

Forklift Throttle Body

Where fuel injected engines are concerned, the throttle body is the component of the air intake system that regulates the amount of air which flows into the motor. This particular mechanism operates in response to operator accelerator pedal input in the main. Normally, the throttle body is situated between the air filter box and the intake manifold. It is often connected to or located close to the mass airflow sensor. The largest component inside the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main function is in order to control air flow.

On many kinds of automobiles, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In cars with electronic throttle control, otherwise referred to as "drive-by-wire" an electric motor controls the throttle linkages. The accelerator pedal connects to a sensor and not to the throttle body. This particular sensor sends the pedal position to the ECU or otherwise known as Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position along with inputs from other engine sensors. The throttle body has a throttle position sensor. The throttle cable connects to the black portion on the left hand side that is curved in design. The copper coil placed next to this is what returns the throttle body to its idle position as soon as the pedal is released.

The throttle plate turns inside the throttle body each time the driver applies pressure on the accelerator pedal. This opens the throttle passage and allows much more air to flow into the intake manifold. Usually, an airflow sensor measures this alteration and communicates with the ECU. In response, the Engine Control Unit then increases the amount of fluid being sent to the fuel injectors so as to produce the desired air-fuel ratio. Often a throttle position sensor or likewise called TPS is connected to the shaft of the throttle plate to provide the ECU with information on whether the throttle is in the wide-open throttle or "WOT" position, the idle position or somewhere in between these two extremes.

So as to regulate the minimum air flow while idling, several throttle bodies could include valves and adjustments. Even in units which are not "drive-by-wire" there will often be a small electric motor driven valve, the Idle Air Control Valve or likewise called IACV which the ECU utilizes to control the amount of air that can bypass the main throttle opening.

It is common that various cars contain a single throttle body, even if, more than one could be utilized and connected together by linkages to be able to improve throttle response. High performance automobiles like for instance the BMW M1, together with high performance motorcycles like for instance the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are referred to as ITBs or also known as "individual throttle bodies."

The throttle body and the carburetor in a non-injected engine are quite similar. The carburetor combines the functionality of both the throttle body and the fuel injectors into one. They are able to modulate the amount of air flow and blend the air and fuel together. Vehicles that include throttle body injection, which is known as CFI by Ford and TBI by GM, locate the fuel injectors inside the throttle body. This enables an old engine the opportunity to be transformed from carburetor to fuel injection without considerably altering the engine design.