Throttle Body for Forklifts

Throttle Body for Forklifts - The throttle body is a component of the intake control system in fuel injected engines to regulate the amount of air flow to the engine. This mechanism functions by putting pressure on the operator accelerator pedal input. Usually, the throttle body is positioned between the intake manifold and the air filter box. It is normally connected to or positioned next 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 function is to regulate air flow.

On most automobiles, the accelerator pedal motion is transferred via the throttle cable, therefore activating the throttle linkages works to move the throttle plate. In vehicles with electronic throttle control, likewise known as "drive-by-wire" an electric motor regulates 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 Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position along with inputs from various engine sensors. The throttle body consists of 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 situated near this is what returns the throttle body to its idle position as soon as the pedal is released.

The throttle plate rotates inside the throttle body each and every time the driver presses 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 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 generate the desired air-fuel ratio. Often a throttle position sensor or also 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 idle position, the wide-open position or otherwise called "WOT" position or somewhere 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 which are not "drive-by-wire" there will usually be a small electric motor driven valve, the Idle Air Control Valve or IACV which the ECU uses to be able to regulate the amount of air that can bypass the main throttle opening.

In a lot of automobiles it is normal for them to have one throttle body. To be able to improve throttle response, more than one can be utilized and connected together by linkages. High performance automobiles such as the BMW M1, together with high performance motorcycles like for example the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are referred to as ITBs or likewise 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 operate by combining the fuel and air together and by controlling the amount of air flow. Vehicles which have throttle body injection, which is called CFI by Ford and TBI by GM, put the fuel injectors inside the throttle body. This permits an older engine the chance to be transformed from carburetor to fuel injection without considerably changing the engine design.