



## Using PTC Service Knowledge and Diagnostics to improve service delivery in the automotive industry

TAKING CASE-BASED REASONING TO THE NEXT LEVEL

Car and trucks are becoming ever more complicated machines. This market reality was creating significant quality, uptime, and financial challenges for one well-known manufacturer of trucks, buses, and construction and industrial equipment.

The manufacturer has used case-based reasoning (CBR) for many years to troubleshoot issues and improve efficiency. CBR is a type of artificial intelligence that organizations deploy to capture effective procedures so they can be referenced and applied to solve recurring problems. To further improve this strategy, it needed a more intuitive way to author, store, and share knowledge.

In 2007, the manufacturer's Trucks Technology service and repair organization deployed PTC Servigistics Advisor to support local truck dealers. With Servigistics Advisor, technicians are able to use guided troubleshooting and natural language processing capabilities to help dealer service personnel resolve more unique customer issues on the first call.

Servigistics Advisor is allowing the manufacturer to capture knowledge on repetitive problems and greatly reduce the time needed to author new solutions.

### Diagnostics is simple with the right tools

The manufacturer deployed Servigistics Advisor in a call-center configuration. When dealers have questions, they call a central number and speak to front-office personnel that search the Servigistics Advisor knowledgebase for the most cost-effective solutions. If a search is not successful, the query is referred to back-office technicians who research the issue and prepare a problem resolution.

This process has been well received by dealer personnel who report being able to resolve problems on the first call 86 percent of the time.

Servigistics Advisor provides dealers with easy access to a flexible and fast tool for improving service outcomes and first-time fix rates. Natural search means they can use everyday language to describe issues when conversing with front-office staff. The solution provides a combination of CBR logic, criteria settings, and advanced search engines to identify the most cost-effective solution.

Authoring new solutions for the knowledgebase is similarly quick and easy. A back-office technician can write and post an entry – complete with images, links, and related documents – in as little as 10 minutes. These entries are auditable as workflows and for regulatory oversight.

Servigistics Advisor administrators can edit entries, add values, and optimize search tags using a built-in rich-text editor and features such as assisted tagging, versioning, and mass editing. The solution also includes controls for distributing information to specific internal and external audiences.

## Improving service is a collaborative effort

In 2011, the manufacturer provided a number of dealers with Servigistics Advisor's Field Service module, which provides connectivity to the knowledgebase from any authorized desktop, laptop, or tablet. With access, dealer mechanics are able to search for solutions and collaborate with back-office technicians on troubleshooting, verification, and repair workflows.

Field Service also enables dealers to contribute problem solutions, as when owners of a particular model of truck reported that water was infiltrating the door seal and entering the driver cabin.

One dealer suggested that the problem was being caused by a combination of roof design and door seal positioning. Its service staff found that the leak could be resolved by adding an existing part to create an outer door seal. After the manufacturer's product specialists verified this case, they uploaded a new procedure to the Servigistics Advisor knowledgebase as an approved fix for an otherwise difficult problem.

The manufacturer reports that average time for searching and finding a solution is 8.5 minutes. When it used a previous system, resolving issues typically required four seven-minute calls, which was a significant burden on technical resources.

## Extending knowledge is an ongoing process

Because of the strong productivity gains these solutions delivered, the manufacturer deployed Servigistics Advisor to approximately 40 more dealers in 2013. The service organization also has received requests for implementing the solution from other brands it supports, and management may authorize a global rollout of Servigistics Advisor and Field Service in 2016 and 2017.

Transitioning to PTC technology has been an ongoing process for the manufacturer. Along with diagnostic solutions, it has discovered that this information provides a valuable tool for training new employees for roles such as technical and after-sales support. Lessons-learned from successive engagements have enabled the company to continue reducing the time required to detect issues and create workable, cost-saving solutions.

Building knowledge and automating diagnostic activities are allowing the manufacturer to share the insights of individual technicians across a diverse workforce. And this more efficient approach to service is improving outcomes even as it lowers costs.

To learn more, please visit:

<http://www.ptc.com/service-lifecycle-management/knowledge-diagnostics>

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