

Throttle Body for Forklifts

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines so as to regulate the amount of air flow to the engine. This mechanism functions by putting pressure on the driver accelerator pedal input. Generally, the throttle body is positioned between the air filter box and the intake manifold. It is usually fixed to or located next to the mass airflow sensor. The biggest part within 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 many kinds of automobiles, the accelerator pedal motion is communicated via the throttle cable. This activates the throttle linkages which in turn move the throttle plate. In automobiles consisting of electronic throttle control, otherwise known as "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 likewise 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 which is curved in design. The copper coil positioned near this is what returns the throttle body to its idle position when the pedal is released.

The throttle plate revolves inside the throttle body each time the driver presses on the accelerator pedal. This opens the throttle passage and allows more air to flow into the intake manifold. Usually, 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 in order to generate the desired air-fuel ratio. Frequently 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 wide-open throttle or also called "WOT" position, the idle position or somewhere in between these two extremes.

Various throttle bodies can include valves and adjustments so as to regulate the least amount of airflow through the idle period. Even in units that are not "drive-by-wire" there would often be a small electric motor driven valve, the Idle Air Control Valve or IACV that the ECU uses to control the amount of air which can bypass the main throttle opening.

It is common that lots of vehicles contain a single throttle body, although, more than one can be used and connected together by linkages to be able to improve throttle response. High performance vehicles such as the BMW M1, along with high performance motorcycles like for example the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are called ITBs or "individual throttle bodies."

The carburetor and the throttle body in a non-injected engine are rather the same. The carburetor combines the functionality of both the throttle body and the fuel injectors into one. They are able to modulate the amount of air flow and combine the air and fuel together. Cars which have throttle body injection, that is called CFI by Ford and TBI by GM, locate the fuel injectors inside the throttle body. This enables an old engine the possibility to be converted from carburetor to fuel injection without really altering the engine design.