

Quality Takes a Back Seat to Innovation as Problems Reach a Record High, J.D. Power Finds

<u>Dodge Ranks Highest Overall in J.D. Power Initial Quality Study; Alfa Romeo Ranks Highest among</u> Premium Brands for First Time

TROY, Mich.: 22 June 2023 — New vehicles are becoming more problematic, evidenced by the number of problems per 100 vehicles (PP100) rising a record 30 PP100 during the past two years. According to the J.D. Power 2023 U.S. Initial Quality StudySM (IQS), released today, the rise in problems is 12 PP100 greater than in 2022, which follows an increase of 18 PP100 in 2022 from 2021. In 2023, the industry average is 192 PP100. A lower score reflects higher vehicle quality.

The continuing decline in quality can be attributed to multiple factors such as greater usage and penetration of technology; continued integration of known problematic audio systems into other new models; poor sounding horns; cupholders that don't serve their purpose; and new models with 11 PP100 more than carryover models.

"The automotive industry is facing a wide range of quality problems, a phenomenon not seen in the 37-year history of the IQS," said **Frank Hanley, senior director of auto benchmarking at J.D. Power.** "The industry is at a major crossroad and the path each manufacturer chooses is paramount for its future. From persistent problems carrying over from years past to an increase in new types of problems, today's new vehicles are more complex—offering new and exciting technology—but not always satisfying owners."

The U.S. Initial Quality Study, now in its 37th year, is based this year on responses from 93,380 purchasers and lessees of new 2023 model-year vehicles who were surveyed early in the ownership period. The study is based on a 223-question battery organized into nine vehicle categories: infotainment; features, controls and displays; exterior; driving assistance; interior; powertrain; seats; driving experience; and climate. The study is designed to provide manufacturers with information to facilitate the identification of problems and to drive product improvement. The study was fielded from February through May 2023.

While problems with driving experience are flat year over year, quality declines in all other categories. The largest year-over-year increase in the number of problems is in the features, controls and displays category (+3.2 PP100), followed by infotainment (+2.3 PP100).

Following are key findings of the 2023 study:

- Vehicle basic—door handles—are increasingly problematic: Opening a door was once a non-discussion point—an aspect of a vehicle that had been examined, engineered and mastered. The basic touch point of door handles is now a percolating problem area as manufacturers attempt to redesign them. Owners are having issues with high-tech approaches to this basic function; seven of the 10 most problematic models in this area are battery electric vehicles (BEVs).
- Safety systems causing problems: More than three-fourths (80%) of owners say their new vehicle
 includes all four of the primary driver assistance features—forward collision warning; lane keeping
 assistance; lane departure warning; and blind spot warning. However, problems owners encounter
 in the driver assistance category have increased 1.8 PP100 year over year. The most problematic
 areas are lane departure warning/lane keeping assistance (7.2 PP100) and forward collision
 warning/automatic emergency braking (5.0 PP100) for those that have these features.

- Owners increasingly happier with apps: Manufacturer smartphone apps improve 0.4 PP100 this
 year as the market penetration rate grows to 76%. BEV owners in particular use their app at least
 68% of the time, primarily to monitor the charging process and to view their vehicle's available
 range. The higher usage and unique BEV use cases translate to more problems experienced using
 the app in comparison to those with an internal combustion engine vehicle.
- Android Automotive Operating System (AAOS) issues: A 21.5 PP100 gap exists between vehicles that have an Android Automotive OS without Google Automotive Services (51.1 PP100) and those vehicles that don't have this system (29.6 PP100). This is only for the operating system for invehicle infotainment, not for the smartphone mirroring systems of Android Auto or Apple CarPlay.
- Smartphone charging becomes most deteriorated problem: Across all 223 problems measured in the study, wireless charging pad not working properly has increased by a sizable 1.1 PP100 and is driven by both increased penetration and more usability issues with the technology. Users are experiencing several problems, including poor location; phone overheating; and intermittent charging, if at all. "This is the area where manufacturers really have the opportunity to delight customers with this convenience, but instead are creating a problem for them," Hanley said.
- **Biggest movers and shakers:** Brands that show the largest year-over-year improvement are Maserati (73 PP100 improvement), Alfa Romeo (68 PP100 improvement) and Ram (45 PP100 improvement).
- Unofficially ranked automakers fill bottom spots: Tesla Motors, with 257 PP100, increases 31 PP100 year over year, while Polestar (313 PP100) improves 15 PP100 year over year. Lucid Motors (340 PP100) and Rivian Motors (282 PP100) are included in the industry calculations for the first time but have too small a sample size to be award eligible. These automakers are not officially ranked amongst other brands in the study as they do not meet ranking criteria. Unlike other manufacturers, they do not grant J.D. Power permission to survey its owners in states where authorization is required. Nonetheless, a score was calculated based on a sample of surveys from owners in the other states.

Highest-Ranking Brands and Models

Dodge is the highest-ranking brand overall in initial quality with a score of 140 PP100. Among mass market brands, **Ram** (141 PP100) ranks second and **Buick** (162 PP100) ranks third.

Among premium brands, **Alfa Romeo** ranks highest with a score of 143 PP100. **Porsche** (167 PP100) ranks second and **Cadillac** (170 PP100) ranks third.

The parent corporation receiving the most model-level awards is **General Motors Company** (seven awards), followed by **Hyundai Motor Group** (five) and **Toyota Motor Corporation** (four). Among brands, **Chevrolet** and **Kia** receive the most segment awards (four).

- General Motors Company models that rank highest in their respective segments are Buick Encore
 GX, Cadillac Escalade, Cadillac XT6, Chevrolet Camaro, Chevrolet Corvette, Chevrolet Equinox and Chevrolet Tahoe.
- Hyundai Motor Group models that rank highest in their respective segments are **Genesis G80**, **Kia Carnival**, **Kia Forte**, **Kia Rio** and **Kia Stinger**.
- Toyota Motor Corporation models that rank highest in their respective segments are Lexus GX, Lexus IS, Toyota Camry and Toyota 4Runner.

• **Nissan Motor Co., Ltd.** has the highest-ranking model overall, the **Nissan Maxima** with 106 PP100, and the **Nissan Murano** ranks highest in its respective segment.

Plant Quality Awards

Toyota Motor Corporation's Tahara Lexus, Japan, plant, which manufactures the Lexus IS, Lexus LS and Lexus NX, receives the Platinum Plant Quality Award. Plant quality awards are based solely on defects and malfunctions and exclude design-related problems.

General Motors Company's plant in San Luis, Potosi, Mexico, which produces the Chevrolet Equinox and GMC Terrain, receives the Gold Plant Quality Award for North/South America. BMW AG's plant in Born, Netherlands, which produces the MINI Cooper and MINI Countryman, receives the Gold Plant Quality Award for Europe and Africa.

For more information about the U.S. Initial Quality Study, visit https://www.idpower.com/business/automotive/us-initial-quality-study-iqs.

See the online press release at http://www.jdpower.com/pr-id/2023063.

About J.D. Power

J.D. Power is a global leader in consumer insights, advisory services and data and analytics. A pioneer in the use of big data, artificial intelligence (AI) and algorithmic modeling capabilities to understand consumer behavior, J.D. Power has been delivering incisive industry intelligence on customer interactions with brands and products for more than 50 years. The world's leading businesses across major industries rely on J.D. Power to guide their customer-facing strategies.

J.D. Power has offices in North America, Europe and Asia Pacific. To learn more about the company's business offerings, visit <u>JDPower.com/business</u>. The J.D. Power auto shopping tool can be found at <u>JDPower.com</u>.

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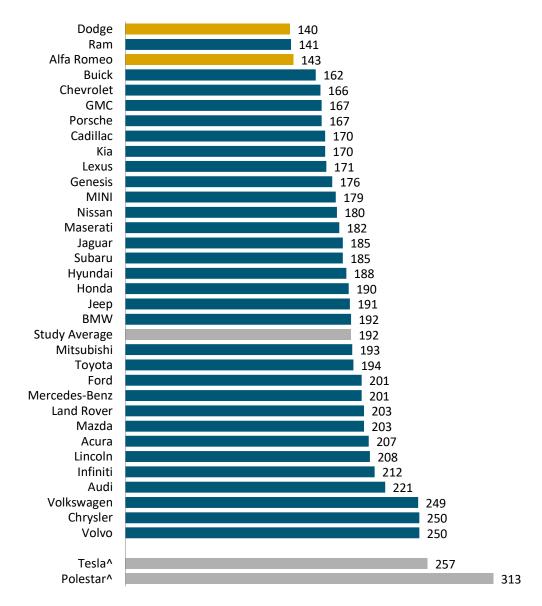
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NOTE: Five charts follow.

Brand Ranking

Problems per 100 Vehicles (PP100)



Dodge ranks highest Overall and among Mass Market brands, and is noted by a gold bar. Alfa Romeo ranks highest among Premium brands, and is noted by a gold bar. Note: ^Brand is not rank eligible because it does not meet study award criteria.

Source: J.D. Power 2023 U.S. Initial Quality StudySM

Highest Initial Quality Model

Nissan Maxima

Top Three Models per Segment

Car Segments

Small Car*

Highest Ranked: Kia Rio

Small Premium Car

Highest Ranked: Audi A3 Mercedes-Benz CLA BMW 2 Series

Compact Car

Highest Ranked: Kia Forte Honda Civic Volkswagen Jetta

Compact Premium Car

Highest Ranked: Lexus IS
Cadillac CT4
BMW 4 Series

Compact Sporty Car*

Highest Ranked: MINI Cooper

Large Premium Car*

Highest Ranked: BMW 8 Series

Midsize Car*

Highest Ranked: Toyota Camry Chevrolet Malibu

Midsize Premium Car

Highest Ranked: Kia Stinger Cadillac CT5 Lexus ES

Midsize Sporty Car*

Highest Ranked: Chevrolet Camaro

Premium Sporty Car

Highest Ranked: Chevrolet Corvette
Porsche 911
Porsche 718

Upper Midsize Premium Car

Highest Ranked: Genesis G80 Mercedes-Benz E-Class

Audi A6 (Tie)

BMW 5 Series (Tie)

Models must have sufficient sample to be considered for the highest initial quality model award. Models are considered from all segments regardless of segment eligibility.

There must be at least three models with 80% of market sales or four models with 67% of the market sales in any given award segment for an award to be presented. In the Large Car and Large Heavy Duty Pickup segments, these criteria were not met, thus no awards have been issued.

Source: J.D. Power 2023 U.S. Initial Quality StudySM

^{*}No other model in this segment performs at or above segment average.

Top Three Models per Segment

SUV Seaments

Small SUV

Highest Ranked: Buick Encore GX

Kia Soul Ford Bronco Sport

Small Premium SUV

Highest Ranked: Audi Q3

Lexus UX Mercedes-Benz GLA

Compact SUV

Highest Ranked: Chevrolet Equinox

GMC Terrain Jeep Wrangler (Tie) Subaru Forester (Tie)

Compact Premium SUV

Highest Ranked: Alfa Romeo Stelvio

BMW X4 Cadillac XT4

Midsize SUV

Highest Ranked: Nissan Murano

Chevrolet Blazer Honda Passport Midsize Premium SUV

Highest Ranked: Lexus GX

Lincoln Nautilus Cadillac XT5

Upper Midsize SUV

Highest Ranked: Toyota 4Runner

Buick Enclave GMC Acadia

Upper Midsize Premium SUV

Highest Ranked: Cadillac XT6

BMW X6 BMW X5

Large SUV*

Highest Ranked: Chevrolet Tahoe

GMC Yukon

Large Premium SUV

Highest Ranked: Cadillac Escalade

Mercedes-Benz GLS Land Rover Range Rover

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Top Three Models per Segment

Van and Pickup Segments

Minivan*

Highest Ranked: Kia Carnival Honda Odyssey

Midsize Pickup

Highest Ranked: Ford Ranger (Tie)
Highest Ranked: Jeep Gladiator (Tie)
Ford Maverick

Large Light Duty Pickup

Highest Ranked: Ram 1500 Nissan Titan GMC Sierra

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Plant Assembly Line Quality Award Recipients

Based on Models Produced for U.S. Market

Problems per 100 Vehicles (Defects/Malfunctions Only)

Model(s) Produced at Plant

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Platinum Award	I	
Toyota Motor Corporation—Tahara Lexus, Japan	27	Lexus IS, LS, NX
North/South America		
General Motors Company —San Luis – Potosi, Mexico <i>Gold</i>	29	Chevrolet Equinox, GMC Terrain
BMW AG—Spartanburg, SC 01, SC Silver	32	BMW X3, X4
Toyota Motor Corporation —Cambridge South, Ontario, Canada (TMMC) <i>Bronze</i>	33	Lexus RX
Toyota Motor Corporation —Georgetown 1, KY (TMMK) <i>Bronze</i>	33	Toyota Camry
Toyota Motor Corporation —Georgetown 3, KY (TMMK) <i>Bronze</i>	33	Lexus ES
General Motors Company —Ramos Arizpe, Mexico <i>Bronze</i>	33	Chevrolet Blazer, Equinox
Asia Pacific		
Hyundai Motor Group —Kwangju Plant 1, Korea <i>Silver</i>	29	Kia Seltos, Soul
Toyota Motor Corporation —Takaoka 2, Japan <i>Silver</i>	29	Toyota RAV4, Venza
Europe and Africa		
BMW AG—Born, Netherlands Gold	29	MINI Cooper, Countryman
BMW AG—Graz (Magna Steyr – BMW), Austria Silver	30	BMW 5 Series, Z4
BMW AG—Oxford, United Kingdom Silver	30	MINI Clubman, Cooper
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Source: J.D. Power 2023 U.S. Initial Quality StudySM