Forklift Throttle Body

Where fuel injected engines are concerned, the throttle body is the component of the air intake system that regulates the amount of air that flows into the motor. This particular mechanism functions in response to driver accelerator pedal input in the main. Usually, the throttle body is placed between the intake manifold and the air filter box. It is normally connected to or placed next to the mass airflow sensor. The biggest piece in the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main function is so as to regulate air flow.

On most cars, the accelerator pedal motion is transferred via the throttle cable, thus activating the throttle linkages works in order 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 is attached 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 upon 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 that is curved in design. The copper coil positioned next to this is what returns the throttle body to its idle position as soon as the pedal is released.

Throttle plates turn inside the throttle body each time pressure is applied on the accelerator. The throttle passage is then opened to be able to enable much more air to flow into the intake manifold. Usually, 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 to be able to generate the desired air-fuel ratio. Generally a throttle position sensor or otherwise called TPS is attached 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.

Some throttle bodies can include adjustments and valves so as to control the minimum airflow throughout the idle period. Even in units that 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 in order to control the amount of air that can bypass the main throttle opening.

It is common that several cars contain one throttle body, although, more than one could be utilized and attached together by linkages so as to improve throttle response. High performance automobiles like for instance the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are called ITBs or "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 into one. They operate by mixing the air and fuel together and by controlling the amount of air flow. Cars which include throttle body injection, that is called TBI by GM and CFI by Ford, put the fuel injectors in the throttle body. This allows an old engine the possibility to be transformed from carburetor to fuel injection without really changing the design of the engine.