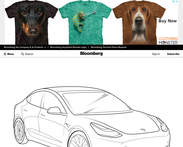

The Tesla Model 3 Survey

5,000 Tesla Owners Told Us What Elon Musk Got Right and Wrong

Quality & Reliability Part I | **Service & Charging** Part II | **Autopilot** Part III | **Market Evolution** Part IV

By Tom Randall, Dean Halford and Cristina Gam
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The biggest survey of Tesla drivers ever conducted shows that the automaker has finally figured out how to deliver cars with fewer problems, cutting the rate of defects nearly in half

Tesla Inc. has sold more than 350,000 of its best-selling Model 3 sedans since 2017, and many of them can have either of two factory-installed flaws: defective paint or defective, chipped parts, misaligned panels and, in fewer cases, mechanical troubles. These flaws became a point of pride among Tesla critics, who posted photos online of their cars' imperfections as proof. Responding to whispers into a hotline, Tesla had just carried out one of the best-made cars in the world—or one of the worst.

The first comprehensive survey of almost 5,000 Model 3 owners, conducted by Bloomberg, found that the rate of defects peaked in the third quarter of 2018, with problems such as paint flaws and trim that didn't line up properly. Tesla carried out a push assembly line to factory parking lot and rolled finished production.

But Tesla is now cranking out almost 450,000 cars each quarter, and for the first time, there's data to show that experience and volume has brought consistency to its manufacturing operations. That's one of the key take-aways from Bloomberg's Model 3 survey, which also shows that the most-reported problems have fallen off to the third quarter this year, compared with the same period a year ago.

A decade after catching together its first vehicle, Tesla has graduated from a niche maker of electric vehicles to a high-volume global manufacturer. This has been an experiment in creating a new kind of car, with unorthodox approaches to service, charging and software updates. The first several hundred thousand Model 3 customers essentially signed up to road test a new vision for the industry. Now, for Tesla continue to explain—growth, it needs to convince customers beyond Tesla that it can deliver the dependability expected of a Toyota, Volkswagen or Ford.

To track Tesla's progress, Bloomberg has been talking to the Model 3's early adopters. We started with a 64-item questionnaire that covers every aspect of having Tesla, and followed up with smaller surveys about crash repairs and new Autopilot features. So far, we have collected half a million words of feedback—enough to fill the first four chapters. Peter Kinder

Do you own a Model 3?
Take the survey

The results are organized into four installments. Part I explains the car itself: reliability, manufacturing and quality. Part II is about the ownership experience, including service, charging, Autopilot, and the future of electric cars—will the demand for fast-charging stations. Tesla didn't respond to requests for comment.

The chart below shows Model 3 problems that came with the car because known in the first month of ownership. Customers were asked to categorize each defect as a "major" or "minor" issue.

Quality Improves in 2019
Defects per 100 vehicles within the first 30 days of ownership
Other issues Major issues

The worst single month for Tesla defects was February 2018, which recorded 145 issues for every 100 cars sold. That's when Tesla began overcoming a dizzying stretch of changes to production and logistics that led to half of the quarter's deliveries rushed out in the final 10 days.

In the months that followed, initial quality improved considerably and reached a record low in the third quarter of last year, according to Tesla's data. Customers reported fewer problems involve the car's exterior. Paint was by and away the biggest source of complaints, with about 25% of owners reporting an issue, followed by irregular gaps between body panels, then exterior trim and doors.

In the automotive industry these concerns are considered proxies for manufacturing precision, and they matter to Tesla. Paint is the first layer of protection and panel misalignment exposed throughout the vehicle. In the early days of the Model 3, meeting this standard proved confoundingly difficult for Tesla.

Most Common Complaints: Paint and Panel Gaps
Defects per 100 vehicles within the first 30 days of ownership
Other issues Major issues

A limitation to Bloomberg's Tesla-only survey is that it doesn't provide comparable insights into how competitors fared in the same time period. Consumer Reports, which surveyed Tesla owners, reported an industry average of 18 problems per 100 cars in 2019. Major differences in survey methodologies make direct comparison impossible. For example, J.D. Power asks owners to report problems that they've had with their car over the past year, instead of the Bloomberg survey, which asks owners to recall defects from the first 30 days of ownership.

The Model 3 survey can, however, identify Tesla's key problem areas and track their trajectory over time. Below are several thousands of comments collected by category: exterior, interior, electronics, and drive systems. We've identified the most common issues, which can be used to sort the responses.

"Panels had paint issues. The rear trunk is misaligned."

Exterior Defects

Tap/click to enlarge, hover for detail, zoom

"Driver's seat has been squeaking and Tesla has not been able to fix it."

Interior Defects

Tap/click to enlarge, hover for detail, zoom

"Flat screen turned off randomly during driving. Fixed with an over-the-air update."

Electronics & Climate Defects

Tap/click to enlarge, hover for detail, zoom

"Tesla had to replace the high-voltage battery due to a wiring defect."

Drive System & Chassis Defects

Tap/click to enlarge, hover for detail, zoom

"Quality is measured in different ways. Being an average owner, I want the car to be mechanically sound and to just work."

After Model 3 owners encountered any problems they encountered with their vehicle, we asked them to rate the quality of their car's exterior, interior, electronics, and drive system. Below is the chart that shows, radar-on-average using the overall reliability score each customer gave the Model 3.

Owners Describe Model 3 Quality and Reliability

Ongoing Reliability (After 30 Days)

"All problems have been cosmetic. Car drives like a champ."

Bloomberg asking for initial ratings, Tesla owners could about their cars. This is scrutinizing of a popular brand reputedly by the Bloomberg survey, and those owners who dealt with defects in their new Model 3 gave the electric vehicle high overall marks for satisfaction. They gave their highest ratings to its design, performance, and some of the standard features that help define Tesla's brand. A nearly unanimous 96.6% of respondents said they would buy a phenomenon to drive. Out of customer comments could be by an consumer product.

Features
Key Drivers Bloomberg Consumer Consumer Otherwise Bloomberg Sales Satisfied

"The car feels like the future, I can never go back."

Tesla frequently modifies its cars after rain through over the air software updates. These have been used to improve the car's acceleration and battery range as well as add video games to the car's 15-inch touchscreen. We asked about some of the core features of the car and how they have been affected by updates. Tesla's software updates have generally concern dragged the Model 3 for its limited range of voice commands and basic automatic windshield wipers, which Musk this month promised to improve.

Features
Key Drivers Bloomberg Consumer Consumer Otherwise Bloomberg Sales Satisfied

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