Strategic Airlift
The C-5 Galaxy

ASPJ STAFF

The C-5 is a formidable aircraft. The giant "T-tail" entered the active inventory on 17 December 1969 and has been a source of national strength, pride, and worry ever since. Its dramatic successes, such as Operation Nickel Grass (airlift to Israel during the 1973 war), have been bounded by design limitations and high operating costs that have earned the aircraft severe criticism from outsiders and insiders alike. The original program combined new technologies, "first-ever" capabilities, and concurrent development with an excess of unlikely requirements. Because of early problems, the original "buy" was curtailed at 81 aircraft, and in an unprecedented move, the badly flawed wing on every C-5A was removed and replaced with one from a new design. Despite its faults, the C-5 still showed huge potential; in fact, a decade after the Galaxy production line closed, it was reopened, and 50 new C-5Bs were added to the inventory. Regardless of subsequent improvements, many aimed at raising the C-5A to the "B" standard, the C-5's operating cost continued to be among the highest for all Air Force aircraft. However, the successes kept coming as well. Most recently, in Operation Enduring Freedom, the C-5 flew approximately 30 percent of the missions and delivered approximately 48 percent of the cargo. In Operation Iraqi Freedom, it flew approximately 23 percent of the missions and again delivered approximately 48 percent of the cargo. By way of comparison, the C-5 moved more cargo and more passengers, on average, per mission than did either the C-17 or the C-141.

The C-5 has a maximum takeoff weight of approximately three-quarters of a million pounds with a cargo maximum of just over a quarter of a million pounds. The unique opening "visor" in front and cargo ramp/doors in back allow rapid drive-through loading and unloading, facilitated by the aircraft's ability to "kneel" at the load/unload point. This feature lowers the access point

by approximately 10 feet and enables easier cargo transit to/from truck beds and a lesser ramp angle for drive-on loading. The C-5 can carry any of the Army's current equipment, including the 74-ton mobile scissors bridge, the 70-ton M1-A2 Abrams tank, and helicopters up to the H-53 class. The C-5 also has an aft upper deck that seats up to 77 passengers. In an emergency, the main deck can be configured for passengers as well. The 12 internal fuel tanks hold over 50,000 gallons of fuel, giving the airlifter vast range in all mission profiles—and in-flight refueling gives it unlimited range.

The future of the C-5 fleet appears to have two distinct alternatives. First, the Air Force Fleet Viability Board at Wright-Patterson AFB, Ohio, is currently analyzing the C-5A's operating costs, remaining structural life, and capabilities as part of its charter to assess aging aircraft. This detailed comparison of costs and values will provide decision makers the data they need to determine the practicality of retaining the C-5A in the Air Force inventory. Second, two significant upgrades—the Avionics Modernization Program (AMP) and the Reliability and Reengining Program (RERP)—have been funded through the test phase for both the A and B models. These modifications will directly address the C-5's most serious limitations: avionics, parts, and engines. Success with these new technologies may finally allow the "C-5M" to achieve the full potential envisioned for it these past decades. If so, it will be around for years to come, say until 2040.

To Learn More . . .

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