

Throttle Body for Forklifts

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 that flows into the motor. This mechanism works in response to driver accelerator pedal input in the main. Usually, the throttle body is placed between the intake manifold and the air filter box. It is often attached to or positioned near the mass airflow sensor. The largest piece inside the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main function is to regulate air flow.

On several kinds of automobiles, the accelerator pedal motion is communicated via the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In cars consisting of electronic throttle control, also known as "drive-by-wire" an electric motor regulates 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 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 has a throttle position sensor. The throttle cable is attached to the black part on the left hand side that is curved in design. The copper coil placed near this is what returns the throttle body to its idle position when the pedal is released.

The throttle plate turns inside the throttle body every time the driver presses on the accelerator pedal. This opens the throttle passage and allows a lot 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 likewise called TPS is fixed 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 anywhere in between these two extremes.

Several throttle bodies may include adjustments and valves in order to control the lowest amount of airflow through the idle period. Even in units that are not "drive-by-wire" there would normally be a small electric motor driven valve, the Idle Air Control Valve or IACV which the ECU uses in order to control the amount of air that could bypass the main throttle opening.

In several cars it is normal for them to contain a single throttle body. To be able to improve throttle response, more than one could be used and connected together by linkages. High performance automobiles like the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or "individual throttle bodies."

The throttle body and the carburetor in a non-injected engine are quite similar. The carburetor combines the functionality of both the throttle body and the fuel injectors into one. They are able to control the amount of air flow and mix the fuel and air together. Cars which include throttle body injection, which is known as TBI by GM and CFI by Ford, put the fuel injectors in the throttle body. This permits an old engine the opportunity to be transformed from carburetor to fuel injection without considerably altering the design of the engine.