



Highlights of [GAO-09-711T](#), a testimony before the Subcommittee on Air and Land Forces, Committee on Armed Services, House of Representatives

Why GAO Did This Study

The F-35 Joint Strike Fighter (JSF) program is the Department of Defense's (DOD's) most costly acquisition, seeking to simultaneously develop, produce, and field three aircraft variants for the Air Force, Navy, Marine Corps, and eight international partners. The total expected U.S. investment is now more than \$300 billion to develop and procure 2,456 aircraft over the next 25 years.

GAO's most recent report in March of this year discussed increased development costs and schedule estimates, plans to accelerate procurement, manufacturing performance and delays, and development test strategy. A recurring theme in GAO's work has been concern about what GAO believes is undue concurrency of development, test, and production activities and the heightened risks it poses to achieving good cost, schedule, and performance outcomes.

This testimony discusses:

- current JSF cost and schedule estimates;
- engine development
- manufacturing performance
- contracting issues for procurement of aircraft; and
- test plans.

This statement draws from GAO's March 2009 report, updated to the extent possible with new budget data and a recently revised procurement profile directed by the Secretary of Defense.

View [GAO-09-711T](#) or key components. For more information, contact Michael J. Sullivan at (202) 512-4841 or sullivanm@gao.gov.

JOINT STRIKE FIGHTER

Strong Risk Management Essential as Program Enters Most Challenging Phase

What GAO Found

JSF development will cost more and take longer to complete than reported to the Congress in April 2008, primarily because of contract cost overruns and extended time needed to complete flight testing. DOD is also significantly increasing annual procurement rates and plans to buy some aircraft sooner than reported last year. Total development costs are projected to increase between \$2.4 billion and \$7.4 billion and the schedule for completing system development extended from 1 to 3 years.

The department has not asked for funding for the alternate engine program in the budgets since 2007 arguing that an alternate engine is not needed as a hedge against the failure of the main engine program and that the savings from competition would be small. Nonetheless, the Congress has added funding each year since then to sustain its development. Our prior analysis indicates that competitive pressures could yield enough savings to offset the costs of competition over the JSF program's life. To date, the two contractors have spent over \$8 billion on engine development—over \$6 billion with the main engine contractor and over \$2 billion with the second source contractor.

Manufacturing of development test aircraft is taking more time, money, and effort than planned, but officials believe that they can still deliver the 9 remaining test aircraft by early 2010. The contractor has not yet demonstrated mature manufacturing processes, or an ability to produce at currently planned rates. It has taken steps to improve manufacturing; however, given the manufacturing challenges, DOD's plan to increase procurement in the near term adds considerable risk and will be difficult to achieve.

DOD is procuring a substantial number of JSF aircraft using cost reimbursement contracts. Cost reimbursement contracts place most of the risk on the buyer—DOD in this case—who is liable to pay more than budgeted should labor, material, or other incurred costs be more than expected when the contract was signed.

JSF flight testing is still in its infancy and continues to experience flight testing delays. Nonetheless, DOD is making substantial investments before flight testing proves that the JSF will perform as expected. DOD may procure 273 aircraft costing an estimated \$42 billion before completing flight testing.

Procurement Investments and Progress of Flight Testing

	2007	2008	2009	2010	2011	2012	2013	2014
Cumulative procurement (billions of dollars)	\$0.9	\$3.6	\$6.9	\$13.7	\$20.6	\$31.1	\$41.9	\$54.3
Cumulative aircraft procured	2	14	28	58	101	183	273	383
Percentage of flight test program completed	<1%	<1%	2%	9%	34%	62%	88%	100%

Source: GAO analysis of DOD data