Throttle Body for Forklifts

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

On most vehicles, the accelerator pedal motion is transferred through the throttle cable, therefore activating the throttle linkages works to be able to move the throttle plate. In cars consisting of electronic throttle control, likewise called "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 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 has a throttle position sensor. The throttle cable connects to the black part on the left hand side which is curved in design. The copper coil situated close to this is what returns the throttle body to its idle position after the pedal is released.

Throttle plates revolve inside the throttle body each time pressure is placed on the accelerator. The throttle passage is then opened in order to enable a lot more air to flow into the intake manifold. Typically, an airflow sensor measures this change 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. Often a throttle position sensor or TPS is attached to the shaft of the throttle plate to provide the ECU with information on whether the throttle is in the idle position, the wide-open position or "WOT" position or somewhere in between these two extremes.

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

It is common that lots of vehicles have a single throttle body, even though, more than one could be used and attached together by linkages to be able to improve throttle response. High performance cars like for instance the BMW M1, together with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are referred to as ITBs or "individual throttle bodies."

The throttle body and the carburator in a non-injected engine are rather similar. The carburator combines the functionality of both the throttle body and the fuel injectors together. They are able to control the amount of air flow and combine the fuel and air together. Vehicles that have throttle body injection, which is referred to as TBI by GM and CFI by Ford, locate the fuel injectors inside the throttle body. This permits an older engine the possibility to be transformed from carburetor to fuel injection without considerably changing the design of the engine.