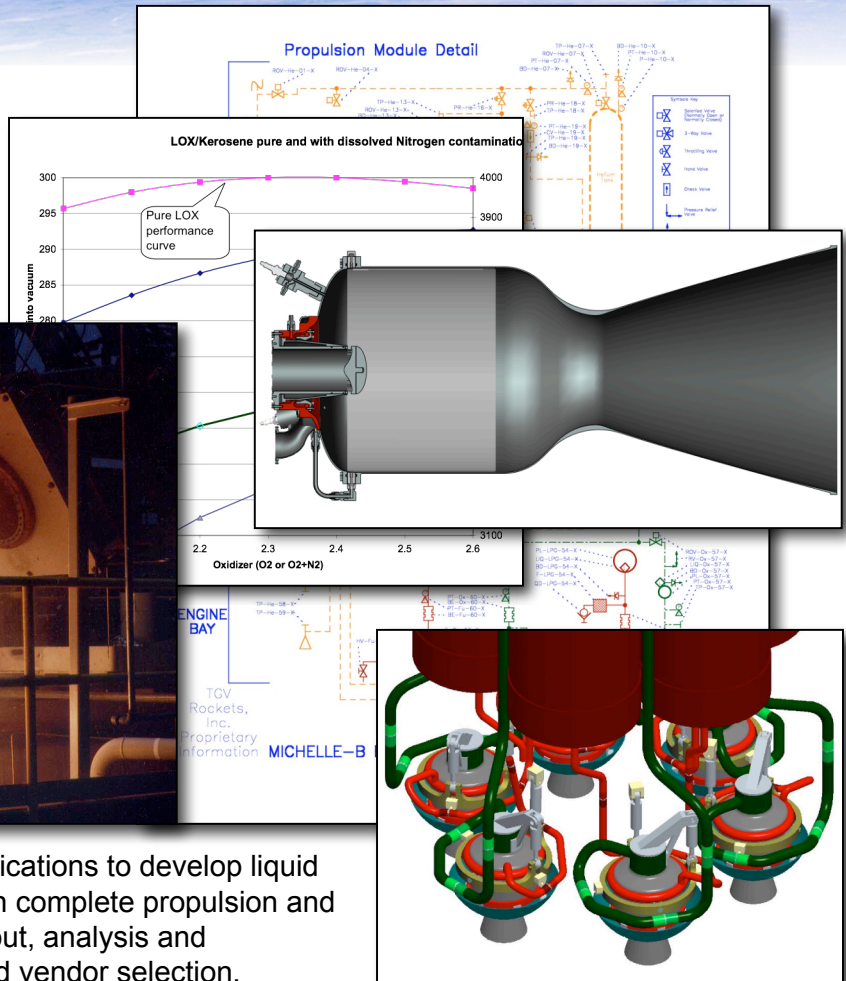


# Rocket Propulsion and RCS Development

PROPULSION CAPABILITIES INCLUDE:  
Computer Aided Design (CAD)  
Finite Element Analysis (FEA)  
Thermochemical Analysis  
Heat Transfer Analysis  
Reaction Control System (RCS) Design



TGV uses a variety of state-of-the-art applications to develop liquid fueled propulsion systems, and can design complete propulsion and RCS systems, including fluid systems layout, analysis and optimization, and component definition and vendor selection.

TGV Inc. has computational resources to simulate a variety of transient and steady state fluid flow conditions. AFALS and ProPep are used to analyze engine equilibrium, and SINDA-FLUINT provides thermal analysis. Exhaust plume flows are modeled using NASA FUN3D.

TGV personnel have extensive work experience in large liquid fuel test programs, and developing high pressure and high flow rate fluid systems including cryogenic, liquid, and gas systems, as well as fabrication and test of prototype hardware.

TGV has completed the design, development and testing of large liquid propellant rocket engine systems, demonstrating injector and combustion chamber design, variable throttle operation, detailed heat transfer measurements, and low-power-level ignition.

TGV Inc. has the knowledge and expertise to plan, design, analyze, prototype, test, and deliver complete propulsion and reaction control systems.



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