

Safety Compliance Report - Project Raptor

Author: Nathan Choi, Safety and Compliance Lead

Approvers: Dr. Amara Nwosu (Director of Systems Engineering), Jason Carter (Head of Engineering)

1. Purpose

This report outlines the safety compliance status of the Raptor electric crossover SUV in relation to required standards for design, testing, and operation in North American and international markets. This is a pre-certification summary following internal validation activities.

2. Summary of Compliance Status

Crashworthiness: FMVSS 208, 214, 301 - Compliant Compliant

Child Restraint: FMVSS 225 - Compliant Compliant

Electric Safety: FMVSS 305, SAE J2929 - Compliant Compliant

Functional Safety: ISO 26262 ASIL-C - Partial Partial (88% coverage)

Lighting: FMVSS 108, UNECE R48 - Compliant Compliant

Brakes: FMVSS 135 - Compliant Compliant

Pedestrian Safety: UNECE R127 - Compliant Compliant

3. Critical Observations

Functional Safety Gap:

- Coverage at 88%, target is 90% (ISO 26262).
- Final regression test: 2025-06-01 (VAL-RPT-SW-009).

Battery Integrity:

- Passed crush, immersion, and penetration tests.
- Isolation: 569V (min 500V).

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Child Restraint:

- ISOFIX tested, passed alignment, tension, and corrosion checks.

4. Testing Overview

Frontal Impact: FMVSS 208 - Dynamiq Labs, MI - Pass

Side Impact: FMVSS 214 - Dynamiq Labs - Pass

Rollover: FMVSS 216a - Aegis Automotive - Pass

High Voltage: FMVSS 305 - TCS Canada Labs - Pass

Pedestrian: UNECE R127 - Internal FEA - Pass

Software Testing: ISO 26262 Part 6 - In Progress

5. Compliance Notes

Maple Leaf Motors follows a "safety by design" approach per ENG-RPT-011.

Final declaration pending software retests.

Final audit: 2025-07-10.

6. Approvals and Certifications

Transport Canada - CMVSS - Pending

NHTSA (USA) - FMVSS Summary - Completed

Internal Safety Gate 3 - Completed

EU (UNECE) - Lighting/Pedestrian - In Review

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7. References

VAL-RPT-SW-009 | Software Validation Report - Project Raptor | Rev 1

DOC-RPT-MECH-002 | Mechanical Technical Specification - Project Raptor | Rev A

ENG-RPT-011 | Internal Code of Engineering Practice | Rev A

FRD-RPT-001 | Functional Requirements Document - Project Raptor | 1.0