



The Global Language of Business

ContiTech turns complexity into simplified traceability with GS1 standards



CHALLENGE: ContiTech manufactures and delivers customised suspension systems based on a customer's specific requirements. The company needed to efficiently produce these individualised systems while ensuring each system was built and delivered to the right customer.

SOLUTION: The company assigns and applies a serialised GS1 Global Trade Item Number (SGTIN) encoded in a durable GS1 DataMatrix barcode on each system, which also contains the serialised GS1 Global Trade Item Numbers (SGTINs) of the components that comprise the system.

BENEFITS:

- Significantly simplified manufacturing process at reduced costs
- Higher operator productivity with fewer errors for high-quality systems
- Fewer errors, decreasing re-works and therefore reducing costs.
- Ability to track systems and components throughout supply chain, from initial order to final delivery
- Ensure the right customers receive the right systems



Right system to the right customer

As a leading specialist in rubber and plastics technology, ContiTech products are used by a wide range of industries—agriculture, automotive, machine and plant engineering, mining, power, printing, rail and ship building. In 2014, ContiTech's sales exceeded € 3.9 billion with more than 32,700 employees worldwide.

For the rail and automotive industries, the company produced air suspension systems that are manufactured for each customer's specific requirements. Since each system is tailor-made for each customer, ContiTech's manufacturing process was complex and inefficient.

The company needed to effectively and efficiently manage the many unique suspension systems it manufactured and delivered, as well as the individual components within each system. The goal was to ensure, track and validate that the right system had been manufactured based on the right customer's specifications, and that it had been delivered to the right customer.

Clear benefits for customers

After consulting with GS1, the company decided to implement the SGTIN encoded in a GS1 DataMatrix barcode for each of its systems and components.

The solution included the following objectives:

- Uniquely identify each manufactured suspension system and each major, customer-specific component with a serialised GTIN.
- Apply or engrave durable machine-readable DataMatrix barcodes on the system that contain the serialised GTIN for the system and the serialised GTINs associated with each of the components that comprise the system.
- Track and manage the serialised GTINs throughout the manufacturing and delivery management processes.

“We fully understood the inefficiencies in our processes as well as the clear benefits for our customers of changing the way we work. The GS1 standards-based solution was a win-win for us and our customers.”

Hendrik Neumann,

Logistics Manager PMS CRE, ContiTech

Serialized systems and streamlined process

Today, ContiTech has standardised its manufacturing processes to uniquely identify and mark each suspension system and its components with GS1 GTINs encoded in DataMatrix barcodes for each of its customers.



“All serialised GTINs can now be easily captured with a single scan anywhere in our supply chain processes—manufacturing, maintenance and repair and overhaul cycles.”

Hendrik Neumann,
Logistics Manager PMS CRE,
ContiTech

“Each system’s DataMatrix barcode contains both the serialised GTIN for the whole system as well as the serialised GTINs for the components in the system since markings or labels don’t always adhere to some components such as rubber bellows,” explains Neumann. “All serialised GTINs can now be easily captured with a single scan anywhere in our supply chain processes—manufacturing, maintenance and repair and overhaul cycles.”

ContiTech can now easily link all customer-specific manufacturing data to the individual systems manufactured for customers based on their specifications.



For each customer’s suspension system, a DataMatrix barcode containing the system’s SGTIN and its components’ SGTINs is applied to the system’s top plate.

The manufacturing order to build the customer-specific system includes the system’s assigned GS1 SGTIN and contains the customer specifications for each of the components.

During the manufacturing process, ContiTech assigns an SGTIN to each individual component manufactured. Since no other component will have the same SGTIN, the customer’s specifications related to the manufacturing order can be unambiguously linked to the individual component manufactured.

With GS1 standards, ContiTech can use the same manufacturing process for any and all of its customers, significantly simplifying the process for lower costs. And because the process is standardised, operators are more productive and make fewer errors, resulting in higher quality systems and reduced costs associated with re-works to resolve errors.



During manufacturing, ContiTech applies a durable label with the DataMatrix barcode containing the serialised GTINs. ContiTech can now track and manage the flow of each system and its individual components by scanning the DataMatrix barcode. With each scan, the new solution advises the operator exactly what to do with the system such as despatch it to the right customer.

Upon receipt of the system, a customer can validate that they received the correct system by simply scanning the barcode containing the serialised GTINs for the system and components specifically produced for that customer. Due to the durability of DataMatrix barcodes, customers and ContiTech can track and manage the individual systems long after the original dates of manufacture.

“The serialised identification of our products based on the GS1 standards is a success story for our company. We are experiencing huge benefits in our processes resulting from the application of the GS1 serialised GTIN and DataMatrix barcode. With these standards, we are well equipped to deal with our customers’ requirements—now and in the future.”

Hendrik Neumann,
Logistics Manager PMS CRE, ContiTech

Taking durable barcodes to the next level

ContiTech has developed a process whereby the DataMatrix barcode can be vulcanised into rubber parts, thus providing a durable marking even when exposed to the most difficult of environments. The company intends to overhaul a complete German high-speed train, using parts with vulcanised DataMatrix barcodes to test and ensure these marked parts meet the highest standards.

Neumann summarises the value of GS1 standards for ContiTech: “The serialised identification of our products based on the GS1 standards is a success story for our company.

We are experiencing huge benefits in our processes resulting from the application of the GS1 serialised GTIN and DataMatrix barcode. With these standards, we are well equipped to deal with our customers’ requirements—now and in the future.”

Contact

Interested in learning more about this success story? Contact GS1 at www.gs1.org

Interested in learning more about the GS1 standard for MRO in rail? Contact your local GS1 Member Organisation at www.gs1.org/contact or visit <http://www.gs1.org/rail>.

With special thanks to :



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