



U.S. ARMY
RDECOM

Small Engine Research Center



open
campus

S&T Campaign: Sciences for Maneuver *Energy and Propulsion*

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Research Facilities

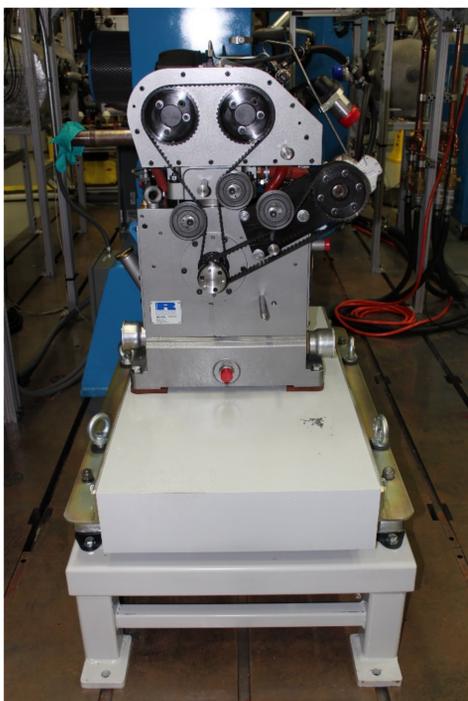
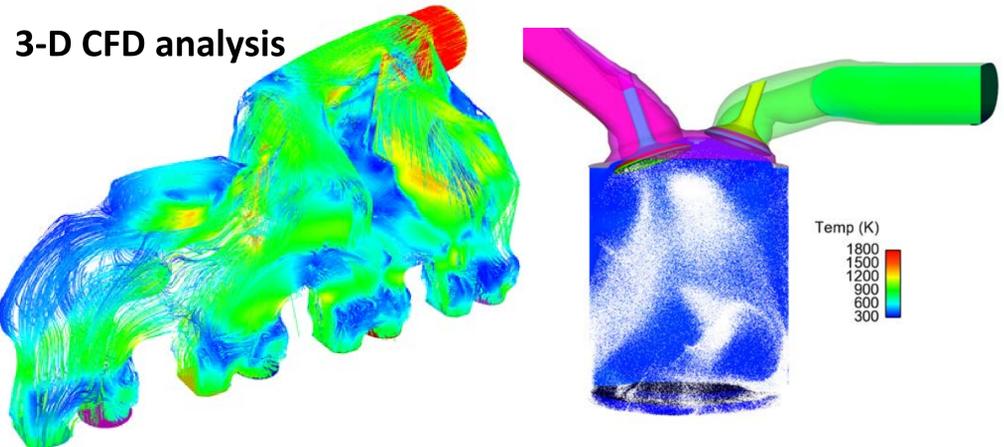
The Small Engine Research Center houses the Small Engine Combustion Research Laboratory and the Small Engine Altitude Research Facility to facilitate the development of new combustion systems or operation improvements to existing systems to meet the Army's mission for single-fuel (JP-8 or F-24). Focus is on high-efficiency, high-powered, unmanned aircraft systems and ground vehicles. The facility is a uniquely singular Department of Defense (DOD) asset for research on small engine combustion and component technologies. Research conducted in this facility supports the U.S. Army Aviation and Missile Research, Development and Engineering Center (AMRDEC), U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC), and collaborations with the Unmanned Aircraft System Product Management Office (UAS PMO) and others in the DOD, Department of Energy, academia, and industry.



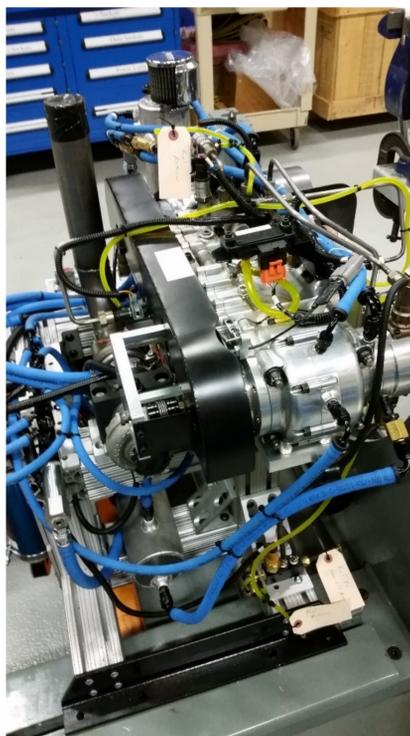
Small Engine Altitude Research Facility
(up to 25,000 ft and -40°F to 130°F)

Equipment Available

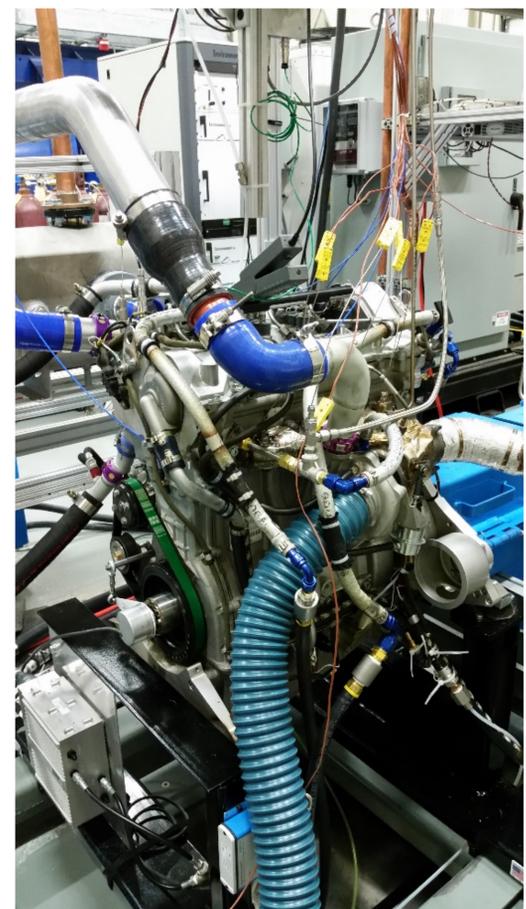
- Small Engine Altitude Research Facility: sea level to 25,000 ft, -40 to 130°F, 3 pps dried combustion air, conditioned room temperature 1 pps bypass air, 1 to 250-hp AC dynamometers, up to 30,000 rpm, 1xTorquetric and 1xHBM inline torque meters
- Small Engine Combustion Research Laboratory: 302-hp dual-ended AC dynamometer, 2xHBM inline torque meters



Ricardo Hydra single-cylinder thermal/optical engine bench



Opposed-piston engine



302 hp dual-ended AC dyno