

### Why GAO Did This Study

The F-35 Lightning II, the Joint Strike Fighter, is DOD's most costly and ambitious aircraft acquisition. The program is developing and fielding three aircraft variants for the Air Force, Navy, Marine Corps, and eight international partners. The F-35 is critical to long-term recapitalization plans as it is intended to replace hundreds of existing aircraft. This will require a long-term sustained funding commitment. Total U.S. investment is nearing \$400 billion to develop and procure 2,457 aircraft through 2037. Fifty-two aircraft have been delivered through 2012. The F-35 program has been extensively restructured over the last 3 years to address prior cost, schedule, and performance problems. GAO's prior reviews of the F-35 made numerous recommendations to improve outcomes, such as increasing test resources and reducing annual procurement quantities.

This report, prepared in response to the National Defense Authorization Act for 2010, addresses (1) F-35 program performance during 2012, including testing, technical risks, and software; (2) manufacturing performance indicators, production results, and design changes; and (3) acquisition and sustainment costs going forward. GAO's work included analyses of a wide range of program documents and interviews with defense and contractor officials.

### What GAO Recommends

GAO is not making recommendations in this report. DOD's restructuring of the F-35 program and other actions are responsive to many prior recommendations. DOD agreed with GAO's report findings and conclusions.

View [GAO-13-309](#). For more information, contact Michael J. Sullivan at (202) 512-4841 or [sullivanm@gao.gov](mailto:sullivanm@gao.gov).

## F-35 JOINT STRIKE FIGHTER

### Current Outlook Is Improved, but Long-Term Affordability Is a Major Concern

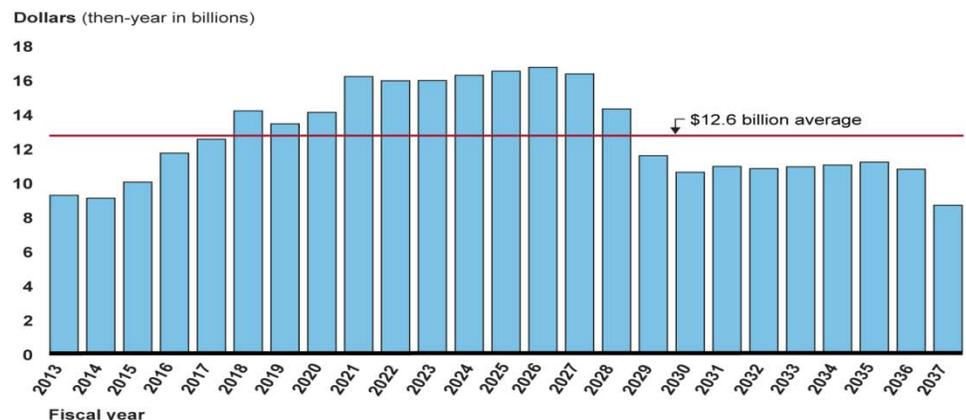
#### What GAO Found

The F-35 program achieved 7 of 10 key management objectives for 2012 and made substantial progress on one other. Two objectives on aircraft deliveries and a corrective management plan were not met. Also in 2012, the program conducted more developmental flight tests than planned and made considerable progress in addressing critical technical risks, such as the helmet-mounted display. With about one-third of development flight testing completed, much testing remains to demonstrate and verify F-35 performance. Software management practices are improved, but with significant challenges ahead as software integration and testing continue to lag behind plans.

Manufacturing and supply processes are also improving—indicators such as factory throughput, labor efficiency, and quality measures are all positive. While initial F-35 production overran target costs and delivered aircraft late, the latest data shows labor hours decreasing and deliveries accelerating. The program is working through the continuing effects from its concurrent acquisition strategy that overlapped testing and manufacturing activities. For example, the program is continuing to incur substantial costs for rework to fix deficiencies discovered in testing, but the amount of rework needed on each aircraft is dropping.

Going forward, ensuring affordability—the ability to acquire aircraft in quantity and to sustain them over the life cycle—is of paramount concern. With more austere budgets looming, F-35 acquisition funding requirements average \$12.6 billion annually through 2037 (see below). The new F-35 acquisition baseline incorporates the Department of Defense's (DOD) positive restructuring actions taken since 2010, including more time and funding for development and deferred procurement of more than 400 aircraft to future years. These actions place the F-35 program on firmer footing, although aircraft will cost more and deliveries to warfighters will take longer. The program continues to incur financial risk from its plan to procure 289 aircraft for \$57.8 billion before completing development flight testing. Meanwhile, the services are spending about \$8 billion to extend the life of existing aircraft and to buy new ones to mitigate shortfalls due to F-35 delays.

**F-35 Joint Strike Fighter Acquisition Funding Requirements**



Source: GAO analysis of DOD data.