

# Delphi Diesel Electronic Throttle Controls

Delphi Diesel Electronic Throttle Controls regulate the intake manifold pressure on diesel engines to help increase exhaust gas recirculation (EGR) rates. The valves can also provide low minimum flow for smooth diesel engine shutdown. Delphi offers a variety of Diesel Electronic Throttle Controls to meet environmental and customer requirements, including:

- Aluminum body valves to meet very stringent vibration and temperature requirements
- Composite body valves to meet requirements for lower mass or lower cost
- Valves with DC motor and composite gear train for high torque requirements
- Valves with torque motor (direct drive) actuation for constrained packaging requirements

### ► Benefits

- Accurate manifold flow control designed to achieve high EGR flow rates with minimum system effect
- Achieves low minimum flow rates for smooth engine shutdown, and minimized noise, vibration and harshness (NVH)
- Accurate and repeatable flow control provides suitability for NOx adsorber function
- DC motor and gear train provide high torque
- Torque motor enables direct drive, smaller overall package size and fast response
- Non-contact throttle position sensor technology provides improved reliability and durability
- Composite body offers lower mass or lower cost

### ► Typical Applications

Delphi Diesel Electronic Throttle Controls are well-suited for all light duty, medium duty, and heavy duty diesel engine applications to contribute to reduced NOx emissions.

### ► Performance Advantages

The principal function of Delphi Diesel Electronic Throttle Controls is to provide accurate regulation of manifold pressure. They also accurately repeat — and hold — any given position or flow so they are especially effective for the NOx adsorber-rich regeneration function. Delphi Diesel Electronic Throttle Controls provide smoother engine shutdown compared to conventional technologies.

### ► The Delphi Advantage

Delphi is actively involved in the development of advanced diesel technologies. Delphi designs and supplies complete diesel engine management systems for light duty, medium duty and heavy duty applications including injection systems and electronics. Delphi has 15 diesel design and engineering centers in Europe, Asia, North America, and South America and 21 diesel manufacturing facilities in 13 countries enabling exceptional on-time delivery.



**Delphi Diesel Aluminum Electronic Throttle Control Valve with non-contact sensor and DC motor**

As a global leader in engine management systems technology, Delphi can help manufacturers around the world meet emissions requirements, improve fuel economy and enhance performance. Delphi is a source for high value solutions and our systems expertise is built into every product. Delphi's flexible engineering approach encourages collaboration. And, Delphi has a thorough understanding of markets around the world and a global network of resources.



**Delphi Diesel Composite Electronic Throttle Control Valve with non-contact sensor and DC motor**



**Delphi Diesel Composite Electronic Throttle Control Valve with non-contact sensor and torque motor**