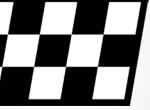


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# **THE DRIVER'S GUIDE TO AUTOMOTIVE MAINTENANCE**



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EBOOK!**



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Routine automotive maintenance is arguably the most important thing you can do for your car. The good news is, as a car owner, you don't need any complex knowledge to take care of a few simple tasks under the hood yourself! Adding some regular checkups and taking care of any issues in a timely fashion go a long way toward extending the life of your vehicle and ensuring a safe ride.

Performing routine maintenance in the comfort of your garage or driveway is not only convenient; it also helps you save a bit of money. In this Driver's Guide to Automotive Maintenance, we'll walk you through many of the basic automotive maintenance services that your vehicle will need throughout its lifespan, including oil changes, routine checkups, and more.

Read ahead to learn more about maintaining your vehicle from home!

## **READ THE OWNER'S MANUAL**

The first thing you should do before performing maintenance on your vehicle at home is read the owner's manual. You can learn a great deal about your vehicle from the manual, including recommended guidelines for various automotive maintenance tasks. A few crucial facts you'll learn in this manual include what kind of engine oil it uses and what kind of tire pressure your vehicle should have.



## REGULAR VISUAL CHECKS

### ***Body & Bumper Pressure***

The biggest reason you should keep an eye out for damage to the body and bumper is for insurance purposes. If there's any kind of dent or other damage, you'll want to know where and how you got it, even if it's something as simple as another driver bumping his or her door into your front passenger door in a parking lot.

### ***Fluid Leakage***

Check for fluids leaking underneath the vehicle. These fluids may include oil, transmission, power steering, or brake fluid. During warmer months, it's also normal to see water dripping from the air conditioning unit. While a small leak may not cause problems right away, it's best to get it checked out sooner rather than later so it doesn't turn into a big issue.

### ***Tire Pressure & Tread***

You should check your tire pressure once a month at the very least. However, it's recommended to check it once every week or two. Maintaining optimal air pressure extends the lifespan of the tires and gets you better gas mileage, both of which save you money. Consult your owner's manual for the ideal tire pressure level for your vehicle.

Most late-model year vehicles come equipped with tire pressure monitoring systems, which are very handy for keeping an eye on your tire pressure from day to day. However, it's also a good idea to have a tire pressure gauge on hand.

Tire pressure gauges are inexpensive and are readily available at any hardware or auto supply store. Tire gauges are also small, which means you can keep one in your glove compartment and do on-the-go pressure checks as needed. Many gas stations have air pumps, or you can have your tires filled at your local service center.

You should also listen for any strange noises, both inside and outside of the tires. Also make sure your tires have adequate tread. Use the penny test to look for tread or keep an eye out for the tire's tread wear indicators.



## ***Smoke***

Diesel emissions and start-up fumes are normal, but any other type of smoke in the vehicle exhaust may indicate an issue. Persistent fumes that are darker than normal can indicate issues with your engine oil, which can cause more problems if it isn't dealt with properly.

## ***Engine or Fluid Warning Lights***

Any time a warning light appears on the dashboard, talk to your service center as soon as possible. Unlike indicator lights, dashboard warning lights will be orange or red and indicative of a problem.

## ***Burned-Out Headlights, Taillights, Turn Signals, & Brake Lamps Changing the Oil***

For your personal safety and the safety of other drivers, all the exterior lights on your car should always be working. It can be difficult to determine whether these lights are working properly while driving. Have a family member or friend inspect the lights for you when it's dark outside and the car is running once every few weeks. An auto technician at your local car dealership can replace burned-out bulbs.

## ***Windshield Wiper Damage***

If your windshield wipers are cracked, torn, or they're starting to streak, it's time to replace them. There are several factors that contribute to the lifespan of windshield wipers, including driving frequency and car housing.

Any time you're having trouble seeing through your windshield, replace the wipers and clean both the inside and outside of the windshield, as general cleanliness also affects visibility. Wipers are generally inexpensive and readily available at many types of stores, including service centers, gas stations, and retail stores.



## CHANGING THE OIL

One of the most critical aspects of automotive maintenance is changing the oil and the oil filter on a regular basis. Conventional oil needs to be changed about every 5,000 to 7,000 miles, or about every six months. Synthetic oil can be changed once a year, or between every 10,000 and 15,000 miles.

The best way to figure out how often you need to change your oil is to check the owner's manual. Regardless of the oil change schedule, make sure to also have your filter changed every time the oil is changed.

An engine oil level check should be part of your routine inspection under the hood. Cars have a dipstick or an electronic gauge for checking oil color and level. Your oil should be relatively clean and smooth. Once it runs through the engine, it'll have a slightly darker color than it does when it's brand new. Keep motor oil on hand so you can add more as needed. There's more information about an inspection under the hood, including the engine oil level check, in the next section.

If you're changing the oil yourself, you can choose from several different types of motor oil. Lighter weight oil, such as 5W-30, is preferable for colder temperatures while heavier oil, such as 10W-40, is better for warmer climates. Does your vehicle have smoke coming from the engine, or does it use a large quantity of oil? Opt for a heavier weight or a synthetic blend motor oil.



## UNDER THE HOOD

You don't need to be a mechanic to learn how to check basic components under your hood. At a minimum, you should check the belts; engine oil level and cleanliness; transmission and transaxle fluids; and windshield washer, antifreeze/coolant, brake, and power steering fluid levels. All of these fluids are fairly easy to check.

In some instances, you can view the tank level directly. However, most fluid containers also have dipsticks or gauges that allow you to check the current level against a notch that indicates the ideal level. The fluid should be above the minimum line but below the maximum line. Your owner's manual will have any additional guidelines for all these fluids. If you're checking the antifreeze, take care not to remove the radiator cap while the engine is still warm or hot.

While you're inspecting components under the hood, watch out for leaks and worn or loose parts, such as loose electrical or tube connections in and around the engine. Worn or exposed wires and tubes and loose or warped belts should be replaced right away. You don't want to drive with a belt that's cracked or has missing parts.

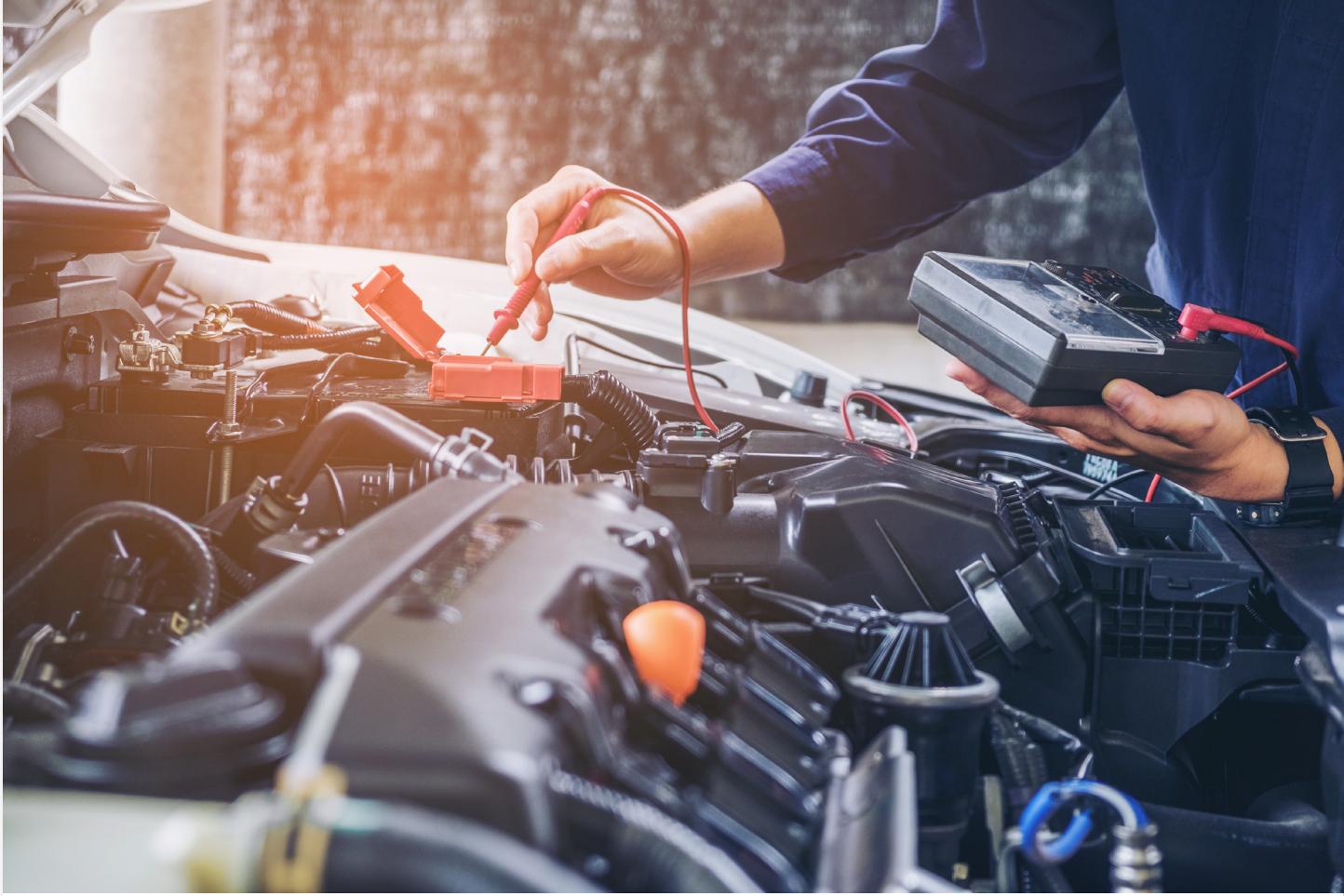
The general guideline for belt replacement is every 60,000 miles for the timing belt and every 40,000 miles for the serpentine belt. Check your owner's manual for the recommended numbers for your vehicle. If your belts are in good shape, you can leave them alone. If they're worn out or damaged in any way, have them replaced before they fail, as damaged belts can harm other components of the car, resulting in even more expensive repairs.

Belt replacement is a complex task for someone without advanced automotive skills, but it's a routine job for a trained auto technician. Don't be afraid to take your car into the shop for this replacement job.

Finally, keep an eye on the battery. You should always know the age of your current battery. If your battery is at least five years old or isn't getting an adequate charge to start your car with ease, it's time to have it checked out. You should also make sure the battery isn't leaking or has any sort of buildup on the contacts.

If there's buildup, purchase a battery cleaning brush for a few dollars at an auto parts store. Once you have a cleaning brush, you can keep it in your trunk.

While you're buying a brush, you may also want to think about getting an inexpensive battery tester or jump starter to avoid having to call for help should you need a jump if the battery dies.



## REGULAR REPLACEMENTS & MAINTENANCE

There are a few internal components of a car that you aren't likely to examine during your routine visual checks that you should still examine periodically. These checks include the cabin and engine air filters, the spark plugs and cables, and the engine timing belt. With regular maintenance, you won't need to replace these items very often.

Your air filter should be clean without any clogs or damage. Most places that change oil also change air filters and are happy to do both at the same time. An auto technician will inspect the spark plugs, cables, and engine timing belt during an engine or electrical tune-up. If your spark plugs are worn out or covered in buildup, your engine can't work efficiently, which can lead to an engine breakdown. If any filters, plugs, cables, or belts need to be replaced, your technician will let you know after they've inspected the vehicle.

Finally, you should have your tires rotated and balanced and your alignment checked on a regular basis. These tasks ensure that your tires wear evenly and that your car drives smoothly. They also extend the lifespan of the tires. If you have trouble keeping your car straight while driving, it's very likely that the alignment is off. The good news is that it's a simple fix that any service technician can perform. Consult your owner's manual for the optimal tire schedule for your vehicle.



## WHEN IN DOUBT, CONSULT A PROFESSIONAL

If you're not sure how to fix an issue, or if your car presents a brand-new problem that you can't diagnose, it's best to schedule an appointment at your local service center. An automotive technician in your area can provide an honest assessment of your car and suggest the best course of action.

If your car is in need of maintenance today, there's no need to delay. Contact your local automotive dealer to set up a service appointment now!