Reduction in Rejection of Automotive Window Regulator Motor using Six Sigma Methodology

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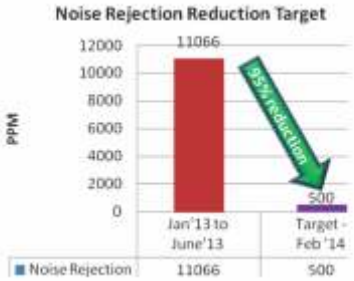
Abstract:

Concentration on reduction of process variability and non-conformance is necessary to sustain global competitive edge in the manufacturing sector. Technological advancements and globalization has a significant influence on the quality of a product. Quality improvement is un like quality control; it is to enhance the quality of the product through process improvement and variation reduction. The key for a business to achieve lower production costs and higher customer satisfaction is by maintaining high quality level effectively. Keeping this in mind, this project work was focused on reducing the high rejection of Window regulator motor from 11,066 PPM. To achieve target six sigma Methodology was applied.

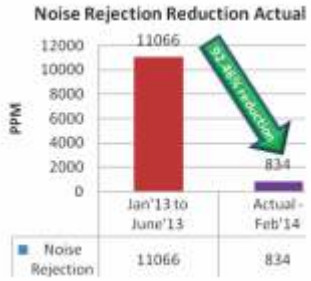
To improve quality of window regulator motor and there by enhance customer satisfaction, quality improvement initiatives were implemented using DMAIC and Shainin approach. Problem was defined by selecting the critical issues of quality in the define phase. Data was collected to determine the current performance in the measure phase. Root causes for motor noise were identified in the analysis phase. Solutions were proposed using Shainin system. All process documents were updated to sustain the improvement.

DMAIC and Shainin approach helped to reduce rejection of motor from 11066 PPM to 834 PPM. Process capability improved to 1.67. Finally project resulted in internal saving of 10.66 lakhs per annum and satisfied customer.

Window regulator motor



Noise rejection reduction



Target v/s Actual