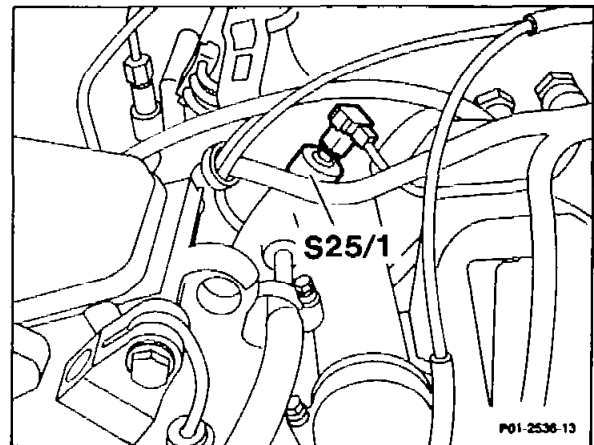


**Note**

Engine 601 have a temperature-controlled electromagnetic fan coupling.

This is switched in and switched off by a 100 °C temperature switch (S25/1) which is screwed into the outlet connection.

The electromagnetic fan coupling is maintenance-free.

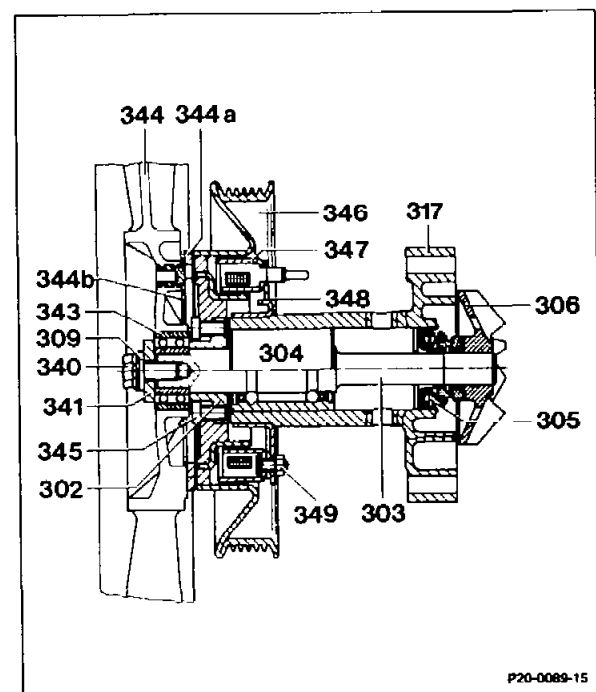


**Design of the electromagnetic fan coupling**

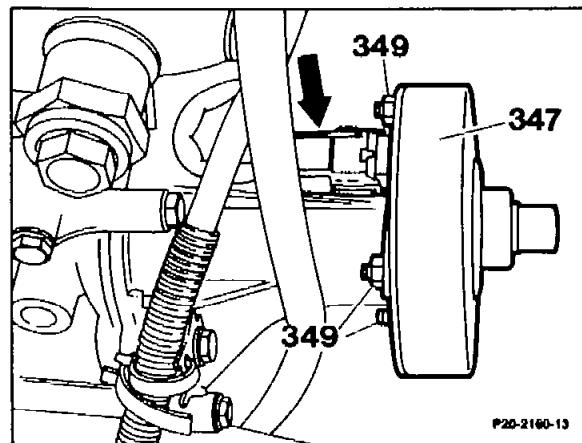
The magnet body (347) is attached to the magnet carrier (348) with 3 nuts (349).

The magnet carrier is bonded to the coolant pump housing and does not need to be pulled off.

- 302 Flange
- 303 Shaft
- 304 Bearing
- 305 Cassette seal
- 306 Impeller
- 309 Tensioning plate
- 317 Coolant pump housing
- 340 Collar bolt
- 341 Washer
- 343 Bearing
- 344 Fan
- 344a Armature
- 344b Leaf spring
- 345 Hexagon socket screw M6 x 12
- 346 Belt pulley
- 347 Magnet body
- 348 Magnet carrier
- 349 Hexagon nut

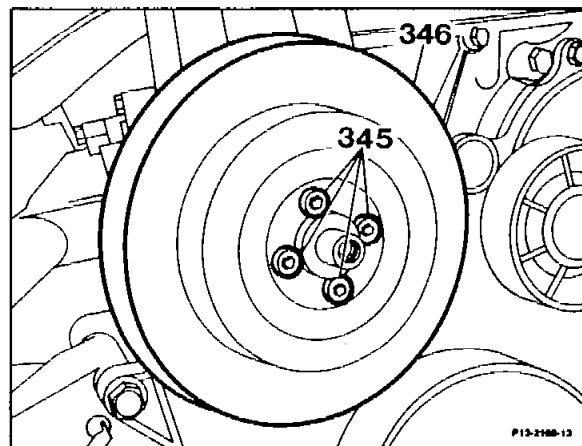


The electric cable is connected to the magnet body (347) via the coupling (arrow).



The belt pulley (346) is fitted on the coolant pump shaft ahead of the magnet body.

The belt pulley (346) is screwed to the flange of the coolant pump with 4 hexagon socket screws (345) or torx screws.



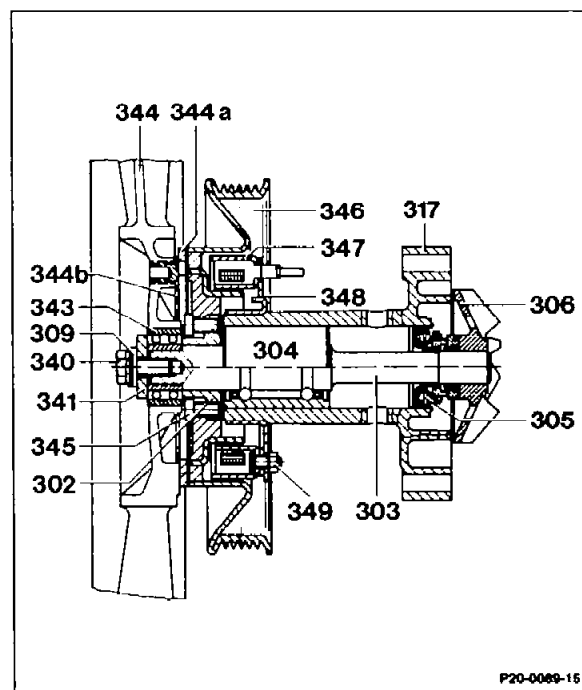
## Function

The fan cuts in only if the ignition is switched on and the coolant is at a temperature above 98 – 102 °C.

Voltage exists constantly at the magnet body (347) through fuse no. 10 terminal 15 (1st version).

Below a coolant temperature of 98 – 102 °C the fan is switched off and only rotates as a result of the air stream when the vehicle is moving or the bearing friction.

A negative voltage is applied by the temperature switch in the outlet connection no later than a coolant temperature of 102 °C.



The armature (344a) is attracted by the magnet body (347) and presses against the face of the belt pulley (346).

The fan is now rigidly connected to the belt pulley and rotates in line with the coolant pump speed.

If the coolant temperature drops below 98 – 93 °C, the temperature switch opens and the armature is lifted off the belt pulley (346) by the leaf springs (344b).

On vehicles with air conditioning, the fan is engaged and the electric auxiliary fan by means of a double contact relay which is activated by the 52 °C temperature switch at the fluid reservoir.

If the air conditioning is switched off, the 100 °C temperature switch at the outlet connection again performs the tasks of engaging or disengaging the fan.

The armature (344a) and the ball bearing (343) are fitted to or in the fan.

The ball bearing is sealed on both sides with cover plates.

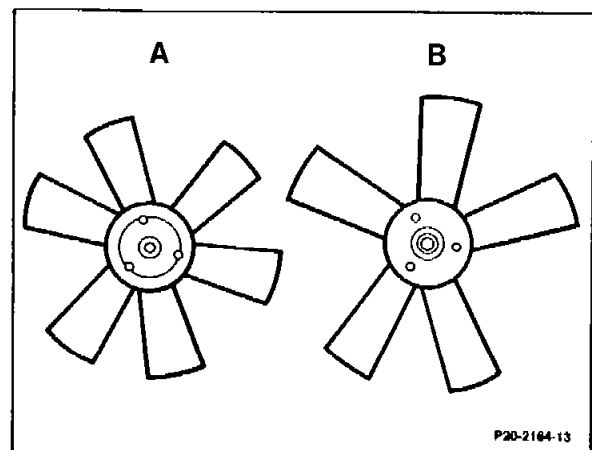
## Fan

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The fan sits on a stub end on the coolant pump bearing and is attached with a collar bolt M8 x 18 (engine 601 only).

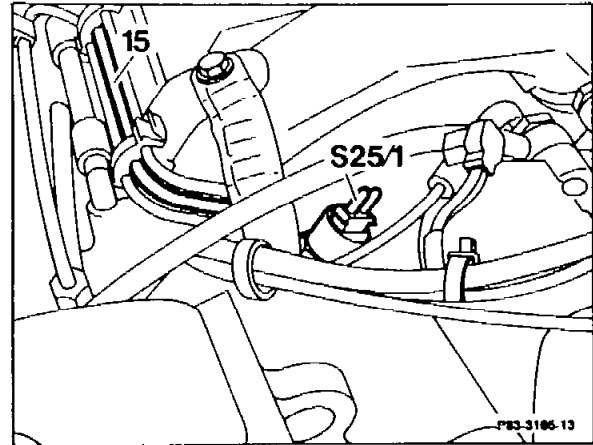
The fan (A) has 6 blades and a diameter of 380 mm.

On vehicles with air conditioning, the fan (B) has 5 blades and a diameter of 430 mm.

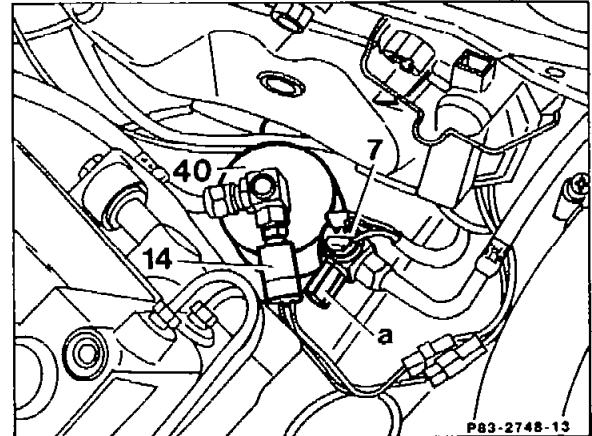


**Modification to electromagnetic coupling  
Model 201**

Effective 10/84 a modified electrical centre is installed. As a result, the electromagnetic coupling is operated by a positive voltage through a 2-pin temperature switch (S25/1) (previously negative voltage).



On vehicles with air conditioning positive is connected through a relay even after the pressure switch (14) closes.



**Note**

After stocks of the previous electrical centre have been used up, only the modified version will be supplied. See Group 54 for conversion instructions.