PRODUCT INFORMATION

Variable intake manifolds

Cutting-edge technology from PIERBURG for the aftermarket

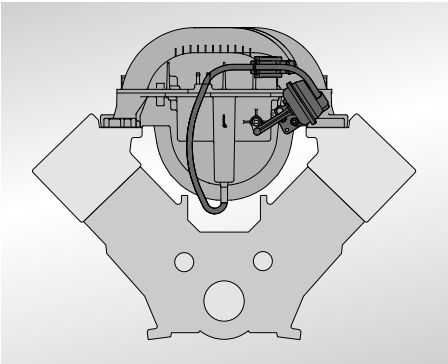
Vehicles: Chrysler, Mercedes-Benz, Steyr			Product: Variable intake manifold		
PIERBURG No.	Manufacturer	Vehicle application	Ref. No. *	Replacement for	Fig.
7.00145.03.0	Chrysler Mercedes-Benz Steyr	Crossfire C, CLK, E, G, ML, S, SL, Viano, Vito G 320	A 112 140 11 01, A 112 140 15 01, A 112 140 21 01, 1285100608, 1285100677	7.00145.00.0/.01.0; 7.18258.02.0/.03.0/.04.0	
7.00246.33.0	Mercedes-Benz	C, CLC, CLK, CLS, E, ML, R, S, SL, SLK, Sprinter, Viano	A 272 140 21 01, A 272 140 22 01, A 272 140 24 01	7.00246.26.0 ... .29.0	
7.00410.26.0	Mercedes-Benz	CL, CLK, CLS, E, GL, ML, R, S, SL	A 273 140 07 01	7.00410.21.0	
7.22671.06.0	Mercedes-Benz Steyr	C, CL, CLK, CLS, E, G, ML, R, S, SL, SLK, G 500	A 113 140 03 01, A 113 140 07 01, A 113 140 08 01 1285106669	7.22671.01.0/.04.0	

Motor Service brings cutting-edge PIERBURG technology to the aftermarket with the die-cast aluminium-magnesium alloy variable intake manifolds for Mercedes-Benz V engines.

With the aid of pneumatically-operated flaps, variable intake manifolds enable the length of the intake line to be adjusted to the requirements of the engine (see reverse for technical background information).

Storage volume is integrated into the lower area of these intake manifolds so that there is always sufficient vacuum available to operate these flaps.

The intake manifolds 7.00246.33.0 and 7.00410.26 also feature tumble flaps in order to carry out stratified charge operation (see Product Information under PI 1019).



Variable intake manifold on a V engine

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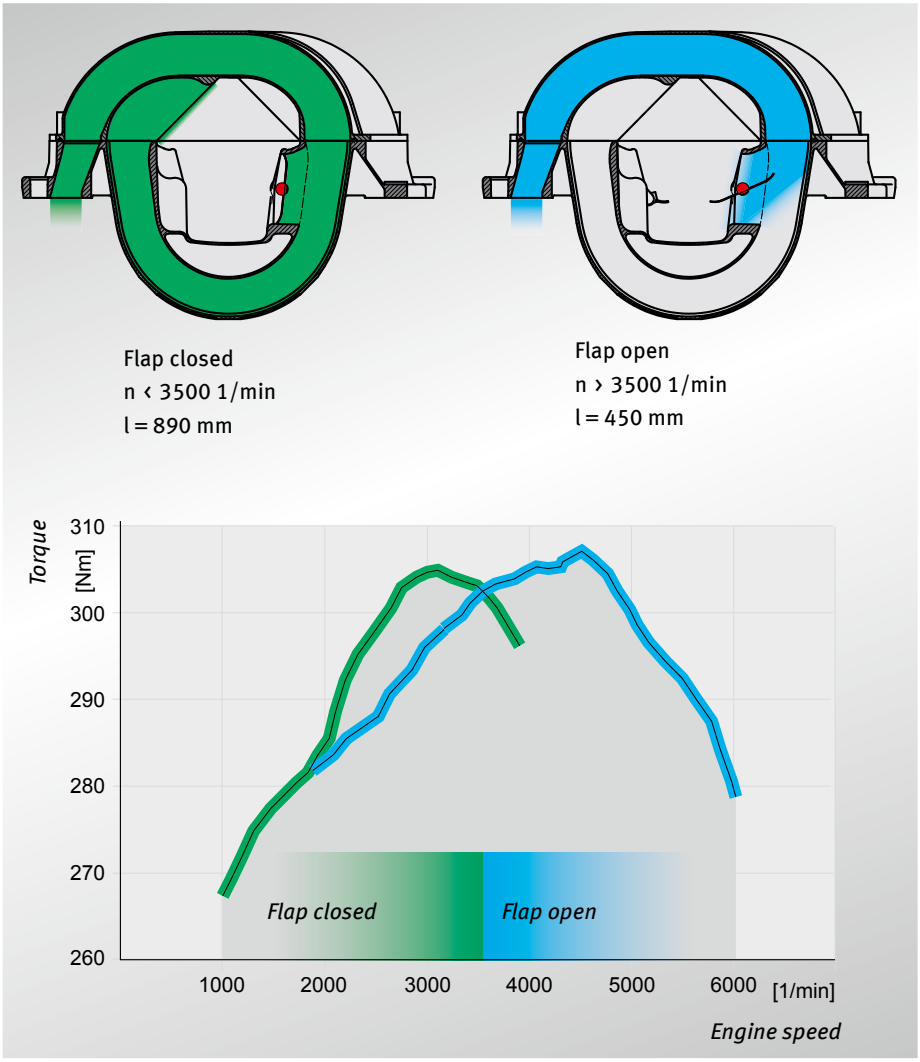
* The reference numbers given are for comparison purposes only and must not be used on invoices to the consumer.

Mode of operation for variable length intake manifolds

During charge exchange, vibrations may occur in the inlet ports which impact upon the performance of the engine.
If the piston moves downwards after opening the intake valves, a vacuum wave is generated which travels along the inlet port. The vacuum wave is reflected at the other end of the inlet port and then travels back to the cylinder as an excess pressure wave.
If this excess pressure wave reaches the intake valve at exactly the same time that the suction effect of the piston is reduced, a higher filling level is created in the cylinder which improves the performance (“internal supercharging”).

In a longer inlet port, the pressure wave requires more time for this than in a short intake manifold. Therefore, long inlet ports facilitate high engine torque in the lower engine speed range.
For higher engine speeds, less time is available to fill the cylinder.
For this reason, a short inlet port enables higher performance at high engine speeds.

The performance of the PIERBURG variable length intake manifolds, or “variable intake manifolds” for short, is optimised for two engine speed ranges:
In the lower engine speed range, the air flows through the long inlet port.
After a specific engine speed is attained, the flap opens and allows access to the short inlet port.



Example: Variable intake manifold in Mercedes-Benz V6 3.2l engine

A view into the interior of a variable intake manifold

Tumble flap (highlighted in red) for stratified charge operation