

Forklift Throttle Body

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines to be able to control the amount of air flow to the engine. This mechanism functions by putting 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 connected to or placed near the mass airflow sensor. The largest 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 cars, the accelerator pedal motion is transferred via the throttle cable, therefore activating the throttle linkages works to move the throttle plate. In vehicles with electronic throttle control, otherwise referred to as "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 otherwise known as Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position together with inputs from various engine sensors. The throttle body consists of a throttle position sensor. The throttle cable is attached to the black part on the left hand side which is curved in design. The copper coil placed near this is what returns the throttle body to its idle position once the pedal is released.

The throttle plate turns within the throttle body every time the driver presses on the accelerator pedal. This opens the throttle passage and permits more air to be able to flow into the intake manifold. Usually, 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 likewise called TPS is attached to the shaft of the throttle plate so as to provide the ECU with information on whether the throttle is in the wide-open throttle or otherwise called "WOT" position, the idle position or anywhere in between these two extremes.

Various throttle bodies could include valves and adjustments in order to regulate the least amount of airflow through the idle period. 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 which the ECU utilizes to control the amount of air that could bypass the main throttle opening.

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

A throttle body is similar to the carburetor in a non-injected engine. Carburetors combine the functionality of the throttle body and the fuel injectors together. They work by combining the air and fuel together and by controlling the amount of air flow. Automobiles that include throttle body injection, which is known as CFI by Ford and TBI by GM, situate the fuel injectors within the throttle body. This enables an older engine the opportunity to be converted from carburetor to fuel injection without really changing the design of the engine.