

Customized Roller Bearing Assembly

MINIVAN FOLDING SEAT

PROBLEM

A leading seating manufacturer, supplying components for one of the world's top-selling minivans, required a specialized bearing for a folding seat mechanism. This mechanism enables the second- and third-row seats to fold flat into the floor in under 30 seconds. The manufacturer's engineers realized early on that an off-the-shelf bearing would not work for such a custom application. In addition to requiring a special mechanism to attach the assembly to the seats, the bearing material needed to accommodate tremendous loads, high stress and excessive torque.

SOLUTION

The manufacturer's engineering team contacted Kilian Bearings and asked for a design solution to fit this unique application. The manufacturer worked closely with Kilian engineers and received a prototype in less than two weeks. Kilian then conducted in-house testing on the bearing that included torque-to-rotate, push-out force, durability testing and environmental testing for corrosion-resistance and grease retention.

Kilian engineers visited the seat manufacturing facility and supervised rigorous crash testing and environmental testing on the bearing to ensure it met strict quality regulations required by the automotive industry. After two years of development, the customized roller bearing was finalized for production.

The revolutionary seating system has now been in use for several years, using millions of custom bearings designed, developed and manufactured by Kilian.



HIGHLIGHTS

- Unique custom solution
- Extensively tested
- Design met strict automotive regulations

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