Customers report iPad 2 damage 3.5 times more likely than iPad 1

10.1% of iPad 2 SquareTrade warranty owners reported a failure or accident within first 12 months of ownership.

SYNOPSIS: SquareTrade analyzed data collected from over 50,000 iPads covered by SquareTrade Care Plans, and found customers reported iPad 2 damage 3.5 times more often than those reported for iPad 1

HIGHLIGHTS OF THE DATA COLLECTED* INCLUDE:

- 9.8% of iPad 2 owners reported a failure from accidental damage within the first 12 months, compared to only 2.8% of original iPad 1 owners.

- Because the rate of accidental damage tends to happen on a straight line basis, SquareTrade projects almost 20% of its iPad 2 tablet warranty holders to report accidental damage over 2 years, compared to 5.5% of iPad 1s.

- Customer data reveals that outside of accidents, the iPad remains an extremely reliable device. Minimal normal use failure rates have even further decreased for the iPad 2.
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iPAD RELIABILITY:
Few Non-Accident Problems

We grouped data of reported failure rates into two categories: consumer-related accidents and normal malfunctions. Malfunction rates were reviewed to explore the reliability of the iPad 1 over the iPad 2 when an accident isn’t involved. Because this data is based upon self-reporting, malfunction rates reported are not an indicator of actual iPad failure rates, but give us a good relative picture on iPad’s reliability.

With 2 full years of iPad 1 data and 1 full year of iPad 2 data, we have strong indications that both devices have been manufactured to a very high standard, with very few non-accident related problems reported.

Figure 1. Reported Malfunction Rate
iPAD RELIABILITY: Few Non-Accident Problems

In the first 12 months, only 0.3% of iPad 2 and 0.9% of iPad 1 owners reported a non-accidental related malfunction to SquareTrade. Moreover, consumers report fewer malfunctions with the iPad than with any other category of portable electronics that SquareTrade has looked at as shown in Figure 3.

Of the non-accident related malfunctions reported by consumers, power and battery issues were the leading problems reported with both the iPad 1 and 2, while screen and software malfunctions also posed occasional issues. Figure 2 shows the breakout of the problems reported by consumers without accidents involved.

Figure 2. Non-Accident Failure Reasons - iPad1 and 2

Figure 3. 12 Month Malfunction Rates of Common Portable Electronics

Next we turn to accidental damage, which we find to be the source of the vast majority of reported iPad problems. Most notably, we see that iPad 2 owners have reported accidental damage at a far higher rate than the iPad 1:

As Figure 4 shows, 9.8% of iPad 2 warranty holders reported accidental damage within the first year, three and a half times the frequency for iPad 1 warranty holders at 2.8%. At the two year mark, the warranty holders for iPad 1 had reported a 5.5% accident rate. Assuming a reporting trend equal to iPad 1, we project 19.5% of iPad 2 owners will report an accident.

The vast majority of the damage reported has been in the form of cracked and shattered touchscreens. Most of the incidents occurred while handling the device, but a number came from other scenarios, as seen in Figure 5.

**Figure 4. Reported Accident Rates after 12 months**
Some of the more unusual iPad accidents reported to SquareTrade included the iPad being vomited on, being thrown out of a moving car by a three year old, and being urinated on by a cat.

Why has there been such a sharp rise in reported failures from accidental damage, even while reports of non-accidental malfunctions have decreased? While SquareTrade doesn’t know for sure, we speculate that there are multiple causes for consumers mishandling the tablets, misperceptions relating to the strength and protective abilities of various iPad covers, and/or design changes in the iPad 2.

This data reinforces the anecdotal evidence of the iPad 2’s relative fragility in a drop test conducted by SquareTrade back in June 2011, where a waist high drop resulted in considerable damage to the iPad 2.

Figure 5.
Causes of Accidental Damage

2. http://www.youtube.com/watch?v=zW_swJieblA
In addition to being thinner, the iPad 2 glass is exposed slightly above the bevel, as opposed to the iPad 1, which has glass that is more protected by the aluminum frame at the corners. Compounding the issue is the curved shape of the edge, which increases the likelihood of impact occurring on the leading edge. Seen in the image below with an iPad 2 stacked on top of an iPad 1, it becomes easy to see the way that a side impact might put more stress on the iPad 2 glass.
THE SMART COVER – OR NO COVER?

The iPad 2 smart cover may be contributing to breakage rates based upon improper use by the consumer of the cover as a means to “grab” the iPad. Customers have reported using the Smart Cover to grab a falling device, only to have the cover – not intended as a fail-safe protector – come off the iPad 2.

Although SquareTrade does not formally collect data around the use of protective cases in evaluating accidental damage claims, we saw enough anecdotal claims involving the Smart Cover to merit further investigation.

In a survey conducted of 257 SquareTrade customers who had an accidental damage claim for their iPad 2, 72% of them said they had a protective case of some sort when they broke their device. About one-third (33%) of all users reported they were using a Smart Cover on their device when it broke.

Furthermore, we asked users whether their protective case had protected their iPad from prior accidental damage. While 41% of Apple Smart Cover users responded that it had protected them at least once, this was far less than other types of protective cases, which all had at least 60% of users saying it had protected them from at least one prior drop.

Figure 6. % of broken iPad 2 owners who said their case had protected them from a prior accident.
OVERALL FAILURE RATES

Putting together the malfunction and accident rates, we arrived at overall rates. With 10.1% of iPad 2 warranty customers reporting a problem in the first year, it is 2.7 times more likely for warranty customers to experience a problem than the first generation iPad 1.

It remains to be seen how long average iPad customers intend to keep their iPad, but we suspect the devices will be not be replaced as frequently as smart phones, which experience 2 year upgrade cycles due to the 2 year carrier contracts that subsidize most customers. Projecting out to 3 years, we anticipate that 30.3% of iPad 2 owners will experience a problem, most likely from consumer-caused accident, compared to 11.6% of iPad 1 owners.

Figure 7. Reported iPad Overall Failure Rates, First 2 Years.
CONCLUSIONS

SquareTrade’s data suggests that the slimmer design and thinner glass of the iPad 2 may have resulted in a device customers will experience more accidental damage than iPad1 customers.

The new iPad 3 is reported to be thicker than the iPad 2, an increase from 8.8 to 9.4 millimeters, and may have other design features that could change the rate of reported accidents. To the extent that the increase in reports of accidents were a result of use of more fragile glass, we look forward to the use of Corning’s new “Gorilla® Glass 2” – announced at this year’s CES trade show as being 20% thinner but as strong as the current generation of Gorilla Glass – in future generations of tablets.

Look out for future reports and drop tests from SquareTrade as we continue to monitor and report on the evolution of tablet durability and reliability.

APPENDIX:
Notes about the Data and Methodology Used

For this study, SquareTrade analyzed the malfunctions and accidents reported by the owners of SquareTrade Care Plans for iPad 1 and 2 devices. We included only items that were purchased brand new (i.e. not refurbished or used).

The following disclaimers apply to our data and analysis:

- Only malfunctions reported directly to SquareTrade are included in the data. Other malfunctions, including software/hardware issues handled directly by Apple, problems associated with product recalls, and those fixed by software/firmware updates, may not be represented in this data.

- SquareTrade’s survey of 257 customers with an accidental damage claim was conducted by an email, linking to an online web survey. In some cases, respondents may have experienced their failure up to 1 year prior to the survey being sent.

- SquareTrade did not ask users at time of claim if they had a protective case on their device when it experienced an accident.

LIMITATIONS:

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