

Targeting hydrogen Society: Toyota's next step

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Abstract: in our New Energy vehicle field,stillfor difficulty in the end is the development of pure electric,or pluggedinproblems with the hybrid car.close to,on pagesessionTokyo Motor Show,Toyota Displays theHydrogen Energy fuelbattery concept vehicleTOYOTAPCVPLUS.

Keywords; Targeting hydrogen; Toyota's next step

Why Toyota is in the process of mixing technology started byWhen the outside world is watching,turn to developmentof the so-called"hydrogen Energy car"?from hybrid to hydrogenpower,Toyota How to pulse new energy auto developmentstrategy?

1. Hybrid Opportunity Creation

from1997year launch hybrid car primasince,sales outlets for Toyota cars in%countries and regions.up to2015year7Endof,,Toyota hybrids Global cumulative sales have burstbreak,million,reach804.8million.

from1997YearMonth Toyota starts selling globalFirst productionhybrid Prius,with samelevel compared to cars with fuel engines,canto dramatically reduce fuel consumption while promoting power.and with no external charge,No need to replacebattery,No additional maintenance and other advantages,are listed as the most mature energy-saving technologies of the moment".

base on hybrid,Toyota can alsoto derive several other new energy models.viaIncrease external charge function,can derive plug-in hybridcar;from plug-in hybridremove engine from car,Increase battery capacity,can also develop a pure electric vehicle.But in abundantfield eyes,Pure EV can only satisfy Citythe need for a short trip to thetown.

But once you add fuel to a pure electric carbattery,become fuel cell hybrid steamcar.According to this idea,Toyota Motor through producttired battery,Motor etc Core Technology buildBasic technology for the company's new energy vehicle.so,

Toyota also positioned the hybrid technology as itsCore Environmental technologies for the century.

A person in the industry close to Toyota is ontheEnergyreporter says,Toyota's dual-motora hybrid system with has other car companies that cannot exceedMore technology.

Other car companies such as BMW,Mercedes-Benz also publishesInsert electric hybrid car,but plug-in blendingTheForce is a vehicle that appends the plug-in function on a mixed basis.type.lack of hybrid technical experience,wantIt is not easy to overtake Toyota in this area.

2. Why is cold in the market?

in the United States, a Toyota,people willThink of thePrius,in China,speakingof Toyota,peopleFirst reaction is Camry.a car hobbyto""Energy""Reporter said.ten years ago, that is2005year,best-selling Toyota Prius withhot-selling rings in countries around the world enter China.onthat that time only special car enthusiasts andreturnees know this model is.Common consumptioncan be said to be unheard of.Besides at the timeThe price of the Prius can be purchased at the entry levelmedium Luxury car.

Themain failure of the Prius in China isTheis high priced.Although Toyota's hybridtechnology is

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excellent, However, this is not a reason to promote make Chinese consumers buy it reasons, Similar to Sounds are ubiquitous in car forums.

First time out of the cold. After this, against China Market, Toyota chooses to change the policy, finally, along with Toyota's localization strategy, Toyota Lower The overall positioning of hybrid models. steer into mixed version of Lexus. soon, Rexa Kyushu plant with excellent workmanship and technology to capture high-end consumer groups in China. China Market officially recognized mixed version Lexus.

Then Toyota continued to force the introduction of a variety of mixed car model. in Lexus C Th Enter domestic Market after, Toyota Hybrid models finally open in China start with. after, accompanying this trend, year 4 months, Toyota President Akio Toyoda announces, Toyota Changshu Research and Development Center with two partners National Research and Development Center "Troika". period year 3 Month publication "Cloud Move Schedule. from that time, heavy Toyota car for many years (China) Investment LLC division only started to actually exercise his car sales responsibilities--that's to get more people to know about Toyota Hybrid Technology.

2015 Year, Toyota and Leiling mix The version is listed with the page million yuan price. vs. Euro-European cars 1.4T or 1.6T price for version, the models more advantageous, for hybrid walk to key effect wins

Toyota considers, while the pure electric car makes the lower cost relatively less, but mixed requirements for Chinese families in power models. for previous in home, all-electric cars are still just city tools for transport. This is mainly because, battery tech Development Latency, to a large extent restrict the pure mileage for electric cars. on long distance travelers face, hybrid models still have unmatched Advantages D

But for the public transport system, Pure electric car has more room for development. Heavy truck, bus vehicles need to be equipped with fuel cells, to satisfy overloads and the need for long-distance transportation. Once added new energy technology application, can effectively reduce large mobile intersection Tools dependency on petroleum products.

Post-natal, is often criticized for shrinking quality. but for Corolla and Leiling two models, Mixed System imported version of the Prius The dynamic system is consistent. All two models use hp 1.8L Atkinson engine, and a high-power motor with deep mixing can be implemented by the.

as the core of Toyota Hybrid technology-----Original

E-CVT The variable-speed drive bridge is also not absent.

Hybrid vehicle localization can be said to be abundant Tian's real step in China. but homemade mixed all power cards Laura and Leiling charm, still pending city field check.

=Mirai can be the next subversion Sex Products?

Is in the current big car companies are keen to research Pure EV case, Toyota performance near "insensitive".

When people are spitting Toyota too conservative, When you are holding on to a blend, Toyota selection to sell fuel cell vehicles by announcing the sale (FCV) Mirai to counter this assertion. with the fact proof, Toyota in New Energy vehicle development Area header Buji and dang nian.

But why is Toyota so cold to All-electric cars? the fuel cell vehicle being developed can be heavy now Toyota's glorious past?

at this year's Shanghai auto Show, Toyota Media generation The table describes the company at the end of last year, on the fuel cell vehicles listed in Japan Mirai. and say, exactly based on hybrid core technology, Toyota can create Mirai.

Mirai Fuel Cell Group Volumes small, performance High, maximum output power 114kW (a) PS, volume output density 3.1kW/L*. Step-Up Converters and high-pressure hydrogen fuel tanks, etc. also successfully implemented miniaturization and lightweight. Toyota says its Reliability, Environment characteristics and collision Security

Basic Technical issues resolved.

a fuel cell vehicle makes hydrogen and oxygen in the air chemical reaction, car itself can edge power generation

edge travel. No need to be equipped with an existing electric vehicle. Large drive battery, the endurance can also be significantly promoted. This is the biggest difference from pure electric cars.

With Mirai as an example, in 3 minutes or so to full hydrogen, driving about 650 km. and even if it is charged with a quick charge, all-electric car full 80% also needs minutes. Change to home power supply, and cannot use for a short time. Second, the fuel cell vehicle will not be occupied by the battery the huge empty room. In addition, driving performance is not inferior to. Total and say, fuel cell vehicles on the energy chain, driving attributes, to achieve pure electric environment, quick benefits, while using convenient, endurance better than pure electric cars.

consider further, Mirai can also be used as a power car use. use a different sales appliance to change the power generation voltage, Mirai can occur 9 kW power to be used as home power supply 0

According to Toyota's assumptions, to 2030 Year car Society will go to "" era. this concept The car is based on this vision, for future car shapes State to explore. in Toyota's vision, fuel battery cars are no longer simply energy-consuming mobile workers. The with, also has the role of regional distributed power.

is currently Mirai The price for is 723.6 million - Yuan. provided by the Ministry of Economic and Industry of Japan "" Japanese FCV, auto car benefits user is only pay no. 520 million Yen. Toyota will take the lead from The first construction hydrogenation station and other infrastructure of Tokyo, Ancient House, Osaka, North Kyushu four regions Toyota Store and Toyopet Stores start selling. Toyota wants The to take the fuel cell car as a successor to the hybrid car Key Technology-trained Intent + points obvious.

but, a technology in the industry that does not want to be named personnel to Energy reporter says, "" This model can promote, ultimately depends on infrastructure construction of the. The Outlook is not clear. and now see, Toyota in the end is the first expansion of hydrogen fuel battery Car sales, or do you want to set the foundation first apply network? There are some controversies with. The

: Bet 2050 Strategy

2015 Year Ten Month Day, Toyota releases

the Toyota Environment Challenge 2050 Strategy. to implement this strategy, Toyota has developed the current Line Schedule. that is, 6 no. "" Toyota Environment governance plan (following abbreviation: "" []).

Plan will be the 2016 year to 2020 Year The five-year plan for the IS enforced. strategy to clear do say, for implementation challenges, Toyota from Energy Saving and Fuel Diversification Countermeasures Point of view, with HEV technology is core, Push FCV A new generation of Auto technology development and speed up popularization.

According to this plan, Toyota will continue to promote hydrogen fuel cell model, strive for 2020 year after let hydrogen fuel cell models sell more globally than current sales volume at least grow ten times is the year sales reached 3 million more. in the Fuel diversification countermeasures Section, Toyota has used hybrid technology as its core technology to open the development of a new generation of cars by []. which include to develop the batteries required for all new generation cars, Power key technologies for machine. These are all available outward plug-in plug-in hybrid vehicles, electric car, extended core technologies such as fuel cell vehicles.

shows, Toyota will, as always, insist on hybrid and fuel cell two routes product Direction, electric cars are excluded from corporate warfares lightly outside.

But that does not mean that Toyota gave up the Power move "" This core concept. in the future, Toyota new generation car development, Improve the technology of the "" Level is critical. for lifting plug-in mixing Force model performance and extended pure electric Auto mileage development with energy density Big, Easy high voltage and high temperature compatibility Characteristics of the full solid battery, such as a new generation of batteries.

But is this idea compatible with the new energy car Big trends? can Toyota continue to lead the World auto industry? now look at, no answer case.

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