

### The First Wash of Spring

As the seasons transition into spring, it quickly becomes clear just how dirty our cars have become.

Dreary months filled with snow and rain can leave a noticeable layer of dirt, salt and grime behind — and it's even more noticeable with the return of sunlight. There's even one hidden area that you might have missed:

### **BEYOND THE EXTERIOR**

Obviously, you'll want to focus on the exterior, windows and wheels of the vehicle. But don't forget that harsh winter conditions also expose a vehicle's undercarriage to highly corrosive substances. If left there, salt and harsh chemicals meant to clear icy roadways can adversely affect the vehicle's lifespan and its resale value.

Depending on where you live, local authorities may apply salt or a combination of magnesium chloride and sodium chloride to help improve driving conditions. The mixture serves as a melting agent and an aid in traction because of its gritty texture. But when these substances accumulate beneath your vehicle, big problems can follow.

### WHAT TO DO

You can treat these areas using a high-pressure sprayer. If you don't own or want to rent one, bring the vehicle to a local



© ADOBE STOCK

self-service car wash. When encountering particularly stubborn salt deposits, you may have to enlist the services of a professional detailer.

The principal worry with build-up in the undercarriage is rust. This gradual deterioration can be likened to a slow-motion car accident, as rust ultimately compromises various components including the body, exhaust, chassis and braking systems. Other hidden areas to focus on include wheel wells, bumpers and fenders. Remember that even minor rust spots can expand if not promptly addressed.

### **MOVING FORWARD**

If you notice this problem,

sand affected areas down to bare metal, then apply a corrosion-resistant primer to the exposed surfaces. After it dries, finish with matching car paint and a clear coat. If you're unsure about doing this job yourself, visit a local body shop for expert advice.

Consider applying a protective sealant to the undercarriage

to help guard against future problems — particularly if you live in an area where anti-icing measures are a fact of life in winter.

As with any larger rust treatment, it's smart to consult with a local professional before applying sealant since several critical components are beneath your vehicle.

### Know the Signs

Warning lights
make easy work
of diagnosing many
common issues, but
not every issue will
trigger your vehicle's
built-in alert systems.

Sometimes, drivers must be aware of other signs that indicate issues with proper operation and safety. As the weather improves, turn down the radio and lower your windows — then be on the lookout for these common sounds and smells:

### **YOUR BRAKES**

A properly functioning brake system safeguards the safety of drivers, their passengers and everyone else on the road. The system has numerous working parts, including brake pads, rotors, pistons and brake fluid. If there are issues with any of these main components, you'll often hear or smell things that make it apparent when pressing the pedal inside your vehicle.

You may hear squeaking or grinding noises. For instance, many brake pads are designed to produce a high-pitched sound as they begin to wear past the manufacturer's recommended depth. Issues with the rotors are indicated by grinding noises — or a shaking sensation when you apply the brakes. Newer vehicles may be equipped with sensors that alert the car's computer when



© ADOBE STOCK

it's time for a replacement.

Note any strange odors. When pistons in the braking system become immobilized, the pads may remain in contact with the rotor while you are in motion. That can result in a burning smell as the parts rub together. Address this as soon as possible because that friction can damage other

essential components.

### **YOUR ENGINE**

The engine compartment houses several components driven by one or more so-called serpentine belts. They operate through a series of pulleys, powering operations like your steering, charging and cooling. If you hear a squeaking noise or

smell smoke from the engine compartment while the engine is running, this could be a sign of an issue with the belt, pulleys or tensioner.

### **OTHER ISSUES**

Your exhaust system ensures that the excess engine gasses and pollutants are released outside of the passenger compartment. Unfortunately, this complex set of pipes and converters is often overlooked during everyday use and even during routine maintenance. Listen carefully when traveling on uneven surfaces or railroad tracks for rattling or scraping sounds. This could indicate a failing hanger for one of the pipes.

### Wiper Blade Maintenance

If a wiper blade fails at the wrong time, you can be put in an extremely dangerous situation.

These mishaps are generally chalked up to poor maintenance — but weather can play a role, too: Spring often brings intense bouts of rain, making visibility a big concern. Thankfully, this component is typically one of the cheapest and easiest to replace.

### **AFTER-WINTER CHECK**

Harsh wintry temps create stress on a range of different components throughout your vehicle, and that includes the windshield and wiper blades. As conditions improve into the spring, inspect them both. Look for wear created by ice, snow, rocks, falling debris and de-icing components.

Thoroughly clean the windshield before replacing the wiper blades to avoid damage when they're turned on. Use a towel and a cleaning agent like washer fluid on your windshield, removing anything that could potentially tear at the wiper blades or affect their effectiveness. The blades themselves shouldn't have any visible cracks, dry rot or uneven edges. Look for damaged wiper arm components, too.

If your windshield is streaked during rain events, it's time to service the wipers.



© ADOBE STOCK

### **DO IT YOURSELF**

Wiper arms typically employ a standard J-hook design that makes replacing wiper blades a breeze — even for those who don't have much automotive expertise. If you happen to have a vehicle with a different, more modern configuration, you may need to consult the owner's manual or a local expert to find the right specialty blades and install them. The last thing you want is for the wiper blade to become dislodged in a storm.

### **DIFFERENT OPTIONS**

Conventional wipers are

generally the most cost-effective. They can arrive fully equipped with a metal frame for easy attachment to the wiper arm. If the assembly is still in good working order, however, you can opt for simple rubber refills instead of purchasing a complete replace-

ment. Beam blades are pricier but may offer superior performance since they conform more closely to the contours of some modern windshields. Just be sure to confirm that the lengths, style and installation methods are suitable for your particular vehicle.

## Emergency Preparedness

Spring isn't all sunshine and flowers. It's also the season where severe weather events like tornadoes can pop up unannounced with lots of associated winds and heavy rainfalls.

Even a more typical spring storm can be quite intense, potentially leaving drivers stranded on the side of the road. That's why it's smart to prepare by assembling an emergency kit. You'll need certain key items, even if you're simply caught in traffic during an evacuation:

### **FIRST-AID KIT**

First-aid kits can be of critical importance even in the best weather conditions. Unforeseen injuries can lead to serious consequences if they aren't addressed before emergency crews have time to respond. Any comprehensive first-aid kit should include assorted bandages, antibiotic wipes for cleaning wounds, sterile dressings to address bleeding, ointments for burns or infections and a thermometer. Don't forget essential over-the-counter medications like aspirin and, if you take prescription meds, pack a few extra doses. Just remember to periodically replace medicine before it expires.



© ADOBE STOCK

### SURVIVAL ITEMS

Spring can still bring very cold mornings — and summer-like afternoons. So, keep a blanket, an umbrella, rain boots and insect repellent in your vehicle in case they're needed. In the unfortunate event that you have to remain in your vehicle overnight, you'll want a blanket, an extra change of weather-appropriate

clothing, toilet paper and a flashlight. A battery-powered radio can provide needed weather updates; it's also a welcome distraction until help arrives.

Stock up on non-perishable items that don't require cooking or refrigeration. That can include nuts, crackers, protein bars or granola and crackers. If you packed canned items,

don't forget the opener. Bring extra water, and make sure it's enough for all your passengers and any pets. Finish your packing with cups, paper plates and plastic utensils.

### **CHARGE UP**

Avoid driving with low fuel or a low charge on your phone. You don't want to unexpectedly run out of gas — and you'll need your mobile to reach out for help. This can be particularly important during the spring when the weather is so unpredictable. Save important numbers on your phone, either as a contact or in your notes. Include family members but also your insurance provider and a towing service.

### Inside Your Service Manual

You're probably aware of the service manual tucked away in the glove compartment of your car. If you're like some people, however, you may not have ever opened it.

That's a mistake since this handy guide offers essential information about maintenance, servicing and troubleshooting your vehicle. Exploring everything that's inside will provide important insights into your vehicle's operation, while helping to ensure it can be relied on daily.

### **HOW OFTEN?**

Regular maintenance ensures your vehicle functions at its best. Changing lubricants such as engine oil and transmission fluids is critically important — and that process begins with determining the right time for these changes. Most vehicle manuals provide service intervals based on mileage or age of the vehicle. If you've purchased a new vehicle, adhering to these recommendations is crucial to maintain your warranty.

### **FOLLOW ALERTS**

Modern vehicles use sensors and computer systems to communicate potential issues to drivers, but you'll need to



© ADOBE STOCK

understand the dashboard icons.

Familiarize yourself with these indicators, since some warning lights indicate an urgent problem while others draw attention to something that could potentially wait until your next scheduled maintenance visit. If you're concerned about any particular alert, immediately shutting off the vehicle can usually

mitigate further damage.

### **SPOT CHECK**

If your vehicle malfunctions, look around before assuming the worst. You might have a loose spark plug wire or serpentine belt. You might have a bad hose connection or even a flat tire. If appropriate, check your fuses to see whether there is simply an overload. The fuse panel is

typically in the passenger cabin near the driver's side seat. Owner's manuals usually provide detailed information on these and other processes.

### **DON'T HAVE ONE?**

There are options if your service manual was lost along the way, or if you purchased a pre-owned vehicle that does not have one. Contact your local dealership to see

whether they have a spare copy available or can order one for you. If that's not an option, reach out to the manufacturer's customer service. Have your vehicle identification number handy. Many manufacturers now offer digital versions of your service manual that can be downloaded, providing a handy and potentially cost-effective alternative.

# Staying in Alignment

Is your car or truck drifting to one side while out on the road? Does the steering wheel vibrate at high speeds? These are clear signs that there's a problem with your wheel alignment.

In the best-case scenario, this can lead to uneven tire wear. More critically, misaligned vehicles can present a big safety risk, since it affects your control and handling.

Generally, alignments are recommended after an accident or whenever you replace your tires, but monitoring your vehicle's alignment should be part of regular maintenance. Thankfully, the process is relatively inexpensive and doesn't take long. Contact your dealer or a certified service center to set up an inspection and schedule a realignment, if needed.

### **WHY IT'S IMPORTANT**

Misaligned wheels diminish your ability to control the vehicle, while potentially leading to costly problems. Tires are generally rated up to 70,000 miles, as long as they're regularly maintained and rotated. But prolonged misalignment results in uneven tire wear, leading to earlier replacements. Misaligned wheels also affect fuel efficiency. Then there's the built-in annoyance of having to

constantly adjust a drifting car or remain below certain speeds to avoid vibrations. It's a significant distraction that could become a hazard for frustrated drivers.

### WHEN IT'S NECESSARY

Most manufacturers do not specify a particular mileage or time interval for alignment.

Instead, schedule regular inspections — and then address this as needed. Pay attention to the typical symptoms. Vehicles can easily become misaligned after encountering potholes and curbs or following minor collisions. Guard against these common mishaps, but if one of them happens to you, talk

to a professional to determine whether alignment service is needed. Vibrations may become more pronounced after crossing uneven pavement or railroad tracks.

### **HOW IT'S DONE**

Service centers equipped with specialized alignment racks can conduct wheel

alignments. Technology helps determine what happens next. Your vehicle will be positioned on this advanced equipment and sensors will assess the angles of each wheel. A technician will then make the necessary adjustments to ensure that your vehicle meets its specified alignment standards.



### How to Keep Your Cool

As we transition from winter to spring, the fluids essential for your vehicle's optimal performance also change.

In colder months, antifreeze maintains the engine's internal temperatures. But as the weather becomes warmer, your vehicle requires coolant. Here's a look at the functions and rules guiding coolants:

### **BIG ADVANCEMENTS**

Antifreeze and coolant technology has grown by leaps and bounds, providing ever-increasing safeguards for modern engines. These fluids are specifically designed for different vehicles. For example, hybrid organic acid technology antifreeze is more effective with aluminum components but less so for copper or brass parts. Generally, a recommended 50/50 blend of antifreeze and soft or distilled water protects against temperatures as low as -34 degrees while safeguarding components from heat up to 263 degrees.

### **DIFFERENT VERSIONS**

Vehicle manufacturers usually specify the required fluid on the reservoir cap. However, used vehicles may have an aftermarket cap that lacks this information — or the reservoirs may have already been refilled with the wrong fluid. Before adding fluids,



© ADOBE STOCK

familiarize yourself with general guidelines for fluid usage that can help prevent errors. That starts with their unique colors. They'll help you easily identify whether the incorrect fluid has been used, since the reservoir is usually constructed from semi-translucent plastic.

General Motors recommends DexCool, identifiable by its distinctive orange hue.

Chrysler and Dodge employ a purple Mopar antifreeze/coolant. Meanwhile, imported vehicles from Honda, Mazda, Toyota and Nissan use a red fluid. Ford recommends the typically yellow Hybrid Organic Acid Technology option.

### FLUSHING YOUR SYSTEM

Allow your engine to cool

before proceeding. Locate the drain valve at the bottom of your radiator. Before opening this valve, place a sufficiently sized bucket underneath to collect any released fluid. After draining the radiator, close the valve and introduce the flushing agent and water directly. If you notice antifreeze or coolant pooling under your vehicle, opt for a flushing solution that

contains additives to assist with leak repairs — or take your vehicle to a repair shop. Once the radiator has been flushed, close the valve again and add the appropriate amount of fluid as specified in your owner's manual. If the manual is unavailable, car dealerships or local auto parts store professionals can help guide you through the process.