

Throttle Body for Forklifts

Throttle Body for Forklifts - Where fuel injected engines are concerned, the throttle body is the component 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. Generally, the throttle body is placed between the air filter box and the intake manifold. It is usually fixed to or placed close to the mass airflow sensor. The biggest piece in the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main function is in order to regulate air flow.

On nearly all automobiles, the accelerator pedal motion is transferred via the throttle cable, therefore activating the throttle linkages works so as to move the throttle plate. In automobiles with electronic throttle control, likewise called "drive-by-wire" an electric motor controls 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 also 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 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 within the throttle body each and every time the operator applies pressure on the accelerator pedal. This opens the throttle passage and enables much 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 in order to produce the desired air-fuel ratio. Generally a throttle position sensor or also called TPS is fixed to the shaft of the throttle plate to be able 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.

So as to control the least amount of air flow while idling, several throttle bodies could include valves and adjustments. Even in units which are not "drive-by-wire" there would often 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 which could bypass the main throttle opening.

In various automobiles it is common for them to contain one throttle body. To be able to improve throttle response, more than one can be utilized and attached together by linkages. High performance automobiles like for example the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or likewise 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 throttle body and the fuel injectors into one. They can modulate the amount of air flow and blend the air and fuel together. Vehicles which include throttle body injection, which is called CFI by Ford and TBI by GM, put the fuel injectors within the throttle body. This permits an old engine the chance to be transformed from carburetor to fuel injection without really altering the engine design.