

**MANUFACTURING SOLUTIONS****ASSEMBLY ASSURANCE SYSTEM - AAS****REFERENCE CASE**

**AAS – Gives every detail a purpose.**

AAS – Assembly Assurance System - gives you total control of every assembly detail. Johan Liljeblad of Volvo Powertrain's diesel engine plant in Skövde can vouch for it.

**About AAS**

AAS is a part of **Product Quality Control** area in Volvo IT Manufacturing Execution System (MES). MES is a collection of tools for improving manufacturing operations through real time management of production processes, product quality and customized decision making support.



Johan Liljeblad is an expert in systems such as AAS and BEMS.

**Mistakes. Nothing but a memory.**

Operatives assembling the 12- and 13-litre engines no longer use the typical printed instructions taped to the product and specifying the particular operations to be carried out. These have been replaced by a computer screen displaying all of the operations for the workstation, including details of the tools, number of items to be tightened and torques to be applied.

If the operator uses the wrong socket on the tightening tool, it will not work. And if he or she forgets to carry out an operation, the system will issue a reminder.

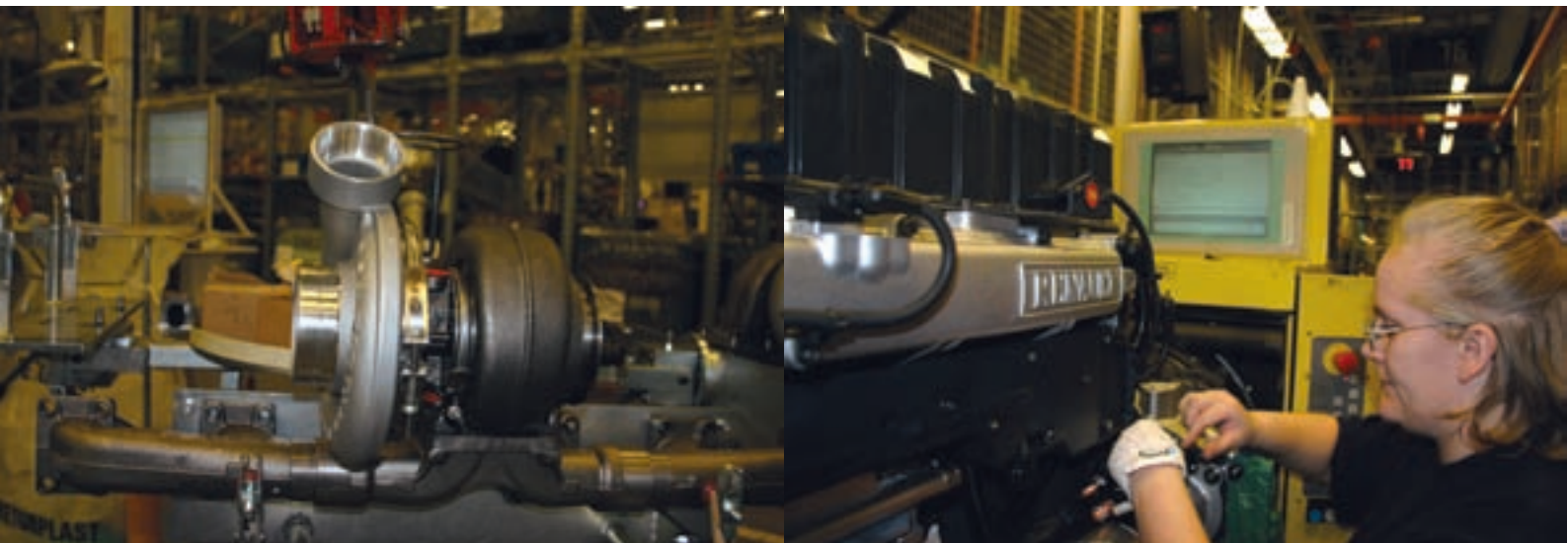
In short, AAS leaves no room for mistakes.

**Everything is recorded.**

"All tightening operations are recorded in the database," says Johan Liljeblad, an automation engineer at Volvo Powertrain in Skövde. "Unusual or especially important operations are also recorded manually. In addition, an extra bar code ensures that the correct materials have been selected in any case in which there is a major risk of incorrect assembly."

He notes that the same applies to the growing proportion of preassemblies, such as turbos/manifolds, compressors, control modules, and so on, which must be matched exactly to the right engine.

# ATION TECHNOLOGY



“The aim is to ‘do the same each time’ – carrying out tightening operations in the same order, using the same torques, and so on. In the production of the MD13, we have gone a stage further by linking all of the tightening tools together in a network,” adds Johan Liljeblad.

### **MONT, AAS and BEMS. For a better understanding.**

Johan explains that the master assembly system is known as MONT.CTRL, while the system displayed on-screen – the assembly instructions for each operative – is called MONTA.AS, which is planned as part of MONT.BEMS (a Swedish acronym standing for Planning and Assembly Assurance).

In MONT.BEMS, every engine part and item is assigned a workstation designation, and all of the information is displayed for the operative with the aid of MONTA.AS.

### **Trace the mistakes.**

“With the lists we used before, it was difficult to trace back faults,” says Johan. “Now, the information is definitive and everything is correct down to the last detail.

“In addition, it is now easy to add change orders from Design to the system. Updating is carried out by the production engineers. BEMS is used for planning, while AAS is aimed at the assembly operative and MONT runs away in the background.”

# **VOLVO**

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