

Servicing Your Car Without Anguish

UNTIL America puts an end to the energy crunch, the nation's private car owners will find the problems of owning an automobile compounded by rising gasoline prices, uncertainties of fuel availability, and attendant motoring inconveniences. All this means that today's driver has more reason than ever to get the most for his dollar when it comes to auto repair work.

The vast majority of auto mechanics are honest and most are fairly competent. Still, tales of shoddy workmanship, exorbitant service bills, and downright fraud continue to surface.

On the plus side, though, is the fact that the 1970s have also brought more opportunities than ever before for the car owner to be better informed on all aspects of vehicle ownership.

This happy turn of events makes it far easier for the average person to follow the two unalterable rules that will get him a lot farther down the road to safe, economical and carefree driving: Proper vehicle maintenance and the selection of an expert and reputable serviceman. That old analogy about personal well-being—preventive medicine in the form of good health habits, and choosing the right doctor—prevails as strongly as ever.

The importance of regular inspection and routine maintenance for your car can't be stressed enough. And the "bible" for this vital task is your owners manual. It contains service recommendations designed for your particular model of car.

Read your owners manual thoroughly if you haven't yet, and keep it handy

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in your car's glove compartment. Always follow it to the letter on such matters as tune-up specifications, recommended tire pressure, correct motor oil, and so forth.

To avoid costly repairs, have a maintenance inspection made periodically. Persons who drive an average of 10,000 miles a year should check the following items at the beginning of each month when the first tank of gasoline is purchased:

All lights (for burned out bulbs)	Water level in radiator
Oil level in crankcase	Fluid level in power steering
Transmission fluid	Air filter cleanliness
Battery electrolyte condition, level, and cleanliness of terminals	Condition and strength of coolant
Brake pedal to be sure of firmness and high pedal	Condition of tires (cuts, imbedded foreign articles)
Level of brake fluid in master cylinder	Tire tread depth and pressure
Windshield washer fluid level; condition of wipers	Condition of hoses and belts

Most of these items can be checked visually. Others require simple tools.

In addition to the above list, the following tasks should be performed every spring and fall: Engine tune-up, tire rotation, and a check of anti-freeze and shock absorbers.

While all these maintenance checks are vital, never leave inspection of a vehicle's electrical system to the last.

Also, the "safety belt starter interlock" system on late model cars makes it impossible to start the engine unless front seat occupants are belted in when they are seated. While the safety value of such combination lap and shoulder belts has been clearly demonstrated, some motorists will be tempted to tamper with the interlock system.

This practice could lead to unnecessary repair bills, since it threatens damage to other parts of the car's electrical system, to which it is linked.

When you are looking for the right service station, don't let your fingers do the shopping! Instead, get the names of three or four facilities from friends



who already patronize them. Then do some comparison shopping. Once you've found a reliable service station facility, continue to patronize it.

It's generally a good rule of thumb to take your car to a dealer that services your make of car, since his mechanics will be skilled on how to handle any problems that may occur. Many service stations do, however, perform the same range of repairs that dealer outlets do, except of course for warranty work.

For major engine overhauls and automatic transmission repairs, you will probably need to take your car to a locally owned independent garage or repair shop that specializes in either job, or to a dealer who services your make of car.

The serviceman who works on your car must have a high level of competency too. With creation of the new National Institute for Automotive Service Excellence, there are promising signs on this front.

Through this non-profit, independent organization, any mechanic in the country can volunteer for a series of tests on automotive diagnosis and repair.

If a mechanic passes one or more of these tests, he is awarded a special certificate and can be identified by an orange and blue shoulder patch. As of

January, 1974, some 26,000 mechanics had been certified, and the Institute feels the numbers will increase measurably as the tests continue.

A directory of employers of certified mechanics was scheduled to be published in 1974. Car owners who would like a copy (a nominal fee will be charged) should write to the Institute at 1825 K Street N.W., Washington, D.C. 20006.

To lessen the threat of faulty repair work or repair frauds, there are a number of constructive steps you can take. While these measures can't offer full protection, they are wise insurance against dented pocketbooks and time schedules.

First, never wait until a small problem becomes a big and costly one. Always take your car in for a check at the first sign of trouble.

But before you take the car in, make a list of all problems and "symptoms" so you will be prepared to describe the nature of the trouble as accurately and specifically as possible.

Don't just ask to have the car put in "working order." That kind of general statement can lead directly to unnecessary work. But do avoid trying to explain in detail exactly what *you* think should be done.

On your initial visit, make certain you get a copy of the work authorization that you sign, or a general estimate of the total cost of the repairs. Don't leave until you do.

Ask the repair garage to telephone you when the exact work to be done is determined. When you receive the call, say you now want to return to the station to obtain another work order itemizing the cost of each repair to be made.

Usually, a good garage will have no objection to this. If you are told that expensive repair work is needed, get confirmation from a second garage.

You also might consider taking the car to a diagnostic center. Generally, such a step is a worthwhile precaution. Fees charged by diagnostic centers are fairly low, ranging from \$6 to \$20 and averaging about \$10.

Just as when hunting for a good service station, be selective! Have a diagnostic center recommended by someone who can testify to its thoroughness and dependability. Or call your local American Automobile Association (AAA) or other auto club, which may be able to give you a selection of two or three good ones to choose from.

If at all possible, pick a diagnostic center that is not associated with a repair garage.

Should you suspect that your service facility is charging you for parts that haven't actually been replaced, ask for the old parts back. Have the service station manager explain any charges you don't understand, and be certain you are not charged for repairs that are covered under your warranty. If your warranty does cover some repairs, have them made at your new car dealership.

Never accept inferior work or price gouging. If you have a complaint, discuss the matter with the dealer or owner of the service facility. It may be the trouble is simply the result of a misunderstanding that can easily be resolved.

If you find you are getting nowhere with a complaint, take action.

When a dealer outlet is involved,

send a letter to the nearest zone office of the auto-maker.

Make certain the complaint and the specific action to be taken are thoroughly detailed. Include your name, address, telephone number, make and model of the car, the dealer's name and location, and the car's age and mileage.

If the problem is especially frustrating, do not make accusations or threats. A far more constructive approach would be to send a copy of the letter to the central consumer office of the manufacturer, and, if the complaint is safety-related, to the National Highway Traffic Safety Administration, Department of Transportation, Washington, D.C. 20590.

If another type of service facility is involved, you can get in touch with your local chapter of the Better Business Bureau, contact a community consumer complaint office, or have an attorney write a letter to the service manager.

Perhaps, as more and more people do today, you may want to handle certain car repairs yourself. Experts say even the simplest maintenance jobs can save a car owner up to \$100 a year.

Also, if you know how to change a tire or replace a burned-out fuse, you won't always have to resort to emergency road repairs. During the winter months, this could save you waiting the extra amount of time such service often requires because of a heavy overflow of calls from motorists.

Besides the tasks already noted, the most basic maintenance jobs requiring simple tools include giving your car a tune-up (changing or cleaning spark plugs and points, changing condenser and air filters, changing oil and oil filters), cleaning the battery terminals, and flushing the cooling system.

Before beginning any such venture, however, make certain to re-read your owners manual *thoroughly* for specific pointers.

To learn the ABC's of car repair, you can attend courses in automotive maintenance offered by community colleges, local civic groups, and some AAA clubs. Such courses vary widely. Some simply stick to classroom instruction in basic

repairs, some require an abundance of technical study, and some even afford students a "greasy gloves" experience by arranging for them to actually work on cars.

Also, recognizing that Americans are showing increasing interest in doing their own minor tinkering, most auto-makers are offering "do-it-yourself" booklets on various makes of autos, free to new car buyers. This is especially true of the sub-compact models, since they are frequently bought by people with economy in mind.

Those who already have a car can usually obtain these booklets from their dealers. Lists of parts and tools needed are generally included.

For the most ambitious trouble-shooter, "shop" or service manuals are issued every year for each new model of automobile. Including far more technical detail than the do-it-yourself booklets, they are generously illustrated with diagrams and individual drawings of each part. In effect, they offer instructions on how to handle the most complicated repair job—even an engine overhaul.

The manuals may be ordered at prices ranging from about \$2 to \$8 by writing to the headquarters office of the auto-maker. Delivery usually takes a few weeks.

One note of caution! Complicated repairs should be undertaken *only* if you're certain you know what you're doing. A faulty wire connection or an improper adjustment could cost you much more than you set out to save, and more important, threaten your safety.

As already noted, cars that are properly maintained usually don't become disabled.

However, the wise motorist is always prepared for emergency situations, especially during long distance drives on freeways or remote roads.

Earlier it was noted that you can avoid having to call for emergency help if you have the know-how to make minor repairs. Whatever the case, always equip your car with emergency equipment. Some of the most useful

items (besides that ever-present owners manual) are:

A flashlight (with extra batteries)	Ice scraper
Minor repair tools (pliers, adjustable wrench, screw-driver, two feet of wire, all purpose tape)	Lug wrench
First aid kit	Jack with flat board for soft surfaces
White handkerchief or cloth	Flares or reflectors
Wiping cloth	Extra fan belt
Tire gauge	Blanket
Jumper cables	Fire extinguisher
	Replacement fuse of the correct rating for your car's electrical system
	Pencil, notebook

If you can't correct a problem, and you are on a limited access highway, pull well off the roadway onto the shoulder. Signal for help by raising the hood and tying a white handkerchief to your radio antenna or door handle, or place the handkerchief in the left front window.

Also, turn on your emergency flasher. Then stay in the car to wait for the police or emergency repair vehicle.

If you're stranded on other roads, move off the street as far as possible and try to find a level piece of ground to park on. Then, if you are a member, telephone your local AAA or other motor club for help.

If you're not a member of any motor club, contact a local garage that provides towing service. But try to avoid unscrupulous towing operators. Make certain the car *needs* to be towed.

Reputable towing operators carry a booster battery, as well as spare cans of gasoline.

Never, of course, carry extra fuel in your own car. The practice is extremely dangerous. Those who carry extra fuel are endangering not only themselves, but others on the road, especially in the event of a domino-type accident.

Find out exactly where a tow truck is going to take you, how many miles are involved, and exactly what the fee will be. Also determine whether towing is covered under your insurance policy, and if there are limits on the service.

Still another vital reason for a sound program of regular car maintenance is

protection of your warranty. Simple neglect is sufficient reason for a warranty to be voided. If it's determined, for instance, that your engine has failed because you didn't change the oil and filter within the recommended intervals specified in your owners manual, you may be refused an important repair free of charge.

Your warranty is a valuable document. It is a joint statement to you from the dealer and auto-maker that the vehicle will perform in the manner for which it is designed, and that any part which does not work or fails—if there's a design, construction, or assembly fault—will be repaired or replaced by the dealer. Always be certain to read your warranty carefully as soon as possible.

Just what is covered by a warranty, and for how long, depends on when the car was made. Most auto warranties cover defects in the manufacture of parts, and defects in assemblies that make up the car, for a full year or 12,000 miles, whichever comes first. Also, most warranties state that the auto-maker will repair the defect, or at his option replace the part with a rebuilt or new part.

Generally, most U.S. auto warranties cover every moving and stationary component in the engine, transmission, drive-shaft, axle assemblies and all other parts of the car except tires and batteries, which have their own warranties.

There are a number of other expendable items not covered that normally wear out, such as oil filters, points, and spark plugs.

Remember, too, that *within 90 days* of the delivery of a new car, most dealers will make a number of adjustments in the vehicle free of charge, such as correcting headlight aim, tightening belts and bolts, and other assembly line oversights.

On 1972 or later model year cars, most warranties also cover certain additional features, including heating and air-conditioning systems, radios, power steering, brakes, seats, windows, and *defects* in paint and interior trim, as well as vinyl tops, if factory-installed.

Certain pre-1971 cars have a five-year, 50,000-mile warranty on the engine, transmission and rear axle, including the drive-shaft.

Putting Your Finger On Green Thumb Garden Helpers

TRYING to find the right person or business firm to take the proper care of your home grounds is probably as difficult as catching a will o' the wisp.

In most sections of the United States it boils down to almost a "catch-as-catch-can" deal. You keep hiring and firing until you find the one that comes nearest to satisfying your wishes.

The more highly organized and better trained services are available where gardening is a year-round business. In those parts of the country where the growing season is short, gardening services on a professional basis practically disappear.

The best solution, of course, is to do as much of it as you can by yourself. Hire the professional for the rest.

With rapid changes in our habits of living, more and more home gardeners realize they need some sort of outside help in caring for their grounds.

The "old-time professional gardener" is now almost a museum piece and in his place you have the following to choose from:

-Lawn Specialists (local franchises of a national parent organization). They will agree to build, rebuild or maintain your lawn area.

With perhaps a slight variation between companies and perhaps in different parts of the country, the basic agreements call for fertilizing, seeding, liming, and aerating; weed, disease and insect control; and in some cases, patch-up work.

This service is accomplished in a