Throttle Body for Forklifts

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 that flows into the motor. This mechanism operates in response to operator accelerator pedal input in the main. Normally, the throttle body is positioned between the air filter box and the intake manifold. It is usually connected to or placed close to the mass airflow sensor. The biggest piece inside the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main function is in order to regulate air flow.

On nearly all cars, the accelerator pedal motion is transferred via the throttle cable, therefore activating the throttle linkages works in order to move the throttle plate. In vehicles with electronic throttle control, also called "drive-by-wire" an electric motor regulates 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 various engine sensors. The throttle body consists of 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 located next 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 placed on the accelerator. The throttle passage is then opened to enable more air to flow into the intake manifold. Normally, 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 so as to produce the desired air-fuel ratio. Generally a throttle position sensor or also called TPS is connected to the shaft of the throttle plate to provide the ECU with information on whether the throttle is in the wide-open throttle or likewise called "WOT" position, the idle position or anywhere in between these two extremes.

In order to control the lowest amount of air flow while idling, some throttle bodies can include 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 control the amount of air that can bypass the main throttle opening.

It is common that numerous cars have a single throttle body, although, more than one could be used and connected together by linkages so as to improve throttle response. High performance cars such as the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are referred to as ITBs or also 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 together. They function by blending the fuel and air together and by controlling the amount of air flow. Automobiles that have throttle body injection, that is called TBI by GM and CFI by Ford, situate the fuel injectors in the throttle body. This permits an old engine the chance to be transformed from carburetor to fuel injection without considerably altering the design of the engine.