

AIM-120 Advanced Medium-Range Air-to-Air Missile (AMRAAM)

Executive Summary

- The Advanced Medium-Range Air-to-Air Missile (AMRAAM), including Air Intercept Missile (AIM)-120D System Improvement Program (SIP)-2, continues to be operationally effective and suitable.
- The Air Force and Navy completed operational test activities for the AIM-120D SIP-2 in January 2020 and fielded SIP-2 in February 2020.
- The Air Force and Navy expect to begin operational test activities for the AIM-120D SIP-3 program in February 2021 and complete operational test in July 2021.
- The Air Force and Navy began combined missile cybersecurity testing in June 2018 and expect to complete testing in February 2021.

System

- AMRAAM is a radar-guided, air-to-air missile with capability in both the beyond-visual-range and within-visual-range arenas. A single aircraft can engage multiple targets with multiple missiles simultaneously when using AMRAAM.
- F-15C/D/E, F-16C/D, F/A-18C/D/E/F, EA-18G, F-22A, F-35A/B/C, and AV-8B aircraft are capable of employing the AMRAAM.
- The AIM-120D is the newest variant in the AMRAAM family of missiles. The AIM-120D includes both hardware and software improvements over the AIM-120C3-C7. Four planned follow-on SIPs will provide updates to the



AIM-120D to enhance missile performance and resolve previous deficiencies.

Mission

- The Air Force and Navy, as well as several foreign military forces, employ various versions of the AIM-120 AMRAAM to conduct air-to-air combat missions.
- All U.S. fighter aircraft use the AMRAAM as the primary beyond-visual-range air-to-air weapon.

Major Contractor

Raytheon Missiles and Defense – Tucson, Arizona

Activity

- The Air Force and Navy conducted all testing in accordance with DOT&E-approved test plans.

AIM-120 SIP

- The Air Force and Navy completed operational testing of SIP-2 in January 2020.
- The Air Force and Navy expect to begin operational testing of SIP-3 in February 2021.

Cybersecurity

- The Air Force and Navy began combined cybersecurity testing of the AMRAAM in June 2018 and it is planned to be complete in February 2021.

Assessment

- AMRAAM continues to be operationally effective and suitable.
- AMRAAM modeling and simulation deficiencies were noted during SIP-2 analysis.

Recommendation

1. The Program Office should investigate and correct AMRAAM modeling and simulation deficiencies.

FY20 AIR FORCE PROGRAMS