

Forklift Throttle Body

The throttle body is part of the intake control system in fuel injected engines so as to control the amount of air flow to the engine. This mechanism works by placing pressure upon the driver accelerator pedal input. Generally, the throttle body is located between the intake manifold and the air filter box. It is normally fixed to or situated next to the mass airflow sensor. The largest piece inside the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main function is to be able to regulate air flow.

On several styles of automobiles, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages which in turn move the throttle plate. In cars with electronic throttle control, also called "drive-by-wire" an electric motor controls the throttle linkages. The accelerator pedal is attached to a sensor and not to the throttle body. This 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 upon accelerator pedal position together with inputs from various engine sensors. The throttle body consists of a throttle position sensor. The throttle cable is attached to the black part on the left hand side that is curved in design. The copper coil positioned close to this is what returns the throttle body to its idle position after the pedal is released.

The throttle plate turns within 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. Typically, an airflow sensor measures this adjustment 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. Generally a throttle position sensor or TPS is connected to the shaft of the throttle plate to be able to provide the ECU with information on whether the throttle is in the idle position, the wide-open position or otherwise called "WOT" position or anywhere in between these two extremes.

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

In several cars it is common for them to have one throttle body. So as to improve throttle response, more than one can be utilized and connected together by linkages. High performance cars like for instance the BMW M1, together with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are called ITBs or also known as "individual throttle bodies."

A throttle body is like the carburetor in a non-injected engine. Carburetors combine the functionality of the fuel injectors and the throttle body together. They work by combining the fuel and air together and by controlling the amount of air flow. Cars that include throttle body injection, that is known as CFI by Ford and TBI by GM, put the fuel injectors inside the throttle body. This permits an older engine the chance to be transformed from carburetor to fuel injection without considerably altering the engine design.