

Throttle Body for Forklifts

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the component of the air intake system which regulates the amount of air that flows into the engine. This particular mechanism functions in response to driver accelerator pedal input in the main. Generally, the throttle body is located between the air filter box and the intake manifold. It is normally connected to or positioned next to the mass airflow sensor. The largest part in the throttle body is a butterfly valve called the throttle plate. The throttle plate's main function is to regulate air flow.

On most automobiles, the accelerator pedal motion is transferred via the throttle cable, thus activating the throttle linkages works to move the throttle plate. In automobiles with 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 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 together with inputs from different 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 situated next to this is what returns the throttle body to its idle position once the pedal is released.

Throttle plates revolve inside the throttle body each and every time pressure is placed on the accelerator. The throttle passage is then opened to be able to enable more air to flow into the intake manifold. Usually, 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 to be able to generate the desired air-fuel ratio. Generally a throttle position sensor or TPS is fixed to the shaft of the throttle plate 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.

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

In many vehicles it is common for them to contain 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, 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 similar to the carburetor in a non-injected engine. Carburetors combine the functionality of the throttle body and the fuel injectors into one. They function by blending the fuel and air together and by controlling the amount of air flow. Cars that include throttle body injection, which is referred to as CFI by Ford and TBI by GM, put the fuel injectors in the throttle body. This permits an older engine the opportunity to be converted from carburetor to fuel injection without considerably changing the design of the engine.