

D. Air Intake System

The intake air passes through the air filter housing (silencer) and air filter (paper cartridge) into the intake manifold which is located between the cylinder banks and consists of an upper and a lower section (5 and 10) (Fig. 14). The upper and lower sections are connected by 8 hose-type connecting pieces and 4 bolts. The air filter housing (silencer) secured with 3 rubber rings, is located on the vertically arranged venturi control unit (1) which in turn is bolted to the flat lower section of

the intake manifold (Fig. 13). The upper part of the intake manifold (10) consists of 8 curved pipes which are cast integrally with one another and connect the lower section of the intake manifold with the intake ports in the cylinder heads. The upper manifold section is secured to the cylinder heads by 16 bolts.

A cooling water duct (8) is cast integrally with the front end of the upper manifold section. It con-

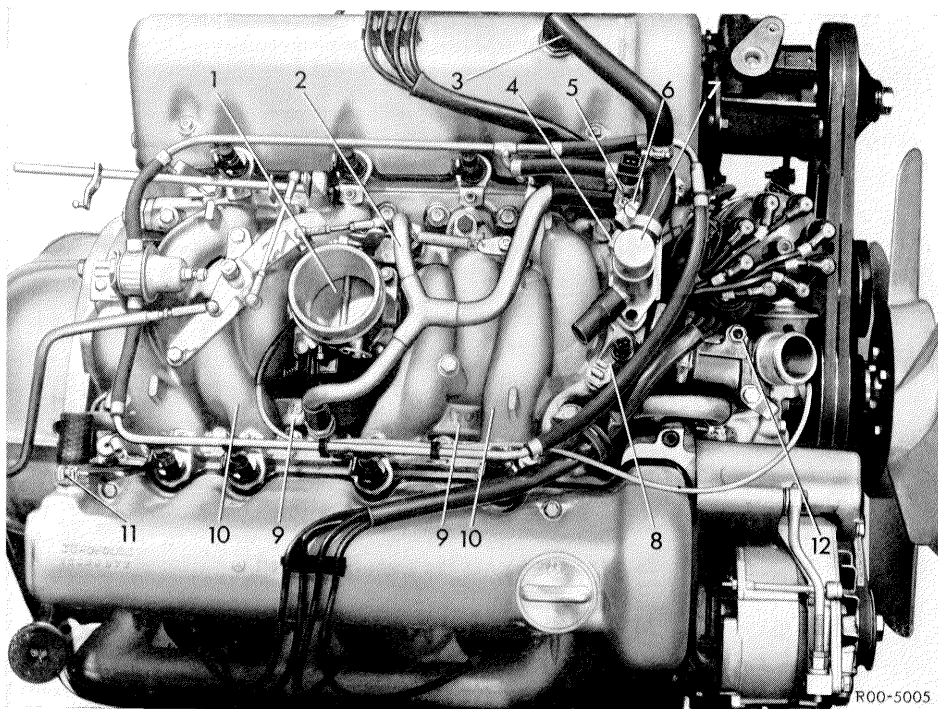


Fig. 13
Top view of engine,
air filter housing
removed

- 1 Venturi control unit
- 2 Idle-speed air line
- 3 Crankcase breather hose
- 4 Connection for idle-speed air distributor
- 5 Starter valve
- 6 Adjusting screw on idle-speed air distributor
- 7 Additional air valve
- 8 Cooling water duct on upper section of intake manifold
- 9 Idle-speed air duct on upper section of intake manifold
- 10 Upper section of intake manifold
- 11 Crankcase breather connection
- 12 Temperature switch 100° C (212° F)

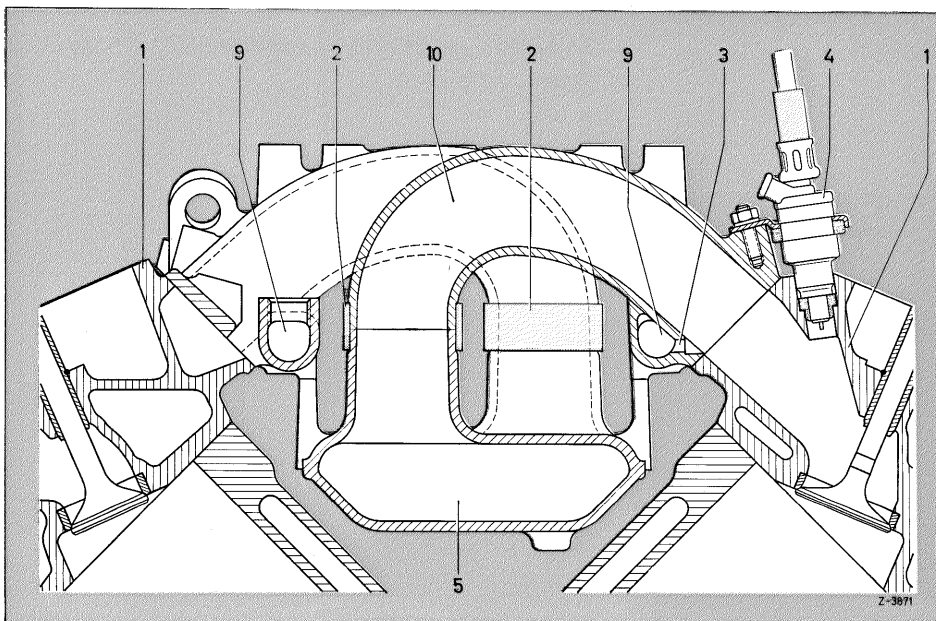


Fig. 14
Intake manifold with
idle-speed air duct

- 1 Cylinder head
- 2 Connecting piece
- 3 Connecting bore
- 4 Electronically controlled injection valve
- 5 Lower section of intake manifold
- 9 Idle-speed air duct
- 10 Upper section of intake manifold

nects on the left and right with the cooling water passages in the cylinder heads and from there delivers the hot cooling water to the radiator or, during the warming-up period, when the cooling water thermostat is still closed, into the by-pass line.

A short, angular duct at the rear end of the left cylinder head connects the cooling water passages in the left cylinder head with the feeder line for the heater system through the upper intake manifold section.

When the engine is running at idling speed with the throttle valve completely closed, air is supplied to the engine through a separate system of lines. The air is taken from the air filter housing on the filtered air side and directed to the idle-speed air distributor (4) which is located on the front left-hand side of the intake manifold on the cooling water duct (8). An adjusting screw (6) on the idle-speed air distributor serves to control the amount of air metered to the engine and thus the idling speed. A hose for the additional air required

during the warming-up period and the crankcase breather hose (3) connect the additional air valve (7) to the idle-speed air distributor (Fig. 13).

The starter valve (5) which injects fuel into the idle-speed line during the starting process is mounted on the idle-speed air distributor.

The idle-speed air distributor discharges the air into a forked line (2). The two lines so formed connect, in the center of the engine, with the idle-speed air ducts (9) which are cast integrally with the upper intake manifold section (10) (Fig. 13). The intake pipes and idle-speed air ducts are connected by 5 mm bores (3) located immediately in front of the point where the intake pipes join the cylinder heads (Fig. 14).

The lower section of the intake manifold incorporates vacuum connections for the automatic transmission, the booster brake, and the pressure sensor of the electronically controlled gasoline injection system.

E. Exhaust System

The 3.5 liter models are equipped with a dual-pipe exhaust system similar to that of model 300SEL/8 6.3.

A pipe leads from each of the two exhaust manifolds

to the connections between the front and rear exhaust pipes. From there the pipes run parallel to a common front muffler, intermediate muffler, and common main muffler which is located to the right of the fuel tank.

F. Engine Suspension

Front Suspension

The front engine mounts (part No. 116 223 01 12) for the left-hand and right-hand sides are identical. An adjustment of the limitation is not possible.

Engine shock absorbers are mounted on both sides of the engine.

Rear Suspension

The rear engine mount (part No. 108 240 03 18) is the same as that of models 280SE/8 and 300SEL/8.

Here, too, no adjustment is possible.