



GLOBAL NCAP
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STOP THE CRASH
PARTNERSHIP



17 - 19 NOVEMBER 2015, BRASILIA
EVENT PROGRAMME
STOP THE CRASH LAUNCH: NILSON NELSON GYMNASIUM



THE GLOBAL GOALS
For Sustainable Development

ON THE OCCASION OF THE
2ND GLOBAL HIGH-LEVEL CONFERENCE ON ROAD SAFETY



2ª CONFERÊNCIA GLOBAL DE ALTO NÍVEL
SOBRE SEGURANÇA NO TRÂNSITO
TEMPO DE AGIR. Juntos

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WELCOME

I am delighted to welcome the Stop the Crash Partnership to Brasilia for the launch of this important new global road safety campaign. It is always preferable to avoid having a crash at all and so it is very important to raise awareness among the public of the new advanced safety systems that can help to keep them and their loved ones safe.

As the United Nations commits to the ambitious target of cutting road fatalities in half by 2020 we need to encourage widespread use of crash avoidance technologies such as electronic stability control, autonomous emergency braking, anti-lock brakes for motorcycle, and tyre safety systems. A crucial first step is building consumer awareness and encouraging a market for safer vehicles. This is what the Stop the Crash Partnership aims to achieve. It is especially appropriate that the partners have decided to hold their launch event here in Brasilia during the 2nd Global High Level Conference on Road Safety. Crash avoidance systems have a crucial role to play in making the world's roads much safer in the years ahead.

HRH Prince Michael of Kent GCVO
Patron of the Commission for Global Road Safety






INTRODUCTION

Today safety technologies can prevent crashes altogether rather than just protecting people when one occurs. They will help lower the toll of more than 3,000 people killed on our roads every day.

The Stop the Crash Partnership is a new initiative to promote crash avoidance systems including electronic stability control, autonomous emergency braking, anti-Lock brakes for motorcycles, and also to highlight the importance of tyre safety. Led by the Global NCAP, our partners are the ADAC, Autoliv, Bosch, Continental, Denso, Thatcham, ZF-TRW, the Toward Zero Foundation and Latin NCAP. We share a strong commitment to the United Nation's Global Goals and Decade of Action for Road Safety, aiming to halve road deaths by 2020.

We are delighted to launch our initiative here in Brasilia and to demonstrate how these life-saving technologies can make roads much safer in Brazil and across the world.

David Ward
Chairman
Stop the Crash Partnership

A handwritten signature of David Ward in black ink, written in a cursive style.



ELECTRONIC STABILITY CONTROL (ESC)

ESC is the most significant advance in vehicle safety since the introduction of the seat belt and one of the most important crash avoidance systems currently available. This anti-skid technology has already helped prevent hundreds of thousands of loss of control crashes and saved tens of thousands of lives.

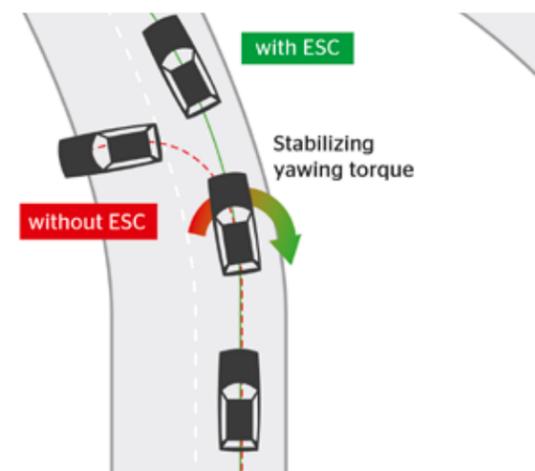
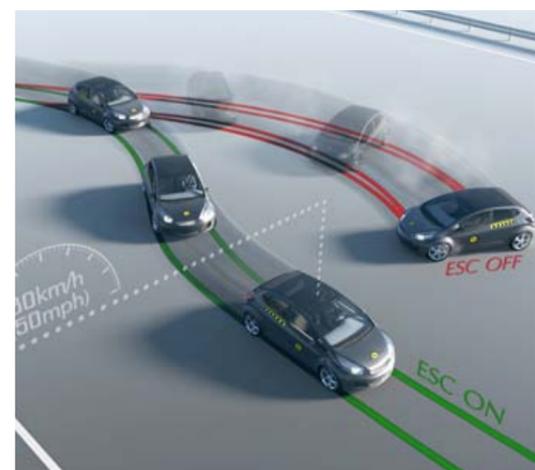
On dry, wet, or slippery roads if the vehicle starts to skid, ESC corrects the slide by reducing engine torque and braking individual wheels to bring the vehicle back on course. The system uses sensors to continuously monitor the stability of the vehicle. When an unstable state is detected, for instance as the result of a sudden direction change, ESC responds in milliseconds and stabilises the vehicle. If the system senses oversteer (i.e. that the rear of the car is starting to drift sideways out of the turn), ESC applies the brakes to the front wheel on the outside of the turn to create a counteracting torque about the vertical axis of the vehicle. This stabilises the vehicle and turns it back onto the path intended by the driver.

Seventeen case studies between 2001 and 2007 have shown ESC to be highly effective, avoiding single vehicle crashes by approximately 30%. In the European Union, where ESC became a mandatory requirement in all new cars from 1 November 2014 it is estimated that since 1995 at least 188,500 crashes involving injury have been avoided and more than 6,100 lives saved by ESC. In the United States, where ESC became mandatory from 2012 it is estimated that already more than 6,000 lives have been saved.

ESC is now mandatory in Australia, Canada, the European Union, Israel, Japan, New Zealand, Russia, South Korea, Turkey and the USA and will soon also be in Argentina. However, Global NCAP believes that the current ESC global fitment rate of just over 60% of new passenger cars and light duty vehicles is too low and wants this to be raised to 100% by 2020.

Global NCAP is recommending that all UN Member States, especially those that have significant automobile production, mandate ESC in all new models by 2018 and in all automobiles in production by the end of the UN Decade of Action for Road Safety in 2020. The United Nations has adopted a global standard for ESC which makes it much easier now for governments worldwide to support mandatory application of the system.

ELECTRONIC STABILITY CONTROL



STOP THE CRASH ESC DEMONSTRATION

The demonstration will showcase a double lane change with and without ESC, where the vehicle has to avoid an obstacle represented by an inflatable airbag.

Driving at speed, the guest will experience the exercise as passengers. When trying to navigate around the obstacle without ESC support, the vehicle will skid and lose control. With ESC, the vehicle will drive safely throughout the manoeuvre without skidding.

AUTONOMOUS EMERGENCY BRAKING (AEB)

AEB is an advanced safety technology that can help drivers avoid or mitigate collisions with other vehicles or vulnerable road users.

Multiple real world studies including a recent report from the Insurance Institute for Highway Safety in the United States show that AEB technologies can reduce injury claims by as much as 35%.

AEB systems use forward looking radar, cameras or optical sensors or a combination of these sensors to help quickly and accurately detect impending vehicles, pedestrians and potentially other obstacles. That information can then be used to apply the brakes to provide up to 1 g deceleration of brake force in an effort to avoid or mitigate collisions.

AEB helps provide constant monitoring of the road ahead and is designed to assist the driver by automatically applying the brakes if they do not respond in an imminent crash situation.

AEB currently exists in three formats responding to different kinds of obstacles:

CITY

Applying the brakes in low speed situations where a crash may be imminent in city environments such as queuing traffic, at intersections or in roundabouts.

INTER URBAN

Applying the brakes to avoid high speed collisions between two vehicles such as on motorways.

PEDESTRIAN

Applying the brakes to avoid hitting a pedestrian stepping into the road, even in situations where pedestrians enter the roadway from behind obstructions such as parked vehicles.

As AEB systems utilize differing sensor technologies and underlying algorithms current cars on the market may be fitted with all three of the systems or only a selection.

AUTONOMOUS EMERGENCY BRAKING



STOP THE CRASH AEB DEMONSTRATION

CITY – the demonstration will showcase a rear end collision avoidance scenario at speeds below 30 km/h, similar to situations experienced in stop and go traffic.

Guests will be invited to drive vehicles at 20 km/h towards a stationary vehicle crash target. The vehicle will stop automatically through the use of the AEB City system, with no braking input required from the driver.

INTER URBAN – The demonstration will showcase a potential rear end collision at speeds above 50 km/h, similar to speeds normally experienced on country roads or motorways.

In this exercise a simulated target vehicle at the front will drive at 20 km/h. The guest in the approaching test vehicle will be travelling at 70 km/h. The driver of the test vehicle will receive audible and optical warnings. When the driver does not react, the vehicles inter-urban AEB system automatically actuates braking interventions known as predictive emergency brake jerks to indicate braking is required.

PEDESTRIAN – The demonstration will simulate a potential accident with a pedestrian crossing in front of the vehicle.

An instructor will drive the guest along a path at approximately 30 km/h, where a pedestrian crash dummy will appear from a hidden area between parked cars directly into the driver's path. The vehicle's pedestrian AEB system will stop the vehicle automatically with no braking required by the driver.

ANTI-LOCK BRAKES (ABS) IN MOTORCYCLES

Around one in six fatalities that occurs on the road in Brazil and in the European Union involves a motorcyclist — in India and China, that figure is even higher. ABS for motorcycles is an effective technology to help reduce this death toll¹.

According to the Insurance Institute for Highway Safety, in the United States the rate of fatal crashes is 31% lower for motorcycles equipped with optional ABS than for those same models without ABS.

ABS is available for all types of motorcycles in all markets: from scooters and mopeds to heavy-duty tourers and powerful motorcycles. There are cost-effective versions for different kind of hydraulic braking systems such as front wheel only as well as front- and rear-wheel brakes combined.

Legislation already exists in some countries and regions mandating ABS on all new bikes over 125cc, while ABS or combined brake systems (CBS) could be fitted to smaller ones (under 125 cc), including scooters. From next year in the European Union ABS will be mandatory for all new motorcycle models above 125 cc. The Indian government has also proposed similar legislation to be applied from 1 April 2017.

HOW DOES ABS WORK?

ABS for motorcycles prevents wheel lock-up and ensures bike stability as well as optimal deceleration while braking. ABS therefore significantly reduces the risk of falling and reduces stopping distance. On a motorcycle fitted with an antilock braking system, the ABS control unit constantly monitors the speed of the wheels using wheel-speed sensors. If a wheel threatens to lock during hard braking or on slippery roads, the antilock braking system regulates the braking pressure in a targeted manner, thereby ensuring optimum braking. In this way, the driving stability and manoeuvrability of the motorcycle is maintained, even where there are adverse driving conditions such as sand, loose chippings or water. This significantly reduces the risk of a brake-induced fall, and usually shortens the braking distance. Depending on the model, the motorcyclists can recognize that the ABS has kicked in through a gentle pulsing on the hand and foot brake levers.

¹ See: Effectiveness of Motorcycle Antilock Braking Systems (ABS) in Reducing Crashes, the First Cross-National Study by Rizzi, Strandroth, Kullgren, Tingvall and Fildes, published in Traffic Injury Prevention (2015) 16, 177–183

ANTI-LOCK BRAKES



STOP THE CRASH ABS IN MOTORCYCLES DEMONSTRATION

The demonstration will showcase a situation, where the motorcyclist has to apply an emergency brake with and without ABS.

For safety reasons during this demonstration the motorbike has outriggers mounted and will be driven by a trained rider. The motorbike will fall down to the outriggers with the system switched off and will brake safely with the system on.

TYRE SAFETY

Tyres are the sole point of contact between the vehicle and the road. All forces transmitted to the road are put down via a footprint no bigger than the size of a postcard. In a critical situation, it is the tyre that determines whether the vehicle can stop in time – or whether it stays safely on course through a corner. This is why car drivers should be aware of the safety benefits of using high-tech tyres inflated to the correct pressure and with adequate tread depth.

Studies from different tyre manufacturers prove over and over again that more than 50 percent of all passenger cars permanently are driven with underinflated tyres. Tests with underinflated tyres show increased risk of adverse safety consequences in emergency situations. That is why it is of crucial importance that air pressures are checked every couple of weeks when the tyres are cold.

Tyre Pressure Monitoring Systems (TPMS) help to permanently monitor a vehicle's tyre pressure and reliably alert the driver in the event of a loss of air pressure. Legislation in Europe and other countries is already mandating TPMS on all new vehicles since November 2014. Nevertheless maintenance of the correct tyre pressure remains the responsibility of the car drivers themselves.

The safety performance of cars heavily depends on the residual tread depth because it is decreasing in parallel to its wear. While new tyres have a tread depth of about 8 mm the legal limit regarding minimum residual tread depth is not more than 1.6 mm for summer and winter tyres - all over the world.

This is far too low when maximum traffic safety is concerned. Therefore experts of leading tyre manufacturers strongly recommend a minimum residual tread depth of 3 mm for summer tyres due to an overproportional decrease in wet/aquaplaning performance and 4 mm for winter tyres due to an overproportional decrease in snow performance.

TYRE SAFETY



STOP THE CRASH TYRE INFLATION MANEUVER DEMONSTRATION

During the Tyre Safety driving session the drivers are requested to perform a double-lane change maneuver "Elk test" on a 250 m track with dry surface and speeds up to 70 km/h in different cars all equipped with different tyre pressures. The direct comparison of cars equipped with correct- and underinflated tyres will offer a remarkable experience regarding vehicle control which is based on these two every day driving situations.

PARTNERS



Global NCAP is an independent UK registered charity serving as the global platform for NCAPs worldwide. Global NCAP has consultative status with the United Nations (ECOSOC), is a member of the United Nations Road Safety Collaboration, and supports the UN's Global Goals and Decade of Action for Road Safety. Global NCAP receives financial support from Bloomberg Philanthropies, the FIA Foundation, International Consumer Testing and Research, and the Road Safety Fund.



ADAC is the largest membership based automobile club in Europe. In addition to the club's focus on benefits and services such as breakdown assistance, air rescue, assistance abroad and travel/traffic information, its efforts also concentrate on making individual mobility safer, eco-friendlier and affordable.



Autoliv is the worldwide leader in automotive safety systems. The company supplies passive safety products and passive and active electronics solutions. It develops and manufactures automotive safety systems for all major automotive manufacturers in the world. Together with its joint ventures, Autoliv has close to 80 facilities with more than 60,000 employees in 28 countries. Sales in 2014 amounted to US \$9.2 billion.



Mobility Solutions is the largest Bosch Group business sector. In 2014, its sales came to 33.3 billion euros, or 68 percent of total group sales. This makes the Bosch Group one of the leading automotive suppliers. The Mobility Solutions business sector combines the group's expertise in three mobility domains – automation, electrification, and connectivity – and offers its customers integrated mobility solutions.



Continental is an international automotive supplier, tire manufacturer, and industrial partner that provides sustainable, safe, comfortable, individual, and affordable solutions. In 2014, the corporation generated sales of approximately €34.5 billion with its five divisions, Chassis & Safety, Interior, Powertrain, Tire, and ContiTech. Continental currently employs more than 205,000 people in 53 countries.

DENSO

DENSO is one of the largest global automotive suppliers of advanced technology, systems and components, heading toward an automotive society where cars have less impact on the environment and drivers have fewer worries about traffic accidents.



Latin NCAP was launched in 2010 to develop a regional system of independent crashworthiness and safety rating across Latin America and Caribbean. Latin NCAP has published the results of more than fifty cars and has contributed to improve the protection levels of the cars sold which in many countries fall below minimum UN safety standards.

Thatcham Research

As the UK's only Euro NCAP accredited research centre and crash facility, Thatcham provide an important role in ensuring high standards in vehicle safety, security and crash repair on behalf of UK insurers. Thatcham are considered a worldwide centre of excellence in the testing and evaluation of active safety systems and autonomous driving technology.



ZF is a global leader in driveline and chassis technology as well as active and passive safety technology. It is one of the world's top three largest suppliers with annual sales exceeding €30 billion and more than 134,000 employees in over 230 locations in 40 countries.

TOWARDS ZERO FOUNDATION

The Towards Zero Foundation (TZF) is a UK registered charity working internationally to encourage a world free from road fatalities. The Foundation serves as platform for co-operation between organisations committed to the application of 'safe systems' approaches to road injury prevention that aim to eliminate road deaths and promote sustainable mobility.



THE GLOBAL GOALS AND ROAD SAFETY

On 25 September the UN adopted the Global Goals for Sustainable Development. Road safety is included in the Goals for Health and Cities and aims to halve the number of deaths and injuries from road traffic crashes worldwide by 2020. The Global Goals and the casualty reduction target are the UN's strongest ever commitment to road injury prevention and gives new urgency to the UN Decade of Action for Road Safety.

To promote the implementation of the Global Goals and their related targets the UN is encouraging the mobilization of multi-stakeholder partnerships. The Stop the Crash Partnership is an initiative aiming to promote crash avoidance technologies with the ambition to achieve a world eventually free from road traffic fatalities. We are proud to be supporting both the Global Goals and the UN Decade of Action for Road Safety.

3 GOOD HEALTH AND WELL-BEING



GOAL 3

By 2020, halve the number of global deaths and injuries from road traffic accidents

11 SUSTAINABLE CITIES AND COMMUNITIES



GOAL 11

2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

17 PARTNERSHIPS FOR THE GOALS



GOAL 17

Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries. Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

For more information about the Global Goals see: WWW.GLOBALGOALS.ORG





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