

Forklift Throttle Body

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. Generally, the throttle body is placed between the intake manifold and the air filter box. It is often fixed to or situated near 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 so as to control air flow.

On nearly all automobiles, the accelerator pedal motion is transferred via the throttle cable, hence activating the throttle linkages works to move the throttle plate. In vehicles with electronic throttle control, also 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 otherwise known as Engine Control Unit. The ECU is responsible for determining the throttle opening based upon accelerator pedal position together 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 close to this is what returns the throttle body to its idle position after the pedal is released.

The throttle plate turns in the throttle body each and every time the operator applies pressure on the accelerator pedal. This opens the throttle passage and enables much more air to flow into the intake manifold. Typically, 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. Often a throttle position sensor or 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 "WOT" position, the idle position or anywhere in between these two extremes.

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

It is common that several vehicles contain a single throttle body, though, more than one can be utilized and connected together by linkages in order to improve throttle response. High performance cars like the BMW M1, together with high performance motorcycles like for example the Suzuki Hayabusa have a separate throttle body for each 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 function by mixing the fuel and air together and by regulating the amount of air flow. Cars that include throttle body injection, which is called TBI by GM and CFI by Ford, locate the fuel injectors inside the throttle body. This allows an older engine the possibility to be converted from carburetor to fuel injection without considerably changing the engine design.