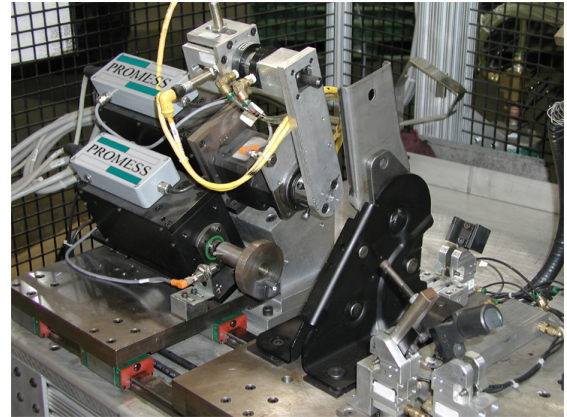


Automotive Seat Recliner Mechanism with Torque

Testing seat recliner mechanisms to verify they meet all customer functionality and government safety critical requirements.

Strategy:

The Promess TorquePRO proved the capabilities necessary to test the seat recliner for full functionality. This functionality testing includes the ability to measure torque, rotation and angle, return spring force, latch/unlatch efforts, tooth engagement (proof loading) and tooth backlash (chuck) while controlling the rotational motion of the part. The TorquePRO, along with the Promess Motion Controller, provides a complete package that is able to turn to a torque, turn to an angle, effort test, functionality test, etc. for seat recliners as well as other seat related mechanisms.



The TorquePRO System provides:

- Force generated to move a component (latch lever, seatback recliner pivot, latching components, etc.) through a given range of travel.
- Abnormal (high/low) force at any point along the range of travel. Example: An excessive force identified at the same measured point on each mechanism may be the result of a poorly assembled part e.g. misaligned stampings, over or under staked rivets, over or undersized pivot pin or incorrect spring force.
- FMVSS proof loading verification (both directions).
- Measurement of travel ranges (full recline/full up).
- Measurement of the amount of movement when a calculated bi-directional force is applied to a component in a locked position (recliner chuck).
- Verification of presence of springs (seat back return spring and latch spring).
- Statistical data on all functional tests as well as FMVSS safety critical part lot control and file archiving.

Other applications abound. 100% functionality tests are linked to printouts and certifiable documentation, all part of the standard offering.

Promess can change the way parts are assembled and tested!

