### Diesel Engine Assembly Line

**Facts**

- **Industry**: Automotive OEM
- **Product**: Diesel Engines
- **Installation Date**: December 2003

**Description**

Diesel Engine assembly line is based on ABB standard modular concept. This line consists of four conveyor systems, one for short block assembly, one for piston sub assembly, one for cylinder head sub assembly and one for final assembly. The assembly lines are a mix between manual, semi automatic and automatic stations, between some of the assembly stations is a buffer station placed. Currently assembles 4-9 liters (4-6 cylinder) engines with weekly production reaching 1000 units with two shift operation.

**Equipment**

- 21 Automatic stations
- 87 Manual stations
- 16 Semi-auto stations
- 6 robots
- ABB turnover device
- ABB nut runner stations
- ABB leakage test station for cylinder head

**Customer Benefits**

- High quality assembly processes to assure product quality and production
- Automatic assembly of heavy parts with robot
- Cost effective solution
- High flexibility, currently assembles 4 types in the line 4-9 liters
- Glueing application by robot
- Easy and low cost startup of new variants
### Facts

| **Technical Data** | Capacity: 50,000/year (2-shift production)  
Cycle time: 90 seconds |
|-------------------|------------------------------------------------|
| **Unique Elements:** | Automatic assembly of cam shaft bearings  
Automatic control of axial clearance and rotation torque  
3 automatic leakage test stations  
Laser key up check |
| **Customer Provided Equipment** | None |
| **Project/Steps to Implementation** | Concept design  
Concept approval  
Engineering (Detail design)  
Project management  
Manufacturing  
Installation  
Training  
Production support on site 6 month. |
| **Project Responsibility:** | Powertrain |
| **Video/Photos/Reference:** | Can be supplied by ABB |

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