



LDW & Associates

*Vehicle Testing and Consulting*

LDW & Associates



Vehicle Testing & Consulting



313-382-4470

[www.ldwassociates.com](http://www.ldwassociates.com)

## ABOUT LDW & ASSOCIATES

---

LDW & Associates was founded in 1989 as a quality alternative service provider. Since then, LDW has performed well over several thousand vehicle brake tests and logged over 25 Million test miles.

LDW maintains a staff of experienced engineers, technicians, and drivers that enable us to offer a wide variety of technical, mechanical and testing capabilities. We utilize state-of-the-art test instrumentation, and are capable of data acquisition at rates up to 100 kHz. LDW can measure many different physical parameters including hydraulic pressure, vacuum, temperature, humidity, velocity, vehicle acceleration, yaw and yaw rate, component vibration/noise, brake torque variation utilizing torque wheels. In addition, we can measure parameters of rotating components when necessary using our slip rings.

## SERVICES

---

LDW's experienced staff with the quality instrumentation is capable of supporting a wide variety of services.

LDW & Associates offers on-vehicle measurement of total indicated runout (TIR) and disc thickness variation (DTV) without removing the tire and wheel assembly. The procedure and instrumentation used for these measurements were developed in-house at LDW. We can also measure TIR and DTV dynamically *on the road* in specialized tests (upon request).

LDW & Associates also owns and operates **Motor City Rod Shop**, which offers much more in terms of Body & Paint Support, Prototype Body Fabrication, Roll Cages, and Complete Frame Build-up and Frame Fabrication/Frame Conversions. We also feature **In-house Machining** to support fixture builds/fabrication and the capability to deliver custom torque wheels.

We also offer services in the following categories:

### Noise Testing (in City Traffic Environment):

Los Angeles City Traffic (LACT)  
Marquette City Traffic (MICT)  
Minneapolis City Traffic (MCT)  
Detroit City Traffic (DCT)  
Phoenix City Traffic (PCT)  
Daytona City Traffic  
Seattle City Traffic  
Cold Chamber Testing

### Performance

High Altitude Vacuum-Boosted Brake System Performance  
FMVSS 105 Certification  
FMVSS 135 Certification  
High Speed Fade  
Death Valley Fluid Boil  
Laurel Mountain Drag  
AMS  
ECE Reg. 13  
Consumer Union Stopping Distance  
Complete DVP Support  
Just to name a few...

### Program Support

Build, Setup, Maintain and Teardown Tests  
Fleet Test Mechanical and Technical Support  
In-Plant Support  
In-Plant Studies\*

### Traffic Tests

Detroit Suburban Traffic (DST)  
Huron-Detroit Metro Traffic (HDMT)  
Phoenix Suburban Traffic  
Mileage Accumulation/Durability\*

### General Services

Disc Thickness Variation (DTV)  
Web-Accessible Data Reports  
Complete DVP Support

The services listed above are just a small sample of the services we offer.

\*Denotes Studies done at Customer Specified Locations.

*LDW offers its customer high quality testing results at reasonable prices.  
Call for a quote!*

## **TECHNOLOGY**

---

LDW offers solid testing results by maintaining a series of quality testing machines and components. Included in our collection of devices are:

- LDW 9000 Noise Measurement System
- Vehicle Tracking System
- Dynamic Rotor Measurement
- Torque Wheels

### LDW 9000 Noise Measurement System

The LDW 9000 Noise Measurement System is based on the Campbell Scientific CR9000 datalogger. The CR-9000 can sample up to 4500 Hz in normal mode and up to 100000 Hz in Burst mode.

### Vehicle Tracking System

Using our Global Positioning System (GPS), LDW has the capability to constantly supervise our customers' test vehicles. A simple Internet connection is all that's required to track a vehicle's past and current locations.

### Dynamic Rotor Measurement

The LDW & Associates Dynamic TIR system is based on the Campbell Scientific CR9000x datalogger and new CR9052 digital filter module.

### Drag Torque & Disc Thickness Variation

The LDW & Associates Drag Torque & Disc Thickness Variation (DTV) System measures brake disc thickness and Total Indicated Runout (TIR) on the rotor's surface (using non-contact capacitive sensors) and brake drag torque without having to remove the wheel or caliper.

### Torque Wheels

Utilizing Torque Wheels, we offer brake torque measuring and brake variation testing as required for Performance tests.

*Web-Accessible Data Reports are supplied by request and are available through a Username/ Password authenticated website.*

## **LOCATIONS**

---

**LDW operates three offices.**

Main Operations –  
17765 Allen Road,  
Melvindale, MI 48122  
Phone: (313) 382-4470

West Coast Operations -  
15362 Texaco Ave  
Paramount, CA 90723  
Phone: (562) 408-3751

Delphi Southwest Test Center –  
1230 West Gila Bend Highway  
Casa Grande, AZ 85222  
Phone: (313) 382-4470

Information Request Email Address:  
email: [info@ldwassociates.com](mailto:info@ldwassociates.com)

## **ALL AT FEES YOU CAN AFFORD**

With our flexible pricing, we are the best solution for your brake testing needs.

**Call (313) 382-4470**

**Fax (313) 382-5709**



LDW & Associates  
17765 Allen Road,  
Melvindale, MI 48122  
Phone (313) 382-4470  
Fax (313) 382-570