BELL 209 AH-1 COBRA Model Guide

BELL 209 AH-1 COBRA guide, drawn only from the US Army AH-1F operator's manual (TM 1-1520-236-10, 26 January 2001). The AH-1F is a tandem-seat, two-place (pilot and gunner), single-engine attack helicopter. The inputs hold no civil or market data, so treat this as a military-variant reference.

KEY TAKEAWAYS

- Tandem two-place (pilot and gunner), single-engine attack helicopter. The manual covers the AH-1F, not every Cobra variant.
- The T53-L-703 engine is derated by the transmission: 1290 SHP for 30 minutes, 1134 SHP continuous.
- Two main rotor blade types are covered: the metal Bell blade (B540) and the glass-fiber Kaman blade (K747).
- The library lists this model as piston, but the manual describes a turbine engine and turbine fuel. Verify the engine type against any aircraft records.

AIRFRAME AND STRUCTURE

The fuselage uses aluminum alloy skins and aluminum, titanium and fiberglass honeycomb panels on two main beams. The fixed wings span 129 inches with a 30-inch mean chord. Each wing has two pylons, and each pylon supports 670 pounds. The tailboom attaches by four bolts. The skids have steel shoes, and a steel tail skid protects the tail rotor.

ENGINE AND SYSTEMS

The engine is a T53-L-703 with a dry-sump oil system. The fuel system is crashworthy with 50 caliber ballistic protection. There are dual hydraulic systems (No. 1 and No. 2). An emergency hydraulic pump powers the collective if both fail. A three-axis SCAS stability system is fitted. The FUEL LOW caution light comes on at about 209 pounds of fuel remaining.

WHAT TO CHECK

Check the chip detectors on the engine, transmission, and 42 and 90 degree gearboxes. Check the hydraulic filter indicators and sight glasses. Check the engine inlet particle separator, which the anti-ice system does not protect. Check the main rotor blade type, and the canopy removal and wing stores jettison safety pins.

SPECIFICATIONS

Wing Span Inches	129
Wing Mean Chord Inches	30
Pylon Capacity Each Lbs	670
Max Power 30 Min Hp	1290
Continuous Power Hp	1134
Low Fuel Caution Lbs	209

SAFETY NOTES

- The engine deice system does not deice or prevent icing of the particle separator. Ice there can cause a power loss.
- The canopy removal system can expel debris 50 feet outward. Keep the safety pins installed on the ground and remove the pilot pin before flight.
- Remove the fire extinguisher when parking where it is 90F (32C) or hotter. Ground the helicopter when parked and during refueling.

AI-aggregated guide for the BELL 209 AH-1 COBRA · sources: TM 1-1520-236-10 - Operators Manual for Army Model AH-1F Attack Helicopter (#101895) · generated 2026-11-25 · Reference only, not for flight. Check the original documents before relying on this guide.