



Sensata
Technologies



APPLICATION NOTE

BOOSTING AUTOMOTIVE AFTERMARKET PRODUCT PERFORMANCE

THE PROBLEM:

As the demand for higher performance in the automotive aftermarket accelerates, custom fuel injection and engine system manufacturers are looking for pressure sensor ranges and durability beyond the capabilities of stock OEM electronics. Many common aftermarket system upgrades, such as turbo boost, gasoline direct injection fuel systems, and supercharger systems, require robust pressure sensors that can withstand the higher PSI, vibrations and temperature extremes of demanding aftermarket systems.

THE SOLUTION:

Common applications for automotive aftermarket pressure sensing include bolt on turbo boost and supercharger packages, as well as high performance fuel delivery systems, all of which require precise and repeatable pressure measurement in order to function properly. These systems typically are designed to increase engine performance. In order to accomplish this the sensors used must operate at higher pressures, temperatures and vibration levels than a stock OEM sensor. They must also be resistant to, and function flawlessly with new, hybrid racing fuels. Aftermarket air suspension systems also require robust sensors in order to operate reliably. The use of pressure sensing is also found in performance “flat spot” aftermarket products that optimize both fuel mix and flow pressure to improve acceleration and safety.

Precision engine performance systems place demands on electronics that can compromise the overall performance and longevity of these systems. Sensata Technologies’ proprietary ASIC designs combined with proven ceramic capacitive, strain gage or MEMS sensing technologies create pressure sensing solutions ideal for custom automotive performance applications. These sensing components are housed in industrial grade packaging with automotive OEM type electrical connectors designed for operation in under-hood environments. With over 100 million automotive sensors in the field, Sensata Technologies has served the OEM and aftermarket automotive industry for over 50 years.

Sensata Technologies’ pressure sensors come in a wide variety of pressure ratings as well as port fittings, packaging materials, and electrical inputs/outputs to provide a flexible range of design solutions for most aftermarket system requirements.

ABOUT SENSATA TECHNOLOGIES:

Sensata Technologies is a leading designer and manufacturer of sensors and controls for leaders in the global automotive, appliance, aircraft, industrial and HVAC markets. Our sensing and protection solutions improve safety, comfort and efficiency for millions of people every day.

Sensata has business and technology development centers in Attleboro, Massachusetts, Holland and Japan and manufacturing operations in Brazil, China, Korea, Malaysia, and Mexico, as well as sales offices around the world. Sensata Technologies employs approximately 5,500 people worldwide.

For more information about the company or their full line of technologies for the aftermarket automotive industry, please call: **888-438-2214**, or visit **www.sensata.com/pressure**

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