EMS Scans 5 LAV's for US Marines

The Land Assault Vehicle is a crucial component of the US Army and Marines. It allows them to mobilize troops quickly while providing a powerful array of munitions and electronics to protect the soldiers inside.

The Problem

The US Marine Corp has several different LAV models for which they need to upgrade communication and electronic equipment. No CAD data exists for any of the current designs as they have been modified through the years. In addition, they wanted 3D CAD models for some new training and simulation software programs they were working on. Their first thoughts were to manually measure the LAV's and create CAD models. After deciding this would take far too long and not be very accurate a source for 3D scanning was needed.

The Solution

A call was made to EMS to 3D scan 5 variations of the LAV on-site in the California desert. EMS combined the use of 3D scanning systems from Z Corp and Konica-Minolta to fully scan the interior and exterior of the different LAV variations. The Z Scanner was critical to get all the detail inside the cramped quarters of the LAV's while the Konica-Minolta was used for most of the outside. Combining the two sets of scan data was challenging but EMS performed this task like they have so many times before without a problem.

The 3D scanned data was then processed in RapidForm 3D scanning software to create CAD models for importation into Pro-Engineer CAD software. The interior data was used to establish the location of all existing interior components so that new electronics could be developed and installed. The exterior CAD models were used for computer animation programs for simulation and training. Having all the detail in the LAV CAD Models makes the simulation software program extremely realistic.

Conclusion

EMS's scanning technology and technical expertise facilitated the rapid development of the 3D CAD data required by the USMC and US Army to upgrade its existing hardware, and provide the graphic images necessary for effective training simulation. Without EMS, this project would have taken months to complete as opposed to weeks using 3D scanners from Z Corp and Konica-Minolta and RapidForm scanning software.

Visit www.ems-usa.com for more information.

Scanning a LAV with a Konica-Minolta Vivid 9i 3D Scanner

Capturing the inside of a LAV with a Z Scanner Z800 hand held 3D Scanner

1 of 5 complete LAV 3D CAD solid models

EMS, Inc ●Tampa● Orlando ● Atlanta www.ems-usa.com   Phone: 877-845-2700