

LANCAIR 360 Model Guide

LANCAIR 360 is a single-engine piston aircraft with retractable landing gear. The registry and library data give no year, seat, speed, range or weight figures for it. The source documents cover only the hydraulic gear system and the landing gear assembly manual, so this guide focuses on gear condition, pump configuration and settings.

KEY TAKEAWAYS

- The library and registry rows give no performance, weight or seat data for the LANCAIR 360. This guide covers the gear system only.
- The stock 320/360 gear pump is a reversible Oildyne 108 series, part number 108AM19-CLB-3VT. A pump of a different type is a red flag.
- Some pumps shipped in 1995 to 1997 had the spool installed backwards. The gear may then cycle several times at the end of retraction.
- Panel pressure gauges are highly recommended. They show slow leaks and let the switches and relief valves be set correctly.

HOW THE GEAR HYDRAULICS WORK

The system is closed loop and reversible: the pump runs one way to retract and the other way to extend. Poppet valves lock pressure after the pump stops. On electrical failure, opening the emergency dump valve lets the gear free-fall by gravity. A healthy system should hold pressure for days.

PRESSURE SWITCH SETTINGS TO VERIFY

Original nominal settings were 550 psi down and 1,200 psi up. Raising the low-side setting to 700 or 800 psi is recommended to avoid an extension hang-up. Aircraft with the larger Outback Gear need 1,300 or 1,400 psi up, because 1,200 psi is the lower end of what holds the gear up.

AIRFRAME AND GEAR BUILD CHECKS

The Lancair gear is a trailing arm type. The assembly manual chapter (for the 320FB kit) covers compression assemblies, over-center links, the main gear brake assembly and three-piece main gear doors. Check the tire tracks parallel to the centerline, the gear strut is near vertical, and the over-center links are assembled the right way round.

SAFETY NOTES

- A Legacy-type replacement pump (spool return springs added about 2003) is not compatible with the 320/360 system. It can hydraulically lock on a hot ramp so the gear cannot be raised.
- Over-center link upper arm shoulder must be on the aft side when fitted. The manual warns that the wrong orientation could jam the gear when cycling.
- Original VEP pressure switches tended to stick after long exposure to hydraulic fluid. A stuck switch can cause hydraulic lock on the ground. Lancair later switched to Suco switches.