

United States of America
Department of Transportation -- Federal Aviation Administration
Supplemental Type Certificate
Number SE60WE

This certificate issued to RAYJAY Parts LLC
10 Harbor Island Drive
Key Largo, Florida 33037

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 13 of the Civil Air Regulations.

Original Product -- Type Certificate Number 1E4
Make : Lycoming
Model : IO-540-A1A5, B1A5, B1B5, B1C5, E1A5, E1B5, E1C5, G1A5, G1B5, G1C5, G1D5, G1E5, G1F5, P1A5, S1A5

Description of Type Design Change: Installation of two Rajay Turbochargers P/N RJ 0327-1 or -2 and 9 lb. \pm 1 Sonic nozzle on Lycoming Engine Models listed above in accordance with FAA sealed Rajay Drawing List No. RJ 5099. This STC establishes the eligibility of the engines listed hereon for operation with the Rajay Turbocharger in accordance with the engine operating limitations specified. Approval of the engine with a turbocharger in any airplane will be covered by an STC issued against the airplane on which it is installed.

Limitations and Conditions: This approval covers engine/turbocharger compatibility only. See page 3 of this STC for Engine Operating Limitations.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application : January 30, 1973

Date of issuance : March 14, 1973

Date reissued : Feb. 10, 1982; Oct. 23, 1987;
Sept. 22, 1995; Dec. 12, 2003;
June 26, 2006

Date amended : May 14, 1973; Sept. 19, 1973



By direction of the Administrator

(Signature)
Melvin D. Taylor, Manager
Atlanta Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

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Supplemental Type Certificate

(Continuation Sheet)

Number SE60WE

August 10, 1982

ENGINE OPERATING LIMITATIONS

Where applicable, the following engine limitations supersede those specified on Engine Type Certificate Data Sheet 1E4.

Engine Speed (Turbocharged)

IO-540-A1A5, B1A5, B1B5, B1C5, E1A5, E1B5, E1C5, G1A5, G1B5, G1C5, G1D5, G1E5, G1F5, P1A5, S1A5.

Takeoff 2575 RPM (5 minutes)

Max. Cont. 2575 RPM

Manifold Pressure (Turbocharged)

Takeoff 29.5" HgA (5 minutes)

Max. Cont. 29.5" HgA

Fuel (Minimum grade Aviation gasoline) 100/130

Altitude

Maximum operating altitude 30,000' MSL (density)

Maximum Permissible Temperatures:

Exhaust Gas (turbo inlet)

1600⁰F@ 100,000 RPM

1650⁰F@ 90,000 RPM

Engine and Turbocharger Operation:

For engines equipped with separate throttle and propeller controls, but no automatic wastegate control, do not operate the turbochargers unless the throttle is wide open. When increasing power, fully open the throttle; then slowly close the wastegates until the desired manifold pressure is obtained. When decreasing power, fully open wastegates, then close the throttle.

For those engines equipped with integrated power controls, (i.e., throttle and propeller controlled by a common control), do not operate the turbochargers below 2200 RPM. When increasing power, set desired RPM; then slowly close the wastegates until the desired manifold pressure is obtained. When decreasing power, fully open wastegates, then make further power reduction by the integrated power lever.

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