This Sheet Has Been Replaced

ABSTRACT:

Title: An Axial Flow Air Guiding System (Device)

The present invention provides an axial flow air guiding device (Figure 1 and 1') for producing a vortical and/or turbulent air flow in an inlet manifold 13' (Figure 3). This device comprises a fixed supporting structure 2 (Figure 1& 6), a plurality of vanes 4 (Figure 1) carried by the supporting structure 2 (Figure 1 & 6) for deflecting an air flow impinging on the device in a first direction to create first vortical and/or turbulent air flow, a tab 6 (Figure 1) associated at least one of the vanes located at the edge of the vanes (at air exiting end) at the high pressure side (the plane of the vane 4 facing the filtered air flow side) for deflecting the air flow in a second direction to create a second vortical and/or turbulent air flow at low air flow rate to improve the fuel-air mixture.

The better mixture of fuel and air is achieved by the present invention and resulting is more readily and efficiently combustible in the combustion chamber in the engine with less energy consumption compare with radial air guiding device.

The present inventions also improve the possible air flow blockage at high flow rate that might induce in the radial air guiding device thatneeds the vanes and/or the tab or tabs to be bigger and more with greater angel to air flow to have vortical and/or turbulent air flow in inlet manifold.