

Throttle Body for Forklift

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the component of the air intake system which regulates the amount of air which flows into the engine. This mechanism functions 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 usually connected to or placed close to the mass airflow sensor. The largest piece within the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main function is to be able to control air flow.

On many styles 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 vehicles with electronic throttle control, otherwise known 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 on accelerator pedal position together with inputs from other 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 close to this is what returns the throttle body to its idle position when the pedal is released.

Throttle plates turn inside the throttle body each and every time pressure is placed on the accelerator. The throttle passage is then opened in order to enable more air to flow into the intake manifold. Usually, 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 produce the desired air-fuel ratio. Often a throttle position sensor or 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 "WOT" position or somewhere in between these two extremes.

To be able to control the minimum air flow while idling, various throttle bodies could have valves and adjustments. Even in units which 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 utilizes to regulate the amount of air that can bypass the main throttle opening.

It is common that several automobiles contain a single throttle body, although, more than one can be utilized and attached together by linkages in order to improve throttle response. High performance vehicles such as the BMW M1, together with high performance motorcycles like for instance the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are referred to as ITBs or "individual throttle bodies."

A throttle body is similar to the carburetor in a non-injected engine. Carburetors combine the functionality of the fuel injectors and the throttle body together. They work by combining the air and fuel together and by controlling the amount of air flow. Vehicles which include 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 chance to be converted from carburetor to fuel injection without considerably changing the design of the engine.