

DOUGLAS DC-3/C-47 Model Guide

DOUGLAS DC-3/C-47 is a twin-engine, low-wing monoplane with retractable main landing gear, built by Douglas as a cargo, ambulance or troop transport. The C-117 versions are personnel transports. It has two Pratt & Whitney R-1830 radial engines. The only numbers come from a 1963 USAF flight manual and a flight-simulator checklist.

KEY TAKEAWAYS

- Twin-engine, low-wing, retractable main gear, two 14-cylinder air-cooled radials (R-1830-90C, -90D or -92 depending on version).
- Design gross weight is 26,000 lbs, per the flight manual. A simulator sheet lists max total weight at 31,000 lbs.
- Cabin: folding benches for 27 or 28 troops, or 21 reclining airliner seats in the C-117 series.
- Engine and supercharger fit varies by aircraft, so confirm which engine and blower setup a candidate has.

WHAT IT IS AND WHAT IT CARRIES

The flight manual describes the C-47 series and R4D series as cargo, ambulance or troop transports. The C-117 series are personnel transports. Troop versions have folding benches for 27 or 28 passengers. C-117 cabins have 21 reclining seats in seven rows of three, plus a buffet and lavatory. Crew accommodations are listed for pilot, co-pilot, radio operator, loadmaster, navigator and flight mechanic.

ENGINES AND SYSTEMS TO INSPECT

Power is two 14-cylinder, twin-row, air-cooled Pratt & Whitney R-1830-90C, -90D or -92 radials. The -90C has a 2-speed supercharger, and on some aircraft the high blower is inoperative. Three carburetor air systems exist: ram, ram-filtered and ram-nonram filtered. Check the carb heat, mixture (IDLE CUT-OFF, AUTO-LEAN, AUTO-RICH) and magnetic chip detector warning lights.

SPEEDS AND HANDLING REFERENCE

The simulator checklist gives rotate and touchdown at 85 KIAS, with the tail lifted at 40 kts. Climb is 120-130 KIAS at 2350 RPM. Maximum speeds are 135 KIAS with flaps 1/4, 126 KIAS gear down, 99 KIAS flaps 1/2, and 97 KIAS flaps 3/4 or full. The tailwheel is locked for takeoff and landing and unlocked for taxi.

PERFORMANCE

Climb Speed Min Kts	120
Climb Speed Max Kts	130
Tail Lift Speed Kts	40
Threshold Speed Kts	85
Landing Descent Rate Fpm	200

V-SPEEDS

Rotate Speed Kts	85
Touchdown Speed Kts	85
Max Flaps Quarter Speed Kts	135
Max Gear Down Speed Kts	126
Max Flaps Half Speed Kts	99
Max Flaps Three Quarter Or Full Speed Kts	97

WEIGHT & BALANCE

Design Gross Weight Lbs	26000
Max Total Weight Lbs	31000
Max Landing Weight Lbs	25350

SAFETY NOTES

- The checklist is marked 'modified for use with Flight Simulator'. Do not treat its speeds and weights as real-aircraft limits. Use the aircraft's own approved manual.
- The flight manual says unusual configurations, such as asymmetrical loading, are prohibited unless specifically covered.
- Check the status of Safety of Flight Supplements; current ones must be complied with.