Automotive OEM
Case study: Diesel Engine Assembly Line

Diesel Engine Assembly Line.

Diesel Engine assembly line is based on ABB standard modular concept. This line consists of three conveyor systems, one for short block assembly, one for piston sub assembly and one for cylinder head sub 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 13 liters (6 cylinder) engines with weekly production reaching 1000 units with two shift operation.

Equipment:
- 21 Automatic stations
- 23 Manual stations
- 4 Semi-auto stations
- 15 robots
- ABB leakage test for injector assembly
- ABB automatic assembly of piston rings

Customer Benefits:
- High quality assembly processes to assure product quality and production
- Cost effective solution
- High flexibility
- Easy and low cost startup of new variants
- ABB service close to customer
Diesel Engine Assembly Line

Technical Data
- Capacity: 50,000/year (2-shift production)
- Cycle time: 183 seconds

Unique Elements:
- Leakage test station of cylinder head.
- Robot assembly of cylinder liner gasket
- Automatic adjustment of valve clearance.

Customer Provided Equipment:
- None

Project/Steps to Implementation:
- Concept design
- Concept approval
- Engineering (Detail design)
- Project management
- Manufacturing
- Installation
- Training
- Training
- Production support on site

ABB Robotics
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