

GAO Highlights

Highlights of [GAO-15-308](#), a report to congressional committees

Why GAO Did This Study

Aerial refueling—when aircraft refuel while airborne—allows the U.S. military to fly farther, stay airborne longer, and transport more weapons, equipment, and supplies. Yet the mainstay of the U.S. tanker forces—the KC-135 Stratotanker—is over 50 years old. It is increasingly costly to support and its age-related problems could potentially ground the fleet. As a result, the Air Force initiated the \$49 billion KC-46 program to replace the aerial refueling fleet. The program plans to produce 18 tankers by 2017 and 179 aircraft in total.

The National Defense Authorization Act for Fiscal Year 2012 included provisions for GAO to annually review the KC-46 program through 2017. This report addresses progress made in 2014 towards (1) achieving cost and performance goals, (2) meeting schedule targets, and (3) gathering manufacturing knowledge prior to the low-rate production decision. GAO analyzed key program documents and discussed development and production plans and results with officials from the KC-46 program office, other defense offices, and the prime contractor.

What GAO Recommends

GAO recommends that the Air Force ensure that key aerial refueling capabilities are demonstrated prior to holding the production decision. The Air Force concurred with the recommendation.

View [GAO-15-308](#). For more information, contact Michael J. Sullivan at (202) 512-4841 or sullivanm@gao.gov.

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KC-46 TANKER AIRCRAFT

Key Aerial Refueling Capabilities Should Be Demonstrated Prior to the Production Decision

What GAO Found

The KC-46 acquisition cost estimate has declined by about 5.4 percent from \$51.7 billion to \$48.9 billion since February 2011 and the program is on track to meet performance goals. Most of the estimated cost decline is due to fewer than expected engineering changes and changes in military construction plans.

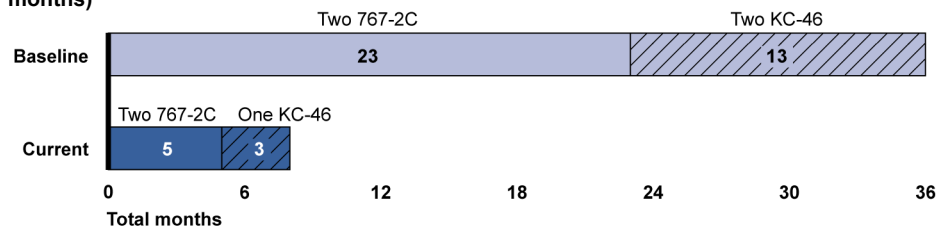
Changes in Total Program Acquisition Costs for the KC-46 Tanker Aircraft

Then-year dollars in millions			
	February 2011	December 2014	Change
Development	\$7,149.6	\$6,570.2	-8.1%
Procurement	\$40,236.0	\$39,004.4	-3.1%
Military Construction	\$4,314.6	\$3,334.9	-22.7%
Total	\$51,700.2	\$48,909.5	-5.4%

Source: GAO presentation of Air Force data. | GAO-15-308

The Air Force delayed the production decision two months, to October 2015, due to wiring problems that Boeing experienced that delayed aircraft delivery and testing. For example, Boeing completed 3.5 hours of flight testing during a single flight of the 767-2C (a precursor to the KC-46 tanker) in 2014, compared to nearly 400 flight test hours it planned to conduct. With program office approval, Boeing restructured its nearly 2,400 development flight test hour plan to focus on demonstrating key KC-46 aerial refueling capabilities required for the production decision. Significantly less testing will now be conducted prior to the decision and only three test months will be on a KC-46, compared to the original plan of 13 months. This testing is intended to demonstrate design maturity and fix design and performance problems before a system enters production. Boeing remains at risk of not being able to demonstrate the aerial refueling capabilities in time to meet the new production decision date due to late parts deliveries, software defects, and flight test cycle assumptions, which could result in additional delays.

Reduction in Planned Flight Testing Before Low-Rate Production Decision (in flight test months)



Source: GAO presentation of Air Force data. | GAO-15-308

Program officials are gathering manufacturing knowledge to support a production decision, such as determining if suppliers can produce military subsystems in a production environment. However, the program office will have less knowledge about the reliability and performance of the KC-46 than planned because of reduced testing prior to the decision. While this increases the risk of discovering costly problems late in development, contract provisions specify that Boeing must correct these at no cost to the government.