

Robinson R22 Model Guide

The Robinson R22 is a two-seat piston helicopter. The model record lists a first year of 1979 and no end year. Its Pilot's Operating Handbook is FAA approved in the normal category under FAR 27 (type certificate H10WE). The inputs give no performance or weight figures, so this guide covers what to inspect: drive belts, tail rotor blades, steel tube frame and fuel tanks.

KEY TAKEAWAYS

- Two seats, piston engine, first built 1979; the handbook is FAA approved in the normal category (FAR 27).
- Drive belts are a known watch item: overweight flying, high power settings and misaligned sheaves hurt belt reliability.
- Check service bulletin status on tail rotor blades (SB-120C) and fuel tanks (SB-109A) before buying.
- Check the upper steel tube frame for fatigue cracks, especially on ex-mustering aircraft.

DRIVE SYSTEM AND BELTS

The ATSB found R22 v-belt reliability is hurt by overweight operation, high manifold pressure, sheave misalignment and infrequent inspection. Robinson's Revision-Z belt brought industry feedback of a more stable drive system. The preflight checklist limits v-belt slack to 1.5 inches (4 cm) maximum. Ask for belt installation and rigging records.

AIRFRAME AND TAIL ROTOR

CASA AD/R22/41 requires repeated inspection of A020-2 upper steel tube frames for cracks or corrosion. The intervals are 25 hours for aerial work and 100 hours otherwise. Most failures were on mustering aircraft. SB-120C covers A029-2 tail rotor blades, S/N 11279 and prior, fitted to helicopters S/N 4873 and prior. It cites tip debonding from corrosion, and affected blades need a daily preflight inspection until replaced.

FUEL TANKS AND RECORDS

SB-109A requires all-aluminium fuel tanks to be retrofitted with bladder tanks to resist post-accident fuel leaks. CASA strongly recommends it. The compliance limit was the next 2200-hour overhaul, 12 year inspection, or 15 January 2020, whichever came first. Verify the retrofit, the weight and balance record, and the handbook revision status.

SPECIFICATIONS

Seats Max	2
First Year	1979
Engine Type	piston
Alternator Standard Amps	60
Alternator Optional Amps	70
V Belt Slack Max Inches	1.5

SAFETY NOTES

- An ATSB-reported R22 accident: with a passenger on board in hot, high conditions, rotor RPM decayed in a hover out of ground effect and the helicopter came down.
- When flying solo, fill the left baggage compartment to capacity before using the right one (preflight checklist caution).
- Drive belt failures have been involved in fatal R22 accidents; know the indications of a drive malfunction and the autorotation procedure.

AI-aggregated guide for the Robinson R22 · sources: Pilot's Operating Handbook and FAA Approved Rotorcraft Flight Manual (#19389) · Collision with terrain involving a Robinson R22, VH-HUA (#19393) · ROBINSON HELICOPTER COMPANY MODEL R22 DAILY OR PREFLIGHT CHECKS (#19399) · ROBINSON MAINTENANCE MANUAL R22 SERIES (#19410) · AIRWORTHINESS BULLETIN AWB 63-006 Issue 4 – 28 February 2023 (#19428) · SCHEDULE OF AIRWORTHINESS DIRECTIVES (#19434) · Reliability of the Robinson R22 helicopter belt drive system (#19435) · R22 SERVICE BULLETIN SB-120C (#19438) · AIRWORTHINESS BULLETIN AWB 28-017 Issue 1 – 1 February 2018 (#19440) · ROBINSON MAINTENANCE MANUAL R22 SERIES (#19447) · generated 2026-10-15 · Reference only, not for flight. Check the original documents before relying on this guide.