

Carnot Emission Services

Carnot is a contract-based corporation that is dedicated to meeting SORE, LSI, stationary, marine, nonroad CI and on-highway heavy duty engine test requirements regulated by 40 CFR Parts 86, 90, 1039, 1045, 1048, 1051, 1054, 1065 and other federal and state regulations. We provide independent engine evaluations, emission testing, and consulting support. Intertek CES uses fixed price contracts for its services that are menu priced, and consulting support is based on a fixed-price level of effort.





Intertek Carnot Emissions Services will provide technology transfer performed at a competitive price, conducted with quality equipment and staff, and delivered with urgency to bring your product to market.

Our Facilities

Intertek Carnot Emission Services is located at Port San Antonio, USA, in a 29500 ft² facility previously utilized by the US Air Force for conducting hydraulic equipment testing on overhauled TF39 jet engines. The cooling tower capacity and compressed air supply is extensive. Power availability includes: 480, 230, 208, and 120 VAC. Test cells are equipped with conditioned intake air. There are 22 test stands in 10 test cells with capacity from 1hp to 500hp and varying speed ranges up to 10,000rpm.

Our Equipment

Intertek Carnot Emission Services uses AC dynamometers to control engine speed or torque. Inline torque transmitters measure torque during steady-state and transient operation. For generators, electrical load banks are available for 25 kW and higher power applications. Emission development, audit, and certification testing is accomplished with full flow dilute CVS-PDP exhaust gas measurements of hydrocarbons (HC), nonmethane hydrocarbons (NMHC), nitric oxide (NO), carbon monoxide (CO), carbon dioxide (CO₂), oxygen (O₂), nitrous oxide (N₂O), and particulate matter (PM). Intertek CES can also measure exhaust gas recirculation using an intake CO₂ analyzer.

Our Experience

Intertek Carnot Emission Services' staff boasts over 50 years of combined engine research and emissions experience on engines ranging from 300 W to more than 1500 kW. This experience includes lawn and garden, utility, marine, on-highway, agricultural, material handling, marine, locomotive, unmanned aerial vehicle, high performance, and other engine applications. Furthermore, Intertek CES' staff is experienced with gasoline, natural gas, liquified petroleum gas, diesel, and other alternate fuels, like E85. Intertek CES' staff has conducted numerous programs requiring engine and emission research, development, general testing, mapping, durability, certification and compliance.

- 40 CFR 60 IIII (Stationary CI)
- 40 CFR 60 JJJJ (Stationary SI)
- 40 CFR 86 Subparts E/F (Motorcycles)
- 40 CFR 86 Subparts I (FTP Smoke)
- 40 CFR 86 Subpart N (On-Highway HD)
- 40 CFR 89 (Nonroad Diesel)
- 40 CFR 90 (Small SI)
- 40 CFR 1039 (Nonroad Diesel)
- 40 CFR 1045 (Marine SI)
- 40 CFR 1048 (Large SI)
- 40 CFR 1051 (ATVs, UTVs, Snowmobiles, Off-road Motorcycles)
- 40 CFR 1054 (Small SI)
- 40 CFR 1060 (Evaporative)
- 40 CFR 1065 (Test Procedures & Equipment)
- 40 CFR 1068 (Compliance Provisions)

The Intertek Advantage

Intertek Carnot Emission Services is a branch of Intertek and was founded in 2002 as a research and development facility specializing in the offroad engine industry. The offroad engine industry produces exhaust emissions that are regulated by the Environmental Protection Agency (EPA) and California Air Resources Board (CARB). Reductions of exhaust and evaporative emissions require extensive engine research, development, testing, durability, and certification services to meet both government and consumer needs. Our customer focused staff has a proven record of being very responsive to customer needs and special testing demands.

Intertek is a leading provider of quality and safety solutions serving a wide range of industries around the world. From auditing and inspection, to testing, quality assurance and certification, Intertek people are dedicated to adding value to customers' products and processes, supporting their success in the global marketplace. Intertek has the expertise, resources and global reach to support its customers through its network of more than 1,000 laboratories and offices and 30,000 people in over 100 countries around the world.

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