TRC® TRACKS

HEAVY VEHICLE TESTING

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Whether you build trucks, motorhomes, buses, vehicle components, or are involved in manufacturing trailers and equipment, you need to know how your product will perform before your customers do. TRC Inc. can help find your product's strengths and weaknesses.

TRC Inc. provides a range of services to the heavy vehicle industry, including test article procurement, test performance, photography, mechanical support, and engineering analysis and reporting.

TRC Inc. has performed over 160,000,000 miles of durability testing and over 4,000 crash tests, including numerous test on heavy trucks and buses.

Powertrain and chassis durability programs are customized to meet customers' requirements. TRC's test facilities provide an ideal environment for real-time or accelerated life cycle and corrosion durability testing of components. Testing is conducted on a 24 hour/day, 7 day/week basis. Driving procedures provide test drivers with explicit information on the test objectives and driving cycle performance. We provide load frames, ballast, instrumentation, and simulated towed loads. Our experienced and trained staff performs mechanical and body maintenance.

Dynamic performance tests are conducted to FMSS, ISO, SAE, EPA, Mil-Spec, Transit Bus White Book, or manufacturers' requirements. TRC Inc. can provide you with everything you need to perform tests independently...or we can work alongside your staff.

Handling tests measure vehicle response characteristics of understeer and roll gradient, lateral and yaw response times, and brake stability. TRC Inc. conducts industry standard tests for: fuel economy; noise, vibration, and ride quality; and acceleration.

The 50-acre Vehicle Dynamics Area is available for maneuvers ranging from high speed to low speed wet, low coefficient of friction brake testing. It contains a large Jennite pad, straight and curved epoxy pads, and a skid trailer calibration pad. Scheduled for completion this fall is a 1,000 ft-long basalt and ceramic tile facility with a capacity up to 80,000 GVW.

Crash tests are conducted in accordance with FMVSS and foreign government standards, as well as for research and accident reconstruction.

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"ISO 9001 Registered"

(Heavy Vehicle Testing continued)

Heavy and medium truck impact testing can be conducted by impacting the barrier wall, by being impacted with a moving barrier or another vehicle, or by impacting into highway appurtenances. We also conduct rollover testing. TRC Inc. can accomplish barrier test portions of the SAE recommended practices for Heavy Truck Crashworthiness cab impact testing. TRC Inc. is a contractor to the U.S. Department of Transportation for developmental and compliance testing in accordance with the Federal Motor Vehicle Safety Standards.

Test bucks up to 16,400 lbs. Can be accelerated to 14 g's, peaking at 28 mph on the 24-inch diameter Hyge Impact Simulator. This enables manufacturers to non-destructively determine the integrity of design elements and evaluate fastener and interior systems applications. The sled can also be used to test occupant restraint systems and free-motion headform of truck interiors. Tests on head restraints, door locks, door retention systems, seating systems, seat belt assembly anchorages, side doors, and roofs can be conducted in the Static Test Lab.

We'd be happy to send you a complete Truck Testing Capabilities package upon request.

HELPING YOU DEVELOP TOMORROW'S VEHICLES TODAY

Retail gasoline prices have increased to the highest level since last June, according to the Department of Energy's weekly survey of about 800 gasoline stations, hitting a 10-month high of $1.626 a gallon, up 21 cents from a year ago. As fuel prices continue to rise, we may well see consumers abandoning larger vehicles in favor of smaller fuel efficient, and even alternatively fueled and hybrid vehicles.

In the past few years, manufacturers have been slowly educating people on the nuances of these niche vehicles. As a result, consumers no longer perceive driving a car fueled by something other than gasoline or diesel fuel as science fiction. Aside from the obvious price advantages derived from the increases in fuel economy of alternative fuels such as methanol, ethanol, compressed natural gas, liquefied petroleum gas, and electricity, the reduction in tail pipe pollutants is another inherent advantage over conventional gasoline and diesel fuel.

While consumers are just becoming aware of these vehicles, TRC Inc. has been providing research and development testing services on cars, trucks, and buses for this market since our inception. We also participated in the development and refinement of the industry's first fuel economy testing standards in 1979. As a result, TRC Inc.'s capabilities in this category of testing are diverse. For the majority of this testing, TRC utilizes our closed-loop, 7.5-mile, high-speed oval test track to perform fuel additive, fuel economy, and coastdown testing driving procedures. An on-site emissions laboratory for EPA certification and compliance is also available as are quality-controlled fuel storage, mixing, and dispensing facilities. TRC Inc. can also assist in total vehicle development including crash, sled, component, durability, and dynamic testing of whole vehicle systems. Testing of aerodynamic devices, lubricants, aftermarket devices, and tires is also possible on the 4,500-acre proving ground. Additionally, TRC Inc. performs in-house client consultation regarding test methodology. When it comes time to test the alternative or hybrid fuel vehicle you are developing, don't hesitate to call us and draw on TRC Inc's. 20 plus years of testing experience.

HAS YOUR STAFF BEEN DOWNSIZED?

Now what are you going to do? They can call it downsizing, right-sizing, or whatever is the latest buzzword, but you know it really means — you have the same amount of work to do but with fewer people to help. TRC Inc.'s trained and knowledgeable employees are available to help you to get your testing work done. Working alongside your staff or conducting the testing entirely for you, TRC Inc. can provide labor support on an hourly or on a long-term basis for:

- test drivers – four skill levels
- mechanics
- engineers
- instrumentation technicians
- project managers
- fabricators

Because our personnel work shoulder-to-shoulder with our customers, they have developed unique insight into test objectives, vehicle performance, and analytical evaluations. That insight provides a major benefit to effective test processes. TRC Inc. technicians and mechanics are specialists in all aspects of test preparation including test program preparation, vehicle service and maintenance, extensive engine analysis and testing , and post-test measurement and diagnosis. Instrumentation technicians provide and install equipment and troubleshoot electronic systems. Fabrication technicians construct and install special ballast, load frames, outriggers, and test bucks, as well as make facility adaptations to accommodate different test scenarios. Extreme flexibility provided by our 24-hour-day, seven-day-week operation. Our staff are also available to work at customer or other outside locations on short-term programs.

In addition to the proving grounds facilities and workforce, we also provide employee-staffing services to our facility-use customers on a long-term contract basis. Among our over 600 employees are approximately 200 qualified and trained personnel who provide exclusive R&D support services to our customers. TRC Inc.'s Contract Services recruits and hires a wide range of dedicated technical personnel. Contract service employees are available to work on-site at TRC and in our customer's offices.

Your staff may have been reduced, but you can still get your job done with the help of TRC Inc.

TRACKS is a publication of Transportation Research Center Incorporated. For more information, contact Teri Elliot (ext. 354) or Jeff Sprague (ext. 349), Marketing, Transportation Research Center Inc., East Liberty, Ohio 43319-0367; phone (937) 666-2011; fax (937) 666-5066; www.trcpg.com.