# TECHNICAL INFORMATION REGARDING CABIN FANS

## GENERAL INFORMATION

The cabin fan generates the air flow which, through various conveyors, is sent inside the vehicle in order to achieve air conditioning.

At the same time, the fan also ensures that the evaporator of the Air Conditioning system functions properly, maintaining the air flow during the evaporation process.

The main causes of malfunction and suggestions for the correct maintenance of the cabin fans are explained below.

## CAUSES OF MALFUNCTIONING

The main causes of malfunctioning are:

1. Clogging of the cabin fan
2. Malfunctioning of the alternator. This can, with regards to the Voltage Regulator and Rectifier Bridge, in particular, cause overheating in the electrical system and damage to the battery and users, fan included.
3. The resistance designed for use at different speeds can be damaged and interrupt the flow of current to the fan.

Bearing in mind that the cabin fan often works in severe conditions, it must certainly withstand temperature changes and prolonged periods, often at maximum speed, with the filter clogged.
It is also quite common to remove the cabin filter to increase the flow of air in the vehicle. This, however, leads to clogging of the conveyors and collateral damage, including blocking of the fan.

## TROUBLESHOOTING

*Problem 1:* The fan does not start.
*Solution:* In this case, first of all, check if the impeller is blocked by foreign bodies, check the fuse, cleaning and coupling of the connectors.

*Problem 2:* The fan only works at certain speeds.
*Solution:* In this case, the problem can be solved by checking the connections and replacing the resistances if necessary. If the resistor is integrated in the fan, the latter must be replaced.

*Problem 3:* the fan is noisy, vibrates and rotates discontinuously.
*Solution:* If the impeller is unbalanced it may have lost its balancing counterweight. Another cause could be the wear of the carbon brushes. The only solution is to replace the fan.