

Throttle Body for Forklift

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 that flows into the engine. This mechanism operates in response to operator accelerator pedal input in the main. Usually, the throttle body is positioned between the air filter box and the intake manifold. It is often connected to or located close to the mass airflow sensor. The biggest component within the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main function is in order to regulate air flow.

On most automobiles, the accelerator pedal motion is transferred via the throttle cable, therefore activating the throttle linkages works to move the throttle plate. In vehicles consisting of electronic throttle control, otherwise 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 also known as Engine Control Unit. The ECU is responsible for determining the throttle opening based upon accelerator pedal position along with inputs from other engine sensors. The throttle body consists of a throttle position sensor. The throttle cable is attached to the black portion on the left hand side which is curved in design. The copper coil situated near this is what returns the throttle body to its idle position when the pedal is released.

The throttle plate revolves inside the throttle body each and every time the driver presses on the accelerator pedal. This opens the throttle passage and allows more air to flow into the intake manifold. Usually, 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 generate the desired air-fuel ratio. Often a throttle position sensor or likewise called TPS is attached to the shaft of the throttle plate to be able to provide the ECU with information on whether the throttle is in the wide-open throttle or "WOT" position, the idle position or somewhere in between these two extremes.

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

In many vehicles it is normal for them to contain one throttle body. In order to improve throttle response, more than one can be utilized and attached together by linkages. High performance automobiles like 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 referred to as ITBs or "individual throttle bodies."

The carburetor and the throttle body in a non-injected engine are somewhat similar. The carburetor combines the functionality of both the fuel injectors and the throttle body into one. They are able to regulate the amount of air flow and mix the air and fuel together. Vehicles that have throttle body injection, that is referred to as TBI by GM and CFI by Ford, locate the fuel injectors within the throttle body. This permits an older engine the chance to be converted from carburetor to fuel injection without significantly changing the engine design.