

Throttle Body for Forklifts

Throttle Body for Forklift - 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 works in response to operator accelerator pedal input in the main. Usually, the throttle body is situated between the intake manifold and the air filter box. It is usually connected to or positioned next to the mass airflow sensor. The biggest piece in the throttle body is a butterfly valve called the throttle plate. The throttle plate's main task is in order to regulate air flow.

On various kinds of automobiles, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages which in turn move the throttle plate. In cars consisting of electronic throttle control, likewise called "drive-by-wire" an electric motor regulates the throttle linkages. The accelerator pedal is attached to a sensor and not to the throttle body. This particular 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 upon accelerator pedal position along with inputs from other 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 situated next to this is what returns the throttle body to its idle position once the pedal is released.

The throttle plate turns inside the throttle body each and every time the operator presses on the accelerator pedal. This opens the throttle passage and allows much more air to be able 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 so as to generate the desired air-fuel ratio. Frequently a throttle position sensor or also 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 also called "WOT" position, the idle position or anywhere in between these two extremes.

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

It is common that several automobiles contain one throttle body, though, more than one could be used and attached together by linkages so as to improve throttle response. High performance automobiles such as the BMW M1, together with high performance motorcycles like for instance the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are called 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 throttle body and the fuel injectors into one. They function by blending the air and fuel together and by modulating the amount of air flow. Automobiles that include throttle body injection, which is referred to as TBI by GM and CFI by Ford, locate the fuel injectors within the throttle body. This allows an older engine the opportunity to be converted from carburetor to fuel injection without considerably changing the engine design.