

## Ball Joint Assembly: Torque-to-Turn and Dimensional Verification

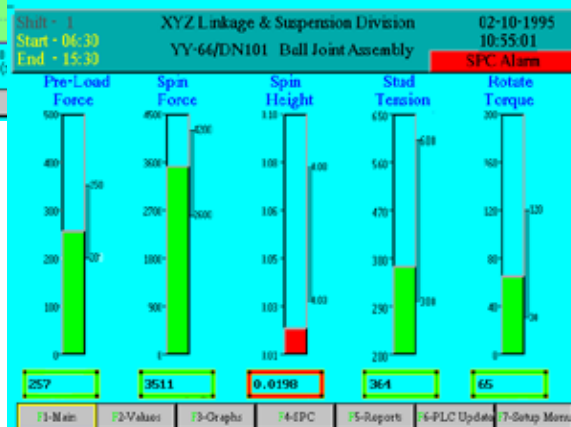
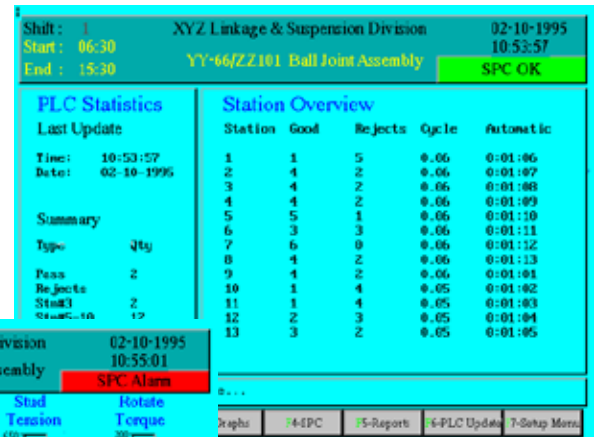
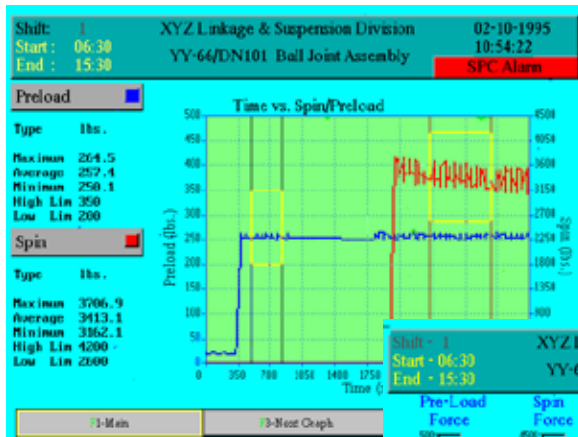
### Highlights:

- Identifies improperly assembled parts based on dimensional and torque-to-turn analysis
- Allen-Bradley Data Highway™ communication
- Monitors 13 assembly stations (PASS/FAIL/ Cycle Time)
- Assembly analysis of 3 independent stations
- Automatic and/or manual shunt calibration
- Signature, SPC, reports
- Data saved based on shift, day and pallet number

This test system is configured to analyze the mechanical characteristics of automotive ball joints during the production process. The system constantly monitors three separate assembly stations, each with its own testing and timing parameters.

Force waveforms collected during the assembly process are analyzed and used to pass or fail each part based on parameters entered by engineering personnel. All analysis results are logged to disk, and are cross-referenced to a pallet number, shift, and date/time in order to correlate failures with individual pallets or shifts. Automated calibration procedures are also incorporated into each station to ensure consistent, accurate results.

The system also maintains production records for all 13 assembly stations using Allen-Bradley Data Highway™ to access additional station information (PASS/FAIL ratio, cycle time, operation time, etc.)



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