

Forklift Throttle Body

The throttle body is a component of the intake control system in fuel injected engines so as to control the amount of air flow to the engine. This mechanism operates 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 usually connected to or placed next to the mass airflow sensor. The biggest part within 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 several styles of automobiles, the accelerator pedal motion is communicated via the throttle cable. This activates the throttle linkages which in turn move the throttle plate. In cars consisting of electronic throttle control, also known 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 otherwise known as 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 is attached to the black portion on the left hand side which is curved in design. The copper coil positioned next to this is what returns the throttle body to its idle position after the pedal is released.

The throttle plate turns in the throttle body every time the driver presses on the accelerator pedal. This opens the throttle passage and permits a lot more air to be able to flow into the intake manifold. Normally, 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. Frequently a throttle position sensor or also called TPS is attached 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 somewhere in between these two extremes.

So as to regulate the lowest amount of air flow while idling, several throttle bodies could have adjustments and valves. Even in units which are not "drive-by-wire" there would normally be a small electric motor driven valve, the Idle Air Control Valve or likewise called IACV which the ECU uses so as to control the amount of air that could bypass the main throttle opening.

In numerous vehicles it is common for them to have one throttle body. To be able to improve throttle response, more than one can be used and connected together by linkages. High performance vehicles like the BMW M1, together with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or otherwise known as "individual throttle bodies."

A throttle body is similar to the carburetor in a non-injected engine. Carburetors combine the functionality of the fuel injectors and the throttle body together. They work by combining the air and fuel together and by modulating the amount of air flow. Vehicles that have throttle body injection, which is known as CFI by Ford and TBI by GM, put the fuel injectors within the throttle body. This allows an older engine the opportunity to be transformed from carburetor to fuel injection without really changing the design of the engine.