Throttle Body for Forklifts

Throttle Body for Forklift - The throttle body is a component of the intake control system in fuel injected engines to be able to control the amount of air flow to the engine. This particular mechanism operates by putting pressure upon the operator accelerator pedal input. Normally, the throttle body is located between the air filter box and the intake manifold. It is often attached to or situated next to the mass airflow sensor. The biggest component within the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main task is so as to control air flow.

On various styles of automobiles, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages which in turn move the throttle plate. In automobiles with electronic throttle control, otherwise known as "drive-by-wire" an electric motor controls 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 upon accelerator pedal position along with inputs from other engine sensors. The throttle body consists of a throttle position sensor. The throttle cable connects to the black part on the left hand side that is curved in design. The copper coil placed next to this is what returns the throttle body to its idle position after the pedal is released.

Throttle plates rotate within the throttle body each and every time pressure is placed on the accelerator. The throttle passage is then opened to be able to permit much more air to flow into the intake manifold. Usually, 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. Frequently a throttle position sensor or otherwise 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 "WOT" position or anywhere in between these two extremes.

In order to control the least amount of air flow while idling, some 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 also called IACV which the ECU uses to control the amount of air that can bypass the main throttle opening.

In a lot of automobiles it is common for them to contain one throttle body. So as to improve throttle response, more than one could be used and connected together by linkages. High performance cars such as the BMW M1, together with high performance motorcycles like for instance the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are called 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 blending the air and fuel together and by controlling the amount of air flow. Cars that include throttle body injection, that is referred to as TBI by GM and CFI by Ford, put the fuel injectors inside the throttle body. This allows an old engine the opportunity to be converted from carburetor to fuel injection without significantly altering the design of the engine.