Forklift Throttle Body

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the component of the air intake system which regulates the amount of air which flows into the motor. This particular mechanism works in response to operator accelerator pedal input in the main. Generally, the throttle body is located between the intake manifold and the air filter box. It is usually fixed to or situated close to the mass airflow sensor. The largest piece within the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main function is to be able to control air flow.

On the majority of cars, the accelerator pedal motion is transferred via the throttle cable, hence activating the throttle linkages works to be able to move the throttle plate. In cars consisting of electronic throttle control, otherwise referred to 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 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 together 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 located near this is what returns the throttle body to its idle position once the pedal is released.

Throttle plates revolve inside the throttle body every time pressure is placed on the accelerator. The throttle passage is then opened in order to allow 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. Often a throttle position sensor or otherwise called 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 anywhere in between these two extremes.

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

It is common that many vehicles contain one throttle body, even if, more than one can be used and connected together by linkages to be able to improve throttle response. High performance automobiles such as the BMW M1, along with high performance motorcycles like for instance the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or likewise known as "individual throttle bodies."

A throttle body is like the carburetor in a non-injected engine. Carburetors combine the functionality of the fuel injectors and the throttle body into one. They operate by mixing the air and fuel together and by controlling the amount of air flow. Automobiles which include throttle body injection, that is known as CFI by Ford and TBI by GM, put the fuel injectors inside the throttle body. This permits an old engine the possibility to be converted from carburetor to fuel injection without considerably changing the design of the engine.