Transportation Research Center Inc. (TRC Inc.) independently manages a transportation research and testing facility serving the needs of industries, governments, trade associations, and educational organizations worldwide. Transportation Research Center (the Center) is located near East Liberty, Ohio, approximately 40 miles northwest of Columbus. Because much of TRC Inc.'s work is proprietary, many projects are described in general terms. However, the information presented on the following pages will provide the extent of TRC Inc.'s capabilities.

History

The Center was developed by the State of Ohio as a transportation research and development proving ground with the purpose of encouraging motor vehicle research and development activities in Ohio. The Center began testing in 1974. In 1979, the State of Ohio's Transportation Research Board entered into a management agreement with The Ohio State University's (University) College of Engineering to oversee the operations of the Center. In 1987, the Center was sold as part of an economic inducement to Honda of America Manufacturing, Inc. to build an automobile plant in Ohio. In order to ensure that the business of the Center could be preserved without violating the confidentiality of the Center's customers, the University established Transportation Research Center Inc., a non-profit corporation. TRC Inc. is governed by a Board of Directors chaired by the University's Dean of the College of Engineering.

Mission Statement

As the leading independent provider of testing, development and research, TRC Inc. helps the transportation industry create safer, improved products. We will accomplish our mission through high-quality services while satisfying stakeholders' expectations.

Vision

Customer satisfaction is our competitive advantage.

Quality

We will strive to meet or exceed customer expectations.

Environmental

We will strive to protect the environment and assure safe and healthful working conditions.

ISO 9001 and ISO 14001 Registered
ISO 17025 Accreditation

Equal Employment Opportunity

It is the policy of TRC Inc. to provide equal opportunity in all areas of employment practices, without regard to race, color, religion, national origin, sex, age, disability, veteran status, or any other reason prohibited by law.
I am pleased to present, on behalf of our staff, the Annual Report for Transportation Research Center Inc. (TRC Inc.) for fiscal year ended June 30, 2011.

The automotive industry's economic environment during the past fiscal year continued to be depressed. The industry was further affected by the Great East Japan Earthquake and tsunami, the results of which were felt throughout the world by manufacturers and suppliers. The automobile industry will recover over time, but our sympathy goes to all of those who suffered losses as a result of these devastating events.

Revenue from all sources for Fiscal Year 2011 was $41 million, which is approximately 5% below prior year. The development, research and testing activities during the past year were impacted by the depressed economic condition of the automobile industry. Activities for the current year focused primarily on trucks and fuel evaluation and economy. Minimal capital investment in laboratory equipment was made during the past year and funding was available to maintain the test facilities and equipment. In the coming fiscal year plans are to resurface the Vehicle Dynamics Area.

TRC Inc. remains an ongoing sponsor of the Automotive News Pace Awards, now entering its 18th year. The program recognizes automotive suppliers for excellence and innovation and enables us to strengthen our relationship with our customers by providing opportunities to improve technology.

We continue to maintain a strong relationship with The Ohio State University through transfers to the University Endowment Portfolio to support transportation research in the College of Engineering. In addition, TRC Inc. provides assistance to numerous student engineering projects and maintains consortium memberships in the OSU Center for Automotive Research, Smart Car Vehicle Concept Center and Center for Child Injury Prevention Research Studies (CChIPS).

The TRC Inc. management is cautiously optimistic about the recovery of the automotive industry, which will be striving to meet new fuel efficiency requirements while producing new and innovative products that customers demand. TRC Inc. will adjust its resources to support the development, research and testing needs of customers.

I would like to thank the TRC Inc. staff for their support in providing quality services, and the TRC Inc. Board of Directors for their guidance and support during the past year.

Rick D. Gildow
### Timeline of TRC facility development from 1962 to 2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>EST 1962: Research Facility Established by The Ohio State University &amp; Ohio Division of Highways</td>
</tr>
<tr>
<td>63</td>
<td>Facility Approved</td>
</tr>
<tr>
<td>65</td>
<td>8100 Acres Acquired</td>
</tr>
<tr>
<td>66</td>
<td>Groundbreaking</td>
</tr>
<tr>
<td>67</td>
<td>First Test on Vehicle Dynamics Area</td>
</tr>
<tr>
<td>68</td>
<td>Off-Road Course</td>
</tr>
<tr>
<td>69</td>
<td>Track Completed Official Opening</td>
</tr>
<tr>
<td>70</td>
<td>TRC</td>
</tr>
<tr>
<td>71</td>
<td>NHTSA Office of Defects Investigation</td>
</tr>
<tr>
<td>72</td>
<td>NHTSA Engineering Test Facility</td>
</tr>
<tr>
<td>73</td>
<td>NHTSA Safety Research Lab</td>
</tr>
<tr>
<td>74</td>
<td>Established as an EPA Coastdown Test Center</td>
</tr>
<tr>
<td>75</td>
<td>Crash Barrier</td>
</tr>
<tr>
<td>76</td>
<td>Corrosion Facility</td>
</tr>
<tr>
<td>77</td>
<td>Eastern Field Test Center</td>
</tr>
<tr>
<td>78</td>
<td></td>
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<tr>
<td>79</td>
<td></td>
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<td>84</td>
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<td>85</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td></td>
</tr>
</tbody>
</table>
Introduction

Over the past 37 years Transportation Research Center Inc. (TRC Inc.) has gained a reputation as the world’s leading provider of vehicular testing services. This reputation has been maintained, not only because of the quality of the services offered, but also because the challenges that each year brings are viewed as new and exciting opportunities for growth.

Since Transportation Research Center (the Center) began operations in 1974, new programs have been developed for customers in the areas of collision avoidance, energy absorption, fuel economy, emissions, durability, performance, noise, crash simulation, and crashworthiness. Please refer to the timeline presented below for an overview of our progress. Test programs evaluate the performance of passenger cars, trucks, airplanes, tracked vehicles, off-road vehicles, recreational vehicles, buses, motorcycles, electric vehicles, and automotive components. TRC Inc. schedules and monitors all facilities with primary importance placed on the safety and security of each customer.

TRC Inc. is continually improving and adapting to meet changing customer needs. To enhance the Center and TRC Inc.’s overall service offerings, new facilities have been designed to assist customers in developing safe and marketable products. To complement our new facilities, TRC Inc. is ISO 9001 and 14001 registered, and maintains a 17025 accreditation. These registrations and accreditations demonstrate TRC Inc.’s commitment to customers. We will continue to measure and improve the quality of the services we provide.

The following pages of this report are dedicated to describing each of TRC Inc.’s primary business areas - Durability and Dynamics Operations, Laboratory Operations, and Contract Services - including a brief review of their activities and accomplishments during the past year.

from 1962 to 2011
Facilities, Equipment, & Operational Changes

Under the terms of our Management Agreement, Transportation Research Center Inc. (TRC Inc.) exclusively schedules the facilities and equipment of Transportation Research Center (the Center). In addition, TRC Inc. maintains the facilities and buildings, which include approximately 150 lane miles of improved and unimproved road surfaces and 328,000 square feet of building space. Annual extensive facility upgrades are made through maintenance and repair, procurement of equipment, and facility construction, based on customer survey feedback.

Fiscal Year 2011 was a challenging year financially for the Automotive Industry and for TRC Inc., there were few capital dollars for new facilities; however, we were still able to allocate resources to repairs and upgrade existing facilities to continue to meet customer demand.

Operational changes included the development and launch of Scheduling and Facility Conditions pages to the TRC Inc. website; the transition from a paper copy newsletter to a digital version; and the launch of a social media marketing campaign. The new Scheduling and Facility Conditions pages provide up-to-date information about facility closures, weather issues, scheduled construction and daily facility activities through the click of a mouse. The transition from a hard copy newsletter to a digital version, along with the launch of a TRC Inc. Facebook page, Twitter account, blog, and YouTube channel, are all part of an ongoing effort to continuously provide information and updates about our facilities, capabilities and upcoming events.

Durability and Dynamics area upgrades included the purchase of new data acquisition equipment, and an ATI programmable Steering Machine to improve testing accuracy.

Laboratory Operations received upgrades in both the Emissions Laboratory and Impact Laboratory. The Emissions Laboratory completed an upgrade of our EL balancer, and purchased a new gas chromatograph, 2.3L engine stand, and a mileage accumulation dynamometer. The Impact Laboratory upgraded its capability to calibrate the THOR (Test Device for Human Occupant Restraint) crash dummy.

As the automotive industry continues to improve, we will continue to invest in facilities, equipment and operations to meet the continued needs of our customers.

Screen shot of new Facility Conditions page.
Durability and Dynamics Operations (DDO) experienced an 8% decrease in revenue from Fiscal Year 2010. The slight decrease was attributed to the effect of the earthquake in Japan as it delayed some development testing that was scheduled to occur in the final quarter of our fiscal year. As the economy improves and the auto industry recovers, we expect our business to increase for Fiscal Year 2012.

The majority of DDO testing involves powertrain, rough road, chassis, corrosion, fuel additives and fuel economy. In addition, we conduct brake, skid truck correlation and vehicle handling testing to FMVSS, SAE, and ASTM Standards. DDO maintains a 24-hour-a-day, 7-day-a-week operation for rapid, safe mileage accumulation.

The following table represents the percentage of business by industry classification, for Fiscal Year 2011:

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Manufacturers</td>
<td>85%</td>
</tr>
<tr>
<td>Component Manufacturers</td>
<td>6%</td>
</tr>
<tr>
<td>Government Organizations</td>
<td>3%</td>
</tr>
<tr>
<td>Independent Labs</td>
<td>3%</td>
</tr>
<tr>
<td>Fuels &amp; Lubricants</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
</tbody>
</table>

The first two quarters of Fiscal Year 2011 were strong as a result of government contracts and testing for pending regulation changes. However, as previously mentioned, we were affected in the final two quarters of Fiscal Year 2011 due to the situation in Japan and its ripple effect in the auto industry.

In order to continue to meet our customers’ expectations for state of the art data acquisition and equipment, an ISAAC GPS System for vehicle tracking will be utilized in Fiscal Year 2012. We also purchased an ATI programmable Steering Machine to better execute dynamic testing. Additionally, we implemented an online facility schedule and weather update system to better inform our customers of facility conditions and availability.

Forward Collision Warning testing on the Center’s Vehicle Dynamics Area.
The Organization

Laboratory Operations

Laboratory Operations (LO) consists of both the Impact Laboratory Operations and the Emissions Laboratory Operations. Overall, the results for Impact Laboratory Operations were not up to expectations due to a decrease/consolidation in the number of models and makes in the automotive industry. Crash tests totaled 63, which was a decrease of 141% from Fiscal Year 2010. Impact simulation testing on the HYGE sled decreased 31% for a total of 124 tests in Fiscal Year 2011. Additionally, the Emissions Laboratory Operations declined from last year’s all-time high with a 32% decrease in revenue due to completion of a large government contract.

The majority of LO’s crash testing involved the development and certification of automobiles and light trucks to meet occupant protection requirements established by the U.S. Federal and Canadian Motor Vehicle Safety Standards. LO’s simulation testing provided research and development in support of child safety seat crashworthiness. The majority of LO’s emissions testing was for the U.S. Department of Energy projects and industry consortium projects concerning fuel blends.

The following table represents the percentage of business by industry classification, for Fiscal Year 2011:

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Organizations</td>
<td>60%</td>
</tr>
<tr>
<td>Fuels &amp; Lubricants</td>
<td>17%</td>
</tr>
<tr>
<td>Vehicle Manufacturers</td>
<td>14%</td>
</tr>
<tr>
<td>Component Manufacturers</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
<tr>
<td>Independent Labs</td>
<td>1%</td>
</tr>
<tr>
<td>Litigation / Engineering Firms</td>
<td>1%</td>
</tr>
</tbody>
</table>

Improvements were made in both the Emissions Laboratory and Impact Laboratory. The Emissions Laboratory completed an upgrade of our EL balancer to meet new particulate measurement standards and purchased a new Gas Chromatograph for alcohol analysis of exhaust emissions. Additionally, we purchased a 2.3L engine test stand to measure intake valve deposits and added a new mileage accumulation dynamometer. The Impact Laboratory has long supported the advancement for new crash test dummies and new crash procedures and we now have the ability to calibrate the THOR (Test Device for Human Occupant Restraint) dummy.
The Organization

Contract Services

The mission of Contract Services is to provide customers with high-quality engineering and technical support to improve the safety, quality, and competitiveness of their products.

Contract Services is comprised of technical personnel whose services are dedicated to specific customers on a full-time basis. Their work predominantly involves research and development testing, including vehicle components, crashworthiness, crash avoidance, biomechanics, research analysis and test device and procedure development. The personnel in these groups include engineering technicians, mechanical and electronics technicians, engineering assistants, photographers, research engineers and research scientists.

The staff holds memberships in professional societies, such as the Society of Automotive Engineers (SAE) and plays major roles in various technical committees. Numerous technical papers were authored or co-authored by our personnel during the past year. The affiliations, committee work, and published writings bring recognition and industry/professional exposure to Transportation Research Center Inc. (TRC Inc.).

The following table represents the percentage of business by industry classification, for Fiscal Year 2011:

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Organizations</td>
<td>48%</td>
</tr>
<tr>
<td>Vehicle Manufacturers</td>
<td>28%</td>
</tr>
<tr>
<td>Component Manufacturers</td>
<td>24%</td>
</tr>
</tbody>
</table>

With the continued instability in the automotive sector, we had forecasted a decrease in revenue of 1%; however, increased hiring at one location has lead to an increase in headcount of 9%, allowing us to post a better year than budgeted. As a result of these factors, we experienced an increase in revenue of 7% versus Fiscal Year 2010. A 1% decrease in revenues and steady employment is forecasted for Fiscal Year 2012.

We look forward to meeting the challenges of the coming year and exceeding the expectations of our customers.

Contract Services employees work at NHTSA’s Vehicle Research & Test Center’s calibration laboratory and driving simulator.
Registrations & Accreditations

Quality Planning, Assurance, Improvement & Control

Company Registrations

ISO 9001 Registration

As part of Transportation Research Center Inc.’s (TRC Inc.) commitment to customer satisfaction and continual improvement, the organization acquired registration to the ISO 9001:1994 Standard on May 6, 2000 (Certificate #68096). The ISO 9001 Standard is an international model for quality management systems. Organizations are required to identify and document best business practices, and to implement these practices to achieve consistent quality services to meet and exceed customer expectations.

In addition, TRC Inc. successfully acquired registration to the ISO 9001:2000 revision of the Standard on May 24, 2002. The 9001:2000 includes a process-based quality management system model with an increased focus on customer satisfaction and continual improvement.

TRC Inc. Quality Policy Statement:
We will strive to meet or exceed customer expectations.

Quality Principles:
1. Customer Focus: TRC Inc. is committed to ensuring that each employee understands who the customer is, what the customer expects, and how their processes support the delivery of customer services.
2. Continual Improvement: TRC Inc. is committed to continual improvement in TRC Inc.’s Management System by setting quality objectives and targets, and by evaluating our performance to those goals.
3. Compliance: TRC Inc. is committed to complying with all applicable statutory, regulatory, and customer requirements, as well as internal policies.
4. Communication & Understanding: TRC Inc. provides education and training to ensure understanding of the quality policy throughout the organization.

ISO 14001 Registration

TRC Inc. is registered to the ISO 14001 Standard. The ISO 14001 Standard is a model for environmental management systems and addresses the management of business activities impacting the environment. Although not required by the ISO 14001 Standard, TRC Inc. has incorporated health and safety into our environmental program.

TRC Inc.’s Environmental, Health & Safety (EH&S) Policy Statement:
We will strive to protect the environment and assure safe and healthful working conditions.

EH&S Principles:
1. TRC Inc. is committed to continual improvement in its environmental, health, and safety program by setting objectives and targets and by evaluating our performance to those goals.
2. TRC Inc. is committed to prevention of pollution by using processes and materials that prevent, reduce, or minimize pollution. This commitment includes recycling, control mechanisms, material substitution, and efficient use of resources.
3. TRC Inc. is committed to compliance with all applicable environmental, health, and safety regulations, laws, and other internal and external requirements.
4. TRC Inc. provides education and training to ensure understanding of the environmental, health, and safety policies throughout the organization.

Company Accreditations

ISO 17025 Accreditation

As part of our commitment to customer satisfaction and continual improvement, TRC Inc. has been granted the ISO/IEC 17025:2005 Accreditation from the Laboratory Accreditation Bureau to perform the following tests:
- Fuel Injector Fouling Initial Performance (SCPI)
- Intake Valve Stick (IVS)
- Automotive Spark-Ignition Engine Fuel for Electronic Port Fuel Injector Fouling (PFI)
- Vehicle Crash Testing of Perimeter Barriers
Transportation Research Center Inc. (TRC Inc.) has renewed its sponsorship of the Automotive News PACE™ Award for the tenth year. PACE™ is the acronym for Premier Automotive Suppliers’ Contribution to Excellence. Now in its 18th year, the PACE™ Award honors automotive suppliers who have embraced innovation or adapted and reinvented themselves to meet the demands of the OEM customer. This prestigious award sets the standard for innovation and excellence and has become a significant industry credential.

Annually, hundreds of automotive suppliers around the globe compete to earn the distinction of joining the automotive world’s list of “Who’s Who.”

The PACE™ Award sponsorship has been a natural link over the past ten years as many of the innovations featured are ultimately validated at our proving ground. Through this sponsorship we have had, and will continue to have, the opportunity to support our customers in the marketplace by acknowledging their efforts.

Staff Activities / Community Service

TRC Inc. believes in maintaining its role as a good corporate citizen in the community. TRC Inc. provides financial support through payrolls, payroll taxes and local procurement of goods and services.

TRC Inc.’s “Partnership in Technology Scholarship” program provides $1,000 renewable college scholarships for high school seniors planning to major in a two- or four-year automotive-related field, as well as the opportunity for an internship at Transportation Research Center (The Center). Three first-year students were added this year for a total of nine students receiving this award in Fiscal Year 2011.

Good corporate citizenship includes protecting the environment. At The Center, this is accomplished in a variety of ways, including the recycling of paper, plastics, glass and metals. TRC Inc. participates in the Ohio Department of Transportation’s Adopt-a-Highway program and supports the Keep Logan County Beautiful Committee, an organization that encourages recycling and litter prevention.

Child safety is promoted through TRC Inc.’s Child Seat Awareness Program, which provides employee reimbursement for the purchase of child restraints and assists the community through child restraint donation programs administered by local health departments.

The following organizations have benefited this Fiscal Year from TRC Inc.’s Community Relations programs:

- Adopt-A-Highway
- American Red Cross
- Antioch Shriners
- Boy Scouts of America
- Discovery Riders
- Humane Society of Logan & Union Counties
- Keep Logan County Beautiful Committee
- Local Food Pantries
- Logan County Agricultural Society
- Logan County Family & Children First Council
- Logan County Fraternal Order of Police
- March of Dimes
- Memorial Hospital of Union County
- Multiple Sclerosis Association of America
- Perry Township Events Committee
- Local Elementary Schools Seatbelt Safety
- United Way
- Wounded Warriors Project

TRC Inc. scholarship and co-op students from left to right: Andrew Marshall, Connor Kress, Taylor Manahan, William Hoile, and Christopher Spletter. Not pictured: John Dulin and Toni Strauch.
Governance

Board of Directors

Dr. David B. Williams  
Dean of the College of Engineering  
The Ohio State University  
TRC Inc. Chairman of the Board

Mr. George J. Arnold  
Business Development Director, H.R. Gray  
TRC Inc. Vice Chairman of the Board

Mr. C. John Easton  
Chairman (retired), Honeywell Sensotec

Dr. Caroline C. Whitacre  
Senior Vice President for Research  
The Ohio State University

Ms. Greta J. Russell  
University Controller  
The Ohio State University

Mr. Rick D. Gildow  
Transportation Research Center Inc.  
TRC Inc. President

Board Changes

Dr. David B. Williams was appointed Dean of the College of Engineering at The Ohio State University and Chairman of the TRC Inc. Board effective April 18, 2011. He replaces Dr. Gregory N. Washington, Interim Dean of the College of Engineering at The Ohio State University and Chairman of TRC Inc. Board since October 1, 2008. We thank Dr. Washington for his service to TRC Inc. and are pleased to welcome Dr. Williams to the Board.

Mr. George J. Arnold, Business Development Director, H. R. Gray, was reappointed to the Board for a two-year term ending at the close of the annual meeting in 2012.

In addition, Mr. Christopher E. Hogan was appointed TRC Inc. General Counsel effective June 10, 2010.

Officers

Mr. Shawn T. Ahern, CPA  
TRC Inc. Vice President  
Treasurer of the Board

Ms. Jill R. Macy  
TRC Inc. Vice President  
TRC Inc. Board Secretary

Mr. Milton J. Dunlop  
TRC Inc. Senior Vice President

Mr. John W. Phillips  
TRC Inc. Vice President

Mr. Jeffrey A. Sprague  
TRC Inc. Vice President

Mr. Ronald W. Burton  
TRC Inc. Assistant Vice President

Mr. Richard E. Powers  
TRC Inc. Assistant Vice President

General Counsel  
Mr. Christopher E. Hogan

Independent Auditors  
PricewaterhouseCoopers LLP