

New Energy Vehicles Facing Traditional and NEV-Specific Quality Problems, J.D. Power FindsNIO Ranks Highest in China NEV New-Vehicle Quality

SHANGHAI: 31 July 2019 – Addressing both new and traditional vehicle quality problems is crucial for New Energy Vehicle (NEV) manufacturers to improve product competitiveness and win consumers' favor, according to the J.D. Power Inaugural China New Energy Vehicle Experience Index (NEVXI) Study,SM released today.

New to J.D. Power in 2019, this study measures new-vehicle quality by examining problems experienced by NEV owners within the first two to six months of ownership. The new-vehicle quality score is determined by problems cited per 100 vehicles (PP100), with a lower number of problems indicating higher quality. This study also measures NEV owners' satisfaction with sales service, after-sales service and product.

The study shows that the most cited problems by NEV owners are traditional vehicle quality problems. The top three most-frequently cited complaint categories are interior (16.3 PP100); exterior (15.8 PP100); and driving experience (14.7 PP100). Complaints about battery and electric motor, the core components of new energy vehicles, are less, with 7.4 PP100 and 3.4 PP100, respectively.

In terms of the NEV-specific problems, the top four complaints by NEV owners are insufficient engine power (2.7 PP100); slow charging speed (1.9 PP100); abnormal reduction of endurance mileage (1.8 PP100); and abnormal powertrain noises (1.4 PP100).

"With the fading of government support, consumers will be paying more attention to new energy vehicles," said **Jeff Cai, General Manager of Auto Product, J.D. Power China**. "New-vehicle quality, as one of the most important elements for product competitiveness and consumers' purchase decision, largely determines which side consumers will prefer when making choices between fossil-fuel vehicles and new energy vehicles. Although challenging, new energy vehicle manufacturers should not overlook the solutions to traditional quality problems while developing NEV core technologies and view it as an opportunity to win the favor of the market and consumers."

Following are additional findings of the 2019 study:

- **Luxury NEV brands (69 PP100) outperform others in NEV new-vehicle quality:** The industry average level of problems reported this year is 89 PP100. Chinese NEV brands by traditional manufacturers (90 PP100) have the most problems.
- **NEV owners are satisfied with their overall user experience:** Vehicle appearance/ styling/ design gets the highest score (7.6 on a 10-point scale), followed by driving experience (7.5) and interior design/ color/ material quality (7.5). Scores of battery performance and in-vehicle high-tech features are slightly lower, at 7.4.
- **User experience with vehicle operation system (OS) needs to be improved:** Vehicle OS are not yet widely accepted by NEV owners. The study finds that 64% of respondents have never tried the feature of over-the-air vehicle software updates. More user scenarios for vehicle OS are waiting to be explored. In addition, the most reported problems by NEV owners when using vehicle OS are few functions (31%); poor interface (26%); poor/ slow network (19%); and system crash/ slow (16%).

Study Rankings

NIO ranks highest in new energy vehicle new-vehicle quality among all brands, with a score of 67 PP100. **BMW** ranks second with a score of 82 PP100. **Chery New Energy** (84 PP100) and **GAC Trumpchi** (84 PP100) rank third in a tie.

BYD Tang PHEV ranks highest in the mass market plug-in hybrid segment. **NIO ES8** ranks highest in the midsize/large BEV segment. In the Luxury PHEV and Small BEV segments, criteria for awarding are not met, thus no awards are issued.

The J.D. Power Inaugural China New Energy Vehicle Experience Index (NEVXI) Study measures new-vehicle quality by examining problems experienced by NEV owners in two categories: design-related problems and defects/ malfunctions. Specific diagnostic questions are included in nine problem categories: features/ controls/ displays; interior; exterior; seats; driving experience; battery; audio/ communication/ entertainment/ navigation; electric motor/ transmission; and heating/ ventilation/ air conditioning.

The study is based on responses from 2,770 vehicle owners who purchased their cars between September 2018 and March 2019. The study includes 41 models from 21 different brands and was fielded from March through May 2019 in 30 major provinces across China.

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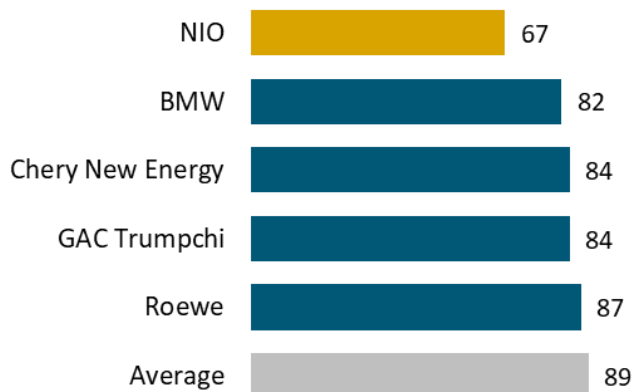
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NOTE: Two charts follow.

J.D. Power 2019 China New Energy Vehicle Experience Index (NEVXI) StudySM

2019 Nameplate NEVXI New-Vehicle Quality Ranking Industry Average and Above

Problems per 100 Vehicles (PP100)



Source: J.D. Power 2019 China New Energy Vehicle Experience Index (NEVXI) StudySM

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2019 China New Energy Vehicle Experience Index (NEVXI) StudySM

Top Three Models per Segment Segment Average and Above

Mass Market Plug-In Hybrid Electric Vehicle*

Highest Ranked: BYD Tang PHEV

Roewe ei6

Midsize/Large Battery Electric Vehicle*

Highest Ranked: NIO ES8

Roewe Ei5

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

Note: To qualify for an award in the 2019 China New Energy Vehicle Experience Index (NEVXI) 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 Luxury PHEV and Small BEV segments, these criteria were not met, thus no awards have been issued.

Source: J.D. Power 2019 China New Energy Vehicle Experience Index (NEVXI) StudySM

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