

# SGS EV & HEV VEHICLE TESTING SERVICES

SGS NORTH AMERICA CONSISTS OF A **COMPREHENSIVE NETWORK** OF TESTING LABORATORIES SERVING THE RESEARCH, DEVELOPMENT AND CERTIFICATION NEEDS FOR OUR CUSTOMERS

SGS can provide full vehicle, component level and system level testing on your electric vehicles (EV) and hybrid vehicles (HEV) and is accredited under ISO 17025. Our labs operate advanced chassis dynamometers with AWD and 2WD capabilities that simulate driving conditions for custom driving patterns or standard road cycles. SGS can also perform vehicle and component level testing in a multitude of simulated environments including road, temperature and altitude.



## CONTACT US

To request a quote or discuss your testing needs in detail, please call +01 844 730 4175 or email [us.transportation@sgs.com](mailto:us.transportation@sgs.com).

## VEHICLE TESTING CAPABILITIES

Our lab offers options for driveability with available certified technical drivers or the use of automated robot drivers for precise repeatability that is crucial to vehicle and battery manufacturers in obtaining accurate range and SOC measurement. Additionally we offer related vehicle and component testing services:

- Custom or standard cycles can be executed as a single test (state test) or continuously repeated (range test) in any combination
- Portable Emissions Measurement System (PEMS) testing services
- Vehicle procurement

## COMPONENT TESTING CAPABILITIES

- Cold soak and environmental testing of assemblies and components
- Evaporative emissions measurement
- Vibration and in-use simulation
- Servo-hydraulic testing
- Exhaust testing
- Electro-dynamic shaker testing
- Durability, fatigue and ultimate strength testing
- Product development
- Impact, static torsion and bending

## TEST SPECIFICATIONS

- SAE J1634, SAE J1711 and SAE J2951 test procedures
- ISO, TC 22Sc 21 and WG 2 test standard PHEV

## FACILITIES & EQUIPMENT

- AWD/RWD/FWD Chassis dynamometer and suspension
- Motorcycle/ATV/side-by-side chassis dynamometer
- PHEV charge stations
- Multi-range SOC analyzer
- Altitude simulation
- Vehicle environmental testing from -20°F to 110°F, sea level to high altitude
- Cold soak room and staging area
- CAN data recording
- Evaporative emissions testing SHEDs
- Dedicated office space for local and visiting staff
- Mechanic shop with private wash bay and vehicle lifts
- Systems for driveline, motors, gear boxes, couplings, BIW, structure, electrical and battery

## TESTING PROCEDURES

- Vehicle types supported include PHEV, EV, ZEV, PEV and BEV
- Range, SOC plotting and SOC measurement
- Range depletion mode
- Battery heat and cooling control
- Vehicle thermal management
- Depletion cycle at steady-state speed
- Vehicle hot and cold charge depleting mode
- Standard cycles including UDDS, HWY, US06, FTP and WLTP
- Custom cycles can be set up for any configuration
- Vehicle auxiliary testing AC on/off and BTM
- Charge recovery
- Power, speed and torque testing
- Continuous test run time up to 10 hours

# SGS GLOBAL & LOCAL

90,000 EMPLOYEES | 2,000 OFFICES & LABORATORIES AROUND THE WORLD



## GLOBAL SERVICE LOCAL EXPERTISE

### SGS TRANSPORTATION

- Automotive
- Aerospace & Defense
- Military
- Marine
- Off-road
- Non-road
- Small Engine
- Power Sports
- Agriculture
- Portable Fuel Containers
- Industry Groups
- Government & Regulatory Agencies

### CONTACT US

**VARIABLE ALTITUDE ENGINE & VEHICLE TESTING**  
Aurora, CO

**TEST CELL SOLUTIONS, SOFTWARE AND VARIABLE HORSEPOWER ENGINE AND VEHICLE TESTING**  
Columbus, IN

**ROCKY MOUNTAIN HIGH ALTITUDE TEST CENTER**  
Empire, CO

**MILEAGE ACCUMULATION CENTER**  
Jackson, MI

**FUEL & COMPONENT SYSTEMS TESTING**  
Lapeer, MI

**CATALYST AGING & COMPONENT TESTING SERVICES**  
Taylor, MI

**COMPONENT TESTING & ENGINEERING SERVICES**  
Troy, MI

WHEN YOU NEED TO BE SURE

**SGS**