



“Serving to Serve Again”

### Featured Video

Texas Skyways offers engine conversions and propeller modifications for better speed and climb performance on Cessna aircraft models 180, 182, 185, 205, 206, 207 and 210. Located in Boerne, Texas, on the North End of Boerne Stage Airfield, the company has been in business since 1985. There are over 600 Texas Skyways modified Cessnas working in the United States and several foreign countries.

Jack Johnson – Texas Skyways, Inc.: The airplanes all have a good increase in speed, climb performance and also the take-off roll is cut just about in half, about 45% decrease take-off roll. Our original STCs were for the 180s and 182s, they were made from year 1953 up through 1986. But, we realized that with the new 182s and the cost of these airplanes, \$300,000 plus, and still not able to go as fast as a 1956 180, 182 in which we put a larger engine. So we decided, we'd go from where we are now, to put larger engines in the newer 182s, the S and T models.

We're often asked why do we remove the fuel injection system from engines that are going to be installed in Cessna 180 or 182 aircraft. The answer, to make the engine fit that 180 or 182 without any aircraft modifications.

Jack: Cessna made the Cessna 182, and 180 with a carbureted engine, so we stay with a carbureted engine in those aircraft. Where aircraft like the 185 on up to the 210 they put in fuel injected engines, so when we install a larger engine in those airplanes, we stay with a fuel injected engine. We don't want to modify your good airplane, we don't want to cut holes in the firewall and put fuel tanks in the cockpit.

There are no firewall modifications, no holes to be cut in the stainless steel firewall, no engine mount modifications, no cowling or exhaust system modifications. Equally important there are no flap restrictions and no reservoir fuel tanks to be installed in the cockpit as required with a fuel injection engine.

When replacing an O-470 engine with an O-520 or O-550, we install an electronic tachometer. Because recommended TBO.

The upgrade from the O-470 230 horsepower engine to an O-550 285 horsepower engine produces an impressive performance improvement. Take this 1962 180 for example. With its original engine it climbs 700 feet a minute and cruised at 120 knots with a maximum speed of 125 knots. Texas Skyways installed an O-550 engine on this same plane.



"Serving to Serve Again"

Here is a takeoff. Notice how quickly the plane is off the ground and look at that rate of climb, 1500 feet a minute. As the Cessna levels off, full power is applied. Note that air speed indicator, 160 knots. To better demonstrate the performance difference we selected two similarly equipped Cessna 182s. This is a 1971 182 with a factory installed O-470 engine. This one is a 1977 Cessna 182 with a Texas Skyways installed Continental O-550 engine. Let's watch the take off. The O-470 will go first. It lifts off the ground at 800 feet. Now, the O-550 Cessna. It is off the ground in just 400 feet. Side by side take off is probably the most dramatic. The same two Cessnas are positioned next to each other for a parallel take off, the Texas Skyways Cessna is on the right, here we go. See how early the Texas Skyways Cessna left the ground and notice the difference in that rate of climb.

Equally impressive is the cruise. We have two Cessnas flying at the same altitude, same power settings, same pay load, and amount of fuel on board. The Texas Skyways Cessna with the O-550 engine is on the left.

Jack: It's top speed, if we leave it full throttle and hold it about 2600 RPM, it's top speed is gonna be somewhere around 170 knots. The 550 conversion we pick up 20 to maybe as much as 24 knots.

#### \*Performance Tests\*

Jack Johnson was curious about how a 2001 Cessna 206 with a T I/O 540 would do side by side with a 1977 Texas Skyways O-550 Cessna 182. Jack knew that the turbo charged 206 would outperform the carbureted 182 at high altitudes, but how about lower? Say about 7,000 feet. Here again is the result, the 182 is passing the 206.

And here is one more impressive test. A 1977 Texas Skyways O-550 Cessna 182 outperforms a 2002 Cessna 182 with an I/O 540 engine.

Jack: It's always a thrill to us to see the expression on the customer's face after we do the first take off. We don't want to scare anybody and usually we don't but the airplane will climb steep enough that it scares some people, it'll climb very steep still well above stall speed, well in the safety area. And then when the customer takes the airplane out by himself and flies it the first time and comes back in, we enjoy seeing the smile on his face and listening to the comments they have to make about the increased performance.



“Serving to Serve Again”

Bill Neiman - Junction, TX – Well this’ll be just about coming up on two years and it’s fantastic. I’ve never thought I would love a machine but like I like this machine. This thing seems to have a sweet spot somewhere between 8 and 10 thousand feet, this thing I can maintain my exhaust temps at an even 1425, the cylinder temps even out at about 325 and I can make this thing go from about 14 to 16 gallons an hour.

Pat Rozypal – Boerne, TX – Yeah this is a 1982 206 and about two years ago we replaced our 520 and our McCauley prop with a new 550 Continental and a Buccaneer Scimitar and it really improved our rate of climb we went from about 600 to 700 feet a minute to about 800 to a thousand and just no problem and the engine just runs so much smoother than the older 520 that we had and our rate of speed actually picked up, we were really surprised and it’s picked up to about 8-10 miles an hour and we’ve really noticed it picking up speed when we’re into a head wind. So we were really pleased with the service we got here at Texas Skyways, they just did a wonderful job and right now our engine has 180 hours and we haven’t had any problem and we’re very satisfied.

Vlad Van Maule – Chicago, IL – I have a 1962 Cessna 182 and a few years ago we replaced the O470 engine with the Texas Skyways conversion O520. The cruise speed increase was about 25 knots which I think is excellent. I do a lot of aerial photography so vibration is a big issue and so this new Scimitar three blade prop is very good. Also with the engine we bought the total drain sump and I used to pay for oil changes to be done at a local shop, now I change my own oil so my only cost is the cost of the oil and the filter. It paid for itself within a year.

Michael Vavrek – Albuquerque, NM – In the last ten years, I’ve had four Texas Skyways engines. The performance upgrade is just the best thing for a 182 that I’ve ever found. We live in Albuquerque at 6000 foot take offs at half the take off distance the rate of climb is in the 1500 foot range which is double what we used to do. In fact in IFR flying we have a 13,000 minimum decent altitude and we routinely had to climb and do 360s to get up and now we just climb to 13,000 feet. The speed increase is about 20 knots. In fact, this propeller is their latest design and we gained about three and a half knots by replacing the Hartzell Scimitar that we used to have. It’s just an amazing machine, I routinely fly it 17,000 feet which up there you’re burning nine and a half gallons an hour. It’s just an amazing machine.

Texas Skyways holds 50 STCs for various engine modifications and related products. For example, the Texas Oil Drain Sump.

Kevin: This is a typical O-470 engine that comes off the majority of the Cessnas we work on. As you can see there’s quite a bit of deposits and old oil that just stays trapped in there over



“Serving to Serve Again”

the years, there's things floating in there. You notice that the lowest point of the sump is actually up in this area here, so a certain amount of oil and deposits remain trapped in there. This is the Texas Skyways sump with our total drain system on it, you notice that the factory drains are still there, but we've also added this drain in the center to help get rid of those deposits that normally would, you saw on the other sump, and actually help extend the life of your engine up to about 500 hours just because your oil is staying cleaner and you're doing better maintenance to your aircraft. This is our quick drain device that we install on all of our total drain sumps, it enables you to hook up a hose and drain your oil very easily from the bottom of the aircraft.

Texas Skyways attained an STC and a PFA for Cessna 180 and 182 engine mounts.

Jack: One of the reasons that we decided to build our own engine mount was taking a good look at this Cessna mount which is used on the Cessna 182. It was designed for a 230 horse engine. But we're putting on up to 285 horses and if you look at the flexibility of the Cessna mount, we decided that we needed a better mount than this.

This new and re-designed engine mount features four extra thick vibration isolators.

Jack: We built the engine mount to use an isolator that is as thick as this is, it's got twice as much rubber in it as the standard Cessna 182 vibration isolator. We have four isolators like this on our engine mount, one on each corner, the front and the back so there're four large vibration isolators.

The mount is approved for two or three blade propellers; land and float plane operations.

Prop balancing is an important step for proper engine performance. Jack Johnson is a strong believer in in-flight prop balancing, he is using the ACES system model 2020, it gives the vibration levels of the propeller in actual flight conditions and that's considerably better than standing in front of a running engine holding a strobe light.

Other unique Texas Skyways products include:

- Exhaust pipe extension
- Exhaust pipe fairing
- Intake air and nose gear fairing
- JPI EDM model 700, 800, and 930 engine monitors
- And a starter warning indicator system



“Serving to Serve Again”

By installing the starter warning kit, the pilot is now able to monitor, via a small light on the instrument panel whether the starter is engaged or disengaged.

Staying at the forefront of technology requires constant investments in new testing equipment and learning about the latest techniques, materials and processes. The Texas Skyways engine modifications came as a result of meticulous work with engines and their components. Along with engine and propeller upgrades, Texas Skyways offers the normal range of aircraft maintenance, annual inspections, 100 hour inspections and so forth. The company is well positioned for the future.

Jack Johnson – Texas Skyways, Inc. – The future for Texas Skyways is very positive and bright. We’re excited at what we have been doing and also the things that we’re involved in right now. The engineering, the data that we are acquiring and of course the big thing that we’re very excited about now is the Turbo charged 325 horsepower 550 engine for the 206, 207, and 210.

New STC  
T I/O 550  
325 hp  
For  
Cessna 206  
Cessna 207  
Cessna 210

And the 310 horsepower engine for the 182 S & Ts. So the future for us looks very bright and positive and we think we’ll be here for a long, long time to come.

New STC  
310 hp  
For  
Cessna 182 S & T

The company slogan “Serving to Serve Again” is working. With a long list of satisfied customers, a line of elite products and services, Texas Skyways is here to stay. For more information please visit our website [txskyways.com](http://txskyways.com) or call 1-800-899-7597. Texas Skyways, Go Further Faster.