

**Extended Vehicle Ownership Brings an Increase of Design-Related Problems, J.D. Power Finds**Porsche, FAW Toyota and WEY Rank Highest in Respective Segments

**SHANGHAI: 3 Nov. 2022** – The number of vehicle design-related problems in China has reached 78 PP100 (problems per 100 vehicles), accounting for 43% of the total number in the industry, according to the J.D. Power 2022 China Vehicle Dependability Study<sup>SM</sup> (VDS), released today. Additionally, the longer the vehicle ownership, the higher number of design-related problems.

The study, now in its 13th year, measures the number of problems experienced per 100 vehicles (PP100) during the past six months by owners of 13- to 48-month-old vehicles. A lower score reflects higher quality. The study covers 177 specific problems grouped into nine major vehicle categories: exterior; interior; driving experience; features/controls/displays (FCD); infotainment; climate; seats; powertrain; and driving assistance.

According to the study, in different vehicle ownership stages, the malfunction problems are higher than design problems, but the number of the malfunction problems does not change significantly as the ownership period extends, while design-related problems do. During the first one to two years of ownership, design problems experienced by owners averages 68 PP100. When the ownership period entered the stages of two to three years or three to four years, the number of problems rises to 81 PP100 and 94 PP100, respectively.

“The number of design-related problems in long-term quality is increasing, which is consistent with the China Initial Quality Study released earlier this year,” said **Elvis Yang, general manager of auto product practice at J.D. Power China**. “Design-related problems continue to affect user experience and satisfaction, both in the new-ownership period and the long-term ownership period. In fact, with the intelligence evolution, both hardware and software will affect the quality dependability. Looking ahead, automakers need to form the strategic thinking of ‘integration’ in the R&D stage to improve the ability of software and hardware collaborative iteration.”

Following are additional findings of the 2022 study:

- **Luxury brands lead in dependability:** In 2022, the dependability of luxury brands is 163 PP100, 21 PP100 less than that of mass market brands (184 PP100). Among luxury brands, the three factors of exterior (7.1 PP100), interior (3.6 PP100) and seats (3.4 PP100) are lower than those of mass market brands.
- **Infotainment is leading design-related problem:** Issues with infotainment total 24 PP100. Among those, the number of design problems account for 17 PP100, becoming the highest category of design-related problems. Top 5 infotainment design problems are: radio poor/no reception; not enough power plugs/USB ports; touchscreen/display screen - DTU/too much glare/gets dirty too easily; built-in navigation system – inaccurate; built-in voice recognition - frequently doesn't recognize commands/DTU.
- **Domestic brands have advantages:** From the perspective of segment market, the overall number of domestic brands' compact cars is 158 PP100, which is better than the industry average of 164 PP100. In addition, the domestic brands are also competitive in midsize car segments, but they fall behind in SUV and MPV segments.

## Highest-Ranked Brands and Models

**Porsche** ranks highest in vehicle dependability among luxury brands with 136 PP100, followed by **Land Rover** (145 PP100) and **BMW** (147 PP100).

**FAW Toyota** is the highest-ranked mass market brand with 159 PP100. **Changan Ford** (168PP100) and **Buick** (170 PP100) rank second and third, respectively.

**WEY** is the highest-ranked Chinese domestic brand with 177 PP100. **Geely** (178 PP100) and **Lynk & Co** (178 PP100) rank second in a tie.

There are 16 models from 12 brands eligible for awards across 16 segments in the 2022 study.

- BMW models that rank highest in their respective segments are **BMW 1 Series**; **BMW 5 Series**; and **BMW X1**
- Porsche models that rank highest in their respective segments are **Porsche Cayenne** and **Porsche Macan**
- SAIC Volkswagen models that rank highest in their respective segments are **Volkswagen Polo** and **Volkswagen Passat**

Other models that rank highest in their respective segments are **Baojun 360**; **All New Buick GL8**; **Chevrolet Onix**; **Ford Edge**; **GAC Trumpchi GS3**; **Geely Binrui**; **Honda Vezel**; **Hyundai Mistra**; **Toyota RAV4**.

The 2022 study is based on responses from 37,345 vehicle owners who purchased their vehicle between December 2017 and May 2021. The study includes 208 models from 48 different brands and was fielded from January 2022 through June 2022 in 70 major cities across China.

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NOTE: Five charts follow.

# J.D. Power 2022 China Vehicle Dependability Study<sup>SM</sup> (VDS)

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## Luxury Brands Segment Average and Above

Problem per 100 Vehicles (PP100)



Notes: Brand/Segment are not rank eligible unless they meet study criteria by J.D. Power, including insufficient sample.

Source: J.D. Power 2022 China Vehicle Dependability Study<sup>SM</sup> (VDS)

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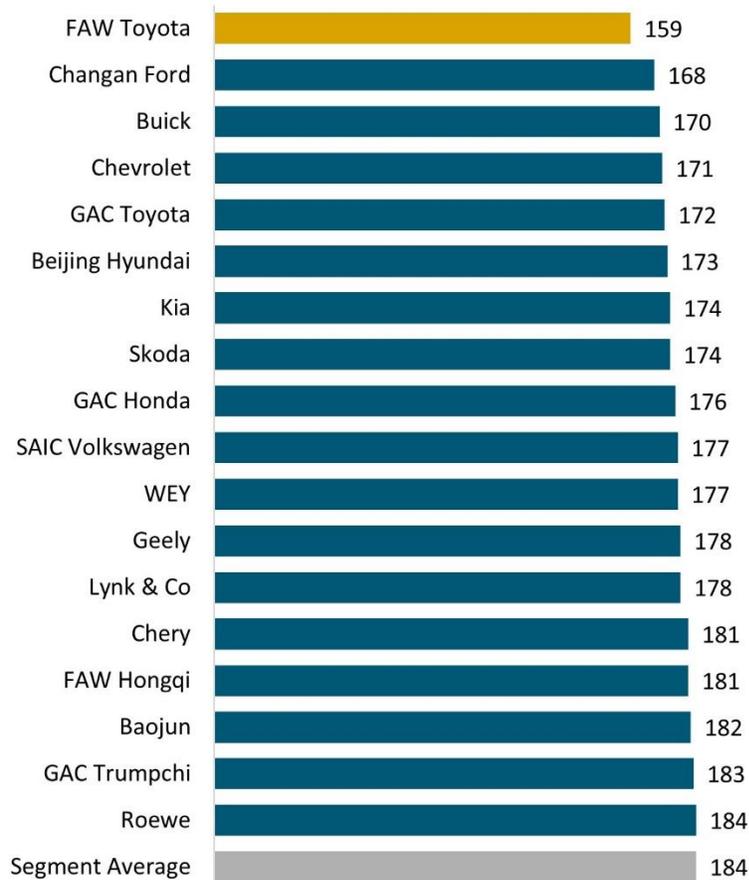
# J.D. Power

## 2022 China Vehicle Dependability Study<sup>SM</sup> (VDS)

### Mass Market Brands

Segment Average and Above

Problem per 100 Vehicles (PP100)



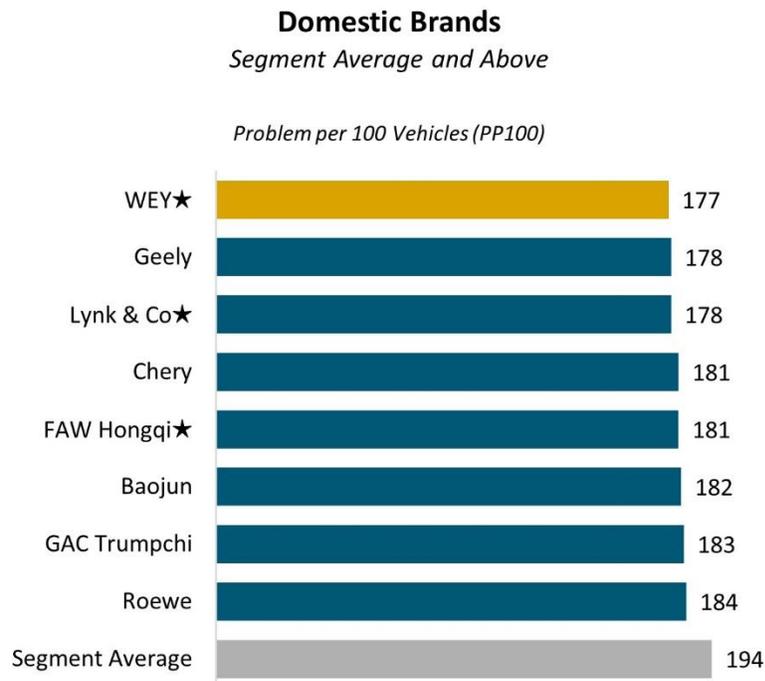
Notes: In alphabetical order if there are tie scores.

Brand/Segment are not rank eligible unless they meet study criteria by J.D. Power, including insufficient sample.

Source: J.D. Power 2022 China Vehicle Dependability Study<sup>SM</sup> (VDS)

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Notes: ★ are Chinese premium brands defined as domestic brands whose premium models contribute more than 50% of its total sales; Premium models are defined as those with an average MSRP of more than RMB 150,000.  
In alphabetical order if there are tie scores.

Brand/Segment are not rank eligible unless they meet study criteria by J.D. Power, including insufficient sample.

Source: J.D. Power 2022 China Initial Quality Study<sup>SM</sup> (IQS)

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# J.D. Power 2022 China Vehicle Dependability Study<sup>SM</sup> (VDS)

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## Top Three Models per Segment Car Segment

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### Compact Upper Car

**Highest Ranked: Volkswagen Polo**  
Second Ranked: Honda Fit  
Third Ranked: Toyota Vios/Vios FS

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### Midsize Upper Car

**Highest Ranked: Volkswagen Passat**  
Second Ranked: Toyota Camry  
Third Ranked: Ford Mondeo

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### Midsize Basic Car

**Highest Ranked: Chevrolet New Cavalier**  
Second Ranked: Hyundai Yuena Verna  
Third Ranked: Chevrolet Cavalier

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### Compact Luxury Car

**Highest Ranked: BMW 1 Series**  
Second Ranked: Cadillac ATS-L  
Third Ranked: Infiniti Q50L

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### Midsize Car

**Highest Ranked: Geely Binrui**  
Second Ranked: Toyota Corolla  
Third Ranked: Nissan Sylphy Classic (tie)  
Third Ranked: Toyota Levin (tie)

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### Midsize Luxury Car

**Highest Ranked: BMW 5 Series**  
Second Ranked: Cadillac XTS  
Third Ranked: Mercedes-Benz E-Class

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### Midsize Upper Economy Car

**Highest Ranked: Hyundai Mistra**  
Second Ranked: Kia K4 Cachet  
Third Ranked: Volkswagen Lamando

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*\* Note: To qualify for an award in the 2022 China Vehicle Dependability Study, models must meet these criteria: 1. Four models with at least 100 samples, or three models with at least 100 samples and with more than 80% of market share. 2. At least one model must perform better than segment average. In the Large Luxury Car segment, these criteria were not met, thus no awards have been issued.*

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Source: J.D. Power 2022 China Vehicle Dependability Study<sup>SM</sup> (VDS)

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## 2022 China Vehicle Dependability Study<sup>SM</sup> (VDS)

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### Top Three Models per Segment SUV and MPV Segments

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#### Small SUV

**Highest Ranked: GAC Trumpchi GS3**

Second Ranked: CHANGAN CS35

Third Ranked: Kia KX1

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#### Compact SUV

**Highest Ranked: Honda Vezel**

Second Ranked: Chery Tiggo 5x

Third Ranked: Geely Vision X6/X6 Pro (tie)

Third Ranked: Honda XR-V (tie)

Third Ranked: Toyota IZOA (tie)

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#### Midsized SUV

**Highest Ranked: Toyota RAV4**

Second Ranked: Chevrolet Equinox

Third Ranked: Kia Sportage R

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#### Large SUV

**Highest Ranked: Ford Edge**

Second Ranked: Honda Avancier

Third Ranked: Volkswagen Tiguan L

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#### Compact Luxury SUV

**Highest Ranked: BMW X1**

Second Ranked: Lexus NX

Third Ranked: Infiniti QX50

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#### Midsized Luxury SUV

**Highest Ranked: Porsche Macan**

Second Ranked: Mercedes-Benz GLC-Class

Third Ranked: Land Rover Discovery Sport

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#### Large Luxury SUV

**Highest Ranked: Porsche Cayenne**

Second Ranked: Land Rover Range Rover

Third Ranked: Land Rover Range Rover Sport

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#### Compact MPV\*

**Highest Ranked: Baojun 360**

Second Ranked: Baojun 730

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#### Large MPV\*

**Highest Ranked: Buick All New GL8**

Second Ranked: Honda Odyssey

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\* No other model in this segment performs above segment average.

Note: To qualify for an award in the 2022 China Vehicle Dependability Study, models must meet these criteria: 1. Four models with at least 100 samples, or three models with at least 100 samples and with more than 80% of market share. 2. At least one model must perform better than segment average. In the Large Luxury Car segment, these criteria were not met, thus no awards have been issued.

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