

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 particular mechanism functions in response to driver accelerator pedal input in the main. Generally, the throttle body is positioned between the air filter box and the intake manifold. It is usually connected to or situated near the mass airflow sensor. The biggest part inside the throttle body is a butterfly valve called the throttle plate. The throttle plate's main task is so as to control air flow.

On various styles of cars, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In cars consisting of electronic throttle control, likewise referred to as "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 Engine Control Unit. The ECU is responsible for determining the throttle opening based upon accelerator pedal position together 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 positioned near this is what returns the throttle body to its idle position when the pedal is released.

The throttle plate rotates in the throttle body each and every time the operator presses on the accelerator pedal. This opens the throttle passage and enables more air to be able to flow into the intake manifold. Typically, 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 in order to generate the desired air-fuel ratio. Generally a throttle position sensor or otherwise called TPS is fixed to the shaft of the throttle plate in order to provide the ECU with information on whether the throttle is in the idle position, the wide-open position or also called "WOT" position or somewhere in between these two extremes.

In order to control the least amount of air flow while idling, various throttle bodies could have valves and adjustments. Even in units which are not "drive-by-wire" there will 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.

In a lot of vehicles it is common for them to have a single throttle body. So as to improve throttle response, more than one could be used and connected together by linkages. High performance cars like for instance the BMW M1, together with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are referred to as ITBs or likewise known as "individual throttle bodies."

A throttle body is like the carburetor in a non-injected engine. Carburetors combine the functionality of the fuel injectors and the throttle body into one. They function by mixing the air and fuel together and by controlling the amount of air flow. Vehicles which have throttle body injection, that is referred to as TBI by GM and CFI by Ford, locate the fuel injectors inside the throttle body. This permits an old engine the possibility to be transformed from carburetor to fuel injection without significantly altering the design of the engine.