The Petroleum Products Research Department at Southwest Research Institute® (SwRI®) conducts numerous standardized tests for clients on gasoline and diesel engine oils, gear oils, transmission fluids, brake fluids, hydraulic oils, coolants and greases. SwRI scientists help clients fulfill requirements to meet specifications, monitor trends, and solve unique problems. SwRI offers oil qualification analytical and bench testing for API, ILSAC, SAE and ACEA, as well as OEM specifications such as Mercon®, Dexron®, Caterpillar, Allison, John Deere and others.

Laboratory test methods include, but are not limited to, test procedures from ASTM, DIN, CEC, JIS, FTM, JDQ, VW and other standards developers. SwRI testing is an essential tool for maintaining quality processes for a variety of clients including OEMs, suppliers and fleet owners.
**Test Types** | **Examples**
---|---
Condition Monitoring & Viscosity (Brookfield, kinematic, dynamic, high/low temperature), total acid number (TAN), total base number (TBN), oxidation and nitration value by FTIR, elemental analysis, TGA soot, moisture analysis, fuel dilution by GC
Oxidation & Deposit | ROBO, DKA, CMOT, RBOT, TEOST MHT, PDSC, ABOT, TOST
Corrosion | Panel rust/humidity cabinet, pin rust, copper strip, corrosion bench test (CBT), high-temperature CBT (HTCBT), TO4 rust, salt fog
Friction & Wear | Falex Pin & Vee, four-ball, Timken, coefficient of friction, extreme pressure
Shear | KRL shear, Bosch shear, Sonic shear
Other | Elastomer and seal compatibility (LDEOC, EOEIC, CEC L-39, others), clay gel, sulfated ash, filterability, foam, simulated distillation, gas bubble separation/air entrainment, miscibility, flashpoint, NOACK volatility, insolubles, panel coker, particle count, ion chromatography

Southwest Research Institute is an independent, nonprofit, applied engineering and physical sciences research and development organization using multidisciplinary approaches to problem solving. The Institute occupies 1,200 acres in San Antonio, Texas, and provides more than 2 million square feet of laboratories, test facilities, workshops and offices for more than 3,000 employees who perform contract work for industry and government clients.

We welcome your inquiries. For additional information, please contact:

Mike Birke  
Senior Research Scientist  
(210) 522-5310  
mike.birke@swri.org

Yong-Li McFarland  
Scientist  
(210) 522-2715  
yongli.mcfarland@swri.org

Petroleum Products Research Department  
Fuels and Lubricants Research Division

Southwest Research Institute  
6220 Culebra Road • P.O. Box 28510  
San Antonio, TX 78228-0510

pprd.swri.org  
swri.org