

Forklift Throttle Body

Throttle Body for Forklifts - The throttle body is a component of the intake control system in fuel injected engines to regulate the amount of air flow to the engine. This particular mechanism functions by placing pressure on the operator accelerator pedal input. Normally, the throttle body is positioned between the intake manifold and the air filter box. It is normally fixed to or situated near the mass airflow sensor. The biggest component within the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main function is in order to regulate air flow.

On most vehicles, the accelerator pedal motion is transferred through the throttle cable, thus activating the throttle linkages works so as to move the throttle plate. In automobiles with electronic throttle control, otherwise called "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 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 along with inputs from various engine sensors. The throttle body has a throttle position sensor. The throttle cable connects to the black portion on the left hand side which is curved in design. The copper coil situated next to this is what returns the throttle body to its idle position after the pedal is released.

The throttle plate rotates in the throttle body every time the operator applies pressure on the accelerator pedal. This opens the throttle passage and allows much more air to be able to flow into the intake manifold. Normally, an airflow sensor measures this adjustment 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 produce the desired air-fuel ratio. Often 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 idle position, the wide-open position or otherwise called "WOT" position or anywhere in between these two extremes.

Various throttle bodies can have adjustments and valves to be able to control the lowest amount of airflow during the idle period. Even in units which are not "drive-by-wire" there will normally be a small electric motor driven valve, the Idle Air Control Valve or also called IACV that the ECU uses so as to control the amount of air which can bypass the main throttle opening.

It is common that various cars have one throttle body, although, more than one can be used and attached together by linkages so as to improve throttle response. High performance vehicles like for example the BMW M1, together 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."

The throttle body and the carburetor in a non-injected engine are rather the same. The carburetor combines the functionality of both the fuel injectors and the throttle body together. They are able to modulate the amount of air flow and blend the air and fuel together. Cars that include throttle body injection, that is known as CFI by Ford and TBI by GM, put the fuel injectors inside the throttle body. This permits an older engine the chance to be converted from carburetor to fuel injection without really changing the design of the engine.