

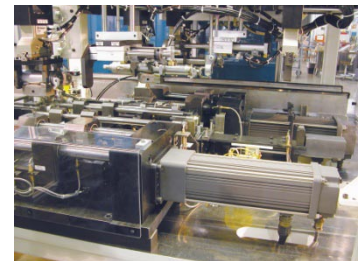
Steering Column Assembly & Test

The customer required a flexible system capable of assembly and test of over 20 models of a family of steering columns for various vehicle platforms. The system provides flexibility to accommodate product variation, both current and future, as well as production volume flexibility with a minimum of change-over time. The project required concurrent production of dis-similar product types which lead to multiple lean systems as opposed to a larger single path assembly system.



System Overview

The overall solution is made up of five (5) Lean Production Systems each of which produces a assembly every 27.5 seconds. The total production for this platform of products is 1.2 million steering columns per year. The systems use a combination of standalone stations and a powered non-synchronous conveyor for the point where the parts become unwieldy to handle. Comprehensive process validation insures defect free products from every process.



System Values & Benefits

- Flexible design allows for reuse of capital equipment as customers needs change.
- Product type flexibility
- Production volume flexibility

System Highlights

- Automatic test of Tilt Effort and Release Effort
- Automatic test of telescoping function for effort and travel
- Archiving of all assembly and test process data
- Currently producing 22 part types in 10 families with flexibility for 23 additional planned part type configurations.
- Quality sensitive operations are automated. Less critical operations utilize low cost manual stations.