

Fox Todd

From: Fox Todd
Sent: Monday, April 13, 2020 9:14 AM
To: Swann Nicholas
Cc: Fox Todd
Subject: CEN18FA236 - Expected Cruise Performance (STC SA02918CH)

Importance: High

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Mr. Swann,

The accident airplane, a Cessna P210N, had been modified by Vitatoe Aviation LLC with STC SA02918CH, which installed a turbo-normalized system on a stock Teledyne Continental IO-550P engine.

According to Vitatoe Aviation LLC, the turbo-normalized engine produces 262 brake horsepower at 2,500 RPM with a manifold pressure of 30" Hg or less and a fuel flow of 17.6 gallons per hour (GPH). The lean of peak (LOP) cruise setting of 17.6 GPH produces a true airspeed of 185-190 knots at 10,000 ft on a standard day. The LOP cruise setting of 17.6 GPH produces a true airspeed of about 215 knots at 22,000 ft on a standard day. The Cessna P210N service ceiling is 23,000 ft.

After climbing to the desired cruise altitude, allow the airplane to stabilize in straight and level flight and reduce engine speed to 2,500 RPM. Allow the airplane to stabilize and reduce throttle setting to no more than 30" Hg manifold pressure. Smoothly and quickly reduce fuel flow to 17.6 GPH. Allow the airplane to stabilize and monitor cylinder head temperatures (CHT) readings. Close the cowl flaps and continue to monitor CHT readings. If any CHT approaches 380°F or higher, gradually reduce fuel flow approximately 0.3-0.4 GPH. Continue to monitor CHT readings. On very hot days it may be necessary to open the cowl flaps slightly to maintain CHT readings below 380°F. Maintain at least 2,300 RPM in cruise.

The entire FAQ can be found at the following weblink:
<http://www.vitatoeaviation.com/f-a-q-centurion-tn550-stc-02918ch/>

There is also a helpful video that explains many of the performance parameters:
<http://www.vitatoeaviation.com/vitatoe-aviation-tn550-featured-on-avweb/>

Alternatively, the same video can be viewed directly on YouTube:
https://youtu.be/fNveiq_JdSI

Hopefully you will find the aforementioned information useful as you continue to work with the recovered JPI engine monitor data.

Sincerely,
Andrew Todd Fox
NTSB, Air Safety Investigator