**Routine Vehicle Maintenance 101**

What You Should Know

Vehicles are machines, and like any machine they need maintenance. For most vehicles, regular maintenance begins at 5,000 miles and continues from there every 5,000-10,000 miles. Of course, checking your car on a more regular basis is even better.

Maintenance keeps your vehicle running smoothly and safely down the road for a much longer distance compared to never doing upkeep. Your owner’s manual will outline all the maintenance that needs to be done and when it needs to be done so that you’re prepared.

But do you need to pay for a mechanic to handle the vehicle maintenance? You can handle a lot of basic vehicle maintenance yourself by following the advice below.

**9 Vehicle Maintenance Measures You Can DIY**

You need a mechanic for most repairs, but there’s a lot of vehicle maintenance you can do on your own. Here’s a rundown that will get you started.

**1. Acquaint Yourself with your Owner’s Manual**

Every vehicle has an owner’s manual. It’s a thick book typically squirreled away in the glove box. If you can’t find your copy, an electronic version could be online. Otherwise, contact your dealer for a copy.

With manual in hand, head to the maintenance schedule section. Take note of the intervals for maintenance items like the engine oil, oil filter, tire rotation, belts, hoses and so on. It’s important to follow these manufacturer recommendations to keep the engine running as smoothly as possible.

**2. Check Your Tires Monthly**

A lot is riding on your tires - like the entire vehicle. The thing that keeps your car driving down the road is the tires. They need to be properly inflated to do their job as well as lessen the chance of a blowout.

You probably know how to add air to your tires already. What you may not know is the correct tire pressure, which is extremely important. You’ll find the ideal tire pressure on a placard located on the driver’s door jamb or in the owner’s manual.

Tires should be inflated when they are cold (driven less than one mile) to get an accurate reading. If that isn’t possible, add 4 PSI to the recommended amount, explains[Bridgestone Tire](https://www.bridgestonetire.com/tread-and-trend). Check your spare tire while you’re at it and confirm all pressures with a tire gauge once the tires have rested.

**3. Change Your Oil and Oil Filter on Schedule**

Oil is your engine’s life blood. It serves as a lubricant, keeping important engine parts from grinding against each other and destroying the engine. Motor oil that’s not changed regularly can damage your engine as accumulated contaminants cause friction when they rub against parts.

What type of oil should you use — petroleum-based or synthetic? Is one better than the other? According to Edmunds.com Engineering Editor Jason Kavanagh, the type of oil is not important. [He noted](https://www.edmunds.com/car-care/top-7-urban-legends-about-motor-oil.html), “As long as the oil meets the service and viscosity requirements set out in your owner's manual, you can switch back and forth as much as you want.”

**4. Replace the Air Filter with Oil Changes**

When it comes to the air filter, you may need to replace it once or twice each year. It largely depends on how much you drive. It’s best practice to check the air filter when you change your oil.

**5. Inspect All Other Fluids**

Motor oil isn’t the only fluid that needs to be checked. Experts recommend checking your car brake fluid, transmission fluids, coolant and windshield washer fluid.

Like motor oil, you’ll check transmission fluid with a dipstick. Determine brake fluid, coolant and washer fluid levels by removing related covers and visually inspecting each. They should reach a designated fill line.

NEVER remove the radiator cap to check coolant levels. You risk getting scalded if the cap is removed. Instead, check the coolant level in the nearby transparent refill container, says [CarTalk](http://www.cartalk.com/).

**6. Examine Belts and Hoses**

If you want to go one step beyond basic routine vehicle maintenance, then inspect the hoses and belts in the engine bay. These hoses direct coolant flow to ensure the engine doesn’t overheat. If a hose has separated, shows cracks or bulges, then have it replaced.

Similarly, check the belts too. The timing belt, as found in most cars and small SUVs, is critical to the operation of your engine, notes YourMechanic. If this belt shows signs of wear, including cracking, glazing and material loss (chunks missing from the belt itself), then replace it ASAP. If the timing belt goes while driving it can cause serious engine damage.

**7. Always Listen and Feel for Brake Issues**

Brakes are a critical component on every vehicle. You should always be aware of how your brakes feel and what they sound like every time you drive. If the brakes feel spongy or it takes more pressure to apply the brakes than normal they need to get inspected by a professional.

Brake sounds can indicate when maintenance or repair is needed. Here’s a quick rundown of common brake sounds:

Squealing - It’s time for new brake pads when you hear squealing because the ones you have now are worn out and rubbing against the rotor.

Grinding - This isn’t a normal sound, but it may not be a major issue if brake grinding is happening only the first time you drive the vehicle in a day. When the humidity levels are high outside, rust can form on the brake rotors in a matter of a day if the vehicle isn’t driven. The grinding sound is the rust getting knocked off. The simple fix is to park the vehicle in a garage when it’s snowing, raining or humid.

Rattling - A rattling or vibration sound suggests one of the rotors is warped or worn out and needs to be replaced.

Intermittent Sounds - If brake sounds come and go it could be an indicator of brake fade from overheating. When the brake pads, rotors or brake fluid overheat you may hear brake sounds and the brakes won’t feel as responsive. This problem should be looked at by a professional who can pinpoint the cause and fix it.

**8. Replace Wiper Blades as Needed**

If the windows streak or the blades screech when the system is operating, it’s time for a replacement set. This is actually a very important vehicle maintenance measure. If you find yourself in a rainstorm the windshield wipers are what give you visibility. You never know when you may need them so check the wiper blades often.

**9. Remove Battery Corrosion**

As for the car battery, the main requirement here is to ensure that the battery terminals remain free from corrosion. Just like the brakes, environmental factors can cause buildup that hinders operation. A wire brush along with a solution of water and baking soda will knock the corrosion right off.

Now that you know vehicle maintenance 101, you’re on your way to ensuring your car keeps safely cruising down the road for miles.

Learn more about vehicle maintenance from[IDriveSafely.com:](https://www.idrivesafely.com/)

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# How Do Shops Come Up with an Estimate?

By Stephen Fogel

Most of us depend on our cars to get us to work, school, and to many other important activities. We make the monthly payments, and we buy car insurance. We put in gas on a regular basis. Driving a car costs money.

So, when your vehicle needs a significant repair, the first thing that probably runs through your mind is, “How much is this going to cost?” This is why an estimate is a very useful thing to have.

Getting an estimate of your repair costs up front, before you have any work done, provides many benefits for you, the consumer:

* It will give you a good idea of how much you will pay for the repair
* It will help you to understand what needs fixing, as well as exactly what the mechanic will be doing to repair your car
* It will allow you to shop this repair around to several different shops, which could save you some money
* It will give you a sense of each mechanic’s personality and approach to the job, which can be just as important as the estimated price

Let’s take a look at what an estimate includes, and how repair shops put one together.

**What goes into an estimate?**

There are several components that go into the creation of an estimate for the repairs to be done on your vehicle.

**The labor cost**

This is calculated by multiplying the amount of time it will take to perform the repairs (in hours) by the hourly rate that the shop charges. When estimating the time required, it is common for repair shops to use “flat rate” databases that spell out how long it should take a qualified technician to do particular job on a specific vehicle.

The hourly rate charged for labor is not what the mechanic who works on your car is paid. The repair shop has “overhead costs,” that it must recover. Overhead costs are all the things that the shop must pay for, on an ongoing basis, to keep itself open. These include:

* Building rent or mortgage payments
* Utilities
* Insurance
* Clerical and administrative staff
* Training costs for mechanics
* Diagnostic tools and specialized equipment for repairs
* Software and database costs and subscriptions
* Marketing and advertising
* Employee benefits
* Taxes

Just as with most other businesses, these costs must be recovered, so that the shop can continue to operate. This is one good reason why the labor rate may seem high to you.

**The parts cost**

In addition to labor, the shop may need to replace damaged or worn-out parts when it makes repairs to your car. There can be a large difference in parts prices, depending on where they come from.

**New OEM (Original Equipment Manufacturer) parts** come from the parts department of the local new car dealer who sells your vehicle brand. These are commonly the most expensive parts because the dealer marks up the price charged to them by the manufacturer, who has already marked up the price they paid their parts supplier. Some specialized parts, or those on a brand-new model, may only be available as OEM parts.

**New aftermarket parts** are another option, but quality can be an issue here. Some are made by the same parts suppliers that make the OEM parts — these are usually of very good quality and should cost less than OEM. But some are of very low quality and should be avoided. Ask the shop about the quality and sources of the parts they will be using on your vehicle, to be sure you are getting good quality parts.

**Remanufactured parts** have been returned to near-original condition, and perform as well as new OEM parts, for a much lower price. Remanufactured starters and alternators are common and may be recommended by the shop as a money-saving alternative. These remanufactured parts should come with a warranty.

**Rebuilt parts** are a step down from remanufactured parts. Rebuilt parts start with used parts, and usually replace only what doesn’t work or has worn out. Rebuilt parts cost less than remanufactured and will not last as long. They may come with a brief warranty.

**Salvaged or used parts** the mechanic gets started.

**Miscellaneous charges**

These can cover items like hazardous waste disposal**,** sourced from a salvage yard or “vehicle recycler,” are another choice. These will cost the least but may not have any warranty. These can be an acceptable option if your vehicle is very old, has lots of miles on it, and you’re not sure how long it will last before you need to dispose of it. This can also be a good low-cost option for things like replacement wheels, bumpers, body panels, and interior parts.

Your mechanic may give you a choice of parts sources, based on your vehicle’s condition and your budget. Keep in mind that if there is a large amount of labor involved in doing the repairs, you may be better off with higher quality parts. You don’t want to have to redo an expensive repair because your cheap parts failed! Also remember that the parts pricing will include some markup to cover the shop’s overhead costs, just as the labor does.

**The diagnostic cost**

If you have a problem that is electrical or electronic in nature, or only occurs intermittently, the shop may need time to track down and diagnose exactly what the issue is, before they can begin to fix it. Diagnostic time will be listed if the shop deems it necessary. Keep in mind that this piece is very difficult to estimate precisely in advance, so it may vary in either direction once

fees, or materials needed to perform your specific repairs, as well as government-mandated fees. If you do not understand any of these items, ask for an explanation.

Even if sales tax is not listed on the estimate, be aware that it will be added to your final bill, in those states where a tax is in effect. Budget for it so you won’t be surprised.

If it’s not listed, ask the shop what their warranty on the repairs will be, for both parts and labor. This may also be another good point of comparison if you are price-shopping multiple repair shops.

**Will my final bill be different from my estimate?**

Depending on the nature of the repair, it could be. Simple repairs that present few opportunities for complications should end up very close to the estimated cost. But complex problems may reveal other issues (and costs) as the mechanic works through the repair.

If this happens, the shop should contact you immediately, report the new developments to you, and give you options on how to proceed. If you are unclear on what they are telling you, ask for further clarification, or visit the shop to see the problem for yourself. That may help you to understand what needs to be done, so you can make an informed decision.



**About the Author**

Stephen has been an automotive enthusiast since childhood, owning some of his vehicles for as long as 40 years, and has raced open-wheel formula cars. He follows and writes about the global automotive industry, with an eye on the latest vehicle technologies.

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**Five Dos and Don'ts when Dealing with an Auto Mechanic**

Jim Gorzelany

With the average age of vehicles currently on the road reaching an all-time high of 10.8 years according to the market research firm R.L. Polk in Southfield Mich., cost-conscious consumers are choosing to keep their existing cars and trucks running rather than trade them in for new models. Unfortunately, as a Consumer Reports survey revealed, that also means many drivers are postponing needed repairs or maintenance as a money-saving measure.

Unfortunately, delaying service not only represents false economy, it can compromise a car’s safety. The car-care experts at AAA Motor Club in Heathrow, Fla. believe the best way to save money over the life of a vehicle is to choose a high-quality, full-service repair shop (or dealer's service department) and allow them do all of the necessary maintenance and repair work. "This helps prevent breakdowns, and often saves money by allowing drivers to make a small repair now rather than a much bigger one later,” says John Nielsen, AAA’s Director of Automotive Repair.

But making the decision to bring in a car for service is only half the battle. To get the most for their maintenance and repair dollars consumers need to know how to best deal with an automotive technician so that a trip to the shop won’t ultimately turn sour. According to an informal survey of independent mechanics and repair experts conducted by the online auto-service resource AutoMD.com, here’s a list of dos to follow and don’ts to avoid when taking a car in for maintenance or repairs.

**1. Communicate Properly.** The better a consumer is able to convey to a mechanic what’s wrong with his or her vehicle the easier it is for a technician to diagnose and fix the problem. It’s a good idea to write down ahead of time what ails your ride, noting specific sounds, sensations, leaks and smells, and when and how often they occur. What happened just before the car stopped running; how did it function the day before it didn’t start? Also note when the vehicle was last brought in for service, as today’s problem may be related to last month’s repairs.

Here’s a list of terms that can help explain common auto symptoms that can also serve as a checklist for a vehicle that’s headed for the repair shop:

* Backfire. A gunshot-like sound that comes from the engine or tailpipe.
* Bottoming: Excessive noise or harshness that’s usually felt through the steering wheel or passenger compartment when going over bumps.
* Bucking: This is felt when the engine hesitates or the transmission slips as it changes gears and the vehicle lurches.
* Dieseling: What occurs when an engine continues to burn fuel and runs briefly after the car has been switched off.
* Hesitation: A brief loss of power upon acceleration.
* Knocking: Also known as “detonation,” this is a rapid rattling that’s heard upon acceleration.
* Misfire: Hesitation that occurs when fuel in one or more of an engine’s cylinders fails to ignite properly.
* Shimmy: A side-to-side motion that can be felt through the tires and/or steering wheel.
* Sluggish: How a car feels when it’s not accelerating smoothly or strongly enough.
* Surge: A sudden, usually upward, change in the engine’s speed.

**2. Set Realistic Expectations.** When it comes to auto repairs, quick, cheap and good are usually mutually exclusive terms. Plan to leave a car in the shop for the better part of a day to obtain necessary service and be prepared to pay the going rate for parts and labor. Even if it’s a quick fix realize there may be several other cars ahead of yours in the mechanic’s service queue. Ask up front how long the car will need to be in the shop and arrange for transportation to and from the repair facility. And always get a cost estimate before allowing the mechanic to proceed with repairs or service.

**3. Don’t Drop Off a Dirty or Cluttered Vehicle.** Not only is this common courtesy, it can affect the quality of a repair. Tidy up your ride before bringing it in for service and be sure to clear out the back seat and trunk of items like strollers, golf clubs and construction equipment. The mechanic may need to remove them to access a part or perform a specific repair, or they may weigh down the vehicle to the extent it affects its performance.

**4. Make Yourself Available.** Be sure to leave phone numbers with the shop where you can be reached and respond promptly. If the technician isn’t able to contact you to approve a repair, the car will sit and remain unattended for that much longer. Likewise, you’ll want to know that the car is ready and how much the service will cost before heading back to the shop.

**5, Leave the Technician Alone.** Just about every mechanic AutoMD.com conducted in the course of its service survey disliked customers hovering over him or her while they worked. While it’s appropriate to spend time with your car and the mechanic to explain the problem, it’s distracting and can be dangerous. If you’ll be hanging around for a diagnosis or quick service, take a seat in the waiting room, grab a cup of coffee and let a professional do his or her job.

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I’m a veteran Chicago-based consumer automotive journalist devoted to providing news, views, timely tips and reviews to help maximize your automotive investments. In addition to posting on Forbes.com, I'm a regular contributor to Carfax.com, Motor1.com, MyEV.com and write frequently on automotive topics for other national and regional publications and websites. My work also appears in newspapers across the U.S., syndicated by CTW Features.

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