

Throttle Body for Forklift

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 which flows into the engine. This particular mechanism works in response to driver accelerator pedal input in the main. Usually, the throttle body is located between the intake manifold and the air filter box. It is usually fixed to or positioned close to the mass airflow sensor. The biggest piece inside the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main task is in order to control air flow.

On the majority of cars, the accelerator pedal motion is transferred through the throttle cable, hence activating the throttle linkages works to be able to move the throttle plate. In automobiles consisting of electronic throttle control, also called "drive-by-wire" an electric motor regulates the throttle linkages. The accelerator pedal connects 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 together with inputs from different engine sensors. The throttle body consists of a throttle position sensor. The throttle cable connects to the black portion on the left hand side that is curved in design. The copper coil placed close to this is what returns the throttle body to its idle position after 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 allows much more air to flow into the intake manifold. Normally, 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 also called TPS is connected 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 somewhere in between these two extremes.

So as to regulate the minimum air flow while idling, some throttle bodies may include 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 IACV which the ECU utilizes to be able to control the amount of air which could bypass the main throttle opening.

It is common that numerous vehicles have a single throttle body, although, more than one could be utilized and attached together by linkages so as to improve throttle response. High performance cars like for instance the BMW M1, along with high performance motorcycles like for instance the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or likewise 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 together. They operate by blending the fuel and air together and by modulating the amount of air flow. Vehicles which have throttle body injection, which is referred to as CFI by Ford and TBI by GM, put the fuel injectors in the throttle body. This allows an old engine the possibility to be converted from carburetor to fuel injection without really altering the engine design.