Fouga CM-170 Magister Model Guide

The Fouga CM-170 Magister is a French two-seat tandem jet trainer with a butterfly tail and wing tip tanks. It first flew on 23 July 1952, and 929 were built. The only documents supplied are flight-simulator add-on manuals (Rev.4 and Rev.6), so the figures below come from that manual, not from an inspected airframe.

KEY TAKEAWAYS

- Two Turbomeca Marboré II engines of 880 lbf each; the Marboré IV came later with more power. 929 built for a dozen different armies.
- Manual weights: empty 2,290 kg, maximum takeoff 3,200 kg. Fuel capacity is 980 L across the fuselage and tip tanks.
- Stall is 87 kts clean and 78 kts with full flaps. Rotate at 90 kts, final approach at 110 kts, VNE 450 kts.
- Inverted fuel supply lasts about 30 seconds. The manual lists no ILS and no autopilot.

SIZE, FUEL AND WEIGHTS

Manual figures: wingspan 12,5 m including tip tanks, length 10,06 m, height 2,8 m, wing area 17,3 m². Gross weight without tip tanks is 2,850 kg. Fuel is a 730 L fuselage tank plus two 125 L tip tanks. Larger 230 L tip tanks exist on some versions.

SYSTEMS TO UNDERSTAND

Two hydraulic circuits (normal and emergency) at 250 bars run the landing gear, flaps, brakes, spoilers and aileron servo. A 28.5V generator is on the left engine. Oxygen is 2000 L at 150 bars, with pure oxygen supplied automatically above 34,000 ft. Nose gear steering is by differential braking.

WHAT TO CHECK

Check hydraulic pressure before taxi and before landing, and the fuel pressure light, which comes on below 350 millibars. Check the low-fuel light (150 liters), the oxygen low-pressure bulb (below 25 bars) and the canopy lock light. Check the landing gear lights, and the warning that blinks when an engine is below 15,000 RPM with the gear not down.

V-SPEEDS

Stall Speed Full Flaps Kts	78
Stall Speed No Flaps Kts	87
Rotation Speed Kts	90
Initial Climb Speed Kts	120
Final Approach Speed Kts	110
Vno Kts	250
Max Gear Extended Kts	215
Vne Kts	450

SAFETY NOTES

- Release the ignition button immediately at engine start to avoid damaging the engine; nozzle temperature should rise about 100 degrees Celsius within ten seconds.
- After a hydraulic failure the emergency circuit can only lower the landing gear; it cannot retract it. Brakes also need the emergency hydraulic handle.
- Inverted flight is limited by the 11 liter back flying accumulator; engines lose power after about 30 seconds.

AI-aggregated guide for the Fouga CM-170 Magister · sources: Fouga Magister CM.170 – Flight Manual – Rev.4 (#100885) · Fouga Magister CM.170 – Flight Manual – Rev.6 (#101903) · generated 2026-10-19 · Reference only, not for flight. Check the original documents before relying on this guide.