

## HMMWV: The same but different – very different

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**Reports of the HMMWV's death have been greatly exaggerated in recent years, and *Shaun Connors* argues that current models are as relevant today as the design has ever been**

It is highly unlikely that anywhere near another 280,000 High Mobility Multipurpose Wheeled Vehicles (HMMWVs) will ever be built, or that AM General's Mishawaka facility will again have close to 100 HMMWVs per day rolling off its production lines. However, despite persistent reports of the vehicle's pending demise based on a mix of supposed obsolescence and replacement by the Joint Light Tactical Vehicle (JLTV), orders for current-generation HMMWVs continue to be placed, as do those for the upgrade and life extension of existing fleets the world over.

The world's most sizeable HMMWV fleet is in the United States. An estimated 230,000 HMMWVs have been ordered by the US government since 1984, and as of early 2018 the total number of HMMWVs spread across the United States' three services is about 140,000. The US Air Force (USAF) logically has the smallest fleet – around 3,270 HMMWVs that have an average age of about 10 years. Despite the relative youth of their fleet, the air force is the only service that has indicated it wishes to replace all of its HMMWVs with the JLTV. However, inclusive of fiscal year 2019 (FY 2019) budget announcements, just 230 JLTVs have so far been requested.



*Production of current-generation HMMWVs continues at AM General's Mishawaka facility. (AM General)*

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The US Marine Corps (USMC) HMMWV Approved Acquisition Objective (AAO) for 2018 is 17,056: this consisting of A2 and Expanded Capacity Vehicle (ECV) models that have a model-dependent average age ranging from 10 to 15 years.

The marines' 2018 planning objective for JLTV is 9,091 – an increase from the previously muted 5,500 JLTVs. Current funding (as of March) allows for 7,622 JLTVs through FY 2023, with deliveries concluding in the first quarter of FY 2025. Based on current figures the marine corps will retain between 7,965 and 9,443 HMMWVs alongside its JLTVs, and in an unspecified armoured/unarmoured mix. Currently the marines' HMMWV fleet is the subject of an ongoing Light Fleet Analysis (LFA), the aim of which is to provide the marines with options to complete the modernisation of the legacy fleet and update the JLTV AAO. Between 2011 and 2017, the marines IROANed (Inspect and Replace Only As Necessary) approximately 2,500 HMMWVs. An earlier figure shows more than 7,000 HMMWVs IROANed between 2007 and 2012. IROAN funding ended in 2015, but from that date around 30 vehicles per year go through depots and are IROANed under other funding.

The US Army's HMMWV fleet is the largest of any service by far, with 2018 figures giving 116,845 vehicles across all active, reserve, and National Guard units. The fleet includes 54,424 armoured and 62,421 unarmoured trucks.

As of 2018 the army's total light tactical vehicle (LTV) requirement is approximately 103,000 vehicles and this is anticipated to include 49,099 JLTVs that will be delivered by 2040. The army currently expects to have about 50,000 Recapitalized (Recap'd) HMMWVs forming the rest of the LTV fleet, although the exact number and split between armoured/un-armoured HMMWVs remains under study. By 2040 the retained HMMWVs will most definitely require life extension/refurbishment to stand any chance of remaining fit for purpose. To meet this need, the army has said it intends to conduct a modernisation of some portion of its HMMWV fleet, and has suggested a decision regarding this will be made during 2018.

But why life-extend and retain any HMMWVs at all if the design is as 'yesterday' as its detractors would have us believe? Because US armed forces are now far better at, and are far better equipped for, asymmetric warfare. In a new fleet, armoured HMMWVs have capability-specific mission parameters, now supplementing better-protected, but heavier platforms such as the JLTV and M-ATV on roles they were once shoe-horned into performing. Additionally, there remain a plethora of roles that require tactical mobility and capabilities across all services, but that do not require protection. And for these, which increasingly include homeland natural disaster assistance, a modern unarmoured HMMWV is arguably an option without peer.

For its HMMWV modernisation programme, the important issues to be addressed by the army are what models to modernise and precisely what does 'modernise' mean? The answer to the latter is especially important as Reset, Recap, and other associated terms can all have specific meanings in US parlance.

Reset traditionally covers the remanufacture of a vehicle to essentially its original build standard. Recap is the more extensive of the two, after which vehicles are returned to service in either upgraded condition or rebuilt to current build standard, and if the latter, returned in zero-mile, zero-hour warranted condition. The aim of Recap is to extend the useful service life of a vehicle by at least 15 years.

Prior to 2012 the army had Recap'd somewhere in the region of 56,000 HMMWVs, 46,000 of these unarmoured. In 2012 the prototype stage Modernized Expanded Capacity Vehicle (MECV) HMMWV effort was cancelled in favour of JLTV funding.

However, since 2013, and in partnership with the army's Red River Depot, the Army National Guard (ANG) has pursued its own separate HMMWV Recap effort. By January 2018 more than 2,600 ANG HMMWVs had entered their Recap programme. The most recent related ANG Recap announcement was in February 2018, calling for 60 M1151A1/wB1 to be Recap'd to the current M1167 configuration; the difference between M1151 and M1167 is essentially armament and government furnished equipment (GFE). The ANG operates about 43,000 HMMWVs, 40% of which are armoured and around 60% of which are in excess of 25 years old.

Given the steady evolution of the HMMWV's design in recent years, a continuation of the Recap approach is arguably the most logical way forward for the army. A HMMWV of today may purposely look near identical to a HMMWV of yesterday, but the numerous revisions resulting from use in Iraq and Afghanistan have evolved a 20th Century design into one that fully meets all of 21st Century needs. Compared with the original cargo/troop HMMWV (the M998), the current equivalent (the M1152) has a 179% available payload increase. Perhaps more importantly when looking at the Reset vs Recap question – compare a current M1100 series HMMWV with a 2004-produced M1100 series HMMWV and there probably is not a major component that has not received refinement or upgrade.

However, despite this ongoing product improvement approach, not all are convinced that a straight Recap to current build standard (or similar) will meet the army's to-be-announced requirements. As a further option for the services, in recent years Meritor/Northrop Grumman, Oshkosh Defense, and others have all touted far more radical MECV-like HMMWV modernisations.

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