

Throttle Body for Forklifts

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines to be able to control the amount of air flow to the engine. This mechanism functions by placing pressure on the driver accelerator pedal input. Usually, the throttle body is positioned between the intake manifold and the air filter box. It is often connected to or located close to the mass airflow sensor. The biggest piece within the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main task is to control air flow.

On the majority of cars, the accelerator pedal motion is transferred via the throttle cable, hence activating the throttle linkages works so as to move the throttle plate. In automobiles with electronic throttle control, also known as "drive-by-wire" an electric motor controls 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 along with inputs from other engine sensors. The throttle body has a throttle position sensor. The throttle cable connects to the black part on the left hand side which is curved in design. The copper coil positioned next to this is what returns the throttle body to its idle position once the pedal is released.

Throttle plates rotate within the throttle body every time pressure is applied on the accelerator. The throttle passage is then opened to be able to permit a lot 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 to be able 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 so as 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 somewhere in between these two extremes.

Some throttle bodies could have valves and adjustments so as to regulate the lowest amount of airflow throughout 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 to regulate the amount of air that can bypass the main throttle opening.

In various cars it is common for them to contain one throttle body. In order to improve throttle response, more than one could be used and attached together by linkages. High performance cars such as 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 similar to the carburetor in a non-injected engine. Carburetors combine the functionality of the throttle body and the fuel injectors into one. They function by combining the fuel and air together and by modulating the amount of air flow. Automobiles which have throttle body injection, which is known as TBI by GM and CFI by Ford, locate the fuel injectors inside the throttle body. This allows an old engine the chance to be converted from carburetor to fuel injection without really changing the engine design.