

LEARJET 31A Model Guide

LEARJET 31A is a twin-turbofan business jet in the Learjet 31 family (variants 31 and 31A). The registry lists the family at up to 1290 nm range, up to 450 kt cruise, up to 10 passengers and a 51000 ft service ceiling. These are family maxima, not confirmed 31A figures. The documents reviewed cover doors and emergency gear, preflight system tests, the emergency air reservoir and a pressurization tip.

KEY TAKEAWAYS

- Emergency air reservoir: 25-year life limit from manufacture date, with hydrostatic testing every 5 years.
- Some later LEARJET 31A aircraft show intermittent pressurization bumps after takeoff rotation.
- The cabin door is 36 inches or 24 inches wide, depending on the aircraft. Door hooks must be released before flight.
- A drag chute is optional equipment. Confirm whether one is fitted.

DOORS AND EMERGENCY EQUIPMENT

The cabin door has an upper half and a lower half with integral steps, and is either 36 inches or 24 inches wide. A 28 VDC actuator pulls the halves together with door hooks. The hooks must be released before flight so the crew can leave quickly in an emergency. A red DOOR light shows a locking pin not fully engaged or hooks still engaged. Emergency exits: the right-hand cabin window and the upper cabin door.

EMERGENCY AIR RESERVOIR

The nitrogen emergency air reservoir (200 cubic-inches, operating pressure 3000 psig) bypasses the hydraulics to lower the landing gear. It also supports braking. Its maintenance manual lists the 31A as an applicable model. Life limit is 25 years from manufacture, with hydrostatic testing every 5 years. Units that fail the test are replaced. Ask for the manufacture date and test records.

PRESSURIZATION HISTORY

A technical tip says some later LEARJET 31A aircraft have intermittent, large pressurization bumps shortly after takeoff rotation. Replacing numerous components did not fix it. One operator's workaround moves the rate selector from the 9:00 position to about 10:30 for takeoff, then back to 9:00 in the climb. Ask about the aircraft's pressurization history.

SAFETY NOTES

- Release the cabin door hooks before flight. The DOOR light is on whenever the hooks are engaged.
- If the drag chute deploys in the air, it fails above approximately 167 knots.
- Emergency air reservoirs past 25 years from manufacture, or failing the 5-year hydrostatic test, must be replaced.