

Forklift Throttle Body

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines to be able to control the amount of air flow to the engine. This particular mechanism functions by applying pressure on the operator accelerator pedal input. Generally, the throttle body is situated between the intake manifold and the air filter box. It is normally connected to or positioned next to the mass airflow sensor. The largest component in the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main function is to be able to regulate air flow.

On several 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 vehicles with electronic throttle control, likewise 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 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 has a throttle position sensor. The throttle cable connects to the black part on the left hand side which is curved in design. The copper coil located near this is what returns the throttle body to its idle position when the pedal is released.

The throttle plate rotates inside the throttle body each time the driver applies pressure on the accelerator pedal. This opens the throttle passage and permits 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. Generally a throttle position sensor or otherwise called TPS is attached to the shaft of the throttle plate in order to provide the ECU with information on whether the throttle is in the wide-open throttle or likewise called "WOT" position, the idle position or somewhere in between these two extremes.

To be able to control the lowest amount of air flow while idling, several throttle bodies could have adjustments and valves. 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 also called IACV that the ECU utilizes to regulate the amount of air which could bypass the main throttle opening.

It is common that many automobiles contain a single throttle body, even if, more than one can be utilized and connected together by linkages in order to improve throttle response. High performance automobiles such as the BMW M1, together with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for each 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 fuel injectors and the throttle body into one. They operate by blending the air and fuel together and by modulating the amount of air flow. Automobiles that include throttle body injection, that is known as TBI by GM and CFI by Ford, situate the fuel injectors in the throttle body. This permits an old engine the possibility to be converted from carburetor to fuel injection without considerably altering the engine design.