Forklift Throttle Body

The throttle body is part of the intake control system in fuel injected engines in order to regulate the amount of air flow to the engine. This mechanism works by placing pressure upon the operator accelerator pedal input. Generally, the throttle body is situated between the intake manifold and the air filter box. It is usually attached to or positioned near the mass airflow sensor. The biggest piece in the throttle body is a butterfly valve called the throttle plate. The throttle plate's main function is to regulate air flow.

On many styles of vehicles, the accelerator pedal motion is communicated via the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In vehicles consisting of electronic throttle control, otherwise referred to 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 particular sensor sends the pedal position to the ECU or also 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 placed close to this is what returns the throttle body to its idle position as soon as the pedal is released.

Throttle plates revolve in 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. Normally, 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 so as to produce the desired air-fuel ratio. Generally 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 likewise called "WOT" position, the idle position or anywhere in between these two extremes.

Various throttle bodies could include adjustments and valves to be able to control the least amount of airflow during the idle period. Even in units which are not "drive-by-wire" there will usually be a small electric motor driven valve, the Idle Air Control Valve or likewise called IACV that the ECU utilizes to regulate the amount of air which could bypass the main throttle opening.

In many automobiles it is common for them to have one throttle body. To be able to improve throttle response, more than one can be used and connected together by linkages. High performance automobiles like the BMW M1, together with high performance motorcycles like for instance the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are referred to as ITBs or likewise known as "individual throttle bodies."

The carburator and the throttle body in a non-injected engine are rather the same. The carburator combines the functionality of both the throttle body and the fuel injectors into one. They are able to regulate the amount of air flow and combine the fuel and air together. Cars which include throttle body injection, which is referred to as CFI by Ford and TBI by GM, locate the fuel injectors in the throttle body. This permits an older engine the chance to be transformed from carburetor to fuel injection without significantly changing the engine design.