Throttle Body for Forklifts

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines in order to regulate the amount of air flow to the engine. This mechanism functions by applying pressure on the driver accelerator pedal input. Generally, the throttle body is positioned between the air filter box and the intake manifold. It is often connected to or placed next to the mass airflow sensor. The biggest piece within the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main task is to regulate air flow.

On numerous styles of automobiles, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In automobiles with 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 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 consists of 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 located close to this is what returns the throttle body to its idle position as soon as the pedal is released.

The throttle plate revolves inside the throttle body each time the driver applies pressure on the accelerator pedal. This opens the throttle passage and allows much more air to be able to flow into the intake manifold. Typically, an airflow sensor measures this alteration and communicates with the ECU. In response, the Engine Control Unit then increases the amount of fluid being sent to the fuel injectors in order to produce the desired air-fuel ratio. Often a throttle position sensor or 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 otherwise called "WOT" position, the idle position or anywhere in between these two extremes.

Some throttle bodies may include valves and adjustments in order to regulate the least amount of airflow through the idle period. Even in units that are not "drive-by-wire" there will often be a small electric motor driven valve, the Idle Air Control Valve or IACV which the ECU utilizes to regulate the amount of air that can bypass the main throttle opening.

It is common that various vehicles have a single throttle body, even though, more than one could be used and connected together by linkages in order to improve throttle response. High performance automobiles like 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 also 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 together. They work by mixing the air and fuel together and by regulating the amount of air flow. Vehicles which have throttle body injection, that is referred to as TBI by GM and CFI by Ford, locate the fuel injectors inside the throttle body. This permits an old engine the possibility to be transformed from carburetor to fuel injection without considerably changing the engine design.