

Throttle Body for Forklifts

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 engine. This mechanism works in response to driver accelerator pedal input in the main. Generally, the throttle body is located between the intake manifold and the air filter box. It is often attached to or located near the mass airflow sensor. The largest component in the throttle body is a butterfly valve called the throttle plate. The throttle plate's main function is in order to regulate air flow.

On various kinds of cars, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages which in turn move the throttle plate. In automobiles consisting of electronic throttle control, otherwise called "drive-by-wire" an electric motor controls the throttle linkages. The accelerator pedal connects to a sensor and not to the throttle body. This 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 different engine sensors. The throttle body has a throttle position sensor. The throttle cable connects to the black part on the left hand side that is curved in design. The copper coil situated close to this is what returns the throttle body to its idle position once the pedal is released.

Throttle plates revolve within the throttle body every time pressure is applied on the accelerator. The throttle passage is then opened to allow more air to flow into the intake manifold. Typically, 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 in order to produce the desired air-fuel ratio. Frequently a throttle position sensor or likewise called TPS is connected to the shaft of the throttle plate so as to provide the ECU with information on whether the throttle is in the wide-open throttle or otherwise called "WOT" position, the idle position or somewhere in between these two extremes.

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

It is common that many vehicles contain one throttle body, though, more than one can be used and connected together by linkages to be able to improve throttle response. High performance vehicles like the BMW M1, together with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are called ITBs or otherwise known as "individual throttle bodies."

The carburetor and the throttle body in a non-injected engine are quite the same. The carburetor combines the functionality of both the throttle body and the fuel injectors into one. They can regulate the amount of air flow and combine the air and fuel together. Vehicles which have throttle body injection, which is known as TBI by GM and CFI by Ford, locate the fuel injectors inside the throttle body. This enables an older engine the possibility to be converted from carburetor to fuel injection without really altering the engine design.