

Wash Away Winter

As winter dissolves into spring, a caravan of dirty cars emerge.

Dreary months of snow and slush build up a film of salt, dirt and grime that becomes painfully obvious once the sun returns. Here's how to wash away winter.

CLEANING

Snowy winters end up exposing a vehicle's underbody to highly corrosive elements, and left unattended they can impact your car's longevity and value. Areas that experience winter precipitation typically use salt to make the roadways more passable. In some cities, two types of salt are mixed magnesium chloride and sodium chloride — to create a kind of brine to be spread on key streets. It works as a melting agent, and the gritty consistency also helps tires adhere better to the road. But it also builds up underneath you, potentially causing huge problems down the road. Use a high-pressure sprayer at the neighborhood do-it-yourself car wash to dislodge and rinse away the build up. For particularly stubborn salt, consider hiring a local detailer.

EVALUATE

Left unattended, salt deposits encourage rusting. This ends up acting as a slow-motion car accident, eventually wrecking everything from the body and chassis to your exhaust and braking systems.

After the underbody of your car is cleaned, examine the vehicle for rust. Wheel wells, bumpers and the fender area directly behind each wheel are the most susceptible because of the amount of salt-and-snow mix that collects there, according to American Automobile Association. Pay close attention

as you examine each area, since even small spots of rust will continue to spread if left untreated. Sand down any area to bare metal, then paint the exposed spot with a corrosion-resistant primer. After drying, apply matching car paint and clear coat. Of course, if you don't think you can adequately

address the issue, stop by a local body shop for assistance.



Salt saves countless lives on the highway, but it can lead to damaging rust that invades the bottom of your car. Take advantage of spring's warmer temps to apply a protective sealant to the vehicle's undercarriage. This will provide a first line of defense when snowy conditions inevitably return. As with rust remediation, you may want to discuss this sealant regimen with a local professional, since a number of important components are found underneath your car.



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Spring Tire Care

Replacing your car's tires is recommended every 50,000 miles or so — and at the very latest, every six years, according to the National Highway Traffic Safety Administration.

There's more to tire maintenance than simply switching them out occasionally, however. Here's a look at how to get your tires ready for spring.

ALIGNMENT

Streets become more susceptible to potholes and other hazards during the winter months due to icy conditions and the salting process. Sometimes, crumbling infrastructure goes unnoticed because of the build up of snow. This puts your car at risk for misalignments, which could lead to premature tire failure. Blow outs can potentially lead to extensive damage to your car, and could even be life threatening. In the meantime, a misaligned vehicle is much more difficult to control. But that's the principal way drivers can make a quick diagnosis of this issue. If the car pulls one or way or another a highway speeds, your tires are out of alignment.

TREADS

The treads on our tires provide the gripping action need-

ed to steer and stop. They get a huge workout every winter, as worsening road conditions present every-day challenges. Worn tires put your car at risk of hydroplaning in rain or melting snow, a scary moment when the tire loses contact with the road. Spring is the perfect time to make sure there's still enough tread to give your car the traction required to operate safely. To administer

a tread test at home, simply place a penny into your tire tread. If you are unable to see any part of President Abraham Lincoln's head, your treads are lower than the recommended depth. The tire should be replaced immediately.

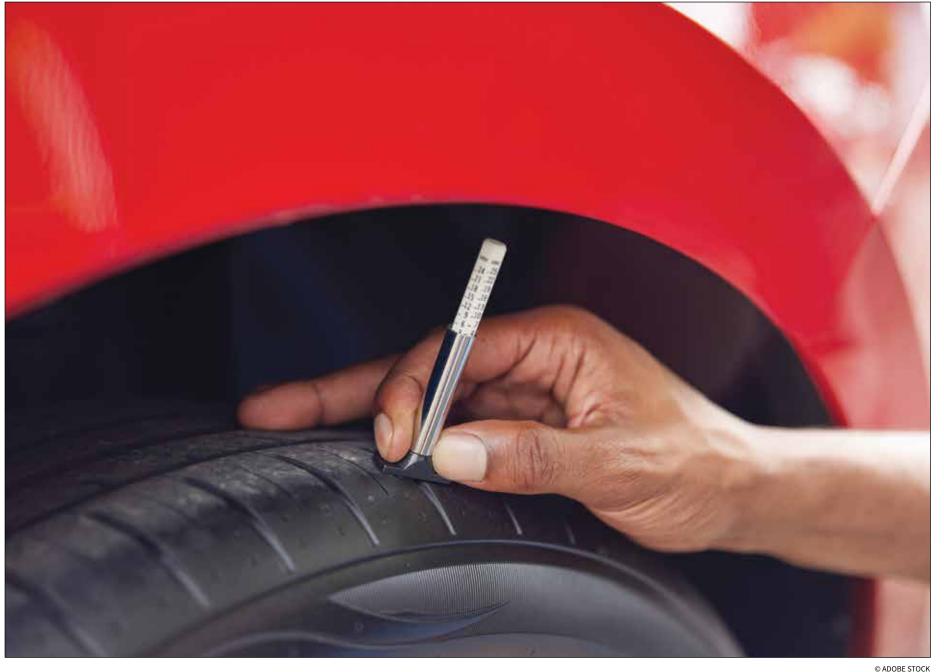
ROTATION

Rotate your tires each spring, and you'll ensure that they wear more evenly, extending their life. Front and rear tires age in different ways, because of their unique responsibilities during the driving process. As with alignment, you can test for rotation issues while driving the vehicle. If you notice vibrations during turns, it's time to rotate your tires.

PRESSURE

Tire pressure should be

checked monthly to guard against uneven wear, flats or something far worse. Cars that have under-inflated tires of more than 25% are actually three times more likely to crash, according to the National Highway Traffic Safety Administration. As temperatures warm in the spring, under-inflated tires also risk overheating and then rapid failure.



Navigating Spring Weather

As the old saying goes, spring showers bring May flowers.
They also bring slippery road conditions with poor visibility, just when people are getting back outside again after a winter spent cooped up inside.

Here's how to prepare for the coming spring weather.

BE WEATHER AWARE

Road conditions are typically at their worst just as rain begins. The water releases oil, dirt and grease from pavement, according to the National Highway Traffic Safety Administration, creating particularly dangerous conditions. Heavy springtime rainfall can also obstruct our ability to see the road clearly. The results are sometimes disastrous: Some 75% of weather-related crashes involve wet streets. Nearly 25% of all crashes are weather related, the U.S. Department of Transportation reports.

LANE OBSTRUCTIONS

Early in the spring months, be prepared for occasional remaining ice patches.
Continue to maintain safe distance, approaching intersections with the same winter caution. Drive slower when



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roads appear to be wet. Then prepare for potholes to emerge as the weather changes, the result of wintertime applications of salt and sand, and traffic from heavy snowplows. The safest approach, of course, is to avoid a pothole. But if conditions don't allow you to swerve out of the way, slow down as much as is safely possible. Remember that erosion might have also occurred on the roadway shoulders, and could worsen

through spring rains. Begin watching for pedestrians, bikers and kids. As everyone rushes to take advantage of sunnier days, they may not notice your approach.

VEHICLE MAINTENANCE

Your windshield wipers take a beating during icy weather, potentially leaving them battered as seasonal precipitation changes from snow to rain. Neglected blades put everyone at risk, inside and outside the car. Check your tires for wear and tear, since the risk of hydroplaning because of poor treads increases during spring showers, as well. Check and refill any fluids that may have been lost during the winter.

SAFE DRIVING

Sometimes, being prepared for spring weather is simply a matter of giving yourself more time. Slow down, and allow extra space on the roadway.

Following too closely during a rainstorm can lead to late braking, which then puts your car at risk of skidding and perhaps even loss of control. Be aware of four-legged travelers as well, since some are emerging from hibernation. Prepare to stop, in particular at dusk and in rural areas where more wildlife is found. Travel in the middle lane if possible, since rainwater tends to pool on roadway edges.

Preparing an Emergency Kit

Warming conditions are a breeding ground for dangerous weather, from tornadoes to flooding rains to tropical storms.

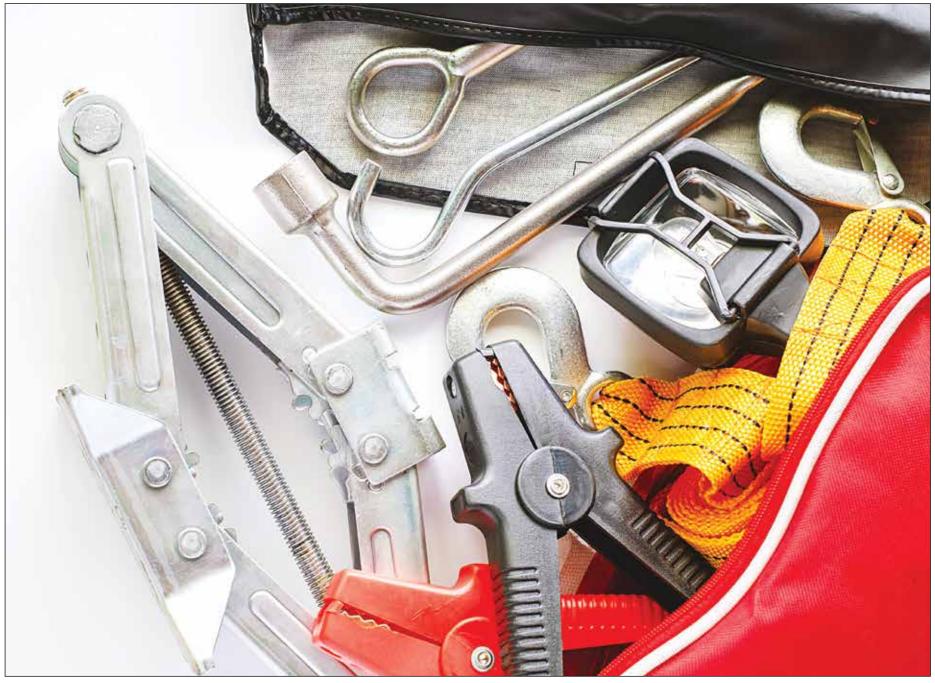
It's best to be prepared for these conditions by creating an emergency kit in case you get stuck in traffic during an evacuation — or if simple bad luck finds you stranded. Here's a quick rundown on what you'll need.

FIRST AID KIT

First aid might be needed whether you're stuck because of a spring weather event or simply suffering a vehicle breakdown. An unexpected injury then becomes life-threatening. A fully stocked first-aid kit includes sterile dressings to help stop any bleeding, antibiotic towelettes for disinfections, sterile gloves, antibiotic and burn ointments, solution to flush your eyes, bandages in a variety of sizes, a thermometer, a medicine dropper and key non-prescription drugs like aspirin or antacids. For those who take regular medication, include several doses. (You'll have to remember to periodically switch them out, to accommodate for expiration dates.)

WEATHER SURVIVAL ITEMS

Depending on when the car becomes stranded, you may



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be battling heat, rain or cold. When it comes to springtime, all three issues could arise over the course of the day and night. Keep a blanket and sleeping bag on hand, a source of heat and light like a candle, extra winter or summer clothing, toilet tissue, rope, a flashlight and radio to follow traffic reports and emergency advisories. Pack a rain poncho and

an umbrella. Don't forget some sort of insect repellent.

FOOD AND WATER

If an inconvenience turns into a longer-than-expected period inside the vehicle, you'll need food and water. Keep several days' worth of non-perishable items, focusing on foods that don't require refrigeration or heating like

protein bars, peanut butter, crackers, nuts and granola. Don't forget a can opener, paper plates, cups and utensils. Store enough water for every person and pet in the car.

CHARGING AND FILLING UP

Keep your cellphone fully charged, since it's your life-

line for help. Likewise, don't drive around with little or no gasoline. If possible, keep your car fully fueled during the spring months when weather can be so unpredictable. Keep family phone numbers saved on your phone, as well as other emergency contacts like a towing company and your insurance provider.

Be Aware of Belts and Hoses

Belts and hoses are undervalued workhorses when it comes to proper vehicle function.

Hoses provide the pathway for crucial fluids to your engine components. Belts keep pulley-driven elements of the car running smoothly. Both require thorough inspection as temperatures begin to rise, because winter may have caused unseen damage. Here's what to look for.

BELTS

As conditions change, belts can develop cracks. These serpentine items may play a role in operating your car's air-conditioner compressor, alternator, power-steering pump and water pump. The failure of these items in some cases could spell disaster. The most common indicator of problems with a belt has traditionally been the sound of squeaking from the engine compartment. But modern belts are made from an upgraded material that's less likely to create noises. Instead, they begin shedding strips of rubber, as a failing tire would. If either is happening, take your car to a local auto shop for an inspection. Auto parts stores also sell gauges so you can evaluate belt wear yourself.

HOSES

Hoses likewise are sensitive



sweet, while oil leaks are smoky. If you smell gasoline when the engine is running, turn the vehicle off immediately. Unfortunately, hoses are the weakest link in the cooling system. They absorb tremendous vibrations, while also enduring fluctuating weather extremes and atmospheric ozone, all of which degrades rubber.

LIFE EXPECTANCY

How long hoses and belts ultimately last varies by manufacturer, the level of use, and outside conditions. They are also dependent on the proper function of the various components to which they're connected. Belts should generally be replaced every 36,000 miles, but that's under ideal situations. A radi-

ator hose might last anywhere from 50,000 to 100,000 miles, depending on seasonal issues. Though it most often occurs in the summer, overheating can happen at any time. Temps under the hood are much higher, and heat can cause or accelerate the deterioration of rubber. Best to be aware of the warning signs.



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Charging Your System

As welcome as warmer temperatures are, they can provide another stern test for your car's charging system in the wake of the cold winter months.

Take the time this spring to test your battery and alternator so you're not left stranded. Here's what to look for.

THE SYSTEM

The alternator is comparable to your body's blood stream. A belt-powered pulley supplies electrical currents that keep your vehicle charged and healthy. If your alternator fails, the car will start but the battery will quickly lose its charge. There's only so long a

battery can power today's modern cars without the rejuvenating help of the alternator.

WARNING SIGNS

It's possible for a battery to fail without any major warning signs. But the American Automobile Association outlines a few noticeable changes that will usually alert you to issues with the battery. The engine could be slow to turn over when you attempt to start the car. You might hear grinding or

clicking noises. Pay close attention to your headlights. If they dim when the car is idling, but then become distinctly brighter when you rev the engine, there is an issue. Take care of these issues immediately, or risk having to pay for a tow truck on top of whatever maintenance is required for the charging system.

ALTERNATOR'S ROLE

Spring is a great time to check in on the alternator, which generates power your battery needs to perform at its peak. Your local auto shop can run a basic diagnostic test that gauges the strength of your alternator. One that's in good condition will operate on 13-14 volts to charge your car's 12-volt battery, using a voltage regular to control how much energy is produced.

REGULAR MAINTENANCE

No battery or alternator will last forever, but there are several maintenance options that can help stave off a charging system failure. Pay close attention to the terminals on your battery, where power exits the component. If you notice corrosion, broken or frayed battery cables, replace them immediately. Make sure the belt that powers your alternator is adjusted at the proper rate of tension, and be aware of any wear and tear to the rubber. Skilled technicians can help with these regular tasks if you don't feel comfortable under the hood.

Controlling the Temps

As your car moves from winter to spring, the fluid needed to keep it running properly changes too.

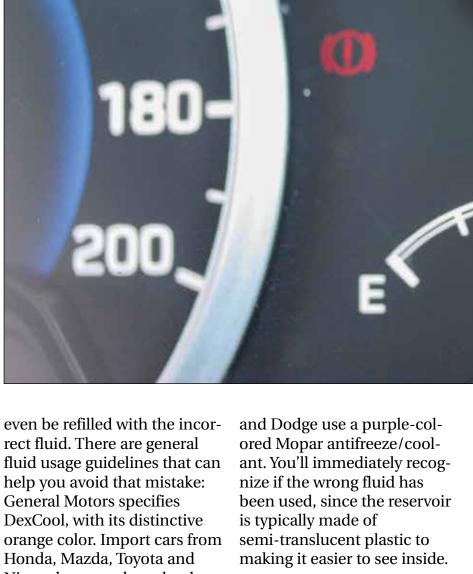
During colder months, antifreeze is needed to regulate the engine's inner temps. As the weather turns sunnier, your car requires coolant. Here's how to navigate through these different fluid options.

PROPER FLUIDS

Critical improvements to antifreeze ensure they work better to protect today's hightech engines. It's important to use fluid meant for your vehicle and meant for the next season, when flushing the vehicle's system. For instance, hybrid organic acid technology antifreeze works better when flowing through aluminum components, and is less effective at protecting copper or brass components. A 50/50 blend of antifreeze with soft or distilled water is generally recommended, a mixture said to protect against cold down to -34 degrees and shields components from heat up to 263 degrees.

DIFFERENT VERSIONS

Car manufacturers typically indicate which specific fluid is needed on the reservoir cap of the vehicle. Of course, used cars might have an after-market cap without that information. Some reservoirs might



Nissan have used a red-colored fluid for more than 25 years. Ford prefers the aforementioned HOAT. Chrysler

FLUSHING YOUR SYSTEM

There is a drain valve at the bottom of your radiator used

for flushing the system. But before opening the valve, make sure you have a bucket of adequate size to catch all of the fluid you're releasing. Then let your engine cool before draining. Next, close the valve and pour the flushing agent and water directly into your radiator. Some flushing products also include an additive that aids with leak repair. This

is important if antifreeze is puddling beneath the vehicle. Once the radiator is flushed, close the valve again then add the correct amount of antifreeze and water, as described in your owner's manual. If the manual has somehow become lost, experts at your neighborhood auto-parts store should be able to tell you the capacity level.