

Blower Fan Troubleshooting

Interior blower fans transfer warm/cold air, depending on the set temperature, from the heater/evaporator to the passenger cabin. At the same time, the blower ensures that the air conditioning is performing properly by maintaining airflow through the evaporator. Nissens explains what can go wrong with the fan, and how to diagnose a fault.

In most cases, the blower fan is situated in the HVAC (Heat-Ventilation-Air-Conditioning) module and has an average lifetime of eight years. However, an ineffective air filter or high mileage, for example using the car as a commercial vehicle, can severely affect the lifespan of the blower.

Problem

There can be many reasons for blowers to malfunction. The issue might arise right after installation, or show itself at a later point. Furthermore, problems can be caused by not changing the cabin filter regularly.

Other parts of the car's electrical circuit can also cause problems for the blower. A malfunctioning alternator can overload the electrical system, which will result in the blower malfunctioning.

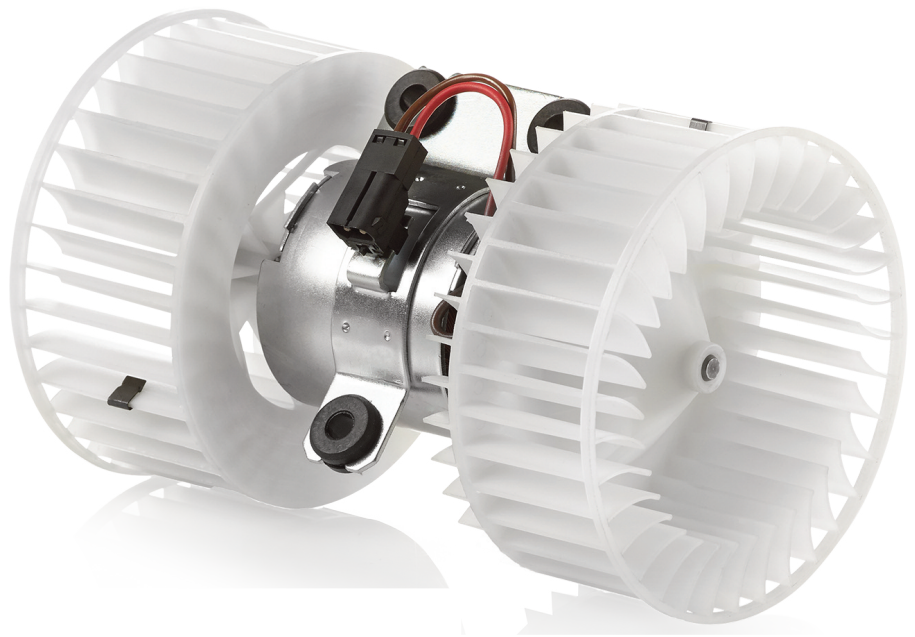
The same effect can be seen when a car is jump-started. A jump-start will, for a short period, add up to 24 volts to the system, which could potentially overload the blower. In some instances, simply starting the car can also cause the blower to malfunction, as excess voltage from the system can cause a voltage spike.

Recommended Solution

Three factors are crucial when handling the blower. The factors are: the vehicle's electrical system, component quality, and proper product handling.

It is, as a minimum, recommended to change the blower at least every eight years. After this point, the risk of the blower malfunctioning increases greatly. During the blower's lifespan, it is important to maintain regular service. Cabins with plastic interiors can increase humidity and condensation, which, in the worst cases, can cause corrosion around the carbon brushes.

When installing a blower, it is important that the wheel is protected - both during transport and mounting. Even minor disturbances to the wheel can cause the blower to become out of balance. A blower that is out of balance is a noisy blower. It is also important that the screws are not over-tightened during mounting. This can break the plastic brackets, causing the blower to vibrate and generate noise in the cabin.



It is also important to always ensure that the replacement fuse has the correct ampere value. If the ampere value is too small, the fuse will blow, and if the value is too high, the blower may be damaged as it is not properly protected.

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Troubleshooting a Heater Blower Fan



If the blower fan does not start when activated from the control panel inside the car, regardless of the speed selected:

- Check if the fuse is blown. If this is the case, replace the fuse with a new one. Make sure that the ampere value of the new fuse is the same as the old fuse.

- Check if the connector to the blower is mounted correctly.
- Check if foreign objects, such as leaves, are blocking the blower wheel.
- Check if there is a generator error, and if the generator produces the correct amount of voltage for the blower.

If the blower only starts at certain speeds:

- One, or more, of the power resistors of the blower is/are defective.
- If the power resistors are integrated parts of the blower, the blower must be replaced.

If the blower is very loud, and it sometimes makes a squeaky sound:

- The blower has a mechanical defect and must be replaced with a new one. This could be caused by an unbalanced wheel, or wear of the carbon brush elements.

If the blower runs slowly or varies in speed:

- The carbon brush elements are defective and the blower must be replaced,