

Throttle Body for Forklift

Throttle Body for Forklifts - The throttle body is a component of the intake control system in fuel injected engines to be able to regulate the amount of air flow to the engine. This mechanism functions by placing pressure on the operator accelerator pedal input. Normally, the throttle body is located between the intake manifold and the air filter box. It is usually connected to or positioned close to the mass airflow sensor. The biggest piece within the throttle body is a butterfly valve called the throttle plate. The throttle plate's main task is to control air flow.

On many kinds 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 vehicles with electronic throttle control, likewise called "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 sensor sends the pedal position to the ECU or 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 which is curved in design. The copper coil positioned near this is what returns the throttle body to its idle position when the pedal is released.

Throttle plates revolve in the throttle body each time pressure is placed on the accelerator. The throttle passage is then opened to be able to permit much more air 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 fixed 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 otherwise called "WOT" position or somewhere in between these two extremes.

Some throttle bodies could have adjustments and valves in order to control the least amount of airflow all through the idle period. Even in units that are not "drive-by-wire" there will normally be a small electric motor driven valve, the Idle Air Control Valve or IACV that the ECU uses to be able to regulate the amount of air which could bypass the main throttle opening.

It is common that many 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 like for example the BMW M1, together with high performance motorcycles like for example the Suzuki Hayabusa have a separate throttle body for every cylinder. These models are called ITBs or also known as "individual throttle bodies."

The carburetor and the throttle body 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 are able to control the amount of air flow and blend the air and fuel together. Vehicles which have throttle body injection, which is called TBI by GM and CFI by Ford, locate the fuel injectors within the throttle body. This permits an old engine the chance to be converted from carburetor to fuel injection without significantly altering the design of the engine.