NRF TECHNICAL ARTICLE

INTERIOR BLOWERS

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WHAT IS AN INTERIOR BLOWER?

›The interior blower is a crucial component within the HVAC (Heating Ventilation and Air Conditioning) system, and it's main job is to create an air flow that passes through the heater and/or evaporator core, to meet the selected temperature by the driver. The blower runs on high amperage current, that is controlled by the blower speed control switch or ECC (Electronic Climate Control) on the dashboard control panel by using a resistor (fixed speeds) or an electronic control unit (variable speeds).

HOW DOES IT WORKS?

When we adjust the blower speed on the control panel, basically a signal is sent to the blower motor resistor or electronic control unit, that regulates the speed of the blower motor. The blower wheel is pulling either fresh or recirculated air and pushes it through the heat exchangers. As the resistor/electronic control unit is getting very hot during operation, the blower also cools these devices with the air flow it creates.

NOTE: Without a running blower (min. speed 1) e.g. on a manual A/C system there will be no A/C function. this is important to avoid freezing up the evaporator

The test criteria for the blower motor is:

› Mechanical test
› Noise test
› Electrical test
› Performance test
› Balance test

TROUBLESHOOTING

Aging and wear of the motor are most common reason for failure. If the interior blower is not working, before putting the blame on this item check the following:

› IBlower fuse on the interior fuse panel (located inside the car)
› Relays and fuse located in the engine compartment

NOTE: A BLOWN FUSE MIGHT BE CAUSED BY TOO HIGH RESISTANCE OF THE WORN MOTOR!

Usually signs that the blower motor is about to break down, the driver might experience e.g

› Squeaky noise
› Rattling /vibration
› Burning smell

The blower motor can also break down because of an unbalance of the blower wheel or from adhering dirt (most common are Leafs and organic debris), which might be a result of not replacing (missing) interior filter.

NOTE: AN OLD AND TOTALLY BLOCKED INTERIOR FILTER MAY CAUSE OVERHEATING OF THE MOTOR AND RESISTOR!

There are two types of blower motors:

› Brush-less (new version)
› Brushed (with carbon brushes old version)

Our interior blowers are designed and manufactured with the highest quality standards.

NRF offers a wide range of 270+ interior blowers for passenger cars, light commercial vehicles and trucks.

For more information check› www.nrf.eu