

Forklift Throttle Body

Throttle Body for Forklift - The throttle body is a component of the intake control system in fuel injected engines so as to control the amount of air flow to the engine. This particular mechanism functions by putting pressure upon the operator accelerator pedal input. Normally, the throttle body is located between the air filter box and the intake manifold. It is normally connected to or placed near the mass airflow sensor. The biggest part in the throttle body is a butterfly valve called the throttle plate. The throttle plate's main task is to control air flow.

On nearly all automobiles, the accelerator pedal motion is transferred via the throttle cable, therefore 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 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 on accelerator pedal position together 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 which is curved in design. The copper coil located close to 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 operator applies pressure on the accelerator pedal. This opens the throttle passage and permits more air to be able to flow into the intake manifold. Usually, an airflow sensor measures this change 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. Frequently a throttle position sensor or TPS is connected to the shaft of the throttle plate so as 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 anywhere in between these two extremes.

Various throttle bodies could have valves and adjustments in order to control the minimum airflow during the idle period. 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 IACV which the ECU utilizes to regulate the amount of air which can bypass the main throttle opening.

In various vehicles it is common for them to contain one throttle body. In order to improve throttle response, more than one can be used and connected together by linkages. High performance automobiles like for instance the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for every 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 fuel injectors and the throttle body together. They function by mixing the air and fuel together and by modulating the amount of air flow. Vehicles that have throttle body injection, that is called CFI by Ford and TBI by GM, put the fuel injectors in the throttle body. This permits an older engine the possibility to be transformed from carburetor to fuel injection without considerably altering the design of the engine.