

Infantry Squad Vehicle (ISV)



Following the IOT&E conducted in August 2021, the Infantry Squad Vehicle (ISV) manufacturer implemented corrective actions to address reliability and maintainability deficiencies identified in previous testing. The Army conducted reliability compliance testing from June 2022 through January 2023 to validate these corrective actions. The ISV demonstrated a significant improvement to mean miles between system aborts (MMBSA) when compared to previous testing. A tactical airborne operation involving the ISV was conducted in August 2023 to assess soldiers' ability to rig, derig, and employ the vehicle as part of forcible entry operations.

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 can be externally and internally transportable by CH-47 helicopters, externally transportable by UH-60s, and 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 (including cyber survivability). The full-rate production decision was made in March 2023. The Army fielded the ISV to four infantry brigade combat teams in FY23 using low-rate initial production (LRIP) quantities.

» MAJOR CONTRACTOR

- GM Defense, a subsidiary of General Motors – Detroit, Michigan

TEST ADEQUACY

Following the IOT&E conducted in August 2021, the vehicle manufacturer implemented corrective actions to address reliability and maintainability deficiencies identified in previous testing. The Army conducted reliability compliance testing from June 2022 through January 2023 at Yuma Proving Ground, Arizona, to validate these corrective actions. DOT&E provided input to the test plan, but the Army was the approval authority. DOT&E observed the test.

In August 2023, the Army conducted a brigade-level mass tactical airborne operation at Fort Liberty, North Carolina, which included the aerial delivery of five ISV vehicles from U.S. Air Force aircraft. DOT&E approved the test plan and observed the tactical operation.

Consistent with DOT&E's recommendation in the FY22 Annual Report, the Army initiated a technical manual verification event in June 2023. A maintenance evaluation event is planned for 2QFY24.

PERFORMANCE

» EFFECTIVENESS, SUITABILITY, AND SURVIVABILITY

The Army reliability compliance testing completed in January 2023, consisted of a single ISV driving approximately 5,000

miles over terrain and at speeds consistent with the mission profile. The ISV demonstrated a significant improvement in MMBSA when compared to the MMBSA demonstrated during the August 2021 IOT&E, and the developmental testing completed at Yuma Proving Ground.

In August 2023, the Army conducted a brigade-level mass tactical airborne operation at Fort Liberty, North Carolina, which included the aerial delivery of five ISV vehicles from U.S. Air Force aircraft. DOT&E analysis is ongoing, precluding an evaluation of the vehicle's suitability. DOT&E's assessment of system effectiveness and survivability were not part of the tactical airborne operation and are unchanged from the December 2021 IOT&E Report.

RECOMMENDATION

The Army should:

1. Address any DOT&E recommendations from the August 2023 aerial delivery of the ISV as part of a tactical airborne operation.