

GAO Highlights

Highlights of [GAO-14-190](#), a report to congressional committees

Why GAO Did This Study

Aerial refueling allows U.S. military aircraft 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 \$51 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 mandated GAO to annually review the KC-46 program through 2017. This report addresses (1) progress made in 2013 toward cost, schedule, and performance goals, (2) development challenges, if any, and steps to address them, and (3) progress made in manufacturing the aircraft. To do this, GAO reviewed 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, Boeing.

What GAO Recommends

GAO recommends that the Air Force determine the likelihood and potential effect of delays on total development costs, and develop mitigation plans, as needed, related to potential delays. DOD concurred with the recommendation.

View [GAO-14-190](#). For more information, contact Michael J. Sullivan at (202) 512-4841 or sullivanm@gao.gov.

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KC-46 TANKER AIRCRAFT

Program Generally on Track, but Upcoming Schedule Remains Challenging

What GAO Found

The KC-46 program has made good progress over the past year—acquisition costs have remained relatively stable, the critical design review was successfully completed, the program is on track to meet performance parameters, and the contractor started building development aircraft. As shown, total program acquisition costs—which include development, production, and military construction costs—and unit costs have changed less than 1 percent since February 2011.

Initial and Current KC-46 Program Quantities and Acquisition Costs

(then-year dollars in millions)			
	Initial estimate	Current estimate	Change
Total quantities	179	179	0
Total program acquisition costs	\$51,700.2	\$51,376.8	<1%
Average program acquisition unit cost	\$288.8	\$287.0	<1%

Source: GAO presentation of Air Force data.

As of December 2013, Boeing had about \$75 million of its management reserves remaining to address identified, but unresolved development risks. There are indications that the start of initial operational test and evaluation, which is scheduled for May 2016, may slip 6 to 12 months. According to the Director of Operational Test and Evaluation, more time may be needed to train aircrew and maintenance personnel and verify maintenance procedures.

The program released over 90 percent of the KC-46 design drawings at the critical design review, indicating that the design is stable. Overall, development of about 15.8 million lines of software code is progressing mostly according to plan. The next 12 months will be challenging as the program must complete software development, verify that the software works as intended, finalize developmental flight test planning, and begin developmental flight tests. Software problem reports are increasing and Boeing could have difficulty completing all testing if more retests are needed than expected. Developmental flight testing activities are also a concern due to the need for extensive coordination among government agencies, the need for timely access to receiver aircraft (aircraft the KC-46 will refuel while in flight), and the aggressive test pace. The program office is conducting test exercises to mitigate risks and working with Navy and United Kingdom officials to finalize agreements to have access to necessary receiver aircraft.

The program has also made progress in ensuring that the KC-46 is ready for low rate initial production in 2015. Boeing has started manufacturing all four development aircraft on schedule. The program office has identified its critical manufacturing processes and verified that the processes are capable of producing key military subsystems in a production representative environment. In addition, the program has established a reliability growth curve and will begin tracking its progress towards reaching reliability goals once testing begins. Boeing is experiencing some manufacturing delays due to late supplier deliveries on the first aircraft and parts delays for a test article of a critical aerial refueling subsystem, but the program has not missed any major milestones.