

Advanced Driver Assistance Systems

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C O M P A N Y C O N F I D E N T I A L

In The News: CCC ADAS Equipped Rate Predictions

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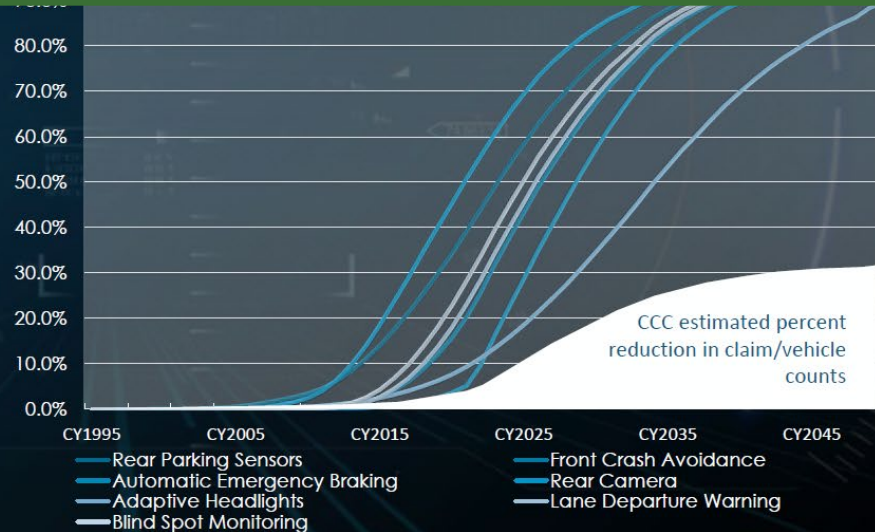
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As ADAS technology climbs, accident frequency is predicted to fall further

Automatic Emergency Braking Required Standard by 2023 Year Model in US

By 2050:

- ✓ Almost 100% of new vehicles will be equipped with ADAS technology
- ✓ CCC projects this technology will cut accidents by a third



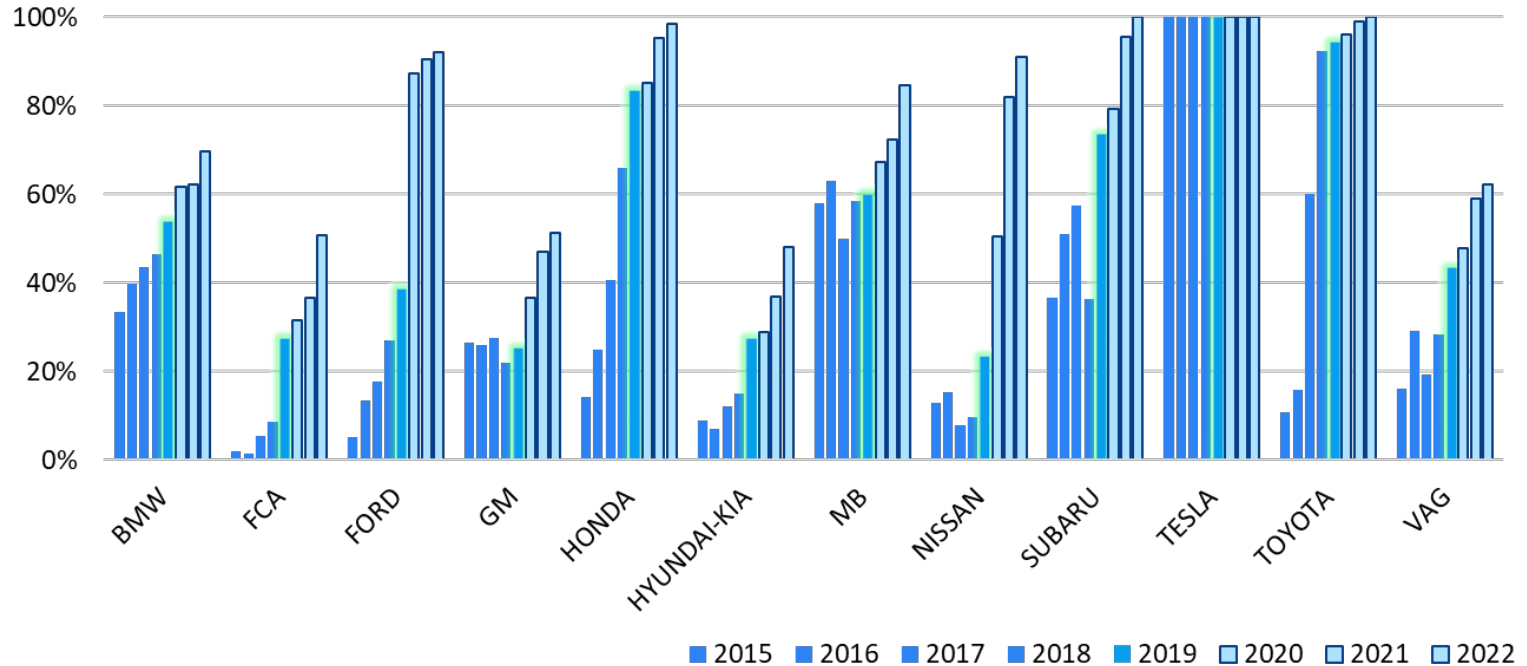
Sources: IIHS, CCC Information Services Inc.
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Source:
Fixed Ops

Front Camera Equipped Vehicles in US from Wards

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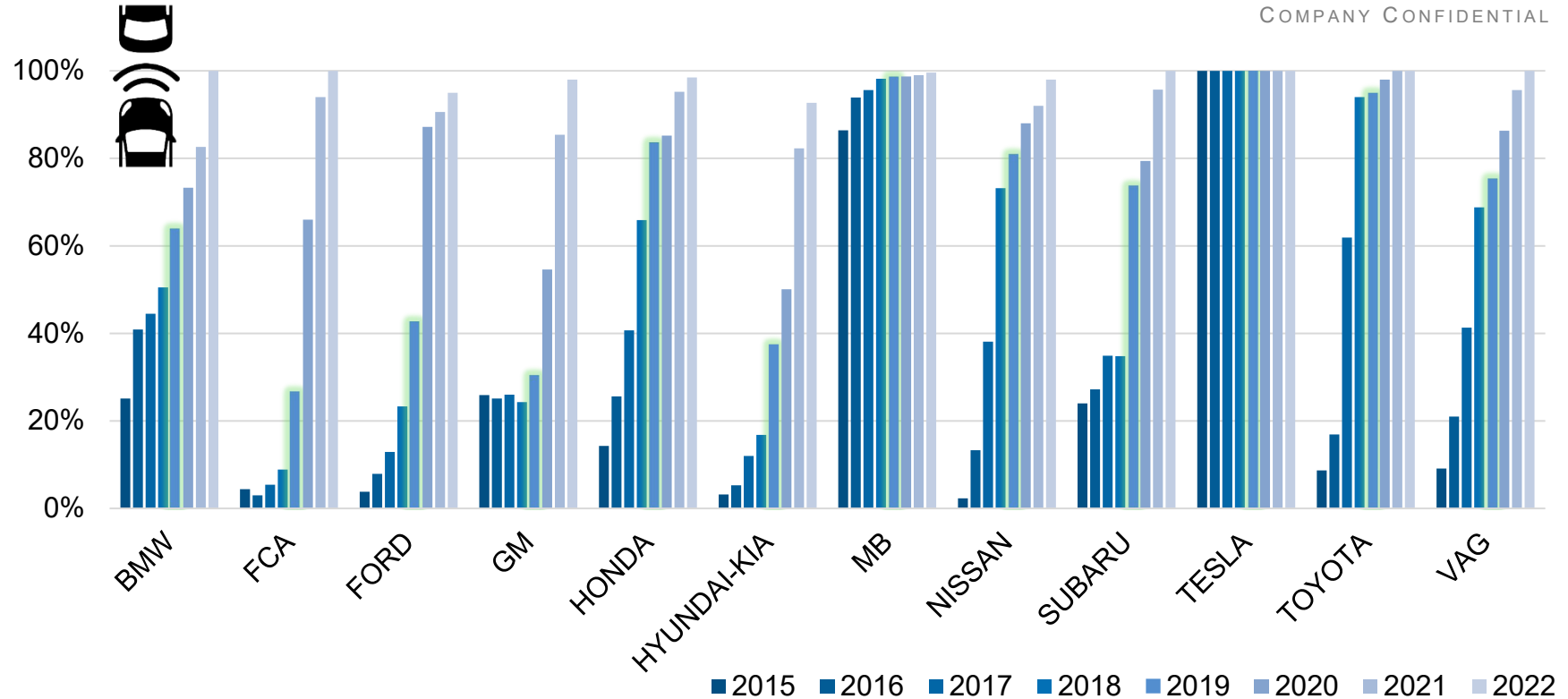
What about the “After Alignment” ones?

Source: Wards Intelligence ADAS Report 2018

Front Radar Equipped Vehicles in US from Wards

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What about the “After Alignment” ones?

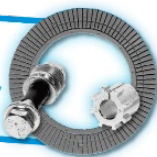
Source: Wards Intelligence ADAS Report 2018

Today: Many Cars Need Two Alignments

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WHEEL ALIGNMENT



Wheel Alignment

- ✓ Mechanical Adjustments
- ✓ Part Replacement
- ✓ Aftermarket Kits



SAFETY SYSTEM ALIGNMENT™



Safety System Alignment™

- ✓ Steering Angle Sensor (SAS)
- ✓ Lane Departure Warning (LDW)
- ✓ Forward Object Detection Radar



100M+ Vehicles *Require* a Safety System Alignment

ESC



Electronic Stability Control (ESC)

- ✓ Standard on ALL cars since 2012

EPS



Electric Power Steering (EPS)

ADAS



Advanced Driver Assistance Systems (ADAS)

- ✓ Automatic Emergency Braking (AEB)
- ✓ Lane Departure Warning (LDW)
- ✓ Adaptive Cruise Control (ACC)

The 2 Types of ADAS Calibration

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Static (Fixture in Shop)

- ✓ Space Requirements Vary
 - Some are very large
- ✓ Fixtures required
- ✓ Each OE has different Fixture



Dynamic (Driving)

- ✓ Potential Issues with:
 - Weather
 - Road Conditions
- ✓ Can take 15+ Minutes
- ✓ Special tools may be required

OEM's use different methods, some use both

When Do Most ADAS Systems Require Reset/Calibration?

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Part Replacement



Collision



Removal of Mounting Part
(Windshield or Side Mirror)



Wheel Alignment
(Some)

OEM's Requiring ADAS Calibration After Collision/Part Replacement

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Wheel Alignment Also

