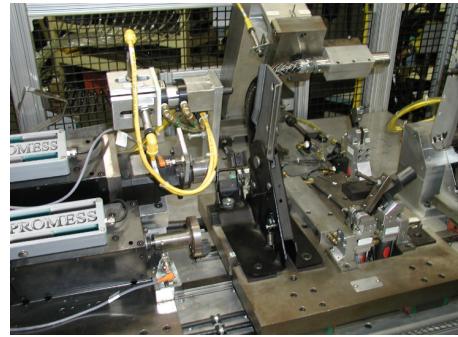
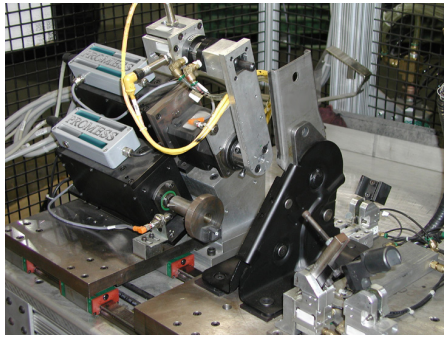


AUTOMOTIVE SEAT RECLINER

Challenge

Automotive Seat Recliner Mechanism with Torque

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



Solution

The Promess TorquePRO supports full functionality testing of the seat recliner measuring torque, rotation, angle, return spring force, latch/unlatch effort, tooth engagement (proof loading), and tooth backlash (chuck), while controlling the rotational motion of the assembly. Used with a Promess Motion Controller, the TorquePRO produces a complete system for testing seat recliners and other related seat mechanisms. The system can turn to a torque, turn to an angle, and perform effort, functionality and many other types of testing,

The TorquePRO System provides:

- Force to move a component (latch lever, seatback recliner pivot, latching component, etc.) through a given range of travel.
- Detection of abnormal (high/low) force at any point along the range of travel. For example, excessive force identified at the same measured point on each mechanism may be the result of a poorly assembled or out-of-specification part (e.g. misaligned stamping, over-staked or under-staked rivet(s), oversized or undersized pivot pin(s), incorrect spring force, etc.).
- FMVSS proof loading verification in both directions.
- Measurement of travel range (full recline/full up).
- Measurement of movement when a calculated bidirectional force is applied to a component in the locked position (recliner chuck).
- Verification of the presence of seatback return spring and latch spring.
- Statistical data on all functional tests as well as FMVSS safety critical part lot control and file archiving.

A Promess TorquePRO System is a standard product that provides accurate and efficient torque testing and verification along with printable, storable and certifiable process documentation to help give customers the best automotive seat recliners available.