MOTOR TRANSPORT AND ELECTROMECHANICAL COLLEGE

HISTORY OF AUTO

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THE FIRST CAR WITH A ICE

- The first car with a gasoline internal combustion engine (ICE) was established in 1885 by Karl Benz. It was a three-wheeled double crew on high wheels with spokes. By the way, the first single-cylinder engine it "Motorvagen" developed less than one horsepower.

TRANSMISSION

- December 24, 1898 Louis Renault took up the challenge to pass on his Voiturette up a steep Parisian Rue Lepic in Montmartre. Due to the gearbox he did it - and he immediately got the first 12 orders for its "wagon". In 1899, Louis and his brothers founded the Renault Freres, which established a model release Voiturette Type A, equipped with a powerful enough at the time (1.75 horsepower) engine "De Dion Bouton" and the world's first transmission (the three forward one back). The scheme of direct transmission to the driveshaft is still used on rear-wheel drive cars.

LIGHTS, STARTER AND IGNITION

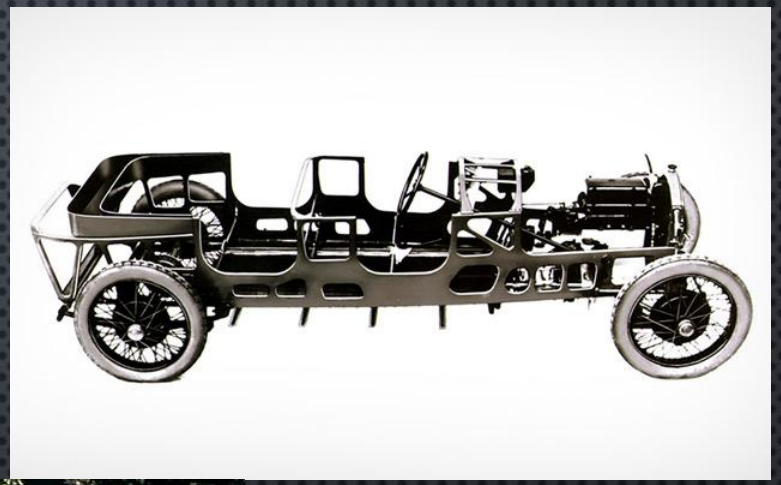
- All these quite familiar to the modern car attributes appeared more than a century ago , in 1912, at one and the same car - Cadillac Model 30 Self Starter (« self-starting "). And in his headlights lamps were already robust tungsten filament . With this car drivers forget about carbide and acetylene , on inefficient lamps with carbon filament bulbs and the " crooked starter " used to start the engine before.

AUTOMATIC TRANSMISSION

- Not surprisingly, the automatic transmission invented lazy Americans living in the country straight as an arrow, highways. The first lucky man in 1939, consumers have become the model Oldsmobile Custom 8 Cruiser, equipped with a standard four-HydraMatic transmission with hydraulic clutch.

DRUM BRAKES, INDEPENDENT SUSPENSION, MONOCOQUE

- As in the case of lamps starter and all these innovations have appeared on one machine in 1922 while simultaneously - it was Lancia Lambda.
- On the "Lambda" was first used monocoque, the first time used drum brakes on all wheels (for rear-wheel drive cars) and an independent front suspension. Total has sold about 13,000 copies Lancia Lambda



POWER STEERING

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- In the first quarter of the XX century twist "steering wheel" only helped biceps - noamp w as not provided. Later, in the 30s, there were complex and noisy pneumatic system, which facilitates participation by drivers, but did not provide much comfort. It was only in 1951, Chrysler Corporation has fitted to his great upmarket sedan Chrysler Crown Imperial world's first power Hydraguide. In Europe, the power steering was introduced by the French, on the model of Citroen DS 19 in 1954

DISC BRAKES

- The same Citroen DS 19, but four years later, in 1958, became a "pioneer" in another area: vehicles with disc brakes.
- In this way, a list of innovations DS 19 did not end: it was front-wheel drive, excellent aerodynamics (Cx = 0.3), hydro-pneumatic suspension and all-wheel drive with a single needle. Not surprisingly, the first day of sales Citroen has received 12,000 applications for the new model.

TURNING

- First there were the special lanterns, then mechanical pointers as arrows indicating the direction of motion, and only in 1925, Edgar Waltz patented the modern "turn signal." But come on production cars he was destined only 14 years later - after the expiration of the patent. The first car with turn signals became Buick Roadmaster 1939.

WINDSCREEN WIPER

- Women's contribution to the history of automotive safety - " wipers ". In the winter 1903 American Mary Anderson , watching the agony of his driver in heavy snow (he constantly had to rush out of the car and wipe the glass) , broke down and came up with a mechanical drive , which has patented . In 1917, the " janitors " with a patented motorized another woman - Charlotte Bridzhvud . A few years of its invention had been lying on the shelf , while in 1926 it is not assumed the company Bosch. In the same year electric "brushes" appeared simultaneously on a large number of cars of different brands . In 1964, American inventor Robert Kearns (1927-2005 gg.) Came up , patented and introduced the idea of " delay " or "Time " with the wiper operation . This company became interested in the idea of "Ford ", which introduced the invention on their cars , and later did other manufacturers . The invention and introduction into production has not been without scandal and trial. The fact that the company "Ford" has issued the invention for his own , but Robert Kearns managed to prove in court that he was the first and the company " Ford " has borrowed the idea and the technology. The court awarded him $ 10.1 million from the company "Ford" , and later the company "Chrysler" has paid him $ 18.7 million .

THREE-POINT SEAT BELTS

- Despite the fact that the straps used by mankind in various fields since the late nineteenth century, it was owned by Volvo is the mechanism, which now saves the lives of many people in the accident - the three-point seat belt. This is the first time the device appeared on the car Volvo PV 544. Before that, there were unpretentious two-point belts, but match the effectiveness of the Swedish invention they could not.

AIR CONDITIONING

- Nowadays, even the low cost cars flaunt climatic systems. However, the world's first car with air-conditioning was introduced only in 1939, at the Auto Show in Chicago. It was Packard 12. The cost of options amounted to 274 dollars: at the time - a third of the price of the new full-size car! To turn on the air conditioner driver had to stop the engine and manually install the belt on the pulley of the compressor. In addition to units located under the hood, he "refrigerator" took up half the trunk and coped with its task is extremely inefficient

NAVIGATION

- The first navigation devices for cars have appeared recently - about 30 years ago. Innovators of the Japanese steel company Honda, offering as an option for their models Accord and Vigor in 1981, the navigation system Electro Gyrocator, which worked ... without GPS! And in general , without any link to the satellites .

- To use the navigator "Honda" , the driver had to take a special plastic map of the area and place the cursor on the location of the current situation , and further built-in gyroscope determined the direction of movement of the vehicle and its speed, and "navigation" is plotted route. Difficult. And it is very expensive for the time - a quarter of the price of the same chord.

- The first is built-in navigation with GPS for the car appeared in 1995 on the car Oldsmobile 88.

AIRBAGS

- In 1967, the inventor of the United States Allen Breed invented the ball sensor to determine the vehicle collision, which has become a key element of a new security system - airbags. It was a rather demanded innovation - it would seem, now you can not wear a seat! It first appeared in the pilot batch of cars Ford Taunus in 1971. The first production car with airbags year later became convertible Oldsmobile Toronado. But the wide distribution of "pillows" were only in the mid 80s. And yes - still need to wear a seat.

ESP

- Bosch is the beginning of 90-s, trying to get the electronics to correct driver errors. Work on the creation of the stabilization system (or system of exchange rate stability) have led to the fact that in 1995, ESP first appeared on the production car, which was the most luxurious sedan from Stuttgart - Mercedes-Benz S 600 in a monumental body of W140. Now Bosch is the largest supplier of sensors and control electronics stabilization system, which, depending on the brand may have different names: DSC (BMW), ESP (Mercedes-Benz), VSC (Toyota) and so on. However, its essence remains the same: to help fix the driver and prevent the development of a vehicle skid or demolition. In addition, current systems are able to deal with the threat of revolution in high machines - for example, the off-road.

ABS

- The first attempts to introduce anti-lock braking systems in cars have been made in the 50's, when it is already used extensively as in railways and aviation. But the first car with ABS appeared only in 1966 - it was the British-wheel-drive coupe Jensen FF, which cost crazy money and eventually went to the world ludicrous edition of 320 pieces. In the late 60's - early 70's ABS acquired American coupe Ford Thunderbird, Lincoln Continental, Oldsmodile Toronado, Chrysler Imperial, Cadillac Eldorado and the Japanese "chlenovoz» Nissan President. In Europe, electronic ABS from Bosch simultaneously used BMW and Mercedes-Benz in 1976 for its flagship model - the 7-series and S-class. That ABS sensors and actuators it uses for its operation, the system stabilization.

ELECTRIC

- The first production electric vehicle is considered to be Mitsubishi i-MiEV, which entered the market in 2009 (and in 2011 and sold in Russia). A little earlier in sale doroguschy sports car Tesla Roadster, but in fact, even before there were electric cars with internal combustion engine - in 1828 the Hungarian physicist Anyos Istvan Yedlikom was invented electric cart with four wheels.

HYBRID

- Mass-produced hybrid car not so long ago: in 1997, when the conveyor got first-generation Toyota Prius. Formally gibridomobil first appeared back in 1901 - it waTwo gasoline engine connected with a pair of generators which produces a current for the electric motors in each of the four wheels. The excess energy is stored in batteries. Furthermore, changing the polarity of power generators, they can be used as starters for gasoline engines.s a four-wheel drive Lohner-Porsche.