

Forklift Throttle Body

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the part of the air intake system which regulates the amount of air that flows into the engine. This mechanism operates in response to driver accelerator pedal input in the main. Usually, the throttle body is located between the air filter box and the intake manifold. It is usually attached to or situated close to the mass airflow sensor. The biggest part within the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main task is to control air flow.

On nearly all vehicles, the accelerator pedal motion is transferred via the throttle cable, hence activating the throttle linkages works to move the throttle plate. In vehicles with electronic throttle control, likewise referred to 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 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 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 located next to this is what returns the throttle body to its idle position as soon as the pedal is released.

The throttle plate rotates inside the throttle body each time the driver applies pressure on the accelerator pedal. This opens the throttle passage and permits much more air to flow into the intake manifold. Typically, 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 in order to produce the desired air-fuel ratio. Frequently 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 also called "WOT" position or anywhere in between these two extremes.

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

It is common that various automobiles have a single throttle body, although, more than one can be used and connected together by linkages to be able to improve throttle response. High performance automobiles like for instance the BMW M1, together with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are called ITBs or otherwise known as "individual throttle bodies."

The carburetor and the throttle body in a non-injected engine are quite similar. The carburetor combines the functionality of both the throttle body and the fuel injectors into one. They can regulate the amount of air flow and mix the fuel and air together. Automobiles which include throttle body injection, which is referred to as CFI by Ford and TBI by GM, situate the fuel injectors inside the throttle body. This permits an old engine the possibility to be converted from carburetor to fuel injection without considerably changing the design of the engine.