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

Background

The Army describes the Armored Multi-Purpose Vehicle (AMPV) in a March 14, 2023, press release as follows:

[The] AMPV is the replacement for the M-113 Family of Vehicles within the Armored Brigade Combat Team (ABCT), comprising approximately 30 percent of its tracked vehicle fleet. The Army's worldwide fleet of AMPVs will include nearly 3,000 vehicles delivered within the next 20 years.

There are five planned AMPV variants:

The **M1283 General Purpose (GP)** variant [Figure 1] provides protected maneuver for soldiers alongside ABCT combat vehicles during tactical operations and provides support to the infantry squad during mounted/dismounted assault during tactical operations. The GP variant accommodates two crew and four soldiers and is reconfigurable to carry one litter.

The **M1284 Medical Evacuation** variant supports the ABCT integration of medical support and casualty evacuation (CASEVAC) as an integrated part of the networked combat forward formation, enhancing the organic medics who ride with and accompany cavalry units during mounted and dismounted operations. Crew capacity is for three crewmembers, and a reconfigurable crew compartment that accommodates four litter casualties, six ambulatory (sitting) casualties, or a combination of two litter and three ambulatory casualties.

The **M1285 Medical Treatment (MT)** variant integrates advanced medical treatment in a mobile surgery suite to the ABCT. The MT hosts four crewmembers, which includes a medic and Physician Assistant or Unit Surgeon, and a treatment table that can serve to carry one litter patient. The vehicle also hosts the capability for onboard medical equipment for casualty care.

The **M1286 Mission Command (MCmd)** variant is the cornerstone of the Army's ABCT Network Modernization Strategy. It takes advantage of increased size, weight, power, and cooling and provides a significant increase in Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance capability. The variant accommodates two crewmembers, and three workstation operators, and its hosted network provides full Tactical Command Post capabilities at brigade and battalion levels.

The **M1287 Mortar Carrier (MC)** variant provides immediate, responsive, heavy mortar fire support to the ABCT in the conduct of fast-paced offensive operations by utilizing the M-121 Mortar System and M-95 Mortar Fire Control System. The MC variant accommodates four soldiers—one vehicle crewmember and three mortar crewmembers.

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.

Program Status

The AMPV is produced by BAE Systems in York, PA. On January 25, 2019, the AMPV entered the low-rate initial production (LRIP) phase. The Army originally planned for acquiring a total of 2,907 AMPVs, with initial vehicle delivery in 2020. The AMPV program plans to replace 2,897 M-113 vehicles at the brigade and below level within the ABCT. There are an additional 1,922 M-113s supporting non-ABCT affiliated units (referred to as Echelons Above Brigade [EAB] units) that are currently 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.

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 needed to 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 LRIP Rates

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

AMPVs Delivered to First Army Unit

According to a March 14, 2023, Army press release, the first AMPVs were delivered to the 1st Armored Brigade Combat Team, 3rd Infantry Division, stationed at Fort Stewart, GA, on March 13, 2023. The Army noted that this was the completion of that unit's AMPV fielding.

Army Awards FRP Contract

On September 1, 2023, the Army announced the award of the AMPV FRP contract to BAE. The total award value for the initial vehicle order was \$797 million, with additional options, for a potential total contract value of \$1.6 billion.

AMPV Annual Production Rate

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 have also been attributed to strong inflationary pressures on commodity prices, reusable parts supply expended from vehicles during LRIP, and purchasing AMPVs at lower production rates.

Army Orders Additional AMPVs

Reportedly, on March 13, 2024, the Army ordered an additional \$754.3 million worth of AMPVs from BAE. The number of AMPVs to be produced was unspecified, but the estimated delivery date was set for February 2027.

AMPV Nunn-McCurdy Breach

According to a DOD Modernized Selected Acquisition Report (MSAR) on the AMPV, a Nunn-McCurdy breach was resolved in late 2023. An Inside Defense article described the situation:

- The Armored Multi-Purpose Vehicle resolved a significant Nunn-McCurdy breach against its current baseline in late 2023.
- The breach, which saw a 33% growth in the program's estimated acquisition unit cost and a 35% rise in its estimated average procurement cost from its 2015 baseline, was driven by two factors: a surprising spike in labor and material costs caused by shutdowns stemming from the COVID-19 pandemic and a drop in the assumed production rates of the AMPV.
- The original baseline in 2015 predicted the Army would churn out 180 vehicles per year. The updated acquisition production baseline estimate is 49 AMPVs short of that, at 131 per year.
- Since entering full-rate production, the program has begun to chip away at its overall rise in cost, at least for now. It is mostly thanks to "the Ukraine supplemental driving yearly production rates above 180 vehicles per year," according to an Army spokesperson for Ground Combat Systems.
- The updated full-rate production baseline, approved May 2023, fixed the current baseline breach, but the original baseline breach remains.

Considerations for Congress

Oversight questions Congress could consider include the following:

M-113s Provided to Ukraine and Future AMPV Backfills

According to a January 8, 2025, DOD Fact Sheet on U.S. Security Assistance to Ukraine, 900 M-113s and 300 armored medical treatment vehicles (many likely M-113 variants) have been pledged to Ukraine. Reportedly, the Army plans to replace M-113s transferred to Ukraine with AMPVs on a one-to-one basis. If this continues to be the Army's objective, Congress might decide to review the Army's plans to backfill Army National Guard ABCTs with AMPVs and if current National Guard AMPV shortages attributed to these transfers have resulted in Army National Guard ABCT readiness issues.

Updated AMPV Program Plans

As previously noted, the 2020 AMPV production delay 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 equip Active and Army National Guard ABCTs. In addition, possible accelerated AMPV production to backfill M-113s provided to Ukraine could have an appreciable impact on the Army's current AMPV production and fielding plans. Given these considerations, Congress might decide to review the Army's current AMPV program plans to determine if an update is required.

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