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# CESSNA

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## CESSNA'S 206 TURBO STATIONAIR

*Escalade for the Jeep Trail*



*New*  
**EFIS Options  
for 2018**



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# CESSNA'S TURBO 206

## Escalade for the Jeep Trail

***Built for the bush or the downtown air terminal, Cessna's multi-talented Stationair offers utility and luxury in a durable package.***

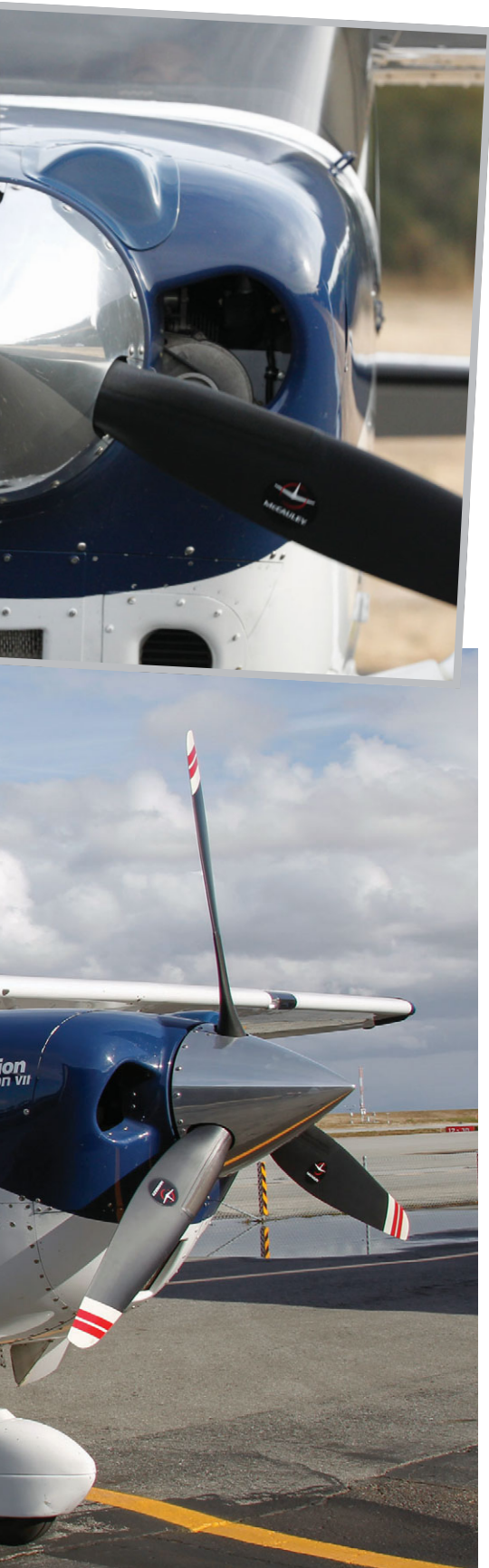
It's a common problem among new pilots. You work hard to earn your certificate, sweat through the written, oral and flight test, pass them all, and then you're faced with the question, "Now, what?"

If you're like me (and I know I am), renting may not have been a satisfying experience. You may have learned in a two-seater, but now you need more buckets – at least four and perhaps six. In addition, the trainers that taught you to fly may have been several decades old, and even if they ran great and had four seats, you probably wouldn't want to take your friends or family flying in them.



California-based business consultant Zentaro Ohasi and his 2004 T206.  
Photo by Victor Sloan

by Bill Cox



Zentaro Ohasi was one of those pilots, but like thousands of other new aviators, he flew sparingly for a while and then stopped altogether. Having to schedule his rental flying in advance never knowing if he could rent his favorite aircraft and possibly being faced with minimum rental hours per day on weekends left him disappointed. The obvious solution was for him to purchase his own aircraft.

## The Right Plane for the Right Mission

Ohasi is a San Francisco-based business consultant who coordinates international trade between clients in Japan and the United States, so he travels much of the West Coast on a regular basis. Though he was willing to leave his monthly business trips across the Pacific to Japan Airlines, Ohasi needed an airplane that would lend itself to business and personal missions of 1,000 miles or less, primarily in the Southwestern U.S.

Ideally, Ohasi wanted an airplane with six-seat flexibility, but the choices were limited.

Both the Beech G36 Bonanza and Piper Turbo Saratoga HP were possible candidates, but Ohasi needed a high wing for ease of entry and the ability to load cargo efficiently. The Cessna Turbo Centurion was also a candidate, but it was so long out of production that Ohasi was concerned about maintenance and parts availability.

Another possible contender was the Cessna TTx, a four-place hot rod capable of 220+ knots cruise up. That might have been a fun machine to fly, but it didn't really fit Ohasi's mission profile. Despite the speed, the TTx flew with a low wing and no dedicated aft entry doors for loading freight or passengers in back. The airplane was unquestionably fast and efficient, but it wasn't well suited to a combo

mission of lifting people and things. "In my case, the TTx was more of a dream machine than a practical airplane," he said.

Ohasi had special plans for whichever airplane he purchased. In addition to flying with clients, the consultant and his wife are both avid tri-athletes and they like to train in the real world at locations throughout the Southwest. This meant transporting two bikes and a variety of other triathlete equipment with them wherever they went.

For that reason, Ohasi finally settled on a 2004 turbo Stationair, a versatile, spacious, fixed-gear aircraft that could be fitted with quick-change interior and used both for luxury transport and utility cargo work. Remove two or four of the aft seats, and the T206 could fly with two pilots up front and a huge variety of equipment in back.

A fringe benefit was that the T206 could operate to/from both primitive and improved strips. Though Ohasi didn't foresee bush flying in his future, he knew a fixed-gear single would probably be more amenable to rough runways than any other six-seat model.

The obvious tradeoff with the fixed-gear Cessna was speed. The T206 was 20-25 knots slower than either of the two retractables, but that was a minor compromise in view of the airplane's other significant talents. With a sextet of comfortable seats, a pair of large double cargo doors, a spacious cabin and a turbocharger out front to help climb above the weather, the big Cessna seemed an ideal solution to the consultant's West Coast travel needs.

While the extra speed could come in handy on long missions, Ohasi didn't anticipate flying much beyond the Mountain West. His destinations in the last two years have included St. George,



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The Turbo Stationair is a popular choice for those pilots like Ohasi who appreciate wide-body comfort, Garmin flat-panel sophistication (an aftermarket addition on Ohasi's airplane) and turbocharged power. The latter provides the ability to fly more than a mile above the highest mountains in the contiguous 48 states, and a turbo Stationair seems almost a contradiction in terms – a utility machine that can fly high and relatively fast, then, land wherever it needs to on airports long and short. *Photos by Victor Sloan*





Utah; Truckee and Lake Tahoe, California; Sedona, Arizona, and other mountain destinations. Similarly, owning a fixed-gear model offered reduced complexity, meaning there was one less system to maintain.

Most pilots don't normally associate the tough 206 with operation in the flight levels. The Stationair's image is more utility station wagon than high-performance, turbocharged SUV. By any measure, however, the largest piston Cessna offers Swiss Army Knife versatility.

The T206 is capable of swallowing a full load of people and/or cargo on flights shorter than 500 miles or ranging out as far as 700 nautical miles with only two up front. That's San Francisco to Tucson or San Diego to Santa Fe, most often operating well above the mountains and the clouds.

Though Ohasi and his wife don't make many trips up into the flight levels, he definitely felt he needed turbocharging. Most of Central and Northern California is bordered on the east by the Sierra Nevada, a range of rocks that reach to nearly 15,000 feet. Once you clear the first line of tall terrain, you may still have the Rockies to surmount, almost as high and equally as rugged. If you're departing toward Utah, Colorado or points farther east without a turbo, you'll be forced to thread your way through mountain passes – not always a comfortable experience.

## The Victor Advantage

Ohasi purchased his Stationair knowing the engine was approaching an overhaul. With 1,400 hours on the tach, the Turbo Stationair's big Lycoming TIO-540-AJ1A was only 600 hours from TBO. The international consultant had made a careful study of Trade-A-Plane and discovered that engines forced-fed with compressed power tend not to make their published TBO.

Ohasi considered every possible option for a major overhaul, from a standard rebuild to a factory remanufactured power plant to a new engine direct from Lycoming. In the process of researching the best shop for an overhaul, the consultant discovered there was one shop that performed major overhauls that actually enhanced the value of the airplane over and above the increase associated with a zero hour engine.\* That shop was Victor Aviation in Palo Alto, California.

Ohasi contacted company president Victor Sloan and arranged to meet, tour the shop and investigate why Victor's company, a Lycoming and Continental dealer, receives such a major price benefit. Ohasi spent a day with Victor examining the equipment and process necessary to transform a standard engine overhaul into a hardened, cryogenically superior powerplant.

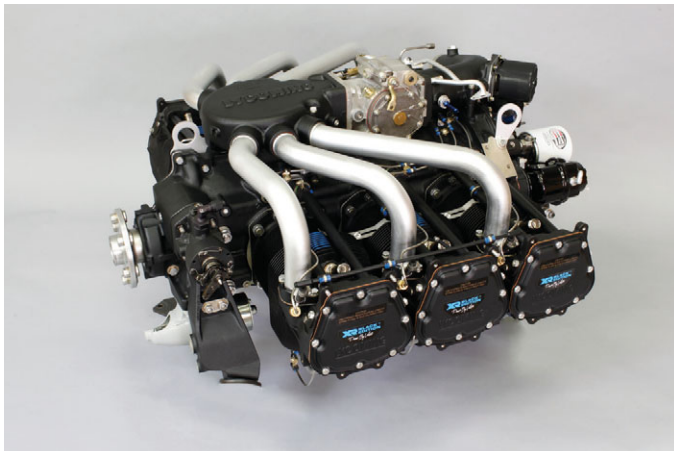
\*"Aircraft Bluebook" credits the full cost of a major overhaul as an addition to used value rather than only the per-hour additive for the reduction in engine hours.





Fully 80 percent of the Earth's weather tops at or below 18,000 feet, so the T206 is easily capable of reaching clear skies with little concern for the terrain below.

"I was impressed with Victor's shop and his huge investment in cryogenics," says Ohasi. "It's apparent that he's willing to upgrade his shop facilities to keep his overhauls at the leading edge of technology. He took me through the entire process of cryogenic engine rebuilding, and when he was finished, I was convinced this was the only place for my overhaul." The international consultant bought the top option, a Victor XR Black Edition VII.



A standard, overhauled XR Black Edition VII engine from Victor Aviation.

Victor Sloan has long been a proponent of expanding the technological envelope on precision engine rebuilding. He's been in the engine overhaul and repair business since 1980, upgrading mostly Lycoming 540s and Continental 520s and 550s to the latest standards, improving reliability and advancing the state of the art.

"A look at some of the list of Vic's clientele provides some idea of the regard many pilots feel for Sloan and his elves," Ohasi comments. "Victor's overhauls have included work on aircraft belonging to some of aviation's most knowledgeable pilots and engineers."

For example, the late Bob Hoover, a renowned airshow and test pilot, had two sets of engines on his

Shrike Commander overhauled at Victor's shop, simply because Hoover was convinced they were the most reliable piston engines available. As Hoover put it, "In my business, I couldn't afford anything less than the best."

Hoover was famous for his dramatic Shrike Commander routine that involved running the engines to full power, executing a Vne dive to near ground level; then, shutting both down, pulling up and dead-sticking the big corporate Commander through several aerobatic maneuvers; restarting the engines and immediately returning them to full power.

The airshow pilot had never endorsed any product until flying behind Victor Engines, and after 15 years and 570 airshows of operating over 5,000 hours with Sloan's overhauls, he was happy to say, "I've never had to cancel an airshow because of engine problems since starting to use Victor engines."

Former X-15 rocketplane test pilot, the late Scott Crossfield, first man to exceed both Mach 2.0 and Mach 3.0, also chose to overhaul the engine on his personal Cessna 210 using Victor's engine overhaul process. Like Hoover, Crossfield had never before endorsed any aviation product, but he had no problem vouching for the reliability of a Victor Black Edition engine in his own aircraft.

More recently, Kenneth Copeland Ministries had used Victor Sloan's services when he dropped off his hard-working Beech E55 Baron. In fact, Victor Aviation has performed at least two-dozen overhauls on Copeland's variety of aircraft, ranging from several Cessna 421s to Bonanzas and the aforementioned Baron. Victor had overhauled the engines on Copeland's E55 Baron before, and Sloan was eager to see how those powerplants had fared.

In many respects, Copeland's Baron engines were ideal test cases, as the E55 was flown often, never abused and well maintained by Copeland's mechanics. Sloan felt it was a great opportunity to flight and ground test a pair of engines that had been given the benefit of meticulous maintenance. Not surpris-

ingly, the engines were both in excellent condition.

For the new, XR Black Edition VII overhauls, however, Victor incorporated technology that had never before been applied to general aviation aircraft engines. Victor Aviation has become one of the pioneers at incorporating cryogenic technology into aircraft engine rebuilding. Though the concept of cryogenics isn't that tough to understand, the execution is considerably more complex.

Cryogenics isn't a new process. It's been around since before World War II, when scientists discovered that cold-soaking metals to extreme low temperatures improved their durability, hardened them and made them more resistant to wear. Trouble was, the prevailing pre-war technology wasn't sophisticated enough to take advantage of the new process. Cryogens such as liquid helium or liquid nitrogen were required to lower the temperature to -250 degrees C (not far from absolute zero), and those materials were scarce or unavailable in the 1930s.

A scientist named Ed Busch experimented with metal tools and discovered cryogenic treatment hardened the materials dramatically. Busch originally investigated cryogenic tempering rather than heat treating. The result was tools with life expectancies 200-400 percent greater than their previous endurance.

Other researchers discovered cryogenics had several applications in the manufacturing business. Parts for a variety of products could be made more durable and constructed with greater precision by removing the residual stress in machine parts.

Victor began his research on cryogenics in conjunction with his engine overhaul business, often working with agencies such as Stanford University, UC Berkeley, UC Davis, Boston University and the Massachusetts Institute of Technology.

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Victor Sloan with his Black Edition engine at Smithsonian at Udvar-Hazy in Dulles Airport in D.C.

Partially as a result of NASA's interest in the Victor Cryogenic Black Edition, the prestigious Smithsonian National Air and Space Museum in Washington D.C. took notice of Victor Aviation's forward-looking engine overhauls and asked Sloan to prepare an engine for display at its Udvar-Hazy Center in Chantilly, Virginia, adjacent to Dulles Airport.

With or without Victor's cryogenic engine out front, a turbo Stationair may represent an unusual choice for an entry-level airplane, but for Zentaro Ohasi and his wife, it may represent the ideal compromise: a spacious, comfortable machine with interior room to spare, a huge cargo area and the power to transport family and friends across horizons near and far.



**Bill Cox** took his first flight in a Piper J-3 Cub in 1953 and has logged some 15,000 hours in 311 different types of aircraft since. He has authored more than 2,200 magazine articles and was

the on-camera host of the 1980s TV series "ABC's Wide World of Flying." Bill is currently rated Commercial/Multi/Instrument/Seaplane/Glider/Helicopter. He can be contacted via email at [flybillcox@aol.com](mailto:flybillcox@aol.com).

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Longer life and improved reliability of metal parts were of great interest to organizations as diverse as NASCAR, NASA and Boeing Aircraft. NASCAR was well aware of the problems of parts breakage during auto racing and was interested in improving engine parts performance, not only on engines that were being pushed well beyond normal limits but on suspension systems that could fail at high speed and send a car out of control. Proper cryogenic treatment could actually save lives on the race track.

Boeing was concerned about protecting their aircraft against the extreme low temperatures of operating at high altitude, especially in summer when the surface temperature might be 35 degrees C and the temp at FL370 might be -50 degrees C.


NASA was interested in Victor's cryogenic work in conjunction with the space program where the failure of a single part out of several million could cause the loss of a multi-billion dollar shuttle or rocket. For NASA, understanding the effects of vibration and shock on parts and materials in the cold, unforgiving realm of space is a vital concern.

A little closer to Earth, most general aviation aircraft engines are expected to run for 2,000 hours or more without missing a beat. Zentaro Ohasi's irregular diet of trips back and forth across the Sierra Nevada and Rockies only serve to reinforce his need for ultimate reliability.

Ohasi reports that the new engine allows him to cruise 145-150 knots at middle heights below 10,000 feet and 160-165 knots at oxygen heights above that. A full service

of fuel lets Ohasi overfly most of the Southwest in one sitting. Dirty stall occurs down around 54 knots, and that would let Ohasi use most unobstructed, 1,500-foot strips. So far, he hasn't had the occasion.

A major part of the Stationair's attraction is its ability to lift a big load, comprised of whatever you can close the doors on. Ohasi's Turbo 206 sports a standard useful load of 1,249 pounds, and that can include as much as 92 gallons of fuel, enough for five hours travel at medium economy settings.

Since that's about two hours longer than most people would want to sit in a general aviation airplane, download fuel to 60 gallons and you can still transport nearly 900 pounds of people and stuff and cover almost 500 nm in the three-hour flight. 

## SPECIFICATIONS & PERFORMANCE

### 2004 Cessna Turbo Stationair

All specifications/performance figures are drawn from official sources, often the aircraft flight manual or the manufacturer's website (on new models). Another reliable source of information is Jane's All-the-World's Aircraft, especially on older aircraft. Specifications on used models will not always agree as several sources may differ on performance. Pricing source is "Aviation Week Aircraft Bluebook" (Fall 2017 edition).

#### SPECIFICATIONS

<b>New Price (2004):</b> .....	<b>\$424,300</b>	<b>Payload-full std fuel (lbs):</b> .....	<b>697</b>
<b>Current Used Price:</b> .....	<b>\$260,500</b>	<b>Wingspan:</b> .....	<b>36.0</b>
<b>Engine(s) - make/model:</b> .....	<b>Lyc TIO-540-AJ1A</b>	<b>Overall length:</b> .....	<b>28.3</b>
<b>HP:</b> .....	<b>310</b>	<b>Height:</b> .....	<b>9.4</b>
<b>TBO (hrs):</b> .....	<b>2,000</b>	<b>Wing area (sq ft):</b> .....	<b>174</b>
<b>Fuel type:</b> .....	<b>100LL</b>	<b>Wing loading (lbs/sq ft):</b> .....	<b>20.7</b>
<b>Landing gear type:</b> .....	<b>Tri/Fxd</b>	<b>Power loading (lbs/hp):</b> .....	<b>11.6</b>
<b>Max TO weight (lbs):</b> .....	<b>3,600</b>	<b>Seating capacity:</b> .....	<b>6</b>
<b>Empty weight (lbs):</b> .....	<b>2,351</b>	<b>Cabin doors:</b> .....	<b>2/3</b>
<b>Useful load-std (lbs):</b> .....	<b>1,249</b>	<b>Cabin width (in):</b> .....	<b>44</b>
<b>Usable fuel-std (gal/lbs):</b> .....	<b>92</b>	<b>Cabin height (in):</b> .....	<b>46</b>

#### PERFORMANCE

<b>Cruise speed (kts-75%):</b> .....	<b>161</b>	<b>TO dist ft):</b> .....	<b>1,060</b>
<b>Cruise Fuel Burn (gph/lbs):</b> .....	<b>18/108</b>	<b>TO over 50 ft (ft):</b> .....	<b>1,740</b>
<b>Best rate of climb, SL (fpm):</b> .....	<b>1160</b>	<b>Ldg dist (ft):</b> .....	<b>735</b>
<b>Service Ceiling (ft):</b> .....	<b>27,000</b>	<b>Ldg over 50 ft (ft):</b> .....	<b>1,385</b>
<b>Stall (Vso - kts):</b> .....	<b>54</b>		