Throttle Body for Forklifts

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 particular mechanism works by putting pressure upon the driver accelerator pedal input. Usually, the throttle body is located between the air filter box and the intake manifold. It is normally attached to or positioned next to the mass airflow sensor. The largest component within the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main task is to be able to control air flow.

On nearly all vehicles, the accelerator pedal motion is transferred through the throttle cable, hence activating the throttle linkages works so as to move the throttle plate. In vehicles consisting of electronic throttle control, also 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 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 on accelerator pedal position together with inputs from different 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 positioned close to this is what returns the throttle body to its idle position when the pedal is released.

The throttle plate revolves in the throttle body every time the driver applies pressure on the accelerator pedal. This opens the throttle passage and allows a lot more air to be able 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 generate the desired air-fuel ratio. Generally a throttle position sensor or 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 "WOT" position, the idle position or somewhere in between these two extremes.

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

In several vehicles it is common for them to have a single throttle body. So as to improve throttle response, more than one could be used and attached together by linkages. High performance cars like for example the BMW M1, together with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or also 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 combining the air and fuel together and by controlling the amount of air flow. Automobiles that have throttle body injection, which is referred to as CFI by Ford and TBI by GM, locate the fuel injectors inside the throttle body. This enables an old engine the possibility to be converted from carburetor to fuel injection without really changing the design of the engine.