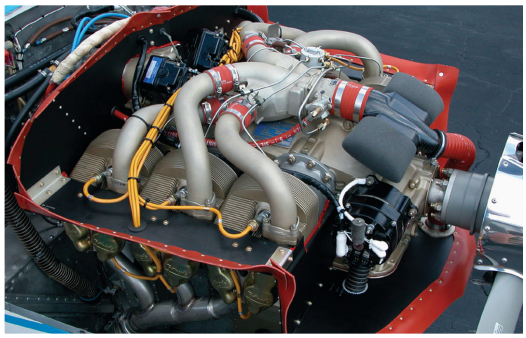
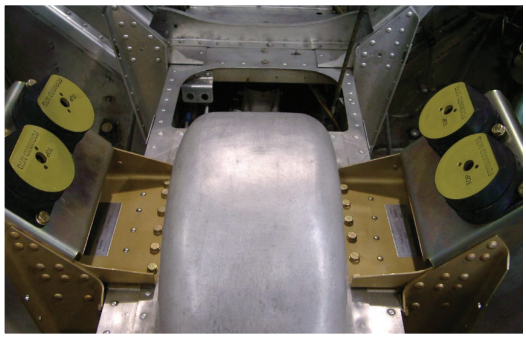
SummitAviation

550 T.I. ENGINE
FOR THE CESSNA 210

STC FOR CONTINENTAL IO-550-P
FOR THE 210 & T210

(SERIAL NUMBERS 21059200
THROUGH 21064897 K, L, M & N)





You Can Have More Than A New Engine In Your Cessna*... You Can Experience A New Aircraft.

Our company has developed one of the most sought after and successful STC's in the industry. We have combined our understanding of the Cessna 210 and our experience with the modern Teledyne Continental Motors (TCM) IO-550-P engine to produce the 550 Tuned Induction Engine Conversion. Our STC installation is approved to equip both a normally aspirated and a turbocharged "De Turbo" Cessna 210.

Cruise Faster, Climb Stronger, Save Fuel

The 550 T.I. establishes a new definition of performance, safety, and comfort for pilots familiar with the standard Cessna 210 Centurion. The non-turbocharged 550 T.I. can climb quicker and can cruise 12 knots faster at 6,000 feet than the stock Cessna 210. This allows the operator to fly at higher true airspeeds, usually in smoother air and above more inclement weather. True airspeed at 10,000 feet is a respectable 178 knots. The TBO is increased by 20 percent to 2,200 hours. You can feel the horsepower on takeoff, see the fuel consumption difference, the climb rate doubles PLUS it comes with up to a 400-hour increase on TBO.

The modern TCM-IO-550-P engine is certified to more stringent standards than the older IO-520.

Among other requirements, the IO-550-P must produce its maximum rated 310 horsepower within a margin of plus 5%, minus 0%. By comparison, the IO-520-L must only produce its maximum rated 300 horsepower within a margin of plus or minus 2.5%. This means that the IO-550 was produced with a minimum of 300 HP and could have as much as 325.5 HP. The IO-520 was produced with a maximum of 307.5 HP however it could have been as low as 292.5 HP. Our IO-550 engine is also rated at 310 HP Max Continuous and the IO-520 is at 285 HP.

Enhanced Comfort For Pilot And Passenger

Enhanced comfort comes from a combination of adding a stronger engine, a new 78" constant speed three-blade Hartzell Scimitar propeller and our SmoothRide Engine Mount System. Vibration and noise levels are reduced to levels not before available in the Cessna 210. This makes the aircraft much quieter and smoother both inside and out. The days of window rattling Cessna 210 takeoffs are gone.

The enhanced performance, safety and comfort of the 550 T.I. STC transforms the heavy hauling Cessna 210 into a quiet, smooth, speedster.

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* The 550T.I. STC has been approved for installation in models K through N, which were manufactured from 1970 to 1984.

Fuel Efficiency Comparison

Full Throttle Cruise At Optimum Altitude - Equal Horsepower And Equal Miles Flown

	I0-520-L	IO-550 (Best Power)
TBO	1,700	2,200
Brake Specific Fuel Consumption (BSFC) (lbs/bhp)	0.44	0.41
Max Continuous Power (MCP)	285	310
Cruise Horsepower % MCP	78%	72%
Cruise Horsepower	222.3	222.3
Optimum Cruise Altitude =	4,600	6,850
Cruise True Airspeed (kts)	170	174
Groundspeed Factor (% of cruise)	85.00%	85.00%
Groundspeed (kts)	145	148
Miles Traveled (nm)	245,650	245,650
Flight Hours	1,700	1,661
Fuel Consumption (gph)	16.7	15.5
Fuel Used (gal)	28,327	25,789
Fuel Cost per gallon	$5.00	$5.00
Fuel savings		$13,223
Fuel savings (gal)		2,645
Fuel savings (%)		9.00%
Fuel Cost	$141,950	$128,728
Fuel Cost per hour	$83.50	$77.50
MPG (nm/gal)	8.7	9.5
MPG (sm/gal)	10.0	11.0
Fuel Cost per Mile (nm)	$0.58	$0.52

Fuel Efficiency Comparison

Full Throttle Cruise At Optimum Altitude And Equal Miles Flown

	IO-520-L (Best Power)	IO-550 (Best Power)	IO-550 (Best Economy)
TBO	1,700	2,200	2,200
Brake Specific Fuel Consumption (BSFC) (lbs/bhp)	0.44	0.41	0.385
Max Continuous Power (MCP)	285	310	310
Cruise Horsepower % MCP	78%	67%	59%
Cruise Horsepower	222.3	207.7	182.6
Optimum Cruise Altitude =	4,600	7,000	12,250
Cruise True Airspeed (kts)	170	170	170
Groundspeed Factor (% of cruise)	85%	85%	85%
Groundspeed (kts)	145	145	145
Miles Traveled (nm)	209,525	209,525	209,525
Flight Hours	1,700	1,700	1,700
Fuel Consumption (gph)	16.7	13.6	12.8
Fuel Used (gal)	28,390	23,120	21,760
Fuel Cost per gallon	$5.00	$5.00	$5.00
Fuel Cost ($)	$141,950	$115,600	$108,800
Fuel savings ($)		$26,350	$33,150
Fuel savings (gal)		5,270	6,630
Fuel savings (%)		18.20%	23.50%
Fuel Cost per hour	$83.50	$68.00	$64.00
MPG (nm/gal)	8.7	10.6	11.3
MPG (sm/gal)	10	12.2	13
Fuel Cost per Mile (nm)	$0.58	$0.47	$0.44

550 T.I. Crossflow Engine Conversion Kit

- Tuned Induction IO-550-P Engine
- Engine Mounted Oil Filter - Full Flow
- Gear Drive Alternator (60 or 100 Amp)
- Starter Motor, Ignition Harness and Spark Plugs
- New Stratoflex Teflon Aircraft Hoses
- New 78” Scimitar Propeller
- SmoothRide™ Engine Mount System
- New Fuel Flow/Manifold Pressure and Tachometer Gauges
- New Alternate Air System
- New Air Induction System and Filters
- New Powder Coated Cooling Baffle Set
- New Mixture Control Cable
- New Throttle Control Cable
- New Propeller Control Cable
- Cowl Oil Door Modification
- Exhaust System Complete (Deturbo)
- Drawings, Installation Instructions and STC Paperwork
- All Parts PMA Approved

Cessna 210 Engine STC 210 & TU210

Engine

Manufacturer - Teledyne Continental Motors (TCM)
Type - Normally Aspirated, Direct Drive, Air Cooled, Horizontally Opposed, Fuel Injected, Six Cylinder Engine with 550 Cubic Inch Displacement
Takeoff Horsepower - 310
Max. Continuous Horsepower - 310
Max. Recommended Cruise-HP - 240
Max. Recommended Cruise-% - 78
Max. RPM - 2700
Max. Recommended Cruise-RPM - 2550
Max. Power for Leaning - 78%/240HP
Min. Oil Temperature for Takeoff -125°F
TBO - 2,200 Hours

Propeller

Manufacturer - Hartzell
Description - New Constant Speed, 3 Blades, 78”
Make - Scimitar
Model - PHC-J3YF-1R/F7691

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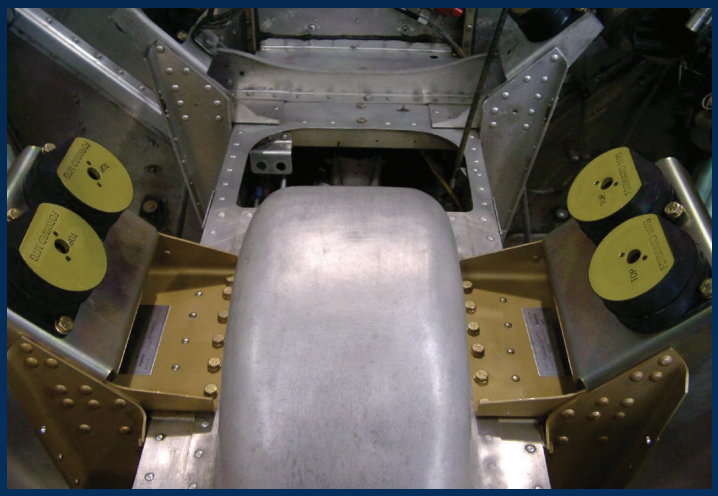
Are You Ready For A Smoother Ride?

Developed and manufactured exclusively by Summit Aviation Mfg., the SmoothRide Engine Mount System, STC kit includes a newly designed and tested six-point engine mount that provides a dramatic reduction of engine vibration to the cockpit environment. The increased stability of the SmoothRide Engine Mount System prevents engine mount sag during engine life and maintains a centered thrust line. Engine vibrations are significantly decreased from takeoff to touchdown, reducing fatigue and stress on both the airplane and the pilot. Additional reductions in vibration can be expected in Cessna 206/207 and Cessna 210 aircraft which have undergone IO-550 conversion.



Engine isolators are increased from four to six, while dual front mounts add strength and stability. The kit includes dual engine mounts, mount legs, heat shields, all new isolators, STC drawing and fittings.

- 70% reduction in cabin vibration
- Revolutionary six-mount system
- Simple installation
- Engine vibrations decreased
- Reducing fatigue on airplane
- Reduces troublesome engine sag

SmoothRide Engine Mount System Frequently Asked Questions

What's the biggest advantage the SmoothRide Engine Mount System offers over the standard Cessna Engine Mount System?
The reduction in cabin vibration is striking, especially in the lower RPM ranges. This means you and your passengers will immediately notice that your flights are smoother, less tiring and more enjoyable. You'll stay more alert on those long flights and you'll arrive more relaxed. It also means your airplane won't be subjected to as much vibration, which offers the possibility of future savings through improved component life.

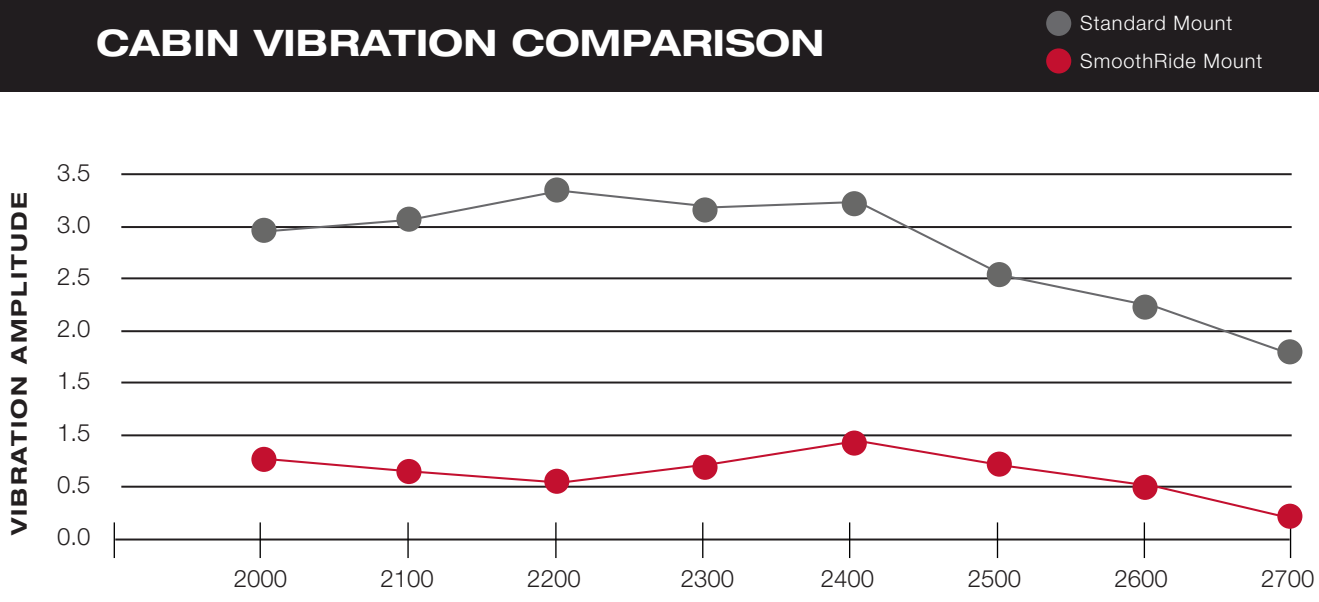
Besides reduction in cabin vibration, are there any other benefits of the system?
Yes! Over time, and in some cases not a very long time, most engines in the Cessna 200 series with the standard four-point engine mount will begin to sag. This is because the weight of the engine compresses the rubber isolator in the front engine mounts. When the engine sags, the thrust line of the propeller moves away from the perfect alignment, which affects efficiency and performance. The SmoothRide Engine Mount System's double front engine mounts provide increased support of the engine's weight, preventing engine sag, restoring thrust efficiency and eliminating the need to shim the engine mounts periodically.

How was the cabin vibration reduction measured?
Our aeronautical engineers attached dual vibration sensors to the pilot seat tracks of several Cessna 210s and the airplanes were first flown with the standard four-point Cessna engine mount. Multiple vibration amplitudes were measured and recorded at each power setting. Then, the SmoothRide Engine Mount System was installed in the same airplanes with the same engines. The flight tests were repeated and cabin vibration was measured and recorded in the same manner using the same instruments. The data was compiled and loaded into a computer spreadsheet.

What does the installation involve and how long does it take?
An FAA-licensed A&P mechanic must install the STC. Experience has shown that removing the engine; locating and installing the SmoothRide Engine Mount System using the supplied templates and then reinstalling the engine accomplish the quickest installation. We have found that the installation can normally be completed in three working days and requires about 20 man-hours. If needed repairs are discovered, the total job may take longer.

My engine is past mid-time. If I have the SmoothRide Engine Mount System STC installed now, will I still enjoy its benefits? Will the system fit my next engine, or will I have to buy another STC kit then?
You will certainly be able to enjoy the benefits of the SmoothRide Engine Mount System, even if your engine is well past mid-time. In fact, you may notice an improvement when the typical engine sag of such engines is corrected. The SmoothRide Engine Mount System is designed for the TCM IO-520 and TCM IO-550 engine series approved for your airplane, so your new engine should fit nicely. Normally there would be no need to purchase an additional SmoothRide Engine Mount System STC kit when the engine is replaced at overhaul.

CABIN VIBRATION COMPARISON



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