

High Mobility Artillery Rocket System (HIMARS)

HIMARS, the newest member of the Multiple Launch Rocket System (MLRS) family, will provide light, medium, and early-entry contingency forces with an all-weather, indirect, area fire weapon system to strike high-payoff threat targets at all depths of the tactical battlefield. HIMARS units will perform the same types of general support, general support reinforcing, and reinforcing missions as current MLRS units.

A HIMARS section consists of a launcher, two resupply vehicles (RSVs) and two resupply trailers (RSTs). The HIMARS launcher is self-loading with a crew cab, a hydraulic control system, and onboard fire control and navigation systems. HIMARS fire control system, electronics, and communications units are interchangeable with the M270A1 MLRS launcher. The launcher module is mounted on a Medium Tactical Vehicle, 5-ton chassis. The HIMARS launcher has a three-man crew. It carries a single pod of six surface-to-surface artillery rockets or one Army Tactical Missile System (Army TACMS) missile. The RSV is a medium tactical vehicle truck with an onboard Hiab crane and secure radio communications. The RST is a standard M1095 5-ton trailer. Both the RSV and RST can carry two rocket or missile launch pods. HIMARS is transportable by C-130 aircraft for inter- and intra-theater deployability.

The Army initiated the HIMARS program in January 1995 as part of the Rapid Force Projection Initiative Advanced Concept Technology Demonstration (ACTD). The demonstration provided three of the four prototype launchers to the 3rd Battalion, 27th Field Artillery (3/27 FA) at Fort Bragg, North Carolina, for a 2-year extended user evaluation. The 3/27 FA retained those launchers for normal operations, which included use in Iraq.

The HIMARS program entered Engineering and Manufacturing Development as an Acquisition Category (ACAT) II system following the November 1999 Milestone II. In 2002, OSD elevated HIMARS to ACAT IC, and placed it under operational test oversight. The Army deferred the HIMARS ballistic survivability test program until ballistic protection is added to the crew cab in a planned product improvement.

The Army awarded the low-rate initial production (LRIP) contract in March 2003 and plans to equip its first MLRS unit with HIMARS in March 2005. The Army's full-rate production decision review is scheduled for June 2005.

TEST & EVALUATION ACTIVITY

HIMARS completed a Milestone C Review in March 2003. DOT&E approved the Milestone C Test and Evaluation Master Plan on April 28, 2003.

In 1QFY03, the launcher underwent climatic chamber testing, executed convoy operations at the Cold Regions Test Center in Alaska, and conducted component survivability experimentation.

A low reliability estimate from the 4QFY02 Extended System Integration Test (ESIT) prompted initiation of a reliability growth program and development of a Reliability Growth Model that combines data from multiple non-firing and live-firing test events. A 2QFY03 Reliability Growth Test produced a reliability model estimate that exceeds the requirement. System integration and system qualification testing of LRIP upgraded launchers began in fall 2003. Those tests include a second combined developmental/operational ESIT (with two launchers and soldier crews), a two-day operational tempo firing exercise, and a C-130 operational deployment and live-fire demonstration.



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ARMY PROGRAMS

TEST & EVALUATION ASSESSMENT

The launcher chassis, RSV, and RST are mature, fielded, production vehicles, and the Hiab crane is a commercial item. Ninety-five percent of HIMARS software is common with the fielded M270A1 launcher, and the 1QFY04 ESIT will test an engineering release of MLRS/HIMARS software Version H. All but one of the Fire Control System line replaceable units are common with the M270A1, and that HIMARS launcher interface unit has completed system integration testing. HIMARS successfully fired all of the fielded MLRS family of munitions in qualification tests and demonstrated timeline and interoperability key performance parameters during the FY02 ESIT. However, the low-cost fire control panel developed by the M270A1 program experienced problems when initially fielded, and its requalification forced a 3-week delay to the HIMARS launcher upgrades. The low cost fire control panel and an improved weapons interface unit developed for firing Guided MLRS rockets were included in the fall 2003 testing.

A HIMARS Project Office accuracy analysis of HIMARS flight test results suggests that there is no statistically significant difference in the accuracy of basic rockets fired from a HIMARS launcher and those fired from an M270 MLRS launcher. DOT&E will conduct its own analysis of data from flight tests with LRIP configured launchers.

HIMARS is susceptible to ground attack and counterfire. Since the HIMARS cab does not provide ballistic protection for the crew, the crew must rely on concealment between missions, and rapid displacement after missions, to survive. The HIMARS initial operational test, scheduled for 4QFY04, will include a counterfire threat.