

BELL 206L-1 Model Guide

BELL 206L-1 (Long Ranger II) is a turboshaft helicopter approved as a seven-place aircraft for day or night VFR in non-icing conditions, with a minimum crew of one pilot. The flight manual extract lists a 250-C30F engine. The registry shows the 206L family at up to 810 nm range and 145 kt cruise across its variants. Treat those as family figures, not BELL 206L-1 figures.

KEY TAKEAWAYS

- Gross weight limit is 4050 lb internal and 4250 lb external. Weight above 4050 lb must hang on the cargo hook, not the landing gear.
- VNE is 130 KIAS at low altitude. It drops to 90 KIAS with any door off and to 84 KIAS in the 85 to 100% torque takeoff range.
- Inspect the exhaust duct: the repair-and-overhaul duct document cites a high incidence of cracking in the flange fillet weld area.
- Ask whether a Soloy STC (SR00036SE) is fitted. If so, steady-state N2 operation between 71% and 88% must be avoided.

LIMITS AND LOADING

Minimum front seat weight is 170 lb. The baggage compartment placard allows 250 lb maximum, at 86 lb per sq ft. With both crew seats occupied, only one mid passenger is permitted unless there are two aft passengers. Maximum operating pressure altitude is 20,000 ft. Flight with doors off is approved but cuts rate of climb by 100 fpm.

ENGINE AND POWER CHECK

The 250-C30F takeoff limits are 100% torque and 791°C TOT, both for 5 minutes, and 104% gas producer RPM. A power check compares actual torque with the chart value. Less than chart means the engine cannot meet the manual's performance and the cause must be found. Best rate of climb speed is 57 KIAS.

COMMON ADD-ONS TO CHECK

Onboard Systems cargo hook kits limit the hook load to the lesser of Bell's figure or 2650 lb (1202 kg). They are not approved for human external cargo. Long line kit Y-rope, long line and lanyard are life-limited to 4 years. A Garmin 400W STC restricts the helicopter to VFR only. Check each STC's paperwork and logbook entries.

SPECIFICATIONS

Approved Seats	7
Engine Model	250-C30F
Max Operating Altitude Ft	20000
Baggage Max Weight Lbs	250
Min Front Seat Weight Lbs	170
Min Crew	1

PERFORMANCE

Max Operating Altitude Ft	20000
Vne Kts	130
Best Rate Of Climb Speed Kts	57
Doors Off Climb Penalty Fpm	100

V-SPEEDS

Vne Kts	130
Vne Doors Off Kts	90
Vne Takeoff Power Range Kts	84
Best Rate Of Climb Kts	57

WEIGHT & BALANCE

Max Gross Weight Internal Lbs	4050
Max Gross Weight External Lbs	4250
Min Front Seat Weight Lbs	170
Baggage Max Weight Lbs	250

SAFETY NOTES

- On Soloy STC aircraft, avoid steady-state N2 between 71% and 88%. Pass through quickly; transient operation means no dwell over 1 second.
- Do not base aircraft operation on the cargo hook load weigh reading. Turn the weighing system off when navigation equipment is in use.
- Flight in falling or blowing snow is not permitted because of engine flameout risk. Acrobatic manoeuvres are prohibited.