

Highlights of GAO-19-480, a report to the Subcommittee on Seapower and Projection Forces, Committee on Armed Services, House of Representatives

## Why GAO Did This Study

Aerial refueling—the transfer of fuel from airborne tankers to combat and airlift forces—is critical to the U.S. military's ability to effectively operate globally. The Air Force initiated the KC-46 program in 2011 to replace about a third of its aging KC-135 aerial refueling fleet. Boeing was awarded a fixed-price incentive contract to develop the first four aircraft, which are being used for testing. Boeing was also required to deliver the first 18 fully capable aircraft by August 2017. The program plans to eventually field 179 aircraft.

This report assesses the program's progress toward meeting cost, schedule, and performance goals. The report also assesses how the program's contracting and sustainment planning approach could inform other acquisition programs.

GAO analyzed cost, schedule, performance, test, manufacturing, contracting, and sustainment planning documents; and interviewed officials from the KC-46 program office, other defense offices, such as the Defense Contract Management Agency, the Federal Aviation Administration, and Boeing.

## What GAO Recommends

GAO recommends that the Department of Defense disseminate insights in this report about the KC-46's contracting and sustainment planning experiences for consideration by acquisition programs, particularly those that plan to use a fixed-price-type development contract or a commercial derivative aircraft. The Department of Defense concurred with the recommendation.

View GAO-19-480. For more information, contact Jon Ludwigson at (202) 512-4841 or [Ludwigsonj@gao.gov](mailto:Ludwigsonj@gao.gov).

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# KC-46 TANKER MODERNIZATION

## Aircraft Delivery Has Begun, but Deficiencies Could Affect Operations and Will Take Time to Correct

### What GAO Found

Costs for the KC-46 program remain lower than expected, as shown below.

Initial and Current Acquisition Cost Estimates for the KC-46 Tanker Aircraft (then-year dollars in millions)		
	February 2011	January 2019
		Percent Change
Development	7,149.6	5,857.7
Procurement	40,236.0	34,188.7
Military construction	4,314.6	2,872.1
<b>Total</b>	<b>51,700.2</b>	<b>42,918.5</b>
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Source: GAO presentation of Air Force Data. | GAO-19-480

The Air Force accepted the first KC-46 in January 2019, but Boeing remains nearly 3 years behind schedule. As shown below, Boeing now plans to deliver the first 18 aircraft with all three aerial refueling subsystems by June 2020.

### Original and Current Program Schedule

	2016	2017	2018	2019	2020
Original 2011 schedule	→	→★			
Current schedule				→	→★

→ Delivery of the first aircraft      ★ Delivery of 18 aircraft with all aerial refueling systems

Source: GAO analysis of KC-46 program data. | GAO-19-480

Program officials expect the KC-46 to meet key performance goals over the next few years as it accumulates 50,000 fleet hours. However, the Air Force is accepting aircraft that do not fully meet contract specifications and have critical deficiencies, including ones that affect (1) the operators' ability to guide the fuel delivery boom into position, and (2) the boom itself. The deficiencies could affect operations and cause damage to stealth aircraft being refueled, making them visible to radar. Program officials estimate it will take 3 to 4 years to develop fixes for the deficiencies and a few more years to retrofit up to 106 aircraft. The Air Force and Boeing will incur costs to fix the deficiencies, with the Air Force's portion estimated to be more than \$300 million. The Air Force is withholding 20 percent payment on each aircraft until Boeing fixes the deficiencies and non-compliances. Meanwhile, the Air Force has limited some refueling operations.

GAO identified a number of insights that could benefit other programs, including the use of a fixed-price-type development contract and a correction of deficiencies clause in the contract that protected the government from some cost increases. The Department of Defense agreed to provide lessons learned about the KC-46 program for future acquisition programs based on a recommendation GAO made in March 2012, but does not plan to do so until development is complete in 2021. GAO believes other programs could benefit from insights identified in this report if they were disseminated sooner.