

Stryker 30mm Infantry Carrier Vehicle – Dragoon (ICVD)

Executive Summary

- The Army initiated the Stryker 30 mm Infantry Carrier Vehicle – Dragoon (ICVD) program in July 2015 in response to an Operational Needs Statement (ONS) from U.S. Army Europe for improved or upgraded lethality of organic direct fire weapons to support dismounted infantry when engaging like units, or those supported by light armored vehicles.
- The ICVD integrates an unmanned turret with a 30 mm autocannon onto a flat-bottom Stryker Infantry Carrier Vehicle chassis with upgraded suspension and larger tires.
- In FY17, the Army conducted full-up system-level (FUSL) live fire testing of the ICVD to assess platform survivability against a spectrum of operationally realistic threats. Preliminary assessments demonstrate that stowed 30 mm ammunition on the ICVD represents a unique platform vulnerability that is not present on other vehicles in the Stryker fleet. Underbody protection afforded by the ICVD is limited due to the flat-bottom Stryker hull.
- In FY17, the Army conducted a user excursion using soldiers from the 2nd Cavalry Regiment (2CR) to validate development of gunnery training tables to support the operational test in February 2018 in Germany.
- Lethality testing to assess the 30 mm ammunition is ongoing.

System

- The Stryker 30 mm ICVD program integrates an unmanned turret with a 30 mm autocannon onto a flat-bottom Stryker Infantry Carrier Vehicle. Initiated via a limited ONS, the ICVD is not a program of record.
- The 30 mm autocannon is intended to employ High Explosive Incendiary – Tracer and Armor Piercing Fin Stabilized Discarding Sabot – Tracer rounds. The crew is intended to be able to reload these munitions under armor.
- The ICVD features a coaxial machine gun and smoke grenades on the turret.



- A Directed Requirement memorandum from the Assistant Secretary of the Army (Acquisition, Logistics and Technology) approves 81 Stryker ICVD vehicles for fielding to 2CR.

Mission

- Units equipped with the Stryker ICVD will provide Combatant Commanders a medium-weight force capable of rapid strategic and operational mobility to disrupt or destroy enemy military forces, to control land areas including populations and resources, and to conduct combat operations to protect U.S. national interests.
- The direct fire weapon system upgrade is intended to provide effective mounted and dismounted combined arms and freedom of maneuver during combat operations.

Major Contractors

- General Dynamics Land Systems – Sterling Heights, Michigan
- Kongsberg Gruppen – Kongsberg, Norway
- Orbital ATK – Mesa, Arizona

Activity

- DOT&E approved the Operational Test Agency Test Plan and Detailed Test Plan for the Stryker ICVD FUSL live fire survivability testing on June 14, 2017. The testing consists of 12 events encompassing theater-relevant threats to include underbody mines, airburst artillery, and rocket-propelled grenades. FUSL live fire testing is scheduled to be complete in December 2017.
- The Army conducted an ICVD user excursion in 4QFY17 using soldiers from 2CR to validate gunnery tables, collect early user feedback on the usability of the 30 mm weapon system, and refine training material taught to crews during New Equipment Training.

- Planning for lethality testing is ongoing and will include characterization of 30 mm ammunition and engagements against operationally realistic targets.

Assessment

- Stowage of 30 mm ammunition in the ICVD represents a unique vulnerability not present for other Stryker vehicles. Live fire testing has revealed that threat engagement consequences for the ICVD may differ significantly from the rest of the Stryker family of vehicles due to stowed ammunition.

FY17 ARMY PROGRAMS

- The current ICVD live fire test plan addresses threats specific only to the European theater. The scope of this test plan will need to increase to support worldwide fielding of the ICVD if this becomes a program of record.
- Soldier and crew feedback collected during the user excursion was used to validate development of gunnery training tables to support the operational test in February 2018.
- Previous 30 mm ammunition test data along with preliminary coupon testing indicate that the 30 mm ammunition is expected to produce the desired effects against threat armored vehicles in the target suite; the ongoing lethality testing will verify this assertion. Effects against urban barriers are inferred from previous 30 mm ammunition test data. Although the

30 mm ammunition fired against urban barriers in previous tests was not fired from an ICVD platform, terminal effects are expected to be similar.

Recommendations

- Status of Previous Recommendations. This is the first annual report for this program.
- FY17 Recommendation.
 1. If the Stryker 30 mm ICVD becomes a program of record, additional testing will be required to fully characterize the platform against the worldwide threat spectrum and against urban barriers.