Japan New Car Assessment Program

JNCAP

Advanced Safety Technology Assessment

New Technology to avoid an accident

2014 ASV+ 先進安全車 AWARD JNCAP

For the first time
2014 October

Choose Safer car

Ministry of Land, Infrastructure, Transport and Tourism

National Agency for Automotive Safety & Victims' Aid

Japan New Car Assessment Program

Outline of Advanced Safety Technology Assessment

Objective

MLIT and NASVA have started new assessment for advanced safety technology, such as Autonomous Emergency Braking System which applies a brake when a collision is inevitable on a vehicle. This so called “Advanced Safety Technology Assessment” assesses safety performance of various new devices. We summarize the results of this assessment.

This leaflet is to provide useful information for users to choose their best fit cars. We try to put a clear description on important points of its performance and notes.

Advanced Safety Technology Assessment targets to mitigate traffic accidents by users using new technology vehicles. Additionally, by providing evaluation and comparing the results we urge more innovation to the manufactures.

Test Procedures・Evaluation Methods

● AEBS* (car to car forward collisions)

Test vehicle collide to target at a speed of 10~60km/h from behind and then the evaluation of collision brake performance. The test scenarios are carried out in two ways. One is to collide into stationary unmoving target. The other is to collide into a moving target at 20km/h.

Points are obtained for the case that alerts or when a brake is applied and collision is avoided or the degree of the speed reduction rate even if it collides.

*Autonomous Emergency Braking System (AEBS)

● LDWS*

The test vehicle maintains a speed of 60km/h or 70 km/h and tests if it alerts when the vehicle crosses the lane. Higher points are obtained if the alert starts on a lower speed range based on real Japanese road accident data.

* Lane Departure Warning System (LDWS)

● Overall points

The remarks are allocated based on real Japanese road accident data and effectiveness of mitigating serious accidents. The vehicle is approved of ASV for a vehicle which gains over 2 points and ASV+ for over 12 points.

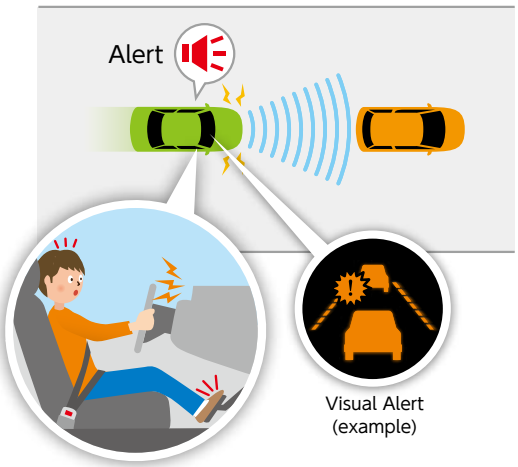
Interpretation of Advanced Safety Technology devices

AEBS (car to car forward collisions)

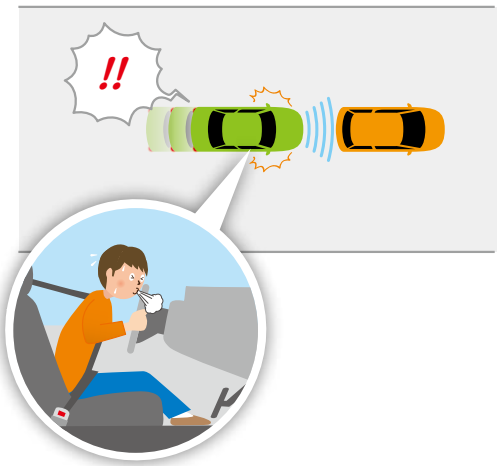
AEBS is the system which detects a forward vehicle with camera or radar and alerts visually or auditorily ① to urge a driver to avoid collision by applying the brake, ② and if no action is taken by a driver and collision is likely to happen it brakes automatically.

However there is a condition as noted in the caution page.

① In case vehicle stops by user's braking with alert



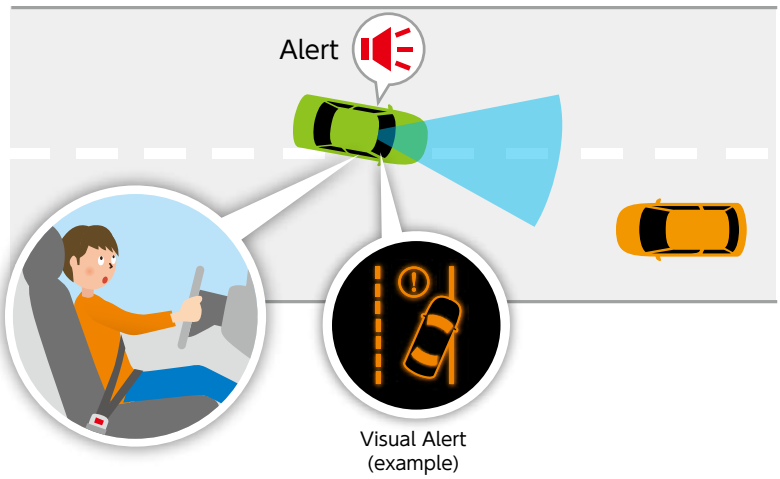
② In case AEBS is activated



LDWS

LDWS is the system which detects the vehicle's position of the vehicle or lane with the camera and alerts visually or auditorily when the vehicle detects deviation.

But it does not alert when a driver operates a left or right turn blink and changes the lane intentionally. In some cases, the system does not respond; refer to the caution page.



Caution Page

1. AEBS (car to car forward collisions)

AEBS, detecting forward vehicle and applies brake or alert is not perfect for every circumstance.

Depending on each detector it differs from operating speed area or distance. Climate condition may cause the system not to work or not work effectively.*

* Example of which insufficient operation can be observed:

Detector	Example
Camera	Dirt on the window Reflection from the object on the dashboard
Laser radar / Milliwave radar	Object placed in front of radar Insufficient maintenance for devices

2. LDWS

It is required that the line has to be clear as this is the system which detects lane line by camera. It may not detect a line in case pavement is covered with snow or soil. Also the system does not operate in case when the white line has disappeared or in the case of low speed. Please follow the user instruction and do not rely on the system. Drive safely.

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Website
http://www.nasva.go.jp

● Search by Key-word
JNCAP
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Interpretation of Assessment results

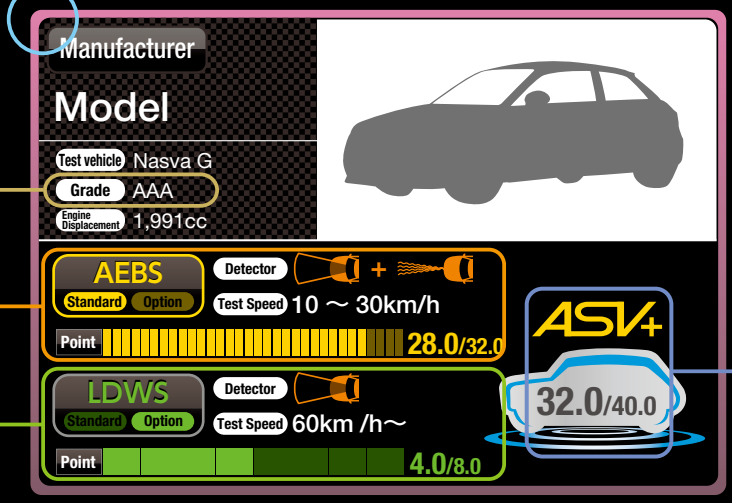
Grade color

Grade AAA

It is indicated in yellow if tested vehicle is a best-selling grade. Others are in white.

Frame color

Silver frame shows「ASV」
pink frame shows「ASV+」



Overall Points

Indicating total points for AEBS and LDWS.
ASV for over 2pt.
ASV+ for 12pt.

AEBS

AEBS Standard Option — Grade Standard equipment

AEBS Standard Option — Option

Detector: Camera / Laser rader / Milliwave rader

Test Speed: 10 ～ 30km/h
Indicating operated speed where certain velocity reduction was confirmed

Point 32.0
Indicating obtained total points in the AEBS test according to deceleration (velocity reduction rate)

LDWS※

LDWS Standard Option — Grade Standard equipment

LDWS Standard Option — Option

Detector: Camera

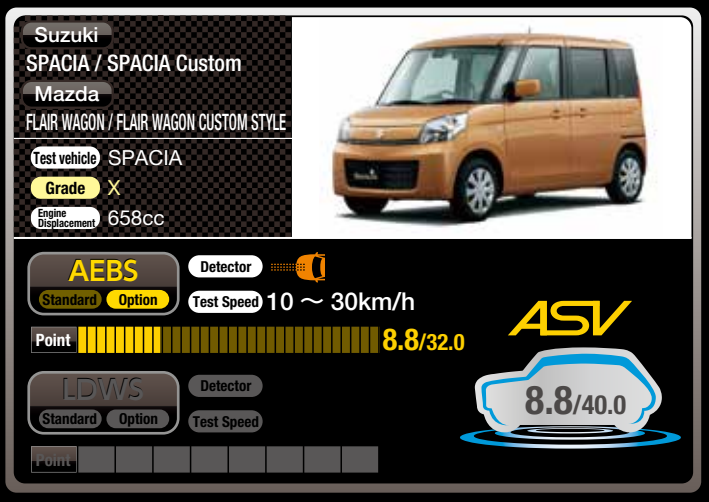
Test Speed: 60km/h～
Indicating speed where alert starts

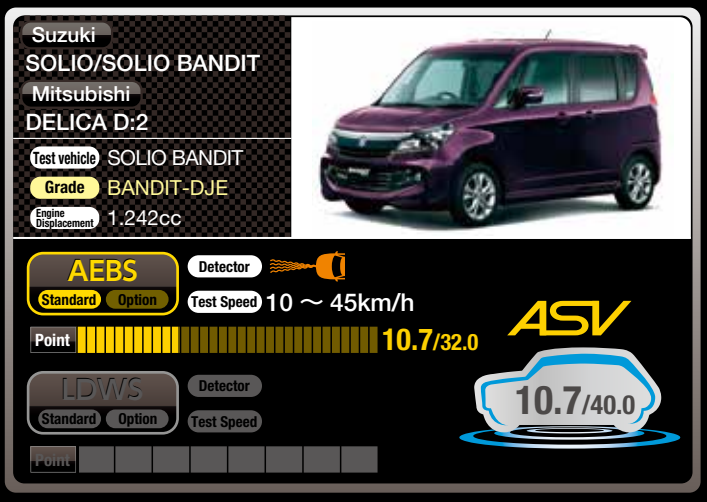
Point 8.0
Higher points are obtained where alerted at lower test speed

※This line is in black if device is not mounted

Manufacturers reported on this paper (alphabetical order)

DAIHATSU MOTOR Co., LTD.
FUJI HEAVY INDUSTRIES LTD.
HONDA MOTOR Co., LTD.
MAZDA MOTOR CORPORATION
MITSUBISHI MOTORS CORPORATION
NISSAN MOTOR Co., LTD.
SUZUKI MOTOR CORPORATION
TOYOTA MOTOR CORPORATION





Suzuki
HUSTLER
Mazda
FLAIR CROSSOVER

Test vehicle HUSTLER
Grade G
Engine Displacement 658cc

AEBS Standard Option
Detector
Test Speed 10 ～ 30km/h
Point 8.9/32.0

LDWS Standard Option
Detector
Test Speed
Point

ASV 8.9/40.0

Suzuki
WAGON R /WAGON R SINGRAY
Mazda
FLAIR/FLAIR CUSTOM STYLE

Test vehicle WAGON R
Grade FX
Engine Displacement 658cc

AEBS Standard Option
Detector
Test Speed 10 ～ 30km/h
Point 8.9/32.0

LDWS Standard Option
Detector
Test Speed
Point

ASV 8.9/40.0

Daihatsu
TANTO / TANTO CUSTOM

Test vehicle TANTO CUSTOM
Grade RS"SA"
Engine Displacement 658cc

AEBS Standard Option
Detector
Test Speed 10 ～ 30km/h
Point 8.0/32.0

LDWS Standard Option
Detector
Test Speed
Point

ASV 8.0/40.0

Daihatsu
Mira e:S
Subaru
PLEO PLUS
Toyota
PIXIS EPOCH

Test vehicle Mira e:S
Grade L"SA"
Engine Displacement 658cc

AEBS Standard Option
Detector
Test Speed 10 ～ 30km/h
Point 7.8/32.0

LDWS Standard Option
Detector
Test Speed
Point

ASV 7.8/40.0

Daihatsu
MOVE/MOVE CUSTOM
Subaru
STELLA/STELLA CUSTOM

Test vehicle MOVE CUSTOM
Grade X"SA"
Engine Displacement 658cc

AEBS Standard Option
Detector
Test Speed 10 ～ 30km/h
Point 7.4/32.0

LDWS Standard Option
Detector
Test Speed
Point

ASV 7.4/40.0

Toyota
CAMRY

Test vehicle CAMRY
Grade G Package
Engine Displacement 2,493cc

AEBS Standard Option
Detector
Test Speed 20 ～ 60km/h
Point 18.2/32.0

LDWS Standard Option
Detector
Test Speed 60km /h～
Point 8.0/8.0

ASV+ 26.2/40.0

Toyota
HARRIER

Test vehicle HARRIER
Grade HYBRID Advanced Package
Engine Displacement 2,493cc

AEBS Standard Option
Detector
Test Speed 20 ～ 60km/h
Point 14.8/32.0

LDWS Standard Option
Detector
Test Speed 60km /h～
Point 8.0/8.0

ASV+ 22.8/40.0

Lexus
IS

Test vehicle IS
Grade 300h F SPORT
Engine Displacement 2,493cc

AEBS Standard Option
Detector
Test Speed 20 ～ 60km/h
Point 17.5/32.0

LDWS Standard Option
Detector
Test Speed 60km /h～
Point 8.0/8.0

ASV+ 25.5/40.0

Lexus LS

Test vehicle: LS
Grade: 460 F SPORT
Engine Displacement: 4,608cc

AEBS (Standard / Option) — Detector: + — Test Speed: 10 ～ 60km/h
Point: 32.0/32.0

LDWS (Standard / Option) — Detector — Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 40.0/40.0

Lexus NX

Test vehicle: NX
Grade: 300h version L
Engine Displacement: 2,493cc

AEBS (Standard / Option) — Detector — Test Speed: 20 ～ 60km/h
Point: 18.9/32.0

LDWS (Standard / Option) — Detector — Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 26.9/40.0

Nissan X-TRAIL

Test vehicle: X-TRAIL
Grade: 20X Emergency Brake package
Engine Displacement: 1,997cc

AEBS (Standard / Option) — Detector — Test Speed: 10 ～ 60km/h
Point: 24.5/32.0

LDWS (Standard / Option) — Detector — Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 32.5/40.0

Nissan SKYLINE

Test vehicle: SKYLINE
Grade: 200GT-t Type P
Engine Displacement: 1,991cc

AEBS (Standard / Option) — Detector — Test Speed: 10 ～ 60km/h
Point: 32.0/32.0

LDWS (Standard / Option) — Detector — Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 40.0/40.0

Nissan NOTE

Test vehicle: NOTE
Grade: X Emergency Brake Package
Engine Displacement: 1,198cc

AEBS (Standard / Option) — Detector — Test Speed: 10 ～ 60km/h
Point: 20.7/32.0

LDWS (Standard / Option) — Detector — Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 28.7/40.0

Subaru FORESTER

Test vehicle: FORESTER
Grade: 2.0i-L EyeSight
Engine Displacement: 1,995cc

AEBS (Standard / Option) — Detector — Test Speed: 10 ～ 60km/h
Point: 31.9/32.0

LDWS (Standard / Option) — Detector — Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 39.9/40.0

Subaru LEVORG/WRX

Test vehicle: LEVORG
Grade: 1.6GT EyeSight
Engine Displacement: 1,599cc

AEBS (Standard / Option) — Detector — Test Speed: 10 ～ 60km/h
Point: 32.0/32.0

LDWS (Standard / Option) — Detector — Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 40.0/40.0

Subaru IMPREZA

Test vehicle: IMPREZA
Grade: XV HYBRID 2.0i-L EyeSight
Engine Displacement: 1,995cc

AEBS (Standard / Option) — Detector — Test Speed: 10 ～ 60km/h
Point: 31.3/32.0

LDWS (Standard / Option) — Detector — Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 39.3/40.0

Honda ODYSSEY

Test vehicle: ODYSSEY
Grade: ABSOLUTE EX
Engine Displacement: 2,356cc

AEBS (Standard / Option)
Detector
Test Speed: 10 ～ 60km/h
Point: 25.3/32.0

LDWS (Standard / Option)
Detector
Test Speed
Point:

ASV+ 25.3/40.0

Honda FIT

Test vehicle: FIT
Grade: HYBRID・L Package
Engine Displacement: 1,496cc

AEBS (Standard / Option)
Detector
Test Speed: 10 ～ 25km/h
Point: 8.0/32.0

LDWS (Standard / Option)
Detector
Test Speed
Point:

ASV 8.0/40.0

Honda VEZEL

Test vehicle: VEZEL
Grade: HYBRID Z
Engine Displacement: 1,496cc

AEBS (Standard / Option)
Detector
Test Speed: 10 ～ 25km/h
Point: 6.7/32.0

LDWS (Standard / Option)
Detector
Test Speed
Point:

ASV 6.7/40.0

Honda N-BOX/N-BOX Custom N-BOX+/N-BOX+ Custom

Test vehicle: N-BOX Custom
Grade: G・A Package
Engine Displacement: 658cc

AEBS (Standard / Option)
Detector
Test Speed: 10 ～ 25km/h
Point: 8.0/32.0

LDWS (Standard / Option)
Detector
Test Speed
Point:

ASV 8.0/40.0

Honda N-WGN/ N-WGN Custom

Test vehicle: N-WGN
Grade: G・A Package
Engine Displacement: 658cc

AEBS (Standard / Option)
Detector
Test Speed: 10 ～ 25km/h
Point: 8.0/32.0

LDWS (Standard / Option)
Detector
Test Speed
Point:

ASV 8.0/40.0

Mazda AXELA

Test vehicle: AXELA
Grade: XD
Engine Displacement: 2,188cc

AEBS (Standard / Option)
Detector +
Test Speed: 10 ～ 60km/h
Point: 17.8/32.0

LDWS (Standard / Option)
Detector
Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 25.8/40.0

Mazda ATENZA

Test vehicle: ATENZA
Grade: XD L Package
Engine Displacement: 2,188cc

AEBS (Standard / Option)
Detector +
Test Speed: 10 ～ 60km/h
Point: 19.6/32.0

LDWS (Standard / Option)
Detector
Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 27.6/40.0

Mitsubishi OUTLANDER/ OUTLANDER PHEV

Test vehicle: OUTLANDER PHEV
Grade: G Navi Package
Engine Displacement: 1,998cc

AEBS (Standard / Option)
Detector
Test Speed: 10 ～ 60km/h
Point: 14.9/32.0

LDWS (Standard / Option)
Detector
Test Speed: 60km /h～
Point: 8.0/8.0

ASV+ 22.9/40.0