

Forklift Throttle Body

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the component of the air intake system which controls the amount of air that flows into the motor. This particular mechanism functions in response to operator accelerator pedal input in the main. Normally, the throttle body is placed between the intake manifold and the air filter box. It is often fixed to or located next to the mass airflow sensor. The largest component inside the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main task is so as to control air flow.

On various styles of cars, the accelerator pedal motion is communicated via the throttle cable. This activates the throttle linkages which in turn move the throttle plate. In automobiles consisting of electronic throttle control, also known as "drive-by-wire" an electric motor regulates 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 also known as Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position along with inputs from various engine sensors. The throttle body consists of 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 located next to this is what returns the throttle body to its idle position after the pedal is released.

Throttle plates revolve within the throttle body each time pressure is applied on the accelerator. The throttle passage is then opened to be able to permit a lot more air to flow into the intake manifold. Typically, an airflow sensor measures this change and communicates with the ECU. In response, the Engine Control Unit then increases the amount of fluid being sent to the fuel injectors to be able to produce the desired air-fuel ratio. Often a throttle position sensor or TPS is connected to the shaft of the throttle plate to provide the ECU with information on whether the throttle is in the idle position, the wide-open position or also called "WOT" position or somewhere in between these two extremes.

In order to regulate the least amount of air flow while idling, some throttle bodies can have valves and adjustments. 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 IACV that the ECU uses to control the amount of air that could bypass the main throttle opening.

In various automobiles it is common for them to have one throttle body. In order to improve throttle response, more than one could be used and connected together by linkages. High performance automobiles such as the BMW M1, along with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are called ITBs or otherwise known as "individual throttle bodies."

The throttle body and the carburetor in a non-injected engine are somewhat the same. The carburetor combines the functionality of both the fuel injectors and the throttle body into one. They are able to control the amount of air flow and mix the fuel and air together. Vehicles that include throttle body injection, which is known as CFI by Ford and TBI by GM, put the fuel injectors in the throttle body. This permits an old engine the opportunity to be converted from carburetor to fuel injection without considerably altering the engine design.