ATS Inspect

Case Study

Heavy Truck Manufacturer

Inspection and Production System Integration

Quality Requirements

Wide-ranging customer demands and requirements are the norm in the heavy truck industry. Truck manufacturers are constantly addressing quality issues and part shortages due to product variation.

It is critical to track vehicles to determine if the correct options are installed or to track the state of completion when part shortages occur.

Until recently, a major international truck manufacturer still relied on paper-based tools, and tracking was inefficient, labor-intensive and prone to error. Tracking quality concerns in this environment was difficult even when things were running smoothly.

Truck manufacturers face many challenges

Complex Assembly Issues

In a typical heavy truck manufacturing scenario, each vehicle of a particular type is slightly different from the next. For this major international truck manufacturer each vehicle running down the assembly line had a route sheet that specified the required assembly options.

The variety of options poses a challenge from a manufacturing standpoint, because unique parts are required for the different options, and each vehicle configuration requires inspectors to determine if that vehicle is properly assembled.

Tracking the required components for each truck and having them available at the right place at the right time is essential.

Keeping track of custom builds is vital

Late Delivery Issues

This major truck manufacturer had a run of the same model of trucks coming down the production line. Based on customer requirements, a number of trucks required leather interiors while others required different engine sizes.

The production supervisor was notified by production planning that, despite best planning efforts, gray leather seats had not arrived from the supplier and that the special 13-liter diesel engine delivery had been delayed and was re-promised for the following week.

Many Requirements

The challenges facing the production line included:

▶ Identifying the trucks that required the gray leather seats and the special diesel engines so that they could be moved off the assembly line into a staging area until the proper parts arrived.

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- Attempting to preserve paper route sheets so that they were not lost or destroyed, thus keeping inspectors from tracking completed assembly processes.

- Performing the time-consuming process of walking from truck to truck when the parts arrived to determine which trucks had seats missing.

- Generating inspection reports (done manually) needed to confirm each vehicle's configuration based on the selected options.

- Transferring In-line and in-warranty quality data from paper forms into separate quality databases for analysis and reporting, a step that often introduced errors into the process and into the quality databases.


ATS Inspect offers a portable solution

The ATS Inspect Solution

The manufacturer implemented the ATS Inspect solution at this truck assembly plant. ATS Inspect is a visual quality inspection system that handles attribute and variable data collection for incoming, in-line and in-warranty inspection.

ATS Inspect also includes dozens of reports that provide a comprehensive view of quality concerns for inspected products. With ATS

Inspect's web-based reporting, a manufacturing operation has access anytime, anywhere, to up-to-the-minute reports that provide the ability to drill down to the required level of detail.
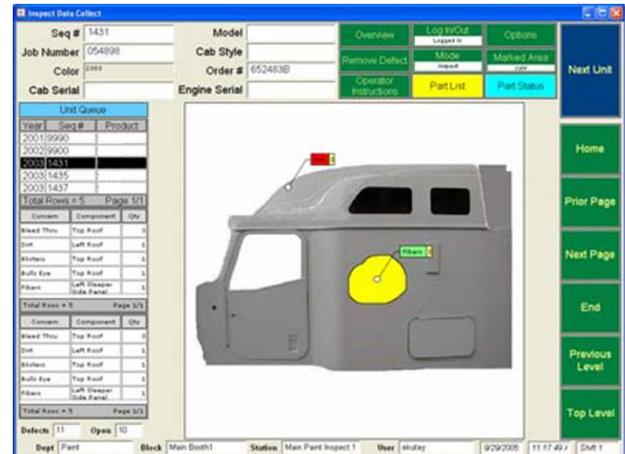
Graphic images allow inspectors to pinpoint defects

Seamless Communication

External systems can query the ATS Inspect database to determine the exact status of a particular vehicle, including what defects have been encountered, missing parts and repair times.

ATS Inspect can also sends e-mails and cell phone text messages to the material handling team for immediate action.

Foolproof Checklists

Foolproof electronic checklists ensure there are no missing or incorrect options. These checklists display a series of questions about the options on the inspected vehicle. ATS Inspect software compares the inspector's responses to the particular VIN specifications to determine if the vehicle was assembled correctly. Because the inspector is alerted to missing or incorrect options right away, corrective action can be taken immediately.

The inspection results are stored in ATS Inspect's quality database. Since electronic checklists cannot get lost or damaged this ensures a permanent, secure inspection record for all VINs.

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Instantaneous Reporting

Instantaneous reporting is possible with up-to-date analytical tools for spotting and diagnosing trends. Managers no longer need to wait for manually entered quality data, nor do they have to query and consolidate data across multiple databases to see the results of quality initiatives. ATS Inspect's web-based reporting delivers timely information the way you want to see it. Pareto charts, graphical reports and concern spectrum reports offer drill-down capability to the individual defect detail.
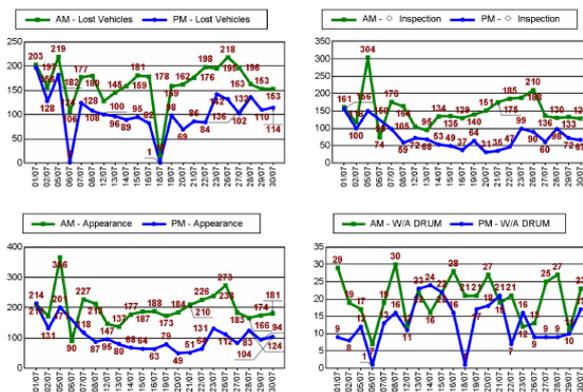
ATS Inspect offers many reporting solutions

This particular manufacturer went 18 consecutive months without a single incorrect build, resulting in significant cost and time savings. Improved performance also enhanced relationships with the truck manufacturer's customers.

The ATS Inspect solution can be used in many different manufacturing industries, including automotive, medical, aerospace, electronics, defense and others that use either a serialized or batch production method. ATS Inspect can make a difference in profitability in any manufacturing situation as timely defect resolution significantly increases productivity and savings.

ATS is an ***Independent* Solution Provider**, with over 30 years' experience in the manufacturing systems arena and a wealth of experience undertaking Continuous Improvement initiatives and Manufacturing IT solution design, deployments and 24/7 support assignments.

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