VOLVO SUPERTRUCK 2

Automotive

Architecture/Design/Packaging

ALTEN ADDED VALUE

Rapid ramp up of team to enable Volvo to meet tight deadlines for SuperTruck 2 program

ALTEN assumed high level of ownership of components and Test & Verification work

Extensive background in heavy truck engineering from concept to production

Key TOOLS & Technologies
CREO, PDM link, KOLA, AVP, ANSA, ANSYS, CANalyzer, Matlab, dSpace, Simulink, GSP (Global Simulation Platform)

KEY DATA

Team Size: 5 Engineers
Time: 2 Years
Location: Greensboro, NC
Work Package

ALTEN TECHNOLOGY

SUPERTRUCK 2 R&D PROGRAM

OVERVIEW

Continuing on from the success of SuperTruck 1, the US Dept of Energy created the SuperTruck 2 program. The goal was 100% improvement in freight efficiency (ton-miles per gallon) over the same 2009 baselines and a 55% brake thermal efficient engine with stronger connections to commercializing the technologies developed. Volvo primary targets were to also improve payload capacity and aerodynamics.

PROJECT DETAILS

- Conducted design and analysis on energy management strategies including specification of systems, simulations and testing
- Battery charging strategies evaluation
- Owned vehicle architecture to ensure Chassis, Engine, Cab and Electrical were developed in harmony

RESULTS

- Additional 20% improvement in complete vehicle aerodynamics over Super Truck 1 (50% over 2009 baseline)
- 134% increase in freight efficiency vs 2009 baseline
- On-time, on budget project completion