

Automotive Telemetry

Strain Gauging, Prop shaft, Telemetry



Keywords

- ▶ Multiple Channel Data Acquisition System
- ▶ Linear Displacement Transducers
- ▶ Accelerometers Transducers
- ▶ Strain Gauges of prop-shaft
- ▶ Vehicle Speed GPS
- ▶ Telemetry Transmitters and Receivers
- ▶ Data Analysis
- ▶ Durability Assessment

When you need to test or design a component where access is restricted, you need special tools. Nprime Ltd is proud to have such an expertise and knowledge associated with partner such as the telemetry suppliers.

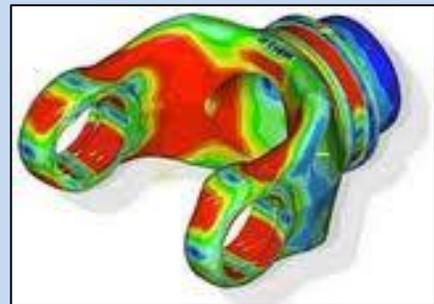
We have been asked to test the prop-shaft of an all-terrain or 4x4 vehicle. The customer needed to have the data collected far from the design centre. The vehicle was running on a proving ground. Nprime Ltd is a supplier of dedicated telemetry system made just for this purpose.

The prop-shaft was fitted with a collar telemetry system which consisted of measurement device fitted with transmitters and its own battery for operational functions. The collar telemetry can transmit data in a continuous or burst mode. The batteries are fed through the cigarette-lighter power in the vehicle or via induction power. The prop-shaft was fitted with strain gauges at critical areas defining stress areas or areas of importance for design optimisation at a later stage.

Given the number of circuit runs and types of terrain the vehicle had to make on the proving ground, specified that the transmitted and downloaded data would be very large as each data file had a size of several 100MB.

The prop-shaft telemetry and instrumentation achieved the best test data available to the test and development engineers at the client's technical centre. Nprime Ltd used GlyphWorks for the data analysis and subsequently created a set of routines or macros for the test engineers to rerun the analysis whenever needed.

Nprime Ltd provides installation, testing and analysis service to automotive manufacturers and OEM equipment. Our telemetry system and consulting project service provide fast, accurate and reliable data to enable the client to understand structural performance. Clients use the services of Nprime Ltd to investigate data integrity, structural integrity, duty cycle and fatigue of components.



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