

Forklift Throttle Body

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines to be able to regulate the amount of air flow to the engine. This particular mechanism operates by applying pressure upon the operator accelerator pedal input. Normally, the throttle body is located between the air filter box and the intake manifold. It is normally fixed to or located next to the mass airflow sensor. The largest component in the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main task is to regulate air flow.

On many styles of automobiles, the accelerator pedal motion is communicated through the throttle cable. This activates the throttle linkages which in turn move the throttle plate. In automobiles with electronic throttle control, otherwise referred to as "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 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 after 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 permits a lot more air to be able to flow into the intake manifold. Normally, 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 to be able to generate the desired air-fuel ratio. Often a throttle position sensor or likewise 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 "WOT" position or anywhere in between these two extremes.

In order to control the least amount of air flow while idling, some throttle bodies could have valves and adjustments. Even in units that 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 be able to control the amount of air which could bypass the main throttle opening.

It is common that several cars have one throttle body, though, more than one can be utilized and attached together by linkages to be able to improve throttle response. High performance cars such as the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are called ITBs or likewise known as "individual throttle bodies."

A throttle body is similar to the carburetor in a non-injected engine. Carburetors combine the functionality of the fuel injectors and the throttle body together. They operate by combining the air and fuel together and by modulating the amount of air flow. Vehicles which include throttle body injection, that is known as TBI by GM and CFI by Ford, put the fuel injectors in the throttle body. This permits an old engine the chance to be transformed from carburetor to fuel injection without considerably altering the engine design.