260 HP FUEL INJECTION

BY PETERSON

- Reduced Takeoff Distance
- Greater Rate of Climb
- Superior Performance at Altitude
- Better Handling at Slow Speeds
- Improved Cruise Speed
- Improved Fuel Efficiency

- Low Fuel Consumption
- Full TCM Factory Warranty
- Proven TCM 10-470-F Engine
- No Carburetor Ice
- Improved Performance at High Density Altitudes

In 1985, while designing the **260SE/STOL**, it was decided that an engine with greater horsepower would be desirable. This engine would also be offered as an individual upgrade for existing Skylanes. Based upon our customers' needs, certain guidelines had to be met. These are:

1) **Slow-Speed Handling** As many of our customers utilize their Skylanes in a utility role, slow-speed handling and landing characteristics were important. The Skylane tends to be nose heavy anyway, so it was important to keep any additional weight up front to a minimum. We looked at the IO-520 and the IO-550 engines, along with the IO-470. The combined weight of the IO-520 or IO-550 ***along with their propellers*** were simply too heavy. Some weight increases ran over forty pounds. Only the 10470 engine and propeller combination when installed did not degrade the slow-speed handling and landing characteristics.

2) **Range and Endurance** Our customers were often times flying into back country areas where fuel was not available, and many more flew in instrument conditions. An unwanted by-product of going to a larger cubic inch engine is higher fuel consumption which in turn reduces the aircraft range and endurance. We wanted an engine whose fuel consumption at ***an equal percent of power*** had about the same fuel consumption as the Skylane's original engine. The IO-520 or IO-550 at ***an equal percent of power*** would have consumed enough additional fuel to reduce the Skylane's range and endurance by 1.5 hours. This was not acceptable. The IO-470 engine is the same cubic inch engine as the original Skylane engine, but with a much more efficient fuel injection system. Due to this, the fuel consumption at ***an equal percent of power*** is the same as the unmodified Skylane. ***More continuous power*** with no reduction in range or endurance. An added benefit is a $10,000 savings in fuel costs through TBO over the IO-520 or IO-550.

3) **Reliability** Due to the conditions our customers flew under, maximum reliability was a very important feature. When looking at the various engines we had to choose from, some facts were obvious. While the IO-520 is not a bad engine, it likewise has not been a great engine either. The IO-550 has had a very poor history. The IO-470, on the other hand, has had an excellent service record since the early 1960's. Without question, the IO-470 engine is the best, most reliable, big engine manufactured by Continental.

4) **Warranty** Generally speaking, our customers prefer TCM factory engines. One of their reasons is TCM factory warranty. We had discussed with Continental the modification of their engines. Teledyne Continental took the logical position - if one of their factory engines was modified, it would lose some or all of its TCM factory warranty. Obviously, part or all of the warranty would then have to be assumed by the modifier. This was not acceptable to us or our customers.

When we looked at all the facts, it was obvious that the TCM IO-470-F engine was the best choice for our 260SE/STOL. Since 1986, we have had hundreds of these engines installed in 1962-1986 Skylanes, and it has become the standard of the industry.

OBSERVATIONS

These are our personal observations after having flown every type of modified Skylane available.

* The IO-470 engine reduces the takeoff distance by 25%. It makes a big difference when the airplane is heavy or operated at high density altitudes.

* Once off the ground, the engine allows the airplane to climb immediately without having to level off first so the airplane can "catch its breath."

* Overall rate of climb is increased by 300-400 fpm, an increase of approximately 40%.

* The performance the original Skylane had at 8,000 or 9,000 feet you now have at 13,000-14,000 feet with the IO-470 engine. A big plus if you fly in the mountains or IFR.

* The IO-470 engine is superior in performance to either the carbureted O-520 or O-550. This is due to the ability of the IO-470 to provide more manifold pressure at all altitudes as compared to the O-520 and O-550 with their carburetors and restricted induction system.

* Cruise speed is increased at altitudes above 5,000 feet. How much the increase is depends upon the airframe rigging and how straight it was built at the factory.

* Many of our customers buy the conversion just to get the fuel injection alone. Some have owned larger business aircraft, and they do not want to give up fuel injection. The worry about carburetor ice is obviously eliminated. Reports have been coming in that O-520's and O-550's are, in some instances, creating more carburetor ice than the original Skylane engine, the O-470.

* Fuel consumption on the average IO-470 runs approximately 13 gph. Most IO-520's and IO-550's at the same power setting are running from 16-18 gph. The carbureted O-520's and O-550's are generally not as fuel efficient as their fuel-injected counterparts.

INSTALLATION

Kits are available for field installation. When ordering a kit, plan three weeks ahead. Cost of our STC'd kit is $5,000.

If you have any technical questions, we are always available to answer them.

SUMMARY

Now you know why we chose this particular engine to power our 260SE/STOL and to upgrade the Skylane. We feel these facts are sufficient for you to determine whether this engine upgrade is right for you. We refuse to publish inflated performance figures or factory unauthorized TBO's. Likewise, we refuse to prey on an owner's lack of knowledge concerning engines. We will give you our honest opinion on questions asked.

Happy Flying!

Todd and Jo Peterson

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