

Throttle Body for Forklifts

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines in order to regulate the amount of air flow to the engine. This mechanism operates by applying pressure on the driver accelerator pedal input. Usually, the throttle body is situated between the air filter box and the intake manifold. It is often fixed to or located near the mass airflow sensor. The largest piece in the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main task is so as to control air flow.

On the majority of vehicles, the accelerator pedal motion is transferred via the throttle cable, thus activating the throttle linkages works so as to 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 particular sensor sends the pedal position to the ECU or likewise known as Engine Control Unit. The ECU is responsible for determining the throttle opening based upon accelerator pedal position along with inputs from different engine sensors. The throttle body has 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 located close to this is what returns the throttle body to its idle position once the pedal is released.

The throttle plate turns in the throttle body every time the operator presses on the accelerator pedal. This opens the throttle passage and enables much more air 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 in order to generate the desired air-fuel ratio. Often a throttle position sensor or also called TPS is fixed to the shaft of the throttle plate to be able 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 regulate the least amount of air flow while idling, various throttle bodies could have adjustments and valves. Even in units which are not "drive-by-wire" there will usually be a small electric motor driven valve, the Idle Air Control Valve or otherwise called IACV that the ECU uses to regulate the amount of air that can bypass the main throttle opening.

In a lot of vehicles it is common for them to contain one throttle body. To be able to improve throttle response, more than one could be utilized and attached 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 each and every cylinder. These models are called ITBs or otherwise 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 mixing the air and fuel together and by modulating the amount of air flow. Cars that have throttle body injection, that is referred to as CFI by Ford and TBI by GM, put the fuel injectors within the throttle body. This allows an older engine the possibility to be transformed from carburetor to fuel injection without really changing the design of the engine.