

Infantry Squad Vehicle (ISV)



The Army fielded the Infantry Squad Vehicle (ISV) to two Infantry Brigade Combat Teams in FY22 using low-rate initial production (LRIP) quantities. They are making modifications to the LRIP configuration to address reliability, and maintainability deficiencies identified in previous testing. Reliability compliance testing to validate corrective actions on the ISV vehicle began in June 2022 and is scheduled for completion in February 2023. The Army conducted Simulated Airdrop Impact Tests (SAITs) of the ISV in July 2022. Unit airdrop operations scheduled for September 2022 were delayed due to the unavailability of production-representative vehicles. The Full-Rate Production decision is scheduled for March 2023.

SYSTEM DESCRIPTION

The ISV is a light, off-road, unarmed and unarmored vehicle designed to carry a nine-soldier infantry squad and their equipment. It provides new capabilities to infantry units conducting rapid deployment into contested areas and extended movement over difficult terrain. The ISV is based on the commercial Chevrolet Colorado ZR2 Bison platform with a 2.8-liter Duramax engine, a six-speed transmission, and an electronically actuated four-wheel drive transfer case. The vehicle has roll-over protection and is reconfigurable to transport a casualty using an integrated, stowable litter system. It is required to be externally and internally transportable by CH-47 helicopters, externally transportable by UH-60s, and able to be airdropped by C-17 and C-130 aircraft.

MISSION

Infantry Brigade Combat Teams will employ the ISV to increase the ground tactical mobility and operational tempo of light infantry units conducting decisive action operations. During forced-entry operations, units equipped with the ISV can insert at extended distances from objectives to counter threat anti-access/area denial strategies by using multiple points of entry to place the enemy at an operational disadvantage.

PROGRAM

The ISV is an Acquisition Category III program. DOT&E published an IOT&E report in December 2021 assessing operational effectiveness, suitability, and survivability. The Full-Rate Production decision is scheduled for March 2023.

» MAJOR CONTRACTOR

- General Motors Defense – Detroit, Michigan

TEST ADEQUACY

The ISV did not meet its 1,200 mean miles between operational mission failure requirement in previous testing. Reliability compliance testing of the ISV began in June 2022 to validate corrective actions implemented by the vehicle manufacturer to address deficiencies identified during developmental and operational testing. The test is planned for 5,000 miles over varying terrain and speeds consistent with the mission profile. DOT&E and Army Test and Evaluation Command will use the test data to assess if the modified ISV meets reliability requirements.

In July 2022, the Army conducted two SAITs using vehicles with corrective modifications to assess the vehicle's ability to endure the forces experienced during low velocity airdrop operations and dual rail airdrop operations, and to re-validate vehicle rigging procedures. Upon completion of the SAITs, the

vehicles were driven approximately 30 miles over terrain consisting of roads and improved trails. Data from the tests are being analyzed.

PERFORMANCE

» EFFECTIVENESS, SUITABILITY, AND SURVIVABILITY

Data from the simulated airdrop impact testing is under review, and data from the 5,000-mile reliability compliance testing is expected in 2QFY23. DOT&E will use the data to assess whether the vehicle meets the reliability requirement and is suitable to support airdrop operations.

Follow-on testing to assess changes in effectiveness and survivability were not conducted.

RECOMMENDATIONS

The Army should:

1. Airdrop the ISV as part of a tactical airborne operation to assess the suitability of the vehicle to support airborne operations.
2. Complete reliability compliance testing using production-representative vehicles to demonstrate compliance to the reliability requirement prior to the Full-Rate Production decision.
3. Complete, validate, and verify the technical manuals.