

Throttle Body for Forklifts

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the part of the air intake system that regulates the amount of air which flows into the engine. This particular mechanism works in response to driver accelerator pedal input in the main. Normally, the throttle body is placed between the intake manifold and the air filter box. It is often attached to or located next to the mass airflow sensor. The biggest component within the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main task is to be able to control air flow.

On nearly all automobiles, the accelerator pedal motion is transferred through the throttle cable, thus activating the throttle linkages works in order to move the throttle plate. In vehicles consisting of electronic throttle control, otherwise 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 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 consists of 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 positioned next to this is what returns the throttle body to its idle position after the pedal is released.

Throttle plates turn inside the throttle body each time pressure is placed on the accelerator. The throttle passage is then opened to enable much more air to flow into the intake manifold. Normally, 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 generate the desired air-fuel ratio. Often a throttle position sensor or likewise called 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 "WOT" position, the idle position or anywhere in between these two extremes.

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

It is common that a lot of vehicles contain one throttle body, even if, more than one can be utilized and attached together by linkages in order to improve throttle response. High performance automobiles like the BMW M1, together with high performance motorcycles like for example the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are referred to as ITBs or otherwise 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 into one. They operate by blending the fuel and air together and by controlling the amount of air flow. Vehicles that include throttle body injection, which is known as TBI by GM and CFI by Ford, situate the fuel injectors in the throttle body. This enables an older engine the opportunity to be converted from carburetor to fuel injection without considerably changing the engine design.