

Why GAO Did This Study

The F-22 was designed and fielded as the Air Force's premier air-to-air fighter. The small fleet of 186 F-22s is central to the Air Force's ability to accomplish its air superiority mission in high threat areas. While the Air Force has focused on other missions over the last 15 years of conflict, it is now trying to refocus on overcoming advanced threats, even as it continues to support ongoing operations. Though the recent introduction of the F-35 gives the Air Force another advanced fighter, the F-35 is primarily designed for the air-to-ground missions and so is intended to complement but not replace the F-22.

Senate Report 114-255 included a provision for GAO to review a variety of issues related to Air Force F-22 fighter squadrons. This report examines the extent to which the Air Force's (1) organization of its F-22 fleet maximizes availability of aircraft and (2) utilization of its F-22 fleet affects pilot air superiority training. GAO reviewed Department of Defense (DOD) guidance, analyzed maintenance data and training information for the F-22, evaluated the use of F-22s during deployments, and interviewed agency officials. This is a public version of a classified report issued in April 2018. Information DOD deemed classified or sensitive has been omitted.

What GAO Recommends

GAO recommends that the Air Force reassess its F-22 organizational structure to determine alternative approaches to organizing F-22 squadrons, and identify ways to increase F-22 pilot training opportunities for high-end air superiority missions. DOD concurred with GAO's recommendations.

View [GAO-18-190](#). For more information, contact John Pendleton at (202) 512-3489 or pendletonj@gao.gov

FORCE STRUCTURE

F-22 Organization and Utilization Changes Could Improve Aircraft Availability and Pilot Training

What GAO Found

The Air Force's organization of its small F-22 fleet has not maximized the availability of these 186 aircraft. Availability is constrained by maintenance challenges and unit organization. For example, stealth is a central feature of the F-22 and, according to Air Force officials, maintaining the stealth coating on the outside of the aircraft is time consuming and significantly reduces the time F-22s are available for missions. Maintenance availability challenges are exacerbated by the Air Force's decision to organize the F-22 fleet into small units—18 or 21 primary mission aircraft per squadron and one or two squadrons per wing. Traditional fighter wings have three squadrons per wing with 24 aircraft in each squadron, which creates maintenance efficiencies because people, equipment, and parts can be shared, according to Air Force officials. Moreover, the Air Force organized F-22 squadrons to operate from a single location. However, it generally deploys only a part of a squadron, and the remaining part struggles to keep aircraft available for missions at home. Larger, traditional Air Force squadrons and deployable units provide a better balance of equipment and personnel, according to service officials. The Air Force has not reassessed the structure of its F-22 fleet since 2010. Without conducting a comprehensive assessment to identify and assess F-22 organization, the Air Force may be foregoing opportunities to improve the availability of its small yet critical F-22 fleet, and support combatant commander air superiority needs in high threat environments.

The Air Force's utilization of its F-22 fleet has limited pilot opportunities to train for air superiority missions in high threat environments. To complete the annual training requirements for air superiority missions, F-22 pilots must train almost the entire year. However, F-22 pilots are not meeting their minimum yearly training requirements for the air superiority missions, according to Air Force training reports and service officials. Moreover, the utilization of F-22s for exercises and operational missions that do not require the F-22's unique capabilities interrupt pilot training and lead to reduced proficiency. For example, F-22 units are often directed to participate in partnership building exercises. However, during these exercises, F-22 pilots may be restricted from flying the F-22 the way they would fly it in combat—due to security concerns about exposing the F-22's unique capabilities. These restrictions limit the value of the exercises and can result in pilots developing bad habits, according to Air Force officials. The Air Force also uses F-22s to support alert missions—a mission that requires certain bases to have jets ready at all times to respond to threats from civil or military aviation. The alert mission does not require the advanced capabilities of the F-22, but there are no other operational Air Force fighter squadrons currently based at the F-22 locations in Alaska and Hawaii, so the alert mission falls to the F-22 units. Pilots and aircraft assigned to the alert mission cannot be used for any other purposes, including training. This limits opportunities for pilots to enhance air superiority skills. Without examining and implementing options to improve F-22 pilot training opportunities, the Air Force may be foregoing opportunities to improve its capability to address the high-end air superiority challenges it expects to face.