

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)-1, and AIM-120C3-7, continues to be operationally effective and suitable.
- The Air Force and Navy completed operational test activities for the AIM-120D SIP-1 in November 2016 and fielded SIP-1 in April 2017. SIP-2 OT&E began in September 2018.
- The Air Force and Navy began operational test activities for the AIM-120C7 AMRAAM Advanced Electronic Protection Improvement Program (AEPPIP) in 2016, with testing continuing through 2018. AEPPIP Tape 1 testing completed in August 2017 and fielded in March 2018. AEPPIP Tape 2 testing completed in October 2018 and fielded in February 2019.
- The Air Force and Navy began combined missile cybersecurity testing of AMRAAM in June 2018.

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 AMRAAM.
- The AMRAAM program develops and incorporates planned, periodic software upgrades. The AMRAAM AEPPIP is a software upgrade to AIM-120C7. The AEPPIP upgrade delivered new capability in two installments, Tape 1 and Tape 2.
- The AIM-120D is the next variant in the AMRAAM family of missiles. The newest missile 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 Missile Systems – Tucson, Arizona

Activity

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

AIM-120D SIP

- The Air Force and Navy are conducting SIP-2 operational testing, which is scheduled to complete in 1QFY20 with fielding in 2QFY20.

AIM-120C7 AEPPIP

- The Air Force and Navy have completed operational testing for the AEPPIP software upgrade to C7 missiles. Testing began in FY16 and completed in 1QFY19. AEPPIP Tape 2 fielded in 2QFY19.

Cybersecurity

- The Air Force and Navy began combined cybersecurity testing of the AMRAAM missile in June 2018 and will complete in 2QFY20.

Assessment

- AMRAAM continues to be operationally effective and suitable.
- The AIM-120D SIP-1 missile meets performance and reliability requirements.

FY19 AIR FORCE PROGRAMS

- The AIM-120C3-7 missiles meet performance and reliability requirements.

Recommendations
None.