Forklift Throttle Body

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the component of the air intake system which controls the amount of air that flows into the engine. This mechanism works in response to operator accelerator pedal input in the main. Generally, the throttle body is positioned between the intake manifold and the air filter box. It is normally connected to or located near the mass airflow sensor. The largest piece in 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 vehicles, the accelerator pedal motion is transferred via the throttle cable, therefore activating the throttle linkages works so as to move the throttle plate. In cars consisting of electronic throttle control, otherwise referred to 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 also known as Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position along with inputs from other engine sensors. The throttle body has a throttle position sensor. The throttle cable connects to the black portion on the left hand side which is curved in design. The copper coil positioned near this is what returns the throttle body to its idle position as soon as the pedal is released.

Throttle plates turn within the throttle body each and every time pressure is applied on the accelerator. The throttle passage is then opened to be able to allow more air to flow into the intake manifold. Normally, 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 so as to produce the desired air-fuel ratio. Frequently a throttle position sensor or 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.

In order to regulate the least amount of air flow while idling, some throttle bodies could include adjustments and valves. 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 in order to control the amount of air that could bypass the main throttle opening.

It is common that various cars have one throttle body, though, more than one could be used and attached together by linkages to be able to improve throttle response. High performance vehicles like for example 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 referred to as ITBs or "individual throttle bodies."

A throttle body is like 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 fuel and air together and by modulating the amount of air flow. Automobiles that have throttle body injection, which is known as CFI by Ford and TBI by GM, put the fuel injectors in the throttle body. This enables an older engine the chance to be transformed from carburetor to fuel injection without significantly altering the design of the engine.