



# INTAKE MANIFOLD WITH "SWIRL FLAPS"



**The function of the swirl flaps is to control the flow of fresh air into the combustion chamber efficiently at different engine loads and speeds.**

It does this by altering the path of which the air travels through the manifold and into the combustion chamber by opening and closing the flaps to direct the air through these different paths. The paths are of different length and cross-sectional area causing the air to speed up or slow down allowing the maximum efficiency/performance of the engine at higher or lower RPM.

*Example of carbon deposit build up.*



## **The bad bits:**

Intake manifolds can become blocked with carbon deposits from the combustion process. These soot-like deposits can harden and restrict the flow of air into the engine causing lack of power, hesitation, poor fuel economy and eventually damage to the intake manifold flaps and even the motor or valve that controls them.

## **BGA Recommend**

When replacing the manifold, we recommend that the motor or valve that controls the swirl flaps is checked prior to replacement of the manifold to ensure it has not been damaged due to the flap movement being hindered by the carbon deposits on and around the swirl flaps. It is also advised to check the throttle valve and inlet valves for further carbon deposits and clean where necessary.



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