

Throttle Body for Forklift

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the part of the air intake system which controls the amount of air which flows into the motor. This particular mechanism functions in response to operator accelerator pedal input in the main. Generally, the throttle body is situated between the intake manifold and the air filter box. It is usually attached to or situated close to the mass airflow sensor. The largest component in the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main function is to regulate air flow.

On most cars, the accelerator pedal motion is transferred through the throttle cable, therefore activating the throttle linkages works 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 together with inputs from different engine sensors. The throttle body has 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 located near this is what returns the throttle body to its idle position once the pedal is released.

The throttle plate turns within the throttle body each and every time the driver presses on the accelerator pedal. This opens the throttle passage and permits 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 generate the desired air-fuel ratio. Generally a throttle position sensor or 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 somewhere in between these two extremes.

Some throttle bodies can have valves and adjustments to be able to control the least amount of airflow during the idle period. 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 in order to regulate the amount of air that could bypass the main throttle opening.

It is common that a lot of cars have a single throttle body, though, more than one can be utilized and connected together by linkages in order to improve throttle response. High performance automobiles such as the BMW M1, together with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are called ITBs or "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 function by mixing the fuel and air together and by regulating the amount of air flow. Vehicles which include throttle body injection, that is called TBI by GM and CFI by Ford, situate the fuel injectors in the throttle body. This enables an older engine the chance to be converted from carburetor to fuel injection without significantly altering the design of the engine.