

Throttle Body for Forklift

Throttle Body for Forklift - The throttle body is a component of the intake control system in fuel injected engines to be able to control the amount of air flow to the engine. This particular mechanism operates by applying pressure upon the driver accelerator pedal input. Generally, the throttle body is located between the air filter box and the intake manifold. It is usually connected to or placed near the mass airflow sensor. The largest piece in the throttle body is a butterfly valve called the throttle plate. The throttle plate's main function is in order to control air flow.

On several kinds of cars, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In cars consisting of electronic throttle control, otherwise known 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 particular sensor sends the pedal position to the ECU or likewise known as Engine Control Unit. The ECU is responsible for determining the throttle opening based upon accelerator pedal position together with inputs from various engine sensors. The throttle body has a throttle position sensor. The throttle cable is attached to the black portion on the left hand side that is curved in design. The copper coil situated next to this is what returns the throttle body to its idle position after the pedal is released.

The throttle plate revolves inside the throttle body each and every time the operator applies pressure on the accelerator pedal. This opens the throttle passage and allows more air to be able 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 so as to produce the desired air-fuel ratio. Often a throttle position sensor or also called TPS is attached to the shaft of the throttle plate so as to provide the ECU with information on whether the throttle is in the idle position, the wide-open position or likewise called "WOT" position or anywhere in between these two extremes.

In order to control the lowest amount of air flow while idling, various throttle bodies may include valves and adjustments. 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 otherwise called IACV which the ECU utilizes to control the amount of air that can bypass the main throttle opening.

It is common that many cars have a single throttle body, although, more than one could be used and connected together by linkages so as to improve throttle response. High performance automobiles like the BMW M1, together with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for every 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 blending the fuel and air together and by controlling the amount of air flow. Automobiles which include throttle body injection, which is called CFI by Ford and TBI by GM, locate the fuel injectors inside the throttle body. This allows an older engine the opportunity to be converted from carburetor to fuel injection without significantly changing the design of the engine.