

LANCAIR EVOLUTION Model Guide

The LANCAIR EVOLUTION is a single-engine piston-category aircraft in this database, built by Lancair of Redmond, Oregon. The documents describe an experimental-certificate aircraft with a Pratt & Whitney PT6A-135A engine and a Hartzell propeller. MT 5-blade propellers also appear in the service bulletins. No performance or weight figures are in the inputs, so confirm those with the builder and the aircraft's own documents.

KEY TAKEAWAYS

- Experimental certificate: a condition inspection under the FAA-approved program is required within every preceding 12 calendar months.
- Main landing gear trunnion cracks led to a mandatory service bulletin, with a 50-hour limit on the interim reinforcement.
- Landing gear switch bulletin applies to serial numbers 44 and previous; a blue threaded-shaft switch should be replaced.
- Check that the VR PDC prop heat controller is not still on factory default programming.

INSPECTION AND MAINTENANCE PROGRAM

The sample program covers the airframe, the Pratt & Whitney PT6A-135A engine and the Hartzell propeller. A complete condition inspection is due every 12 calendar months. A repair station, certificated mechanic or the repairman certificate holder must do it. Engine work follows Pratt & Whitney Maintenance Manual 3043512. Propeller work follows Hartzell Owner's Manual No. 149. The owner keeps the records and must track life-limited parts and Airworthiness Directives.

LANDING GEAR HISTORY TO VERIFY

Service Bulletin SB016-0003 (Rev B) followed a crack found in the left main gear trunnion of the prototype. It requires inspecting the trunnions and trailing links, installing kit PN 434-0014A, and contacting Lancair at 50 hours for replacement. Limits during that period: avoid locking one wheel when taxiing (29 foot wing tip minimum turn radius) and limit crosswind landings. Ask for records showing which phases were done.

OTHER SERVICE BULLETINS

SB-016-0014 covers a landing gear switch that proved unreliable in at least one aircraft. It affects serial numbers 44 and previous. A blue switch with a threaded shaft (OTTO T-30020) can be replaced. The functional test checks that the gear retracts only with simulated airspeed above 90 kts. SB016-0017 (advisory) says some aircraft with the VR Avionics PDC prop heat controller may still have factory default settings. It gives settings for Hartzell 4-blade and MT 5-blade propellers.

SAFETY NOTES

- If any crack is found in the gear during the trunnion inspection, remove the aircraft from service and contact Lancair Engineering.
- Do the preflight visual gear inspection thoroughly (flashlight suggested), as the trunnion bulletin directs.
- The Operating Limitations issued by the FAA take precedence over the inspection program if the two disagree.