

Forklift Throttle Body

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines so as to regulate the amount of air flow to the engine. This particular mechanism works by applying pressure upon the operator accelerator pedal input. Normally, the throttle body is placed between the intake manifold and the air filter box. It is normally attached to or situated close to the mass airflow sensor. The largest part within the throttle body is a butterfly valve called the throttle plate. The throttle plate's main function is to control air flow.

On various kinds of cars, the accelerator pedal motion is communicated via the throttle cable. This activates the throttle linkages which 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 particular 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 along with inputs from other engine sensors. The throttle body consists of 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 once the pedal is released.

The throttle plate rotates inside the throttle body every time the operator presses 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 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. Often a throttle position sensor or TPS is fixed to the shaft of the throttle plate so as 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 somewhere in between these two extremes.

So as to control the least amount of air flow while idling, some throttle bodies can include valves and adjustments. 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 which the ECU uses to control the amount of air which can bypass the main throttle opening.

It is common that lots of vehicles contain a single throttle body, even if, more than one could be utilized and attached together by linkages so as to improve throttle response. High performance vehicles like the BMW M1, together with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or also known as "individual throttle bodies."

The throttle body and the carburetor in a non-injected engine are rather the same. The carburetor combines the functionality of both the fuel injectors and the throttle body together. They could control the amount of air flow and mix the fuel and air together. Vehicles that have throttle body injection, which is referred to as TBI by GM and CFI by Ford, put the fuel injectors within the throttle body. This allows an old engine the opportunity to be converted from carburetor to fuel injection without really altering the engine design.