



Tracy Cermack
Project Manager
American Honda Motor Co.

FAST ACTION DRIVES CUSTOMER SATISFACTION

American Honda saves millions using SAS®

Industry

Automotive, Manufacturing

Business Issue

Detect and contain warranty and other issues before they become widespread.

Solution

Early warning system based on SAS® software.

Benefits

SAS® improves safety and customer satisfaction while saving millions in warranty costs.

Engineers at American Honda Motor Co. hope you never have to take your car to the shop – except for routine maintenance.

“People expect their cars to be perfect,” says Tracy Cermack, Project Manager in the Service Engineering Information Department at American Honda. “SAS allows us to integrate text documents with traditional structured product information from warranty, Techline [technician call center] and customer call center data so that we’re capable of quickly addressing issues of quality, reliability and customer satisfaction.”

Boasting one of the most admired and recognized brands in the United States, American Honda ensures the continued quality and performance of its automobiles by listening closely to what its customers – and the data – are saying.

Using SAS for an early warning system that mines structured data and unstructured text, American Honda combines customer and technician feedback with manufacturing and other systems data. The resulting analytic discoveries support engineering improvements that build better vehicles and maintain the automaker’s pre-eminence in the industry.

“Not only does this mean less cost to the company, but it also means less expense and inconvenience to our customers,” Cermack says. “We can fix issues before they ever reach the customers, and that means higher satis-

faction and improves the probability of repeat purchases.”

Product quality, customer safety

Cermack’s group continually analyzes warranty claims, Techline data, customer feedback, parts sales and vehicle sales to gauge quality and safety – looking at essentially anything that possibly could go wrong with a vehicle. The team’s vigilance – coupled with SAS’ analytic power – enables the company to mitigate potential issues before they lead to real problems. If, for example, an analyst identifies a possible concern, the team can alert engineering, manufacturing or even the dealers’ repair shops immediately.

“We’ve implemented a system using SAS data mining and SAS text mining that gives us insight into what the data can tell us,” Cermack explains. “American Honda has an excellent infrastructure for identifying problems and investigating issues that aren’t clear on the surface. There’s always something we could miss if we had to do it all manually, so we rely on SAS to identify and help us make sense of key information.”

Detecting emerging issues

Using SAS, American Honda has developed an early warning system that helps the automaker find and forestall potential problems and go back to previous data for more in-depth analysis. During the project’s development phase, analysts identified

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emerging issues with three different vehicle models – issues that had not shown up earlier. With this help from SAS, American Honda was able to resolve the problems swiftly before they had widespread effects.

SAS Text Miner helps analysts zero in on a single performance issue that might be identified based on text. They can then compare hundreds of potential scenarios and drill into additional areas of information to quickly find key concepts or threads that provide a picture of what’s really happening. By analyzing the text and related structured data, American Honda can pinpoint the real issue and identify key part numbers or other sources for further investigation.

“SAS helps us look at the analyses graphically to identify what stands out,” Cermack says. “Then we can hone it down to a more finite definition that we can act on.”

Hundreds of millions saved

Before using SAS Text Miner, American Honda developed a SAS system to place

warranty and other customer data into categories to define problems and address them as quickly as possible. While this warranty analysis system was cutting-edge for the industry, it still wasn’t comprehensive. The original SAS system worked extremely well when American Honda already knew what the problems were. The new SAS system enhances the solution to uncover root causes and find hidden issues that engineers can correct long before they become problems for American Honda customers.

With the new SAS early warning capabilities built into the warranty analysis system, Cermack’s team can perform simple text-matching functions and look at automatically defined clusters of text in a variety of different ways. If the system detects growth in a cluster over time or a sudden increase in a cluster size, it alerts analysts, managers and engineers for further analysis. Recipients can click on the alert notice, easily view details of the findings and take into consideration the relationship of other variables. As needed, they can request reports to highlight top

part numbers or labor operations related to claims, which can give them better insight and understanding of what’s going on.

“We’ve discovered that parts might be replaced when, in fact, they have nothing to do with the problem, which means the part never needed to be replaced to begin with,” Cermack says. “SAS is helping us make discoveries so that we can address the core issues before they ever become problems – and we can make sure that we are addressing the right causes. We’re talking about hundreds of millions of dollars in savings.”

If a problem is identified two months into production and is corrected right away, then it doesn’t adversely affect the next 10 months of output – hundreds of thousands of cars.

Cermack credits SAS Consulting for ensuring the project’s total success. “Just any consultant wouldn’t do,” she says. “We had an amazing team in SAS – even better than I had expected; I cannot compliment them enough.”



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