

Quality of New Energy Vehicles (NEVs) Made by China Startups Maintains Leading Edge, J.D. Power Finds

Chery QQ Ice Cream; XPeng G3i; BYD Han BEV; Tesla Model Y; NIO ES6; BYD Qin Plus PHEV; and Li ONE Rank Highest in Respective Segments

SHANGHAI: 4 Aug. 2022 – Compared with new energy vehicles (NEVs) made by domestic traditional automakers and international/joint venture automakers, the quality of NEVs made by China startup automakers continues to lead the industry. The quality of the interior and exterior are significantly improved, according to the J.D. Power 2022 China New Energy Vehicle Initial Quality Study (NEV-IQS),SM released today.

The study, first published in 2019, is based on the J.D. Power U.S. Initial Quality StudySM (IQS). The NEV-IQS measures new-vehicle quality by examining problems experienced by NEV owners in China within the first two to six months of ownership. New-vehicle quality is determined by problems cited per 100 vehicles (PP100), with a lower number of problems indicating higher quality.

The 2022 study shows that the average number of quality problems of NEVs made by China startup automakers is 149 PP100. This automaker category maintains a leading edge in NEV new-vehicle quality compared with traditional domestic automakers (152 PP100) and international/joint venture automakers (153 PP100). Notably, China startup automakers lead the industry with fewer quality problems in interior (2.5 PP100) and exterior (1.8 PP100). Additionally, owners experience fewer problems than the industry average in three categories: driving experience, powertrain and battery/charging.

“China’s auto industry has been affected by the pandemic, the unavailability of microchips and other objective factors, and thus is facing multiple pressures,” said **Elvis Yang, general manager of auto product practice at J.D. Power China**. “In the increasingly complex market environment, the China NEV market has achieved more rapid development than expected. The high rate of growth is driven not only by the promotion of technological innovation but also by the improvement in product quality. Buyer consideration of NEVs often begins with the design and then by technology features, but is finally determined by quality, so automakers should create value for NEV owners with innovation and emphasize product quality.”

Following are some key findings of the 2022 study:

- **NEV quality is lower than last year:** In 2022, the overall average number of NEV quality is 152 PP100, an increase of 24 PP100 compared with 2021. Among them, interior problems has become the problem category cited most often. The number of problems related to features /controls/ displays has increased the most, by 2.3%.
- **Leading advantage of BEV quality is lower:** The quality gap between battery electric vehicles (BEVs) and plug-in electric vehicles (PHEVs) has narrowed. In 2021, the number of problems in BEVs was 8.1 PP100 less than that of PHEVs. In 2022, the gap has narrowed to 1.1 PP100 less in BEVs than in PHEVs.
- **Fewer battery problems in new NEV models than carry-over models:** New NEV models have improved in terms of the battery/ charging and features/ controls/ display categories compared with carry-over models. The number of problems cited in these two categories for new NEV models are 1.4 PP100 and 1.3 PP100, respectively, fewer than those of carry-over models. NEV automakers

have gradually lowered the number of battery, motor and electric control problems. However, the carry-over models have a significant advantage in the infotainment system and driving assistance categories, with 3.8 PP100 and 2.1 PP100, respectively, fewer problems than new models.

Highest-Ranked NEV Models

Models that rank highest in their respective segments are:

- Small BEV segment: **Chery QQ Ice Cream**
- Compact BEV segment: **XPeng G3i**
- Midsize BEV car segment: **BYD Han BEV**
- Midsize BEV SUV segment: **Tesla Model Y**
- Luxury BEV segment: **NIO ES6**
- Mass market PHEV segment: **BYD Qin Plus PHEV** and **Li ONE**, in a tie

In the luxury PHEV segment, criteria for awards were not met, thus no awards are given this year in this segment.

The China New Energy Vehicle Initial Quality Study (NEV-IQS) measures new-vehicle quality by examining problems experienced by NEV owners in two segments: design-related problems and defects/malfunctions. Specific diagnostic questions include 236 problem symptoms across 10 categories: features/ controls/ displays; exterior; interior; infotainment system; seats; driving experience; driving assistance; powertrain; battery/ charging; and climate.

The study is based on responses from 5,672 vehicle owners who purchased their vehicle between September 2021 and March 2022. The study includes 65 models from 36 different brands, among which 45 models have sufficient samples. The study was fielded from March through May 2022 in 56 cities across China.

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NOTE: One chart follows.

J.D. Power 2022 China New Energy Vehicle Initial Quality StudySM (NEV-IQS)

Top Three Models per Segment

Small BEV

Highest Ranked: Chery QQ Ice Cream
Second Ranked: Wuling Hongguang MINI
Third Ranked: Roewe Clever EV360

Midsize BEV Car*

Highest Ranked: BYD Han BEV
Second Ranked: BYD Qin Plus BEV
Third Ranked: Tesla Model 3

Compact BEV

Highest Ranked: XPeng G3i
Second Ranked: BAIC BJEV EU5/EU5 Plus
Third Ranked: ORA Cat

Midsize BEV SUV*

Highest Ranked: Tesla Model Y

Luxury BEV

Highest Ranked: NIO ES6
Second Ranked: BMW iX3

Mass Market PHEV

Highest Ranked: BYD Qin Plus PHEV (tie)
Highest Ranked: Li ONE (tie)

* Segmentation of new energy vehicles by J.D. Power is based on four segments: BEV (battery electric vehicles)/PHEV (plug-in electric vehicles); Mass Market/Luxury; Small/Compact/Midsize/Large; and Car/SUV. However, to increase the number of models that qualified for awards, thus encouraging the models with the main sales volume in the market, some segments were merged due to the limit of sampled models. In 2022, the Midsize BEV segment was divided into two segments: Midsize BEV Car and Midsize BEV SUV.

Note: To qualify for an award in the 2022 China New Energy Vehicle Initial Quality Study (NEV-IQS), 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 Luxury PHEV segment, these criteria were not met, thus no awards have been issued.

Source: J.D. Power 2022 China New Energy Vehicle Initial Quality StudySM (NEV-IQS)

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