

# STELLANTIS CANADA CONTRIBUTIONS TO 2026 JEEP® CHEROKEE DEVELOPMENT

## AUTOMOTIVE RESEARCH AND DEVELOPMENT CENTRE (ARDC)



### Road Test Simulator (RTS) Lab

- Perform durability testing on full vehicle and suspension systems
- Create drive files using: Traditional data-acquisition-based methods, Advanced HSRC (Hybrid System Response Convergence) methods that eliminate the need for physical data acquisition
- Generate HSRC drive files using: Road surface scans, tire models, physical test specimens (suspension systems and full vehicles)
- Use drive files from either method to conduct full life-cycle durability testing
- Conduct new RTS tests that assess initial vehicle quality across varying temperature conditions
- Accelerate vehicle development timelines and improve overall product quality through these enhanced testing capabilities

### Lighting Lab

- Headlamp IIHS assessments
- Performed virtual beam pattern evaluations of supplier Illuminating Engineering Society (IES) files
- Conducted physical level beam pattern testing
- Night drive simulations in coordination with the ARDC - Vehicle Driving Simulator Lab

### Brake Development Lab

- Brake performance validation under high-temperature conditions
- Front and rear brake noise evaluation
- Front brake durability

### Corrosion Lab

- E Coat coverage and thickness evaluation



### Elastomer Lab

- Tested chassis and suspension components to reduce NVH and quantify the static/dynamic performance to feed the virtual models
- Lower control arm hydro bushing evaluations
- Suspension camber links
- Camber link failure studies

### Vehicle Driving Simulator Lab

- State-of-the-art simulator used for completing a shock & spring balance assessment to improve ride comfort, with damper tuning ongoing to further refine performance

### About ARDC:

ARDC plays a role in the R&D work involved in every make and model sold in North America and many Global models.

LOCATION: Windsor, Ontario

SITE: 93,000 square metres

EMPLOYMENT: 800

HISTORY: Opened in May 1996 with a \$30 million (CDN) investment, the ARDC was Canada's first industry-academic partnership of its kind. The facility features six road-test simulators, proprietary software development, and extensive R&D support capabilities. It contributes to engineering and development for nearly all Stellantis products and offers hands-on co-op placements for post-secondary students.

