Forklift Throttle Body

Forklift Throttle Body - The throttle body is a component of the intake control system in fuel injected engines to control the amount of air flow to the engine. This mechanism operates by applying pressure on the operator accelerator pedal input. Generally, the throttle body is positioned between the intake manifold and the air filter box. It is usually attached to or situated close to the mass airflow sensor. The largest component inside the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main task is to control air flow.

On the majority of cars, the accelerator pedal motion is transferred through the throttle cable, therefore activating the throttle linkages works so as to move the throttle plate. In automobiles with electronic throttle control, also 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 likewise known as Engine Control Unit. The ECU is responsible for determining the throttle opening based upon 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 located close to this is what returns the throttle body to its idle position as soon as the pedal is released.

The throttle plate turns inside the throttle body each time the driver presses on the accelerator pedal. This opens the throttle passage and enables 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 likewise called TPS is connected to the shaft of the throttle plate so as to provide the ECU with information on whether the throttle is in the idle position, the wide-open position or likewise called "WOT" position or anywhere in between these two extremes.

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

In a lot of automobiles it is normal for them to have one throttle body. In order to improve throttle response, more than one can be used and connected together by linkages. High performance vehicles like the BMW M1, together with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are called ITBs or otherwise 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 together. They function by blending the fuel and air together and by controlling the amount of air flow. Automobiles which include throttle body injection, that is referred to as CFI by Ford and TBI by GM, put the fuel injectors inside the throttle body. This enables an old engine the possibility to be transformed from carburetor to fuel injection without really changing the engine design.