



Highlights of [GAO-09-303](#), a report to congressional committees

### Why GAO Did This Study

The Joint Strike Fighter (JSF) is the Department of Defense’s (DOD) most complex and ambitious aircraft acquisition, seeking to simultaneously produce and field three different versions of the aircraft for the Air Force, Navy, Marine Corps, and eight international partners. The total investment required now exceeds \$1 trillion—more than \$300 billion to acquire 2,456 aircraft and \$760 billion in life cycle operating and support costs, according to program estimates. The Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 requires GAO to review the JSF program annually for 5 years. This is the fifth and final report under the mandate in which GAO (1) determines the program’s progress in meeting cost, schedule, and performance goals; (2) assesses manufacturing results and schedule risks; and (3) evaluates development test plans, progress, and risks. GAO’s work included analyses of a wide range of program documents, cost data and interviews with defense and contractor officials.

### What GAO Recommends

GAO recommends that DOD (1) report to the congressional defense committees on the risks and mitigation strategy for use of cost reimbursement contracts for procurement and plans to transition to fixed price contracts and (2) ensure that the prime contractor performs periodic schedule risk analyses to improve schedule and budget actions. DOD agreed to take these actions.

To view the full product, including the scope and methodology, click on [GAO-09-303](#). For more information, contact Michael J. Sullivan at (202) 512-4841 or [sullivanm@gao.gov](mailto:sullivanm@gao.gov).

## JOINT STRIKE FIGHTER

### Accelerating Procurement before Completing Development Increases the Government's Financial Risk

#### What GAO Found

JSF development will cost more and take longer than reported to the Congress last year, and DOD wants to accelerate procurement. Two recent estimates project additional costs ranging from \$2.4 billion to \$7.4 billion and 1 to 3 more years to complete development. Despite cost and schedule troubles, DOD wants to accelerate JSF procurement by 169 aircraft from fiscal years 2010 through 2015; this could require up to \$33.4 billion in additional procurement funding for those 6 years. DOD plans to procure hundreds of aircraft on cost-reimbursement contracts, magnifying the financial risk to the government.

Ongoing manufacturing inefficiencies and parts problems have significantly delayed the delivery of test assets. The prime contractor has extended manufacturing schedules three times and delivered 2 of 13 test aircraft. The program is still recovering from earlier problems that resulted in design changes, late parts deliveries, and inefficient manufacturing. The contractor is taking positive steps to improve operations, the supplier base, and schedule management. Schedule risk analyses could further enhance management insight into problem areas and inform corrective actions. Officials expect to deliver all test aircraft and fix many problems by 2010. By then, DOD plans to have purchased 62 operational aircraft and will be ramping up procurement. Procuring large numbers of production jets while still working to deliver test jets and mature manufacturing processes does not seem prudent, and looming plans to accelerate procurement will be difficult to achieve cost effectively.

DOD’s revised test plan adds a year to the schedule, better aligns resources and availability dates, and lessens the overlap between development and operational testing, but it still allows little time for error discovery and rework. DOD’s decision late in 2007 to reduce test aircraft and flight tests adds to risks while any additional delays in delivering test aircraft will further compress the schedule. The revised plan relies on state-of-the-art simulation labs, a flying test bed, and desk studies to verify nearly 83 percent of JSF capabilities. Only 17 percent is to be verified through flight testing. Despite advances, the ability to so extensively substitute for flight testing has not yet been demonstrated. Significant overlap of development, test, and procurement results in DOD making substantial investments before flight testing proves that the JSF will perform as expected. Under the accelerated procurement plan, DOD may procure 360 aircraft costing an estimated \$57 billion before completing development flight testing.

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Cumulative procurement (billions of dollars)	\$0.9	\$3.6	\$7.4	\$15.4	\$28.2	\$42.5	\$57.0	\$72.3	\$89.0
Cumulative aircraft procured	2	14	30	62	132	241	360	506	684
Percent flight tests completed	<1%	<1%	2%	9%	34%	62%	88%	100%	-

Source: GAO analysis of DOD data.