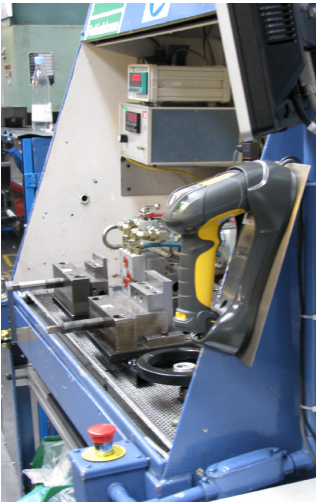




Sauer-Danfoss Uses Motorola Bar Code Scanners to Track Hydraulic Motor Parts and Increase Scanner Lifespan in Harsh Manufacturing Environment



“Hydraulic oil is very aggressive oil that dissolves virtually any kind of plastic and rubber that it encounters,” says Rasmus Rune Kiileric, IT consultant, Sauer Danfoss. “Our oldest Motorola scanners have now been in use for about two years, and it doesn’t show. In the past we have experienced handheld scanners that have only lasted six months. With Motorola, we got what we wanted: handheld scanners that can be used in our really harsh assembly environment without rapidly deteriorating.”

– Rasmus Rune Kiileric, IT consultant, Sauer Danfoss

The company: Sauer-Danfoss

Sauer-Danfoss, a manufacturing company, equips vehicles with hydraulics. The company has 20 manufacturing units distributed worldwide, and it builds and manufactures hydrostatic transmissions, mobile electronics, steering components, motors and valves, as well as products for open circuits and electro-hydraulic steering systems.

The challenge: Harsh manufacturing environment containing hydraulic oil which cuts through plastic scanners

The Sauer-Danfoss manufacturing facility operates under highly adverse conditions. All of the motors being manufactured are tested after the assembly has been completed. This means that assembly tables and operators’ gloves are soaked with hydraulic oil, which is particularly aggressive toward plastics and rubber.

Sauer-Danfoss uses bar code scanners to scan products before they reach the ‘testing panel’, a machine which comprehensively tests the product. The bar code scanners automatically notify the machine of the part details, the tests and testing parameters which need to be carried out on that particular item. The tests vary from product to product, so there is a real need for the machine to be notified of the right tests to carry out on.

Customer profile



Company
Sauer-Danfoss

Location
Nordborg, Denmark

Industry
Manufacturing:
Mobile hydraulic solutions

Motorola products

- 100 laser scanners, including LS3408, LS3478, LS3578

Application(s)

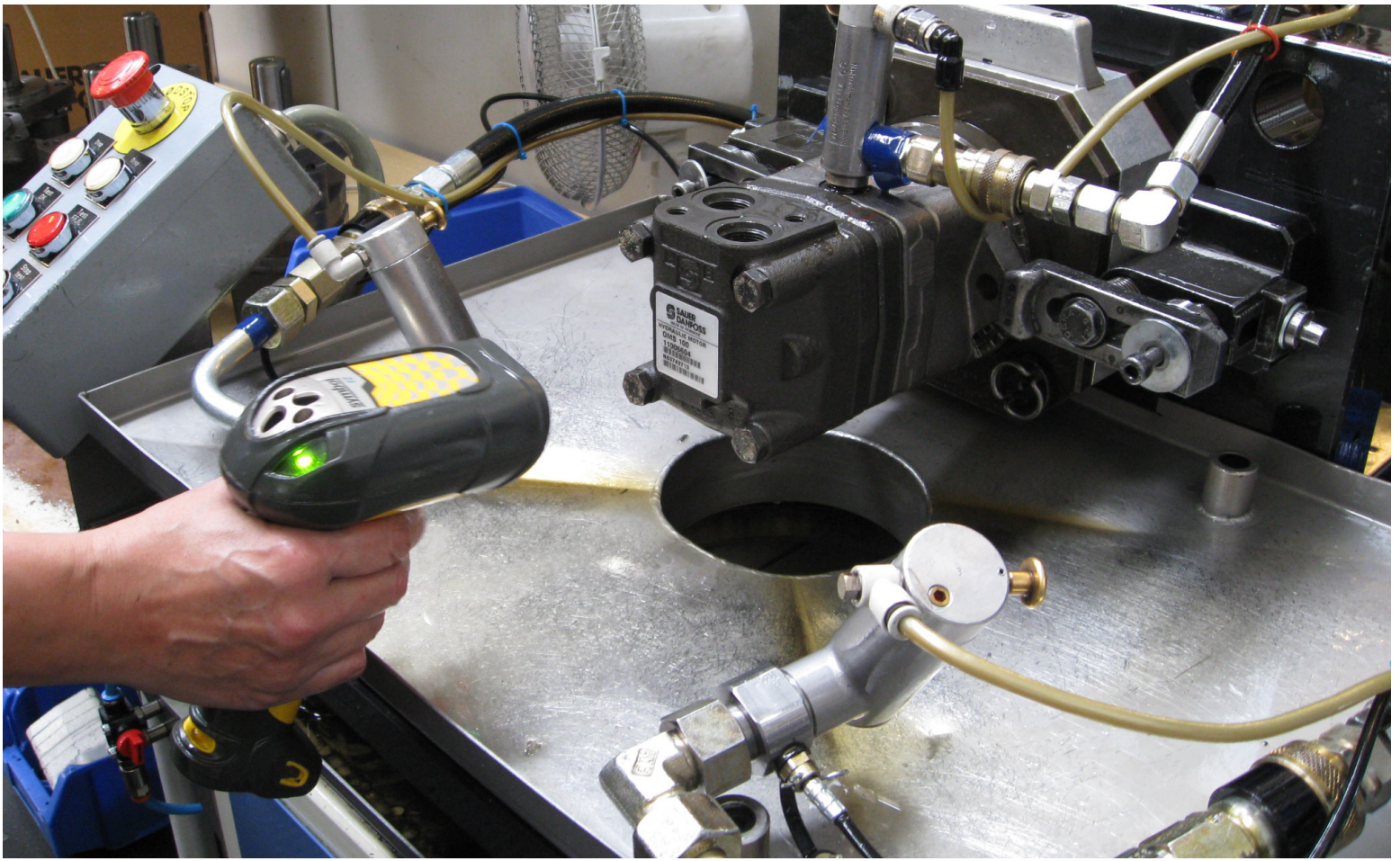
- Vehicle component testing application

Partner

- Norris Print-Tech A/S

Benefits

- Scanner lifespan significantly improved in adverse environment
- Motorola scanning engine has increased scanning accuracy to 100%
- Ruggedised scanners result in reduced repair costs



However, the Sauer-Danfoss team was having trouble finding handheld scanners that were able to survive the harsh environment of the assembly lines, as hydraulic oil is very corrosive. If a scanner is not sufficiently oil resistant, oil and dirt will slowly enter the interior of the scanner, damaging the unit and gradually impairing its scanning ability. Furthermore, the old bar code scanners would often require several attempts at reading the bar codes, which could often slow down the assembly line.

“We found that our traditional scanners deteriorated quite rapidly,” said Rasmus Rune Kiileric, IT consultant, Sauer Danfoss. “In the past, a scanner could become inoperable within six months, which became not only expensive, but also damaged the productivity of our workers, because they would have to stop the testing procedures until a new unit could be retrieved from the spare inventory.”

Solution: Motorola ruggedised bar code scanners

As a result, the Sauer-Danfoss team began to look for a new model of bar code scanner which could survive in the adverse conditions of the manufacturing environment. After consultation with Norris Print-Tech, Sauer-Danfoss chose the LS3408, LS3478 and LS3578 bar code scanners from Motorola’s Enterprise Mobility business. These scanners are ruggedised and can survive the harsh

environment. Furthermore, all of the scanners are sealed to IP65 level, so they are completely immune to dust getting into the body of the scanner, and can withstand occasional jets of water or oil being sprayed at them, without affecting the operation of the device.

Sauer-Danfoss is now using Motorola scanners at many of its manufacturing plants worldwide. Although many of the scanners are fixed to the assembly environment, where this would become inconvenient and detract from productivity, Sauer-Danfoss uses Bluetooth wireless scanners.

Results: Higher productivity and no irritation

As a result of using Motorola scanners, the assembly and testing staff can continue to operate without interruptions from devices breaking down. Not only does this cut down on the costs of replacing devices, but also increases the productivity of employees because they can scan continuously without any disturbances.

“The Motorola scanners do not deteriorate like our previous models,” continued Kiileric. “Furthermore, the actual bar code scanners themselves are more accurate, and read the bar code on the first attempt, which means that the assembly line moves much faster than in the past. The new scanners work at

100% efficiency and accuracy all the time, so that we do not have to worry about interruptions to our schedule.”

Sauer-Danfoss has also cut down on the time spent by the IT team replacing and re-connecting new scanners, which could previously effectively bring the assembly line to a halt. Furthermore, the manufacturing plant operates at all hours of the night and day, so a scanner which broke down at 2am would stop assembly for half an hour or more, because of the limited IT personnel on-hand.

“Since switching to Motorola scanners, we simply haven’t had any interruptions,” concluded Kiilerich. “Technology is now enabling our business to continue as usual, despite the adverse conditions, rather than acting as a stumbling block.”

Norris Print-Tech



Norris Print-Tech is a Danish company that has been working with bar code systems and data capture since 1986.

The headquarters in Aalborg and the sales and service department in the Copenhagen metropolitan area deliver solutions and service for bar code printing and data capture – such as label printers; label design software, including connections to administrative systems; labels and ribbons; automatic labeling systems; and peripheral equipment for labeling and data capture. Norris Print-Tech’s clients now include many of Denmark’s largest corporations. www.npt.dk.

Further information about Motorola products can be found at: www.motorola.com

About Motorola

Motorola is known around the world for innovation in communications and is focused on advancing the way the world connects. From broadband communications infrastructure, enterprise mobility and public safety solutions to high-definition video and mobile devices, Motorola is leading the next wave of innovations that enable people, enterprises and governments to be more connected and more mobile. Motorola (NYSE: MOT) had sales of US \$30.1 billion in 2008. For more information, please visit www.motorola.com.





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