Forklift Throttle Body

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the part of the air intake system which controls the amount of air that flows into the motor. This particular mechanism operates 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 normally connected to or positioned close to the mass airflow sensor. The largest component in the throttle body is a butterfly valve called the throttle plate. The throttle plate's main function is to be able to control air flow.

On most cars, the accelerator pedal motion is transferred via the throttle cable, hence activating the throttle linkages works to move the throttle plate. In cars with electronic throttle control, also called "drive-by-wire" an electric motor controls 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 Engine Control Unit. The ECU is responsible for determining the throttle opening based upon accelerator pedal position together with inputs from different engine sensors. The throttle body consists of a throttle position sensor. The throttle cable connects to the black part on the left hand side that is curved in design. The copper coil positioned close to this is what returns the throttle body to its idle position when the pedal is released.

Throttle plates turn within the throttle body every time pressure is applied on the accelerator. The throttle passage is then opened in order to permit much more air to flow into the intake manifold. Typically, an airflow sensor measures this change 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. Frequently a throttle position sensor or TPS is fixed to the shaft of the throttle plate to be able to provide the ECU with information on whether the throttle is in the wide-open throttle or otherwise called "WOT" position, the idle position or somewhere in between these two extremes.

In order to regulate the least amount of air flow while idling, some throttle bodies may have adjustments and valves. 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 utilizes to regulate the amount of air which can bypass the main throttle opening.

In lots of vehicles it is common for them to contain one throttle body. So as to improve throttle response, more than one can be used and attached together by linkages. High performance vehicles like for example the BMW M1, together with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are referred to as ITBs or also known as "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 into one. They function by mixing the air and fuel together and by modulating the amount of air flow. Automobiles which have throttle body injection, which is called CFI by Ford and TBI by GM, situate the fuel injectors within the throttle body. This permits an older engine the opportunity to be converted from carburetor to fuel injection without really changing the engine design.