

Forklift Throttle Body

Forklift Throttle Body - Where fuel injected engines are concerned, the throttle body is the component of the air intake system which controls the amount of air that flows into the engine. This mechanism works in response to operator accelerator pedal input in the main. Generally, the throttle body is placed between the intake manifold and the air filter box. It is often attached to or positioned next 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 task is to control air flow.

On many styles of automobiles, the accelerator pedal motion is communicated via the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In automobiles consisting of electronic throttle control, otherwise called "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 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 on accelerator pedal position along with inputs from various engine sensors. The throttle body has a throttle position sensor. The throttle cable connects to the black portion on the left hand side which is curved in design. The copper coil placed close to this is what returns the throttle body to its idle position after the pedal is released.

Throttle plates turn in the throttle body each and every time pressure is placed on the accelerator. The throttle passage is then opened so as to permit more air to flow into the intake manifold. Normally, an airflow sensor measures this alteration 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. Frequently a throttle position sensor or also called TPS is connected 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 likewise called "WOT" position or anywhere in between these two extremes.

Various throttle bodies could have adjustments and valves to be able to regulate the minimum airflow throughout the idle period. Even in units which are not "drive-by-wire" there will often be a small electric motor driven valve, the Idle Air Control Valve or IACV which the ECU uses to regulate the amount of air which can bypass the main throttle opening.

In many vehicles it is common for them to have a single throttle body. In order to improve throttle response, more than one could be used and connected together by linkages. High performance automobiles like for instance the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are referred to as ITBs or otherwise known as "individual throttle bodies."

The throttle body and the carburetor in a non-injected engine are somewhat the same. The carburetor combines the functionality of both the fuel injectors and the throttle body together. They can control the amount of air flow and combine the fuel and air together. Automobiles that have throttle body injection, that is called TBI by GM and CFI by Ford, locate the fuel injectors within the throttle body. This enables an older engine the chance to be converted from carburetor to fuel injection without really altering the engine design.