

DAIMLERCHRYSLER

Safety Pioneer

Safety Pioneer

for the Automotive World

A Tradition of Commitment to Safety

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Pioneering Spirit for the Future of Mobility

DaimlerChrysler has set itself a goal for its customers throughout the world, namely to assure their sustainable and safety mobility.

For DaimlerChrysler, great products, pioneering innovations and honest involvement for society are one: The future technologies developed at DaimlerChrysler Research are the basis for innovative products that offer improved mobility and greater individual freedom.

For DaimlerChrysler, working towards the future has a long tradition. Our pioneering spirit can be seen in the many innovations brought to the customers by our brands. And it shows in the projects currently carried out by DaimlerChrysler Research with a pioneering spirit to create the car of the future.

DaimlerChrysler is the Safety Pioneer

The story of the automobile is a continuing story of creation and innovation. And this story cannot be told without speaking of DaimlerChrysler and the heritage of all our brands: From the first automobile to the car of the future, DaimlerChrysler has the pioneers to realize the future today.

In this story, safety is a prime concern. Our pioneers have always been ahead of their time in coming up with new technologies to improve passive and active road safety.

A selection of our safety innovations we have introduced into the automotive world bear out the fact that DaimlerChrysler is the company with the most safety features in the history of the automobile. DaimlerChrysler is the safety pioneer.

Safety Pioneer

A Tradition of Commitment to Safety



Time of Exploration – Inventing Individual Mobility

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Inventions

DaimlerChrysler's history of technological development is synonymous with the history of the automobile. The world's first automobile in 1886 marked the beginning of a constantly accruing pool of inventions. The pioneering spirit of people like Carl Benz, Gottlieb Daimler, Wilhelm Maybach and Walter P. Chrysler established a new era of individual mobility and initiated the heritage of DaimlerChrysler's brands.

First Automobile

In 1886 Carl Benz was awarded the patent for his "vehicle powered by a gas-engine". This patent is regarded as the birth certificate of the automobile.



First Bus

In 1895 the first omnibus by Carl Benz started service on the Deuz-Siegen line. Its 5 hp engine allowed for a speed of 15 km/h. Eight people could be seated in the first omnibus.



First Truck

In 1896 Gottlieb Daimler sold the world's first truck. The "motorised cart" with 4 hp reached a speed of 12 km/h and could carry 1,500 kilograms.



First SUV

In 1941 the US-Army started using the world's first SUV. The Willys Quad became known throughout the world under the name of Jeep.



Innovations in Safety Technology

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Innovations

With the development of innovative passive and active safety technologies DaimlerChrysler has set milestones in automotive safety. Our “Safety Firsts” are pioneering achievements for the automotive world. The mission of all brands has always been the pioneering spirit for the future of mobility.

First Occupants Safety Cell

In 1951 Daimler-Benz registered the occupants safety cell for a patent. This invention of Béla Barényi is still the basis for passive safety in automobile construction. In 1959 Mercedes-Benz presented the world's first safety cell with integrated crumple zones for the “tailfin” model.



First Automatic Transmission and Power Steering

In 1951 fully automatic transmission and power steering became optionally available from Chrysler.



First Automatic Cruise Control

In 1958 Chrysler is the first in the automotive industry to offer cruise control in the Chrysler Imperial.



First Power Brakes

With the Airflow Imperial Sedan of 1932, Chrysler was the world's first motor manufacturer to introduce power-assisted brakes.



First Four-Wheel Disc Brakes

In 1950 Chrysler introduced disc brakes on all four wheels in the Town & Country Newport.



First Omnibus with Continuous Brake (Retarder)

1964 the company presents the first omnibus with wear-free continuous brake (retarder).



Innovations in Safety Technology

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Innovations

First Anti-Lock Braking System (ABS)

The Mercedes-Benz S-Class of 1978 marked the world premiere of the anti-lock braking system (ABS). In 1981 Mercedes-Benz introduced the first ABS for commercial vehicles.



First Airbag and Belt Pretensioner

In 1981 Mercedes-Benz presented the world's first driver airbag and belt pretensioner in the S-Class.



First Acceleration Skid Control (ASR) for Commercial Vehicles

In 1986 ABS was supplemented by Acceleration Skid Control (ASR) for trucks and buses with air brake. With ASR, a skidding wheel can be stopped individually which greatly improves traction, as well as stability during acceleration and steering.



First Electronic Stability Program (ESP®)

In 1995 the Electronic Stability Program (ESP®) was developed and introduced in the Mercedes-Benz S 600 Coupé. Mercedes-Benz supplied as the first automobile brand since 1999 all its cars with ESP® as standard and makes with it a contribution to the improvement of road safety. In 2002 Mercedes-Benz introduced the first Electronic Stability Program (ESP®) for trucks and vans.



First Lane Assistant for Trucks

In 2000, Mercedes-Benz introduced the first lane assistant in the Actros. Telligent Lane Assistant warns the driver when there is imminent danger of drifting out of lane. Should the truck start to deviate from the lane unintentionally, a loud "rumble strip" noise sounds on the side where the danger is.



First Stability Control for Trucks

In 2000, Mercedes-Benz presented the first Actros with Telligent Stability Control. Stability control recognizes potential instability – for example the risk of braking away or skidding – in advance and counteracts this by means of specific intervention from the brake system.



First Preventive Occupant Protection (PRE-SAFE®)

In 2002, Mercedes-Benz presented PRE-SAFE®, the first preventive occupant protection system. PRE-SAFE® recognizes a potential collision in advance and activates special protection systems even before the impact. These include new belt pre-tensioners and automatically adjusting seats.



First Active Brake Assist for Trucks and PRE-SAFE® Brake for Cars

The first active brake assist system will be available in the Mercedes-Benz Actros in autumn 2006. Active Brake Assist automatically triggers a full application of the brake, if a collision with a vehicle ahead cannot be avoided. The PRE-SAFE® Brake will be available for the S-Class and the new luxury CL-Class in autumn 2006. In collaboration with Brake Assist PLUS, the PRE-SAFE® brake is able to prevent a collision or significantly reduce the severity of the accident.



Pioneering Achievements for the Car of the Future

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The pioneering spirit is also a promise for the future. DaimlerChrysler's research labs are constantly engaged in research and development activities for innovative safety systems under the guiding principle of the Vision of Accident-free Driving.

DaimlerChrysler has set benchmarks and standards as safety pioneers, and intends to continue providing convincing innovations in the future. Safety is the first priority in the vehicle development activities for us.

Intersection Assistance

Current research initiative at DaimlerChrysler Research are concerned with the subject of driver assistance systems at intersections. The prototype of the intersection assistance observes the surrounding traffic, recognizes road signs as well as crossing traffic in order to help avoiding collisions at intersections.

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Safety for both the driver and all other road users. When it comes to protecting people only the very highest standards will suffice, and the Vision of Accident-free Driving lies behind all these development efforts. Intelligent assistance systems of the future will help us even more reliably to interpret the current driving situation and will thus contribute to enhanced road safety.

Our aim is to ensure safe, sustainable individual mobility.



Intersection Assistant

Pioneering Achievements for the Car of the Future

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Freeway Assistance

Freeway Assistance

Current research initiatives at DaimlerChrysler Research concern the subject of driver assistance systems for freeways. The prototype of the freeway assistance combines several technologies into an overriding active safety system:

- Lane Keeping Support: supports the driver to prevent him or her from leaving the lane unintentionally
- TransVision: high-resolution radar helps to look beyond the car in front
- Car2Car communication: data transmitted directly from car to car give predictive warning of hazardous situations



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City Assistance

Further research initiatives at DaimlerChrysler Research: with the city assistance our research engineers developed safety systems that were so far used as modules. They are now combined in the city assistance. The intelligent combination of the systems enable an integrated compilation of the inner-city traffic situation.

City Assistance

Pioneering Achievements for the Car of the Future

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Road Departure Avoidance

Road Departure Avoidance for Commercial Vehicles

A current project at DaimlerChrysler Research is concerned with the subject of road departure avoidance for trucks. The goal is the intelligent combination of lane assistant and stability control. A countervailing force exerted by the steering system makes the driver intuitively steer back onto the lane. If the driver does not react to an acoustic warning signal, a precise braking of individual wheels steers the truck back into the lane.



Cornering Assistant for Commercial Vehicles

The cornering assistant, a current project at DaimlerChrysler Research, aims to demonstrate the intelligent combination of navigation and driving dynamic data: based on information on the route the onboard computer defines the maximum speed for the curve. At excessive speed the driver is warned in good time.

Cornering Assistant