Forklift Throttle Body

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines so as to control the amount of air flow to the engine. This mechanism functions by applying pressure on the operator accelerator pedal input. Generally, the throttle body is positioned between the air filter box and the intake manifold. It is normally connected to or located near the mass airflow sensor. The biggest component inside the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main function is to regulate air flow.

On numerous 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 automobiles with electronic throttle control, otherwise 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 also known as Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position along 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 that is curved in design. The copper coil positioned near this is what returns the throttle body to its idle position when the pedal is released.

The throttle plate revolves inside the throttle body each time the driver applies pressure on the accelerator pedal. This opens the throttle passage and allows much more air to be able to flow into the intake manifold. Typically, 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 to be able 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 in order to provide the ECU with information on whether the throttle is in the wide-open throttle or "WOT" position, the idle position or anywhere in between these two extremes.

To be able to regulate the minimum air flow while idling, several throttle bodies may have valves and adjustments. Even in units that are not "drive-by-wire" there would often be a small electric motor driven valve, the Idle Air Control Valve or IACV which the ECU uses to control the amount of air that could bypass the main throttle opening.

In various vehicles it is normal for them to contain one throttle body. So as to improve throttle response, more than one can be used and connected together by linkages. High performance vehicles like the BMW M1, along with high performance motorcycles such as 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."

The carburator and the throttle body in a non-injected engine are quite similar. The carburator combines the functionality of both the fuel injectors and the throttle body into one. They can control the amount of air flow and combine the fuel and air together. Automobiles which have throttle body injection, that is referred to as TBI by GM and CFI by Ford, locate the fuel injectors in the throttle body. This enables an older engine the chance to be transformed from carburetor to fuel injection without really changing the design of the engine.