

Throttle Body for Forklifts

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines to regulate the amount of air flow to the engine. This mechanism operates by applying pressure on the driver accelerator pedal input. Normally, the throttle body is located between the intake manifold and the air filter box. It is normally connected to or placed next to the mass airflow sensor. The largest part inside the throttle body is a butterfly valve called the throttle plate. The throttle plate's main function is to regulate air flow.

On many kinds of cars, the accelerator pedal motion is communicated via the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In automobiles with electronic throttle control, also called "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 other 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 positioned near this is what returns the throttle body to its idle position as soon as the pedal is released.

The throttle plate turns inside the throttle body each and every time the driver applies pressure on the accelerator pedal. This opens the throttle passage and enables much more air to flow into the intake manifold. Typically, 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. 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 idle position, the wide-open position or "WOT" position or anywhere in between these two extremes.

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

In many vehicles it is normal for them to contain one throttle body. To be able to improve throttle response, more than one could be used and attached together by linkages. High performance cars like for instance the BMW M1, together with high performance motorcycles like for instance the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are referred to as 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 throttle body and the fuel injectors together. They work by combining the fuel and air together and by modulating the amount of air flow. Cars which include throttle body injection, which is referred to as CFI by Ford and TBI by GM, locate the fuel injectors inside the throttle body. This enables an old engine the possibility to be transformed from carburetor to fuel injection without considerably altering the design of the engine.