



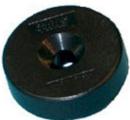
# Bloomington-Normal Seating Company Puts RFID On The Line

Bloomington-Normal Seating Company (BSC) is a just-in-time manufacturer and tier-1 supplier of automobile seats to Mitsubishi Motors. Seat manufacturing is a multi-stage process involving numerous stations where data must be collected and passed along with the product.

## Problem:

BSC sought a data collection solution that would capture information during the assembly process directly into their host system. BSC needed to automate the collection of component and QC data so that little or no human intervention would be required. It was important to reduce "misloads" - assembly errors caused by missing or bad information from previous stations.

Side-curtain airbags are installed in all front-seat assemblies, and capturing traceability data was critical. Perhaps most importantly, the data would be made available to Mitsubishi when the product was delivered.



## Solution:

Purple Oak developed a solution that combines RFID and bar coding, and interfaces directly with BSC's manufacturing system. The system uses Texas Instrument's TIRIS low-frequency RFID tags and Symbol Cyclone scanners for hands free reading of bar coded serial numbers on airbag components.



At the start of the line, BSC affixes an RFID tag to the seatback and "registers" it with a tag reader. Next, the airbag serial number is scanned, and the seatback assembly is then matched with a seat bottom to form a single production unit. At each stage in the assembly process, an antenna reads the RFID tag to identify the seat being built. Lot numbers and safety-related data, including quality checks and torque readings, are recorded.

At the end of the line, the RFID tag is read one last time, to inform the host system the seat is complete. The tag is removed from the assembly, and it is re-used again and again.

## Success:

- Data is captured with minimal involvement by the operator, with a high level of accuracy, and with no paperwork.
- Reusable RFID tags keep costs low.
- Direct interface with the manufacturing system makes data readily available to BSC management and Mitsubishi.
- The system is simple to use, and makes training new operators easy.



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