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The Army's Armored Multi-Purpose Vehicle (AMPV)

Background

The Army describes the Armored Multi-Purpose Vehicle (AMPV), a tracked support vehicle, as follows:

> The Armored Multi-Purpose Vehicle (AMPV) is the replacement for the M113 Family of Vehicles (FoV) within the Armored Brigade Combat Team (ABCT), comprising approximately 30% of its tracked vehicle fleet. Five variants are planned:
>
> The **General Purpose (Figure 1)** variant accommodates two crew, six passengers, is reconfigurable to carry one litter, mount crew served weapons, and integrates a variety of communications and battle management systems.
>
> The **Mortar Carrier** variant accommodates two crew members, two mortar crew members, one mounted 120 mm mortar, 69 rounds of 120 mm ammunition, and communications and fire control systems.
>
> The **Mission Command** variant is the cornerstone of the Army's ABCT Network Modernization Strategy. It is intended to take advantage of increased size, weight, power and cooling technology and provide a significant increase in command, control, communications and computer capability. The variant accommodates a driver and commander and two workstation operators, and its red side network provides full Tactical Command Post capabilities at brigade and battalion levels.
>
> The **Medical Evacuation** variant includes room for three crew members, six ambulatory patients or four litter patients or three ambulatory and two litter patients, and storage for medical equipment.
>
> The **Medical Treatment** variant includes room for four crew members, one litter patient, and a patient treatment table.

Figure 1. The Armored Multi-Purpose Vehicle (AMPV) General Purpose Variant

Source: United States Army Acquisition Support Center, https://asc.army.mil/web/portfolio-item/gcs-ampv/, accessed January 18, 2021.

Current Program Status

The AMPV is currently produced by BAE Systems in York, PA. On January 25, 2019, the AMPV entered the low-rate initial production phase (LRIP). The Army originally planned for acquiring a total of 2,907 AMPVs, with initial vehicle delivery in 2020. The current AMPV program plans to replace 2,897 M113 vehicles at the brigade and below level within the ABCT. There are an additional 1,922 M113s supporting non-ABCT affiliated units (referred to as Echelons Above Brigade [EAB] units) that are not included in the Army's modernization plan.

Low-Rate Initial Production (LRIP) is a programmatic decision made when manufacturing development is completed and there is an ability to produce a small-quantity set of articles. It also establishes an initial production base and sets the stage for a gradual increase in the production rate to allow for Full-Rate Production (FRP) upon completion of Operational Test and Evaluation (OT&E).

Full-Rate Production (FRP) is a decision made that allows for government contracting for economic production quantities following stabilization of the system design and validation of the production process.

Testing Deficiencies and Production Problems

During a limited user test (LUT) in FY2019, the Department of Defense (DOD) Director of Operational Test and Evaluation (DOT&E) and the Army Test and Evaluation Command (ATEC) identified 24 items while testing prototype AMPVs that BAE should correct and have evaluated during the Initial Operational Test and Evaluation (IOT&E) by the end of 2021. Reportedly, due to BAE production challenges and effects of the Coronavirus Disease 2019 (COVID-19) pandemic, BAE did not meet

the July 2020 first vehicle delivery date and was six to eight months behind the original schedule to deliver vehicles to support AMPV IOT&E and live-fire test events. BAE reportedly delivered its first LRIP AMPV to the Army on August 31, 2020.

AMPV Reaches Low-Rate Initial Production Rates

In October 2021, it was reported that monthly AMPV production had reached contracted levels for LRIP and the early manufacturing troubles had subsided. Because of earlier delays, total AMPV production remained behind schedule, but BAE planned to achieve full-rate production by the end of FY2022.

Budgetary Information

Table 1. FY2023 AMPV Budget Request

Funding Category	Total Request ($M)	Total Request (Qty.)
RDT&E	—	—
Procurement	$380.7	72
TOTAL	$380.7	72

Source: Office of the Under Secretary of Defense (Comptroller)/Chief Financial Officer, Program Acquisition Cost by Weapon System: United States Department of Defense Fiscal Year 2023 Budget Request, April 2022, p. 3-4.

Notes: RDT&E = Research, Development, Test & Evaluation; **$M** = U.S. dollars in millions; **Qty.** = FY2023 procurement quantities.

FY2023 AMPV Budget Request and Slowing Production

Reportedly, by FY2024, AMPV production rates are planned to increase to 131 vehicles per year and to continue at that level until at least FY2027. Earlier AMPV program planning documents issued before the 2020 production delay had reportedly called for an annual production rate of 190 AMPVs per year by FY2024. Supposedly, reduced production rates and increased commodity prices have contributed to higher unit costs per vehicle. Unit price increases reportedly are also attributed to strong inflationary pressures on commodity prices, reusable parts supply expended from vehicles during LRIP, and purchasing AMPVs at lower production rates.

Potential Issues for Congress

M-113s Provided to Ukraine and AMPV Procurement

Reportedly, as of April 29, 2022, the Active Army and Army National Guard were tasked by DOD to provide 200 M-113s to support Ukraine. It is not known if the M-113s were taken from operational units or from other M-113s not assigned to units. Furthermore, it is not known if the Biden Administration will include additional M-113s in future Ukraine military aid packages. Given the these considerations, Congress might examine the potential impacts to the AMPV program in terms of readiness, program cost, and schedule resulting from current M-113 transfers to Ukraine, as well as potential future M-113 transfers.

Updated AMPV Program Plans

As previously noted, the 2020 AMPV production delay has reportedly resulted in increased per vehicle costs and slower-than-planned-for annual production quantities. If approved AMPV acquisition quantities remain at 2,897 vehicles, there could be cost implications resulting from higher per-vehicle costs as well as a longer production and fielding timeline needed to fully equip Active and Army National Guard ABCTs. Given these considerations, Congress might decide to review the Army's current AMPV program plans to determine if an update is required.

The Way Ahead: Upgraded M-113s at Echelons Above Brigade (EAB)

As previously noted, the Army's current modernization plans do not include replacing EAB M-113s with AMPVs although, originally, the Army had planned to replace all M-113s with AMPVs. Reportedly, on May 21, 2018, the Army indefinitely postponed its plans to upgrade EAB M-113s. Then, in January 2019, the Army reportedly decided to cancel all EAB M-113 replacement efforts. Given the frequently changing nature of the Army's plans for addressing the replacement of legacy M-113s at EAB and the decision to cancel M-113 EAB replacement, policymakers might question if the Army has a clearly defined "way ahead" for addressing M-113s at EAB. Will the Army "leave" approximately 1,900 M-113s at EAB and continue to maintain these Vietnam era vehicles? Will they be replaced by another vehicle? Or is the Army still trying to decide on a course of action and an overall program strategy?

For a more detailed historical discussion of the AMPV Program, see CRS Report R43240, *The Army's Armored Multi-Purpose Vehicle (AMPV): Background and Issues for Congress*, by Andrew Feickert .

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