

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

*Number* SE6WE

*This certificate issued to* RAJAY 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, C1B5, C1C5, C2C, C4B5, C4C5, E1A5, E1B5, G1A5, G1B5, G1C5, G1D5, G1E5, J4A5, K1A5, K1B5, K1C5, K1F5, L1A5, M1A5, P1A5, S1A5, K1E5

*Description of Type Design Change:* Installation of two Roto-Master Turbochargers Model No. 3DT5FF10J2, P/N 600572-00 (formerly Rajay Model 315F10, P/N RJ0080-100, or -102) on Lycoming engine models listed above in accordance with FAA sealed Roto-Master (formerly Rajay) Drawing List RJ1000 Revision 1, dated 5/15/83 or later FAA approved revision. This STC establishes the eligibility of the engines listed hereon for operation with the Roto-Master (formerly Rajay) turbocharger in accordance with the engine operation limitations specified. Approval of the engine with the 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. This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the interrelationship between this change and any of those other previously approved modifications will produce no adverse affect upon the airworthiness of that airplane. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission. See page 3 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:* September 26, 1962

*Date reissued:* 8/6/63; 11/27/63; 4/3/64; 10/13/64; 9/6/66;  
5/2/68; 1/14/69; 2/10/82; 10/30/87; 9/22/95;  
9/15/03; 6/26/06

*Date of issuance:* April 19, 1963

*Date amended:* 4/18/67; 7/30/68; 2/12/69; 3/2/73; 9/19/73;  
8/13/74; 10/7/74; 7/15/83



*By direction of the Administrator*

(Signature)

Melvin D. Taylor  
Manager  
Atlanta Aircraft Certification Office

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

# Supplemental Type Certificate

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## 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, C1B5, C1C5, C2C, C4B5, C4C5, E1A5, E1B5, G1A5, G1B5, G1C5, G1D5, G1E5, J4A5, P1A5, S1A5, K1E5

Takeoff 2575 RPM (5 minutes)  
Max. Cont. 2575 RPM

IO-540-K1A5, K1B5, K1C5, K1F5, L1A5, M1A5, S1A5, K1E5

Takeoff 2700 RPM (5 minutes)  
Max. Cont. 2700 RPM

### Manifold Pressure (Turbocharged)

Takeoff 29.5 in. HgA (5 minutes)  
Max. Cont. 29.5 in. HgA

Fuel (Minimum grade Aviation gasoline) 100/130

### Altitude

Maximum Operating altitude 30,000 ft. MSL (density)

### 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 wastegate 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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