KC-130J Airlift Aircraft

The KC-130J is a medium sized, four-engine turboprop aircraft modified to perform its primary United States Marine Corps (USMC) mission Aerial Refueling of fixed and rotary wing aircraft. Secondary missions include Rapid Ground Refueling, assault transport, logistics support, and special warfare while preserving personnel and cargo transport capabilities. The KC-130J will perform the same missions as the aircraft it will replace, the KC-130F, KC-130R, and KC-130T aircraft.

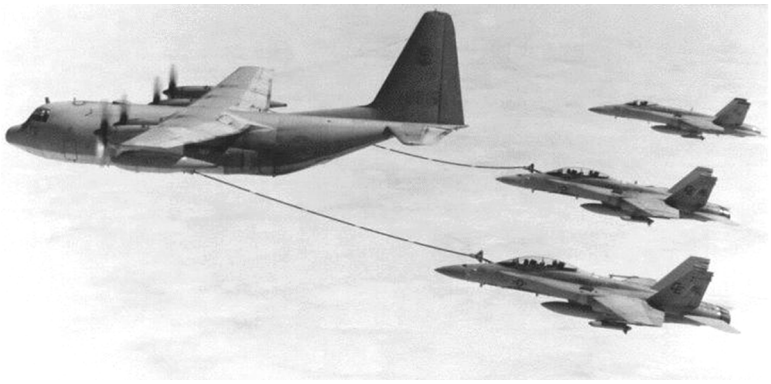
Procurement of the KC-130J is proceeding under a commercial-off-the-shelf acquisition strategy, instituting catalog pricing and commercial payments through the United States Air Force's C-130 System Program Office. The C-130J upgrades the basic C-130 by incorporating a full glass, two-person flight station; digital avionics; a new electrical system; new digitally controlled engines; high-speed doors and ramps; and composite propellers. The KC-130J also has a modified aerial refueling system (fuselage fuel tank, fuel manifold, and pylons/pods) and supporting avionics. Additional equipment is provided to refuel vehicles, aircraft, and equipment on the ground.

The KC-130J Navy/USMC test program is designed specifically to address differences in aircraft configuration and mission employment from the baseline United States Air Force (USAF) C-130J. The program is intended to build upon Lockheed Martin Aero Marietta, Federal Aviation Administration, and USAF test efforts and data collection rather than duplicate effort. The USAF effort has been ongoing since 1995.

USMC/Navy combined Developmental Test (DT)/Operational Test and Operational Evaluation Testing is ongoing and will span seven months consisting of approximately 640 flight hours. The Test and Evaluation Master Plan is in coordination and will be submitted for approval in the next few months. The Marines have taken limited acceptance of nine aircraft and have not accepted two.

TEST & EVALUATION ACTIVITY

The Navy/USMC test and evaluation program requires five test aircraft. KC-130J DT will be conducted primarily by Naval Air Warfare Center-Aircraft Division. Operational Test and Evaluation Force (OPTEVFOR) team members include a designated Operational Test Director and designated fleet personnel (trusted agents). DT flight crews will consist of both qualified test pilots and fleet aircrew/maintainers. A combined DT/Operational Test period will be followed by an independent Operational Evaluation conducted by OPTEVFOR. The KC-130J Integrated Product Team is located at Naval Air Station Patuxent River, Maryland.



The KC-130J Marine Corps mission aerial refueling of fixed and rotary wing aircraft.

DOT&E approved the Live Fire Test and Evaluation (LFT&E) Plan for the KC-130J in June 2002, 2002. The vulnerability of the KC-130J will be evaluated using the following information: existing applicable Joint Live Fire test results for earlier versions of the C-130 aircraft; available combat experience and incident reports; applicable data from the USAF C-130J LFT&E program; component, subsystem, and system-level testing of the air refueling system; and live fire testing of an earlier model of the C-130 aircraft modified to represent the KC-130J aircraft's

production configuration for the areas to be tested. Test articles will be configured to assess vulnerability effects, including fire, explosion, structural integrity, and functionality. Data also will be used to compare to vulnerability models and simulations.

Measurements of the conditions inside the refueling system will be taken during actual mission profiles flown during scheduled flight-testing in FY02-FY03. This information will be used to plan the ballistic tests, currently scheduled for execution in FY04.

TEST & EVALUATION ASSESSMENT

The KC-130J aerial refueling system has not been qualified to refuel. It is a safety of flight and operational capability issue. There have been incidents of "uncommanded pull-outs" where the refueling hose disengages from the aircraft being refueled. This problem has caused a one-year slip in testing from the original schedule. Until this problem is corrected, the aircraft cannot perform its primary refueling mission. Testing will continue next year.

A second issue is an Operational Requirements Document requirement for a rendezvous distance of 100 nautical miles (NM), similar to the legacy systems capability. The new system is predicted to only achieve a rendezvous distance of 40NM; however, this has not been tested. Operational test will assess the mission impact of the reduced capability after the discrepancy with the refueling pod is resolved.

The LFT&E program is adequate and fully resourced. In addition, instrumentation to measure ullage composition and explosivity inside fuel tanks and lines is being developed and safety-certified for in-flight use. This capability will be extremely valuable in other programs.