



## Auto Dehumidifiers: Does Placement Matter?

Those using a auto dehumidifier for the first time may be at a bit of a loss in terms of where to put it, or even whether placement makes any difference. For electric dehumidifiers, the answer is – not really. As long as they have access to air, a current will gradually be created in the car. For non-electric dehumidifiers, placement matters a bit more.

#### Dashboard Placement

There are a few reasons why people like to place their dehumidifier on the dashboard. The first is to prevent window fogging. Even with a dehumidifier in the car, it could take anywhere from several minutes to multiple hours for it to swing into full gear. Having it placed on the dashboard ensures that defogging will take place ASAP. Also, it's easy to keep track of when the dehumidifier is full and needs to be emptied. Otherwise, it's pretty easy to forget about them during the course of a day.

#### The Back Window

Defogging the back window can also be a priority for those who do not have rear defrosters. Also, it is sometimes hard to keep dehumidifiers in place on the front dashboard. Rear windows often have open ridged areas behind the seats, perfectly suited for dehumidifiers.

#### Trunk Placement

Moisture in the trunk can be a bit of a nuisance, since many cars don't have great air flow from the trunk to the main cabin. This is especially useful for drivers who do sports, as sweaty moisture from shoes and clothes can create a long lasting musk. With trunk placement, it's important to remember that the effects will be limited, if present at all, in the main cabin.



## Mildew, Mold, and Their Effects on Driver Health

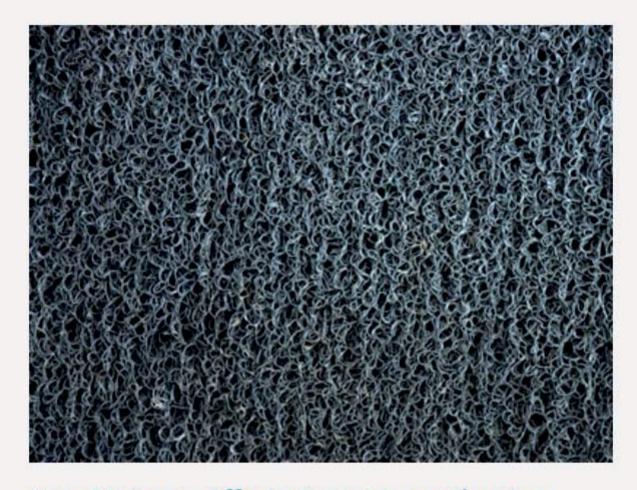
Mold and mildew are common terms for a variety of fungi that form in moist and warm conditions. We check our homes, schools, and work places for mold and mildew infestations, but rarely do we inspect our cars. Mildew and mold can grow to be a nuisance, as well as a health problem, if left in a humid car to fester.

#### Mold and Mildew in Warm Weather

Even with pollen masks or medicine, some drivers still suffer from mild to severe allergies while driving in the spring and summer. During this time, while the body is trying its best not to give in to pollen, mold or mildew will often attack unexpectedly, causing allergic reactions. The American College of Occupational and Environmental Medicine (ACOEM), suggests that roughly 10% of humans have allergic reactions to mold or mildew. While allergies alone would probably not be enough to cause illness or fever, they can be just as uncomfortable, especially on busy or hectic days.

#### Mold and Mildew in Cold Weather

Cold weather leads to a lot of pooling liquids. Ventilation is often poorer in your car in winter than in warmer months. Because of this, fungi will have an easier time growing in your car and, consequently, take a toll on your health. Breathing in fungi thrown into the air by the heater could cause infection after long periods of exposure. It's especially important to have a Zarpax dehumidifier for the winter months after wet and cold days (with snow or hail); otherwise moisture tracked into your car will become stagnate, and infest later when your heater warms it up.



# **How Moisture Affects Carpets and Flooring**

We know wet floors and carpet are bad, but do we know why? How moisture affects carpets and flooring depends heavily on whether it's pooled, or in the air as condensation. Both can cause damage, but the actual process varies.

## Pooling, or Deep Moisture

When liquids rest on a surface, over time they begin to wear away at it. Any cracks or pores on the surface of a material are forced open. With car carpets and floors, this is especially dangerous, because they are not compact materials. Moisture can seep deep into them, worming its way to the metal base. When temperatures change, the moisture will expand, breaking up the internal structure of the flooring material. This will have two effects. The first is that it will increase the chances of flooring being uprooted or falling apart. The second is that now dirt, dust, food, or anything else can find its way under the very flooring of your car.

#### Airborne Moisture

A humid or moist car can seem like less of a problem than if there were puddles of water in the backseat, but the effects can be just as troublesome if left alone. Airborne moisture carries more than just water. A variety of different gases and chemicals can evaporate as well. This condensation coalition moves like a single unit around your whole car. The main problem caused by this circulation is the smell. One bad smell from a food or drink can easily find its way into the trunk, roof, floor, and seats. A combination of various chemicals can cause extreme damage to the interior. Car cleaners, or acidic foods like vinegar, will damage your car if not aired out properly. A dehumidifier can help keep the problem from spreading, but you should also make sure to open the doors and windows from time to time to just let the old air clear out.



# Dehumidifiers vs. Air Conditioning

So, your goal is to reduce relative humidity in the air, most probably to reduce window fog or misting. Those of you looking into purchasing a dehumidifier might already know that the A/C is rather effective at drying out the air inside a car. In fact, when the defroster fails to provide results, the A/C will often succeed in its place. The evaporator coils in an air conditioning unit will get rid of a lot of moisture in the air, so why use a dehumidifier?

## Time and Energy

The bottom line is, a car dehumidifier doesn't use up precious gasoline to function. This delays that dreaded trip to the pump for just a little longer. Also, the car does not have to be on, and you don't have to be in it, for a dehumidifier to work. For non-electric versions, just drop it on your dashboard, lock the door, and come back to a dry car.

## Standing Moisture

There are times when turning on the A/C will temporarily release more moisture in the air, which can result in more intense and sudden fogging. This is caused by liquid, often water, pooling inside of your air conditioning unit. Many of us have seen the water pooling, and then dripping off of home window A/C units. A similar scenario happens in your car.

## Sometimes it's Just Too Cold

Turning on the A/C in the middle of winter isn't the most effective solution when it comes to dehumidifying or defogging your car. The heater and defroster will do their job more often than not, but when they don't, it's best not to have your conditioner simulate outdoor conditions.



# Why auto Dehumidifiers are Trans-Seasonal

When it comes to auto dehumidifiers, people often see them as a single purpose investment. The truth is, no matter where you live, or how often you use your car, there are several uses for a dehumidifier in your car. Most uses fall under the categories of weather, accidents, or daily accumulation.

#### Weather

It makes sense that we'd want a dehumidifier in humid conditions. Rain, or warm moist air being drawn in from nearby bodies of water, can wreak havoc on a car if left to their own devices. Many of us don't realize, however, that there are also reasons to use a dehumidifier in the colder months. Moisture left in cars over the summer will dry up much faster than in the winter, even if it's a humid day. Moisture accumulated in the winter will persist for days, or even weeks since it doesn't evaporate as quickly.

#### Accidents

Whether it's spilled liquids, or leaving the sunroof open on the wrong day, the average driver is bound to experience at least one moisture-related accident in their lifetime. Having a dehumidifier handy on day one can help to prevent replacement costs for seats or entire sections of flooring a week later.

## **Daily Accumulation**

Even the cleanest and most meticulous drivers have to breathe, perhaps even sweat from time to time. That moisture released into the air doesn't just go away. If left unchecked, it gradually works its way into the seats and other surfaces of your vehicle, attributing to the "old car smell" you're left with over time. Spring, summer, fall, winter – the seasons don't matter much on this one. Having a dehumidifier for daily use can keep odor-causing moisture buildup to a minimum.



## 5 Effective Uses for a auto-Dehumidifier

When drivers decide whether or not to buy a dehumidifier, usefulness comes to mind. "Will I ever use it?" is a valid question to ask. You might not live in the most humid place on earth, but does that mean you wouldn't benefit from a Zarpax auto-dehumidifier? Ask yourself the following questions to find out.

## Will I Ever Be Caught in the Rain or Snow?

Water or ice absorbed into clothing will later be disbursed throughout your vehicle. People who don't air out their cars shouldn't be surprised to smell traces of mold or mildew over the next couple of days. A Zarpax auto-dehumidifier is perfect for removing droplets of water as they vaporize.

## Will I Ever Sweat in My Car?

So it's hot and dry outside. Those who claim they're in the clear better think twice before wiping the sweat off their brows. Among countless drivers, this is often agreed upon as the worst form of moisture to leave in a car. The smell won't just stay; it will increase as time passes, until you're left with just the musty odor that has no apparent source. Those of you who don't clean their vehicle regularly during the summer should get a dehumidifier now, before it's too late.

## Will I Ever Spill Liquid in My Car?

For some, the answer is no. For those of us that make the occasional human error, there probably will be spillage at some point. Dehumidifiers are very effective at drawing out small amounts of moisture before they have time to cause bigger problems.



## Why Cars Never Seem to Dry Out

If you've ever left the top down – or a window open – during a rain storm, you know that drying out a car can take an eternity. Drying rugs, clothes, even home carpets; none of them even compare. What makes it so hard for cars to dry? There is no single answer, but a collective of factors behind the scenes.

#### Air Flow

Probably the most apparent factor is the shape of cars in general. They are built to be secure enclosed spaces, which makes it hard for air to circulate and moisture to escape. Even with all the doors and the sun roof (if you have one) open, areas below the seat and under the dashboard still won't have optimal ventilation.

#### Weather

The weather is a near absolute factor in determining how quickly a car will dry out. Unlike in a house, where the inside as a whole will stay dry, even if the floor of one room is wet, cars are much smaller. One soaked seat will create a humid atmosphere that will affect the entire vehicle. Therefore, drying a car must normally use the outside air in order to be effective. Humid environments outside do not bode well for removing moisture. In such cases, it's often better to rely on a dehumidifier until the weather changes.

## **Location and Safety**

Not everyone can leave their car outside with the doors open and expect it to stay put for long. We often resort to trying to dry them out in garages. The reduced air flow will lead to longer drying times.



# 3 Reasons Why Car Windows Fog

Most of us have seen some kind of fogged window. A fogged window is not exactly the same as fog in the air. Fog can happen for a multitude of reasons, but before we know why fog happens, we need to know what it is.

## What is Fog?

Fog is a mass of thick moisture or water droplets. Sometimes fog is airborne, especially in near bodies of water. Other times it appears on surfaces. If you've wondered why fog often appears on windows, it's mainly due to the temperature difference between the two sides of the thin glass surface.

## Cars and Fogging

Cold weather brings with it lots of frost and fog. The reason for this is the temperature difference between the inside and outside of your car. The heat from the inside of the car warms up the frost around the window and under the hood of the car. The moisture from the frost then sticks to the window as fog, trapped in a limbo of temperature changes. Likewise, the inside of the car window fogs when the moisture of the warm air comes into contact with the cold glass of the window.

#### **Outside Conditions**

There are times when fog is already present outside. In areas with large bodies of water, wind currents, as well as temperature changes throughout the day can create fog. Wind traveling and cooling as it moves up mountains results in perpetual fog for seasons, or even year-round. These conditions can't be prevented or avoided by drivers and are persistent.

#### **Excessive Moisture**

Excessive moisture on the outside or inside of a car can lead to window fogging. While some causes like rain and snow can fall into the outside conditions category, their effect is two-fold, landing them a spot here. Moisture left by outside conditions can accumulate in your car, staying there for long periods until redistributed back into the air. A common place this happens is the air conditioning, which can lead to sudden fogging of windows. Sweat, heavy breathing, pets, damp shoes and clothing as well as food and beverages in a closed space can also lead to moisture collecting over time.



# **Humidity and Seat Health**

Seat health often puts us in a sort of catch 22. Most of us want to protect the seats as much as possible, but we often forget about it. The moment our eyes are turned, they become carriers of stains, gashes, and stress or puncture marks. Some of us do a better job at keeping our seats clean than others, but still end up with mysterious damage or odors when we least expect it. A factor many don't take into consideration is the effect of airborne moisture and condensation. Depending on what kind of seat you have, you may need to increase your level of protection with a car dehumidifier.

#### Leather

Leather is one of the most vulnerable types of seating when it comes to moisture. It's a fairly porous surface, which promotes the trapping of water. Over long periods of time, mold and other bacteria can form in deep pores that can't be cleaned out without a deep scrub, which is damaging to the seat.

Leaving leather in humid conditions for long periods of time will wear it out faster as well, resulting in stress marks on the surface of the seat.

## Vinyl

Vinyl is more resistant to water than leather, but it's still not invincible. This material tends to crack easily over time. Sometimes the damage is visible, while other times it's hidden along seams or at the base of the seat. When cracks are present, moisture can wreak havoc on the life of the seat, as well as be breeding grounds for bacteria.

## Polyester

Not many car seats are made of polyester, but several brands choose this material for seat covers. If you live in a humid environment, using a polyester seat cover is ill advised. The material absorbs and slowly expands with moisture. Likewise, it slowly expends the water it has collected. Stored moisture will find its way between the cover and the seat below. If there is damage underneath, this leads to even more problems.

## Neoprene

This generally is a safe choice. Neoprene is a water resistant material, and so as long as the entire seat is encased with neoprene there is little risk of moisture being absorbed by the seat.



Can a Car Heater Blower Create More Window Condensation?

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The short answer is yes, there are times when using the ventilation system can create more windshield condensation. The real question is why it happens, and there are two primary causes for this. Both revolve around humidity, or excess moisture.

#### External Moisture

The first is an external issue in which the air outside is especially humid or moist. Some examples would be:

- · Autumn and winter
- Areas with naturally high humidity
- · Locations near large bodies of water such as lakes or oceans

Dry warm air is good to have in both hot and cold seasons. In winter, it helps melt away frost and fog. In autumn and winter, humid air can cause flash fogging when in contact with the cold windshield, which has been cooled by the outside air. This is especially hazardous early mornings when the sun has not yet warmed up the car interior. Therefore the ventilation system can best be set to 'recirculation'

#### Internal Moisture

External moisture is more situational or seasonal – those who experience it often, know how to handle the situation. The above tips are good to know for travelers as well. Problems caused by internal moisture, however, can happen nearly anywhere, at any time. Moisture that has settled inside your vehicle can cause frosting on the inside of the windows. This buildup of moisture doesn't necessarily be due to rain either.



# Car windows fogging up – 5 things to try when you have a damp car

Fogged up car windows are one of the most common moisture problems. A car acts as a closed compartment and tends to retain a lot of moisture. Moisture that comes in does not easily go out again, which causes condensation on the windows. But no worries! Here are 5 things you might try to lower the humidity in your car to prevent condensation and moisture building up:

## Ask your mechanic to check the door and window seals on your car.

The rubber weather stripping is there to keep moisture out of the car. Damaged or dried out rubbers can cause water to leak into the car.

#### 2. Keep your windows clean.

Particles of dirt on the windows give water molecules a surface to attach themselves to. Therefore, it is important to regularly wipe the inside of your windshield and other windows with a clean microfiber cloth and window cleaner. Make sure the window cleaner you use does not leave a residue or you might actually worsen the condensation problem.

#### Air out your car regularly.

Leaving the car windows open for a few hours on a sunny day will allow part of the moisture that has built up in the car interior to escape.

#### 4. Ventilate the smart way.

Using the car's A/C and heater smartly will help you drive away quicker. Your windshield and windows will likely not be fogged up when you get in the car. Only when you turn on the ignition and air starts blowing on the cold windows do the windows start to mist up. It can help to switch off the blower for a few minutes until the engine, which supplies it with heat, has warmed up a little. The A/C removes moisture from the air, so switch it on. But remember — the A/C tends to be less effective at very low temperatures.

#### Place a small dehumidifier inside the car.

There are excellent non-electric dehumidifiers you can use in your car to prevent moisture from building up. Make sure to use a dehumidifier without calcium dichloride as these tend to leak a salty residue that might damage your car upholstery or its metal parts.