by paying what he said was a compliment to the aircraft's simplicity of operation: "It flies just like a Cessna."

This writer remained in the left seat long enough to go through a few gentle banks and make one 360° turn that was anything but steep. Contrary to prior anticipation, there was no sensation of zoom-zooming through the skies and, though it may have only been because comforting Bob Leonard was at-the-ready in the right seat, the *Citation* seemed a kind of docile-handling high-powered beast.

With Leonard helping with the proper engine settings, we made a less than squared-off tour of the traffic pattern at Hutchinson Airport, and executed one touch-and-go. On the approach, as well as all during the short time I was at the wheel, the *Citation* responded instantly to each touch of the controls. It might be a little sacrilegious to say so, but the aircraft's positive response reminded me a little of the quick, solid reaction you get when flying American Aviation Corporation's two-seated *Yankee*. You know you are flying both planes.

Though unaware of it at the time, my uneasiness over the first landing in the *Citation* must have been clearly visible to Swartz and Hailand, as they sat strapped down in the gutted passenger section of the prototype. Not that my uneasiness is difficult to observe, you understand, because, I confess, I suffer from aircraft perspirationitis, especially when flying with instructors and in new aircraft.

Shortly before the *Citation* touched down, and just after I had begun composing a "Dear Mom, I landed a jet" letter in my mind, I almost overcorrected in attempting to get lined up with the runway's threshold. Leonard was too polite to say later whether he slipped me a helping foot on the rudders at the last minute and I was too engrossed with my first jet landing to know, or really care, at the time.

One thing I would like to know though, is what did you guys in that plane with me *really* mean by all that handclapping and shouting of yeas as I touched down? □