Engine Head Bolt Tightening Torque

Industry: Automotive and Vehicle

Summary

Customer Need / Challenge

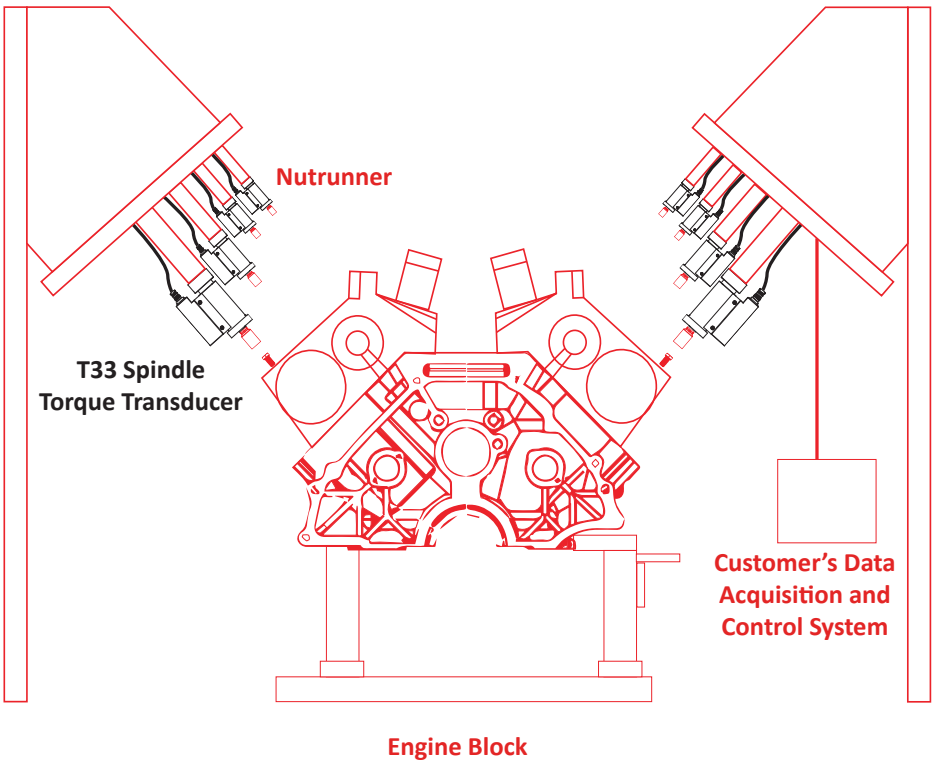
An industrial automation company was building an automated assembly machine for an auto manufacturing plant. They needed to tighten all of the head bolts on an engine on their assembly line to a specific torque value. Having the head bolts precisely and consistently tightened to the engine block is critical to the operation of the engine.

Interface Solution

Several Interface Model T33 Spindle Torque Transducers were installed in their new machine to control torque and angle, and ensure the head bolt was properly tightened. The square drive of the T33 allowed the customer to fix their tool directly to the end of the torque sensor, streamlining the installation.

Results

The head bolts were correctly installed according to manufacturer specifications, producing an engine that meets performance and reliability expectations of the auto manufacturing plant.



Materials

- T33 Spindle Torque Transducer.

How It Works

1. Several Interface Model T33 Spindle Torque Transducers are installed in-line with the nutrunner/screwing spindle.
2. Fastening tools are attached to the end of each T33.
3. The machine comes down and screws on the engine head bolts.
4. The torque and angle profile are sent to the customer's machine controller.
5. Based on the feedback received by the machine controller, the automation will pass the engine to the next step in the assembly line or fail and have the engine evaluated further.

interface
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