



**LATIN AMERICAN & CARIBBEAN
NEW CAR ASSESSMENT PROGRAMME
(Latin NCAP)**

TESTING PROTOCOL – MOOSE TEST

Version 2.0.1

December 2024

ACKNOWLEDGEMENT

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Table of Contents

Table of Contents.....	3
1. Introduction	1
2. Test conditions.....	1
3. Moose test Scenarios.....	2
3.1. Moose test SCENARIO A	2
3.2. Moose test SCENARIO B	2
4. Procedure	2
5. Pass / Fail Criteria	3
6. Results and reporting.....	3

1. Introduction

Latin NCAP will conduct “moose tests” in two different scenarios; **Moose Test A** and **Moose Test B**. Both tests will be conducted by a professional driver from the accredited crash test facility. The objective of the “moose test” assessment is to assure the real-life robustness of the electronic stability control systems fitted in cars for the Latin American and Caribbean region.

2. Test conditions

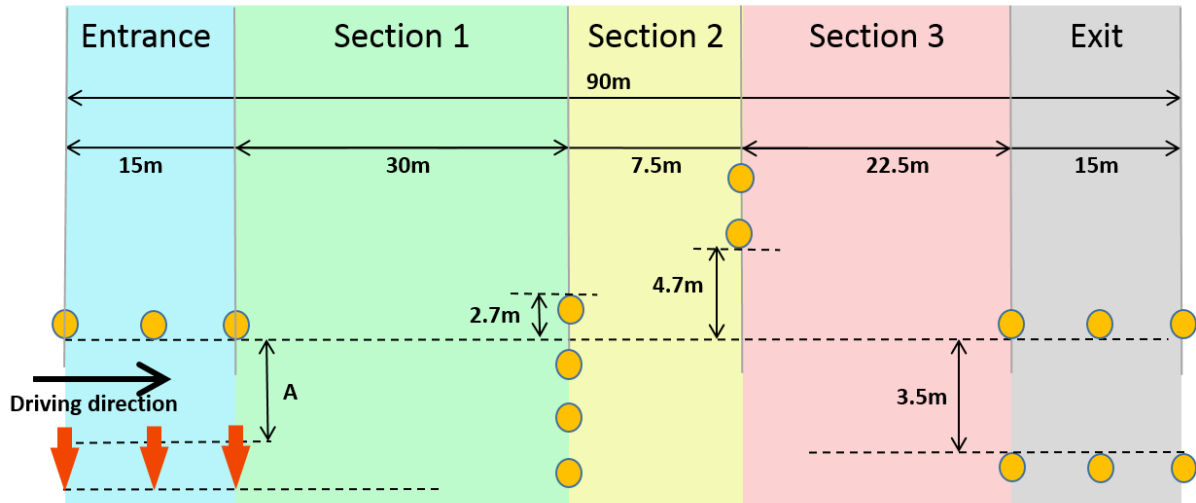
Both Moose Tests configurations will be tested in runs of increasing speed by 5 km/h starting at the lowest speed described on **Section 5 - Pass / Fail Criteria**, until at least one of the fail conditions detailed is met.

- Moose test will be performed with the ESC activated in manufacturer's original default mode. Latin NCAP reserves the right to test under other modes available for information purposes but will base the scoring on the default mode.
- Brakes and tyres must be conditioned according to section 8.1.2 and 8.1.3 of the Euro NCAP “TEST PROTOCOL – AEB systems”, Version 2.0.1, November 2017. Since no steering or logging equipment is installed in the moose test, conditioning will be done at the discretion of the test facility and in agreement with Latin NCAP secretariat.
- The Manufacturer must provide to Latin NCAP the rim and tire specifications for all variants sold in Latin American and Caribbean markets.
- In the case of more than one possibility, the vehicle’s test weight, rim size and other specifications will be decided by Latin NCAP for each model according to specification.
- The vehicle must be loaded with an equivalent weight to 4 adult passengers (70kg per passenger) and 30kg load in the cargo area.
- The vehicle tyres pressure should be set up to correspondent test weight condition according to specified tyre placard pressure label on vehicle or in the vehicle’s manual.
- The driver (from the testing laboratory) will be designated by Latin NCAP.
- In the case that an OEM would like to pre-test the car in advance of the official Moose test, a car manufacturer designated driver may be allowed to drive up to 4 runs ahead of the start of the official test. In this case, the car to be used as a pre-test by the car manufacturer should not be any of the official test units and the manufacturer must provide an extra car for this purpose, selected under the exact same conditions as the official test vehicles (modified, “updated”, “test unit” or pre-production vehicles will not be accepted). Latin NCAP and the test facility are not liable for any incident or damage in the case of a pre-test scenario. The OEM must notify Latin NCAP with at least one month in advance that an OEM driver will drive the car in advance of official test.
- Once the official test runs begun, the OEM designated driver cannot drive the OEM car in the test track until the test is finished.
- All drivers, including OEMs should wear a helmet.
- In the case that instability is noticed at a certain test speed the higher-speed condition will not be tested.
- It is a top priority to ensure driver and car integrity, for this reason manufacturer might be approached to confirm the need of rigs and safety precautions. In this case, rig contact with surface will also be considered as a fail added to the criteria described below.
- **Latin NCAP and the test facility reserves the right to stop the pre-test by the OEM driver at any point if timing, in the case safety or any potential damage could compromise the completion of the test in any way.**

- 2 cameras should be set in safe positions, both aiming to both $\frac{3}{4}$ front view of the car.
- 2 cameras should be set in safe positions, both aiming to both $\frac{3}{4}$ rear view of the car.
- Position of the cameras should allow clear view of the 4 wheels from different angles during the test

3. Moose test Scenarios

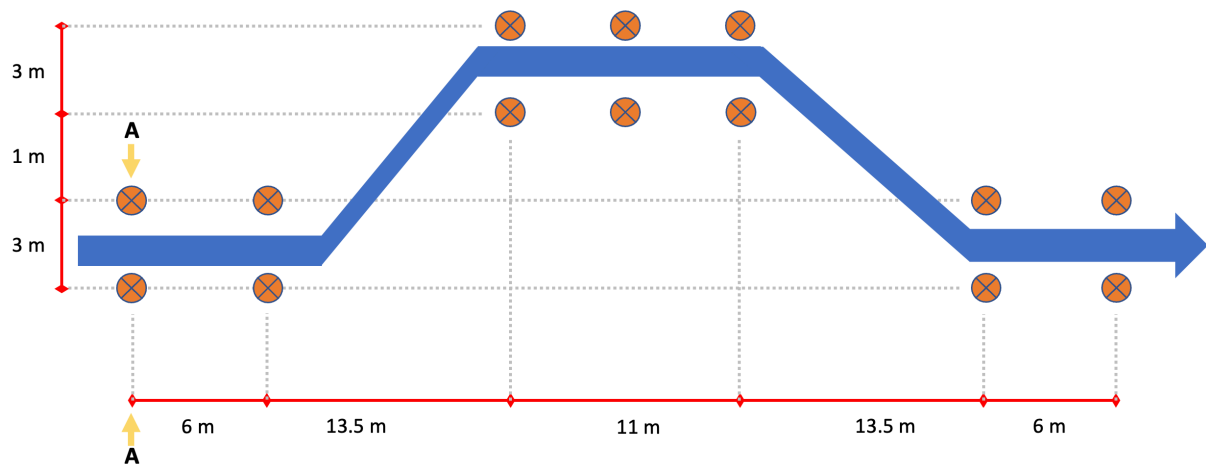
3.1. Moose test SCENARIO A



Entrance in lane A in highest gear at least 2000 RPM; after passing the first cones push ESC activated in Standard mode.

$A = 1.1 \times \text{vehicle width} + 250\text{mm}$

3.2. Moose test SCENARIO B¹



Cone dimensions for both scenarios: 15.5 cm x 15.5 cm (base), 19.5 cm (height)

4. Procedure

- For both scenarios (A and B), the test vehicle must enter the first section of the defined track (first line of cones) at the lowest speed as defined in **Section 5** in the first run and start increasing speed on 5km/h until the car meet any of the fail criteria points.

¹ Geometric track based on *TEKNIKENS VÄRLDS* moose test

- The throttle must be released at the point of entry described above (first cone for “scenario A” and “point A” for scenario B). The vehicle must remain un-throttled during the rest of the test.
- At the exit of the first cone section, the vehicle must be in the highest gear at least 2000RPM. ESC in manufacturer's original default mode..
- The track and weather conditions for both moose test scenarios are identical to those indicated for ESC regulation UN-140 or GTR8 testing procedures.

5. Pass / Fail Criteria

The following criteria will be used as a “fail” considering all runs:

- Rim contact with track.
- Two or more wheels in the air
- Contact with any cone.
- Rollover or significant loss of stability.

The following speeds will be assessed:

- For 2026 and 2027
 - 1) 65 km/h
 - 2) 70 km/h
 - 3) 75 km/h
- For 2028 and 2029
 - 1) 70 km/h
 - 2) 75 km/h
 - 3) 80 km/h

For each test speed, both runs in Scenario A and B need to be successful (no fail criteria detected) to confirm that at that speed the result is a “Pass”.

Example:

Test at 65km/h, Moose test scenario A: OK, Moose test scenario B: OK then 65km/h is OK

Test at 65km/h, Moose test scenario A: NOT OK, Moose test scenario B: OK then 65km/h is NOT OK

Latin NCAP will report the maximum speed at which both scenarios show no detection of “fail” criteria.

6. Results and reporting

The consumer will be presented with a brief overall analysis of the performance of the ESC system in both scenarios, along with the maximum speed reached without any fail.

The ESC total points within the SAS box will be affected according to section 7.2 in the latest version of Latin NCAP **“ASSESSMENT PROTOCOL – SAFETY ASSIST”**.

As this assessment is pioneered by Latin NCAP in the region, Latin NCAP will monitor the performance of the vehicles and reserves the right to propose further changes to the setup, scenario, criteria or rating for 2023 onward, if any. These may include an increase in the test speed.