



# Spring Car Care

# Sun Protection

Much like your skin, your car requires protection from dangerous sun rays. Fortunately, there are numerous products available and precautions you can use to keep your car in pristine condition.

One of the easiest and most affordable ways to keep your vehicle safe is to park in the shade when available. Look for cover when parking at the office or while running errands. At home, consider cleaning out the garage or installing a pop-up carport. Keep reading for more tips on keeping your car cool and protected.

## EXTERIOR PAINT

A paint job can be compromised by UV rays by causing it to oxidize and appearing old or worn out. A great way to reduce the sun's effects is to keep the car clean with regular washings.

If you prefer handwashing, ensure you are in an area away from direct sunlight. An easier way to receive a quality cleaning is by visiting a local car-wash where an expert can detail both the inside and the outside and use products to protect it from the sun.

After cleaning, your vehicle should be hand dried, so cleaning chemicals are com-



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pletely removed and unable to accelerate paint deterioration by combining with harmful rays. Waxing your vehicle after a wash adds another layer of protection. With so many different waxes and polishes available, test a few different products to discover which proves to work best for you.

## LEATHER SEATS

Have you ever gotten into your vehicle on a warm day and found the leather seats to be unbearably hot? This discomfort to yourself may be temporary, but the effects it can cause on your seat may cause permanent damage like fading or cracking.

You can protect your investment and change the material during the warm weather by using pull-over seat covers that can be much more comfortable. If you want to keep the original style, make sure to use a leather cleaner and conditioner to ensure the seats remain soft and durable.

## DASHBOARD

Dashboards are also common victims of exposure to the sun. Harsh rays will eventually wear down the plastic and create cracks or fading. If you are unable to park in the shade, it's imperative to use a windshield shade to lessen its impact and reduce the levels of heat inside.

# Strut your Stuff

A major component of your vehicle's suspension system are struts. While people often confuse them with shock absorbers, they are wildly different. A shock absorber's primary purpose is to control spring and tension movement, not support a vehicle's weight.

As we drive over road imperfections like potholes, a shock's internal piston system is controlled by contained hydraulic fluid used to distribute pressure based on the intensity of the movement.

They are comfort companions who adjust to roadways and provide us with a more comfortable ride.

A strut, on the other hand, is an integral part of a vehicle's structural support system. They take the place of a traditional upper control arm found on cars and trucks with shock absorbers. While their operations may be similar, the main differences with strut assemblies are their responsibility to maintain control, steering, create effective braking and even wheel alignment.

## REPLACEMENT INTERVALS

Struts are a reliable part of a



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vehicle but do eventually experience problems after constant abuse on uneven roads. While they aren't traditionally a part of routine maintenance, most automakers recommend replacements around the 50,000-mile mark. Since driving habits and road conditions can vary vastly by location, follow your service professional's advice about when to replace your struts. They know the signs of a failing unit and can give you an

idea of how much life is left.

## SIGNS A REPLACEMENT IS DUE

Failing strut assemblies often show signs of wear that people can notice while driving. Here are some good ways to test the condition of the important stabilizers from the National Auto Parts Association.

Driving over potholes or speed bumps causes the vehicle to make noise or is difficult

to handle.

The front end nosedives when brakes are applied.

There is noticeable leaking near the strut and its housing.

It's important not to delay a replacement or an expert's recommendation when the struts begin failing.

## DIY OR PROFESSIONAL?

Changing struts can be difficult for an amateur DIYer, and more importantly, incredibly dangerous. Specialized tools

are required to remove a strut from its coil spring. Many strut manufacturers produce quick strut assemblies, which come as a complete unit, so a replacement can simply be bolted up to its predecessor's footprint.

However, since it's such a crucial part of the vehicle's support system, unless you're familiar with alignments and toe adjustments, a professional replacement is often recommended.

# What Is your Vehicle Telling You?

Not every required repair is illuminated by a light on the dashboard.

Fortunately, your vehicle has multiple ways of alerting you when parts are failing, and attention is necessary to ensure better performance and safety.

When you're in the car this spring, roll up the windows, turn the radio down and listen for these common noises that demand awareness.

## **BRAKE NOISES**

An efficient braking system is imperative for your safety and the well-being of others on the road. This hydraulic system relies on a series of pads, rotors, caliper pistons and fluid to slow the vehicle at a driver's demand. When you engage with the pedal, these common problems are easily noticed.

**Squeaking:** Pads are often built to squeak once their friction is past recommended wear levels set by the manufacturer. Some new vehicles feature sensors that will tell the car's computer when a replacement is due.

**Grinding:** If you hear grinding or notice your vehicle shaking once the pedal is depressed, it's usually caused by a warped or grooved rotor.

**Burning smell:** When a caliper's piston is stuck, it will generally keep the pads engaged with the rotor while you're driving. This typically provides



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an odor that something is burning and can compromise other vital components.

## **NOISES UNDER THE HOOD**

There are numerous components in the engine compartment that are powered by a serpentine belt. It rides a sys-

tem of pulleys on important parts to operate things like power steering, cooling and charging. If you hear squeaking under the hood while your vehicle is running, it's likely there is a problem with the belt, tensioner or pulleys. Don't risk an expensive tow bill by driving with these issues as

it can leave you stranded if ignored.

## **RATTLING UNDERCARRIAGE**

Without an effective exhaust system, the gases and pollution created by your vehicle would have no way to exit. It's an innovative maze of pipes,

hangers and converters that are often forgotten as a part of regular maintenance. Some signs of physical damage you should listen for are rattling metal when you hit a pothole or cross a railroad track. It's possible that a hanger is failing or an important component is not properly installed.

# Get to Know your Service Manual

In most vehicles, you can find a service manual stashed away in the glovebox behind extra napkins and acquired paperwork you gather throughout your daily life.

This book holds valuable information regarding service, maintenance and troubleshooting tips. Make the time to scour the pages and learn more about the machine you rely on every day.

If you bought a used vehicle without a manual, there are a few ways to obtain one. Start by calling your local dealership to find out if they have an extra on hand or can order it for you. If not, try to reach out to a manufacturer's customer service department and provide them with your vehicle identification number. To cut costs on creating physical manuals, many may have turned to digital versions you can download.

Here are some important factors to look for when you flip through the owner's guide.

## SERVICE INTERVALS

Staying on top of regular maintenance is crucial to protecting your vehicle and ensuring it operates optimally. Changing lubricants like engine oil and transmission fluids is important, but how do you know when the time is right? Most manuals will sug-



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gest service intervals based on mileage. It's important to follow their guidelines to maintain a warranty and keep moving parts of components performing flawlessly.

## DASHBOARD INDICATORS

Since modern vehicles rely on sensors and computers to relay messages of potential

problems to their driver, it's important to understand the icons displayed on your dashboard. Study the indicators so you know if a light is on because of an issue that requires immediate attention or can be addressed during your next scheduled service. Shutting the vehicle down at the first sign of danger can less-

en the damage caused by a failing part.

## DIAGRAMS

When you discover something in your vehicle isn't working properly, it's easy to become overwhelmed and think of the worst-case scenario. Before you begin racking up the estimate costs of a major

repair, check the fuse in charge of breaking a circuit if there is an excessive current. Your user's manual paints a clear picture of the fuses your vehicle relies on. Remember that there is typically a panel inside and under the hood. Knowing their locations can be an asset when dealing with an emergency on the road.

# Brake Lines

If you live in an area with frequent ice and snow, it's common that chemicals used to alleviate the conditions wreak havoc on your vehicle's brake lines.

The undercarriage is loaded with an intricate maze of metal lines used to distribute hydraulic fluid to each wheel, the master cylinder and anti-lock braking system modules to ensure you stop when the pedal is engaged.

A lack of brake fluid can put you in danger during a panic stop or inhibit the system's effectiveness. This spring examine these lines to ensure they're not leaking at the fittings or showing signs of wear or rust throughout. Repairs may require special tools and an understanding of flares, threads and bending. Many times, it's best left to the professionals.

## THREAD PITCHES

When deciding to tackle a brake line job, identifying the correct thread pitch on tube nuts and other components is crucial to a proper connection. If you force a fitting, you risk cross-threading and damaging the line's fitting or the port of an important part. If you need help identifying if a fitting is cut with metric or standard thread, visit a repair shop or local auto parts store



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for help. Once you know the correct pitch and size, it's easy to find adapters or nuts that can be used to fix a fluid leak.

## FLARING

The next step to finding the right brake line fittings is to understand how it seats or seals. This is commonly referred to as a type of flare.

Typically, manufacturers use two types when engineering their vehicles and components.

**Inverted/double:** Easily identifiable by an inward-facing funnel shape on the end of a line or fitting. The female port of an inverted flare will be opposite, so the line can tighten and mate securely.

**Bubble/din:** This type is often found with metric threads; the male nut will have a round external appearance. Its mate has the shape of a tapered cone which allows for the bubble flare to seat.

Ensure the fittings are tight by using a flare-nut wrench to secure connections.

## BENDING

When replacing brake lines, it's important to replicate the bends designed by the original manufacturers.

Typically, these bends or loops are necessary to lessen the brunt the tubes take during daily driving, which would cause accelerated failure if left straight.

# Choosing Washer Fluid

Not all washer fluids are made alike.

During the winter months, you likely filled your reservoir with a handy de-icing agent but once the weather warms, there are several options to give you season-specific benefits.

Many dealerships or auto shops offer to top-off fluids during regular maintenance like oil changes. Ask them about the washer fluid they include, or if you can bring your own if the type you prefer isn't offered. Keep in mind, if you change the mixture, it may require a flushing of the system to ensure the new fluid works at its peak performance.

Here are a few common options to choose from and the benefits they provide.

## **ALL-SEASON**

The traditional blue washer fluid you may be most familiar with is typically offered in two different blends. During colder months, a minus-20 formula is beneficial to avoid freezing but when temperatures are comfortable, plus-20 is the better option.

While some people choose to simply use water during the spring, this standard fluid replacement is more suitable for eradicating grime picked



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up during daily driving. Typically, it is a blend of water, methanol and cleaning agents that create a streak-free windshield so you can travel without obstructions.

## **BUG-CLEANING FORMULAS**

An annoyance during spring driving is the invitation for

bugs to meet your windshield. During long drives, these insects can become tough to remove and may require a pit stop at a gas station to use their squeegee if they become intrusive to your view. Using a specially designed washer fluid that promotes cleaning tough spots and creates a barrier to lessens the mess made

by pests helps you stay on the road and avoid unnecessary stops. Look for cleaners that also protect against other powerful residues like bird droppings, tree sap and road grime.

## **RAIN REPELLENT**

Driving in the rain can be a dangerous experience if your

windshield is not pristine. Water repellent washer fluids apply to your windscreen after regular use and use beading technologies to promote better visibility. Keep in mind that this shouldn't be considered a replacement for windshield wipers, but it provides great relief when navigating spring's wet conditions.

# Transmission Maintenance

Transmissions rarely receive the maintenance and attention they deserve. Since it's under the vehicle and out of sight, out of mind, many forget about their importance until a problem arrives.

While they don't require as much attention as your engine, the automatic transmission's role is imperative.

While a motor gets most of the praise for providing the energy to propel a car, the transmission acts as a distributor to send the right amount of power to the wheels. Without it, our vehicles would have no way to determine if we're driving up or downhill or need extra power when towing.

Make sure this incredible machine operates efficiently by completing service based on the manufacturer's recommendations.

## SERVICE INTERVALS

There is not a one-size-fits-all service interval for the numerous automatic transmissions offered by vehicle makers.

It's important to refer to your service manual to figure out exactly what the manufacturer recommends. If you



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purchase a used car or truck with high miles and are unsure of how it was maintained, you should have the fluid and performance tested at your local dealership or favorite auto repair shop. Here are some of the vast service interval differences you can expect, as reported by Consumer Reports.

Many new vehicles can operate up to 100,000 miles without maintenance.

Some vehicle makers suggest service after only 30,000 miles.

A few manufacturers use a sealed transmission which requires zero maintenance as the fluid is meant to last for the vehicle's lifetime.

Since there are so many variables to understand the maintenance of your transmission, it's crucial to stick to a strict maintenance routine as set by the manufacturer.

## TYPES OF MAINTENANCE

In most cases, general maintenance to an automatic transmission requires replacing a portion of the unit's fluid and applying a new filter and gasket in the pan. In more extreme situations, a service writer may recommend a complete flush of the system. This task requires that all fluid is eradicated and replaced and will sometimes use specially formed cleaning

solutions to wash out grime and sludge.

Since transmission fluid doesn't burn like engine oil, if you find yourself low, it's likely you have a leak. A good indicator is finding drops or puddles of red fluids under your vehicle. If this is detected, be sure to check your capacity with the dipstick and refill with the correct fluid recommended by the vehicle maker.