Forklift Throttle Body

Forklift Throttle Body - The throttle body is a component of the intake control system in fuel injected engines in order to control the amount of air flow to the engine. This particular mechanism works by putting pressure upon the operator accelerator pedal input. Generally, the throttle body is positioned between the intake manifold and the air filter box. It is normally connected to or placed near the mass airflow sensor. The largest component inside the throttle body is a butterfly valve called the throttle plate. The throttle plate's main task is to be able to control air flow.

On the majority of vehicles, the accelerator pedal motion is transferred through the throttle cable, thus activating the throttle linkages works in order to move the throttle plate. In cars with electronic throttle control, otherwise known 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 Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position together with inputs from various engine sensors. The throttle body consists of a throttle position sensor. The throttle cable is attached to the black portion on the left hand side which is curved in design. The copper coil located near this is what returns the throttle body to its idle position as soon as the pedal is released.

The throttle plate revolves in the throttle body each and every time the operator applies pressure on the accelerator pedal. This opens the throttle passage and enables a lot 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. Often a throttle position sensor or otherwise called TPS is fixed to the shaft of the throttle plate in order 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.

In order to regulate the least amount of air flow while idling, various throttle bodies could include valves and adjustments. 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 could bypass the main throttle opening.

It is common that several vehicles have a single throttle body, although, more than one could be used and attached together by linkages so as to improve throttle response. High performance vehicles like the BMW M1, together with high performance motorcycles like 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 throttle body and the fuel injectors together. They operate by mixing the fuel and air together and by modulating the amount of air flow. Automobiles that have throttle body injection, which is known as CFI by Ford and TBI by GM, put the fuel injectors in the throttle body. This enables an old engine the possibility to be converted from carburetor to fuel injection without really altering the engine design.