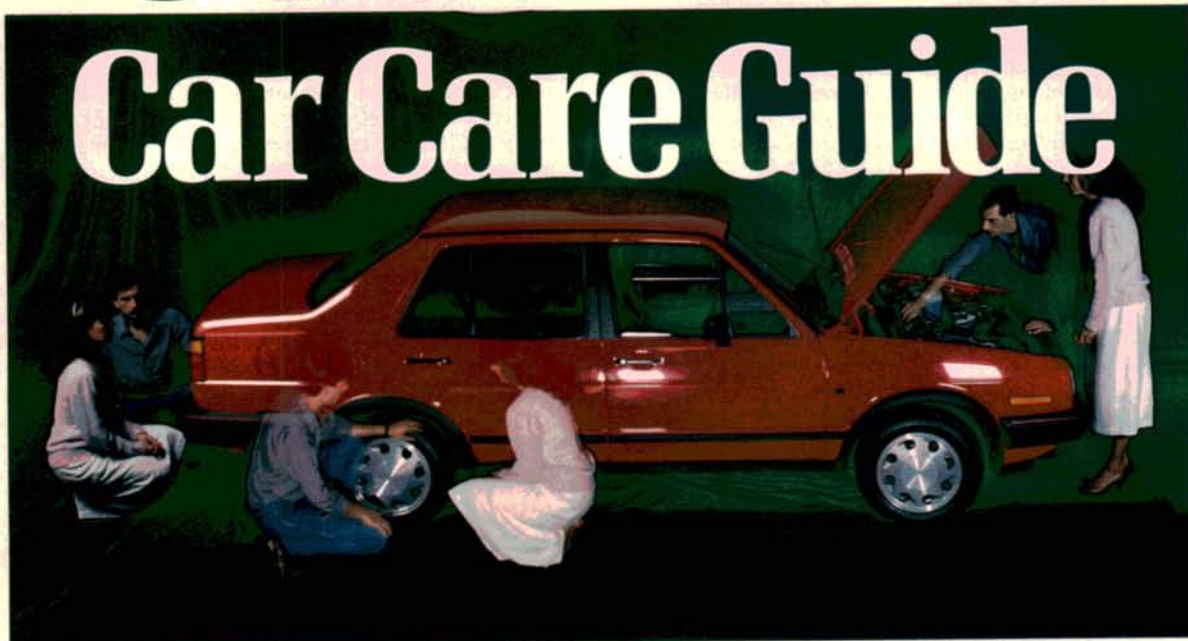


# Customer Car Care Guide



Dear *Import Service* Readers:

Quite a few of you have asked us to talk about customer training. We'll begin our periodic treatment of customer training with an article written specifically to your customers. It's basically a how-to guide that tells the customer how he can perform preventive maintenance procedures and driveway inspections on his car.

In upcoming issues, *Import Service* will be dedicating more ink to customer relations and training. If you have any ideas or stories for us in those areas, we'd love to hear from you. Meanwhile, please feel free to use this article in your customer relations program.

—By Marla Schleider

## Introduction

A car is the second largest purchase many people make in their lifetime. Yet the majority of consumers neglects the investment they have made. A few of the benefits you gain from routine preventive maintenance and regular visits to your service technician are: prolonged vehicle and tire life; greater resale value; lower overall repair costs; and, perhaps most importantly, the safety and security that come from driving a vehicle that has been well cared for.

If you don't know how to care for your car, you're certainly not alone. The Car Care Council estimates that Americans spend millions of dollars yearly on

repairs that could be avoided through simple preventive maintenance procedures. The Automotive Information Council concurs with this opinion, stating that: "Every day there are drivers who discover that the dangerous, inconvenient and sometimes costly breakdown they suffered on the freeway during rush hour could have been avoided by a 30-second inspection and a 10-minute visit to a repair shop."

*Import Service* and your technician are happy to provide you with this preventive maintenance guide. For information specific to your vehicle, please consult your owner's manual. If you still have questions about car care, your technician will be happy to answer them for you.

## SAFETY/VISIBILITY ITEMS

**Lights.** These are easiest to check with the assistance of another person. Have them turn on the parking lights, then the headlights, and then switch to the high beams. Check fog lights if you have them. Check both left and right turn signals for both the front and rear. Also check the brake lights. If any of your car's lights aren't working, you probably have burned out bulbs. If you replace the bulbs and the lights still don't work, you'll want to consult your technician for a possible electrical problem.

**Windshield Wipers.** It's certainly nice to have working windshield wipers when you get caught in a tor-

rential downpour or a winter blizzard. Clean your wipers periodically with an alcohol base cleaning solution. To check your wipers, squirt some fluid on to the windshield and turn on your wipers. Do they miss part of the window, streak, or rub? Then it's time to get new wiper blades. Do they chatter? They may either need to be replaced, or the tension on the arms of your wipers may need to be adjusted. If you live in a seasonal climate and winter's approaching, you may want to purchase winter wiper blades specially designed to resist build up of ice and snow.



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**Glass/Mirrors.** For visibility purposes, you'll want to periodically check all of your windows and mirrors. Are they clean? Do you have any cracks that should be repaired? What about your mirrors? Are they adjusted correctly? Check that mirror plates are snug in their housings and that the rear view mirror is tightly affixed to the windshield.

**Horn.** You may not always use your horn, but you'll be thankful you checked it when another motorist comes too close and needs to be warned off.

**Emergency Brake Operation.** Because owners of automatic transmission cars can put their car in park, it's easy for them to forget about the emergency brake. Don't ignore this brake. On many cars, the use of the emergency brake maintains the adjustment of the car's rear brakes. In addition, regular use of the emergency brake will prolong the life of your front brakes and reduce the chances of corrosion on the rear brake adjusters.

Periodically check your emergency brake to be certain it's still functional. Check the brake on a grade—20 percent is a good rule of thumb. If the car rolls freely after you release the emergency brake, then you know

it's releasing completely. If it sticks upon release, you may need to have cables replaced.

**Spare Tire/Jack.** These are two more convenience items that become safety items when you're stranded in the middle of nowhere on a trip with your family and find out that you don't have a jack or that the spare's flat. Make sure the spare tire is in good condition and properly inflated. Note: some new mini-spares operate at much higher pressures than conventional spares. If you need to use your mini-spare, drive at a slower speed than you would on your other tires. Because these mini-spares are intended only for short-term usage, you should have your flat tire fixed or replaced as soon as possible.

If you've never used a jack or changed a flat, you may want to take a trial run at it. On a bright sunny day, arm yourself with your owner's manual and an assistant. Follow the directions carefully. Then when an emergency does arise, you'll be familiar with the methods for changing a tire.

**Antenna.** "You gotta have tunes!" says our technical editor. To keep your antenna working, periodically clean it with alcohol. Then apply a light coating of a good graphite base lubricant. Also check to be sure that the antenna isn't loose or rusting.

**Dashboard Warning Light Bulb Check.** When you turn the key to on position, check to see that all of your dashboard warning lights illuminate and then go out when the car starts.

## UNDERCAR ITEMS

**Brakes.** While it may be difficult for you to actually look at your brakes, you can listen and feel for symptoms of brake trouble. If you find any of the following symptoms, have your technician look at the car immediately. Typical symptoms of trouble include:

- 1) brake pedal begins to feel spongy or mushy;
- 2) brakes begin to squeal, grind, or groan upon application;
- 3) brake pedal feels lower than its normal position;
- 4) it takes greater-than-normal pedal effort to stop the car; or
- 5) brake pedal begins to pulsate when you apply the brakes.

**Exhaust.** Your car may be giving you some clues that you should check your exhaust system. Does your car make a loud or unusual noise? You may have a hole somewhere in your exhaust system. How about an odor? Is something rattling? It may be the muffler or the exhaust pipe coming loose. When you decelerate or coast down to a stoplight, do you hear backfiring or rumbling under the car? Your car may have a bad exhaust leak. Walk behind your car when it's turned off and cooled down. Check for loose or broken clamps

and hangers. Look for holes in the muffler or tailpipe. If you find any of these things, have them replaced or repaired.

If you don't find anything, but are still in doubt about the exhaust system, have it professionally checked. REMEMBER THAT ALTHOUGH CARBON MONOXIDE IS COLORLESS AND ODORLESS, IT CAN KILL YOU.

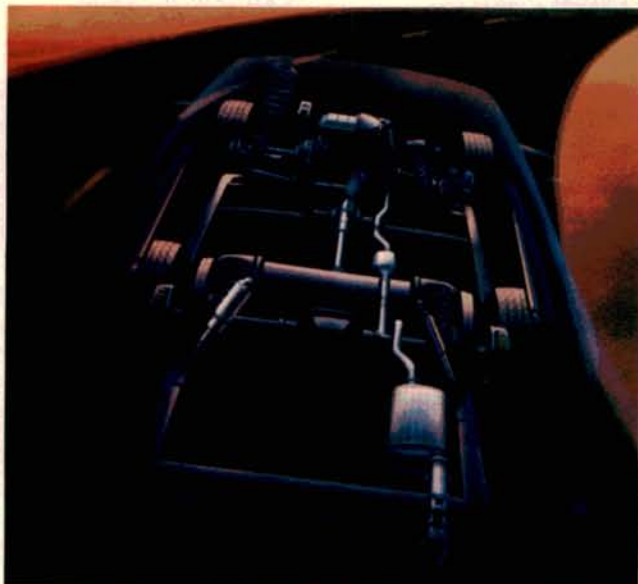


PHOTO COURTESY OF AP PARTS COMPANY.

**Collision or Corrosion Damage.** When you're done inspecting the exhaust system for rust and loose parts, take a peek under and around the car. If you see damage due to corrosion, have the vehicle inspected. If you live in an area where there is snow and salt, you'll probably want to have this done twice a year, before and after the winter season. To protect against corrosion, always remove salt, mud, dirt, or snow with water. Include the exhaust system when you do this. Also check for damage caused by road hazards: chuckholes, stones, glass, or other debris.

**Struts/Shock Absorbers.** As shocks become worn, their seals will start leaking hydraulic fluid. Check the shocks for signs of this. When you drive, be alert for other symptoms such as a particularly uncomfortable ride, the car's inability to recover from bumps quickly, excessive leaning and swaying during lane changes, or excessive diving or pitching forward during braking. Shocks that have lost all damping action can actually be dangerous because they can cause you to lose control of your vehicle. Shocks should be changed by your technician.

**Springs.** Does your car sag with the weight of passengers or suitcases? Does it lean when unloaded? These symptoms may indicate the need for new springs.

**CV Joints and Boots.** To find your CV joints and boots, look under the front end of the car. In the center of each wheel is a shaft with a bellows-like boot at each end. These are your CV boots. Inside them are the CV joints. According to the people at Moog Automotive, you should check these boots at least every 12,000 miles for cracks or leaks. Grease splatter in the undercar area near the CV joints is another clue that your boots need to be replaced. If you do find any of these things, have your technician take care of them immediately. Replacing a boot is relatively inexpensive. But unrepaired boots can lead to damaged CV joints—a much more costly repair.

**Tires.** Incorrect tire pressure can shorten tire life and cause accidents and injuries. To check tire pressure, you'll need a tire pressure gauge, a very inexpensive item to purchase. The Goodyear Tire & Rubber Company recommends that you check your tire pressure at least every two weeks, and before and after long trips. Check with your tires' manufacturer or consult your owner's manual to find out what the recommended pressure is for your tires. If your tires are underinflated, either take your car to the service station or buy an inexpensive tire pump to add air. If tires are overinflated, you'll need to let air out of them. Be sure to put the valve caps back on when you're done. Also check tires for cuts, stones, bulges, uneven wear, or baldness. Uneven wear indicates misalignment or tires that are out of balance. You'll want to have your car's tires aligned and balanced every 6,000 to 8,000 miles, suggests Goodyear. If tires have less than  $\frac{3}{32}$  inch of tread, you'll need to replace them.

**Wheels.** Clean your wheels and check to see that lug nuts are in place and tight.

**Leaks.** Your driveway can give you a clue as to what's wrong with your vehicle. Check it for leaks. The color and location of the leaks will tell you where they're coming from. Engine oil or rear axle fluid is dark brown or black. Reddish fluid comes from your automatic transmission. Green/yellow fluid is antifreeze from the cooling system. Clear water is probably just condensation from the air conditioner.

## UNDERHOOD ITEMS

**Engine Oil.** One of the most common and costly mistakes made by motorists is neglecting their engine oil. Spending a few moments of time checking your engine oil now can save you thousands of dollars in engine repairs later. Check the oil often—you may want to check, or have it checked, each time you get a fill up. How do you check engine oil? 1) Park the car on level ground. 2) Turn the engine off. 3) Open up the hood. 4) Pull out the engine dipstick, clean it off, and dip it back in. 5) Now pull it out and read the marks. The oil should fall between the maximum and minimum marks on the dipstick. If the oil falls below

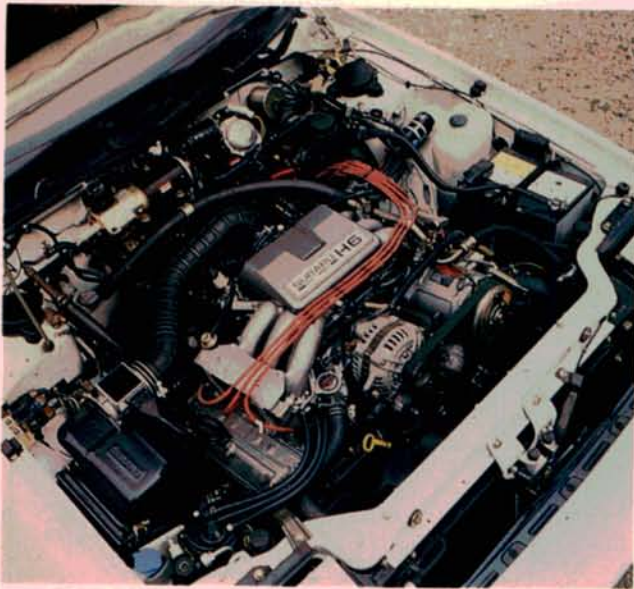


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the minimum mark, the oil level is low. If the engine needs oil, it is important to add only manufacturer-approved oil of the proper viscosity and grade. These two things are listed on the top of the oil can or on the side of the plastic oil bottle. Typical oil grades are SG, SF, SE, etc. Using the proper oil is critical to the life of your engine. Keep records of when, how much, and what type of oil you added. Depending upon your driving habits and climate, you'll need to have your oil and oil filters changed every 3,000-5,000 miles. To do this yourself, please consult your owner's manual. If you don't want to do it yourself, it's an inexpensive and quick procedure that your technician can do.

**Transmission Fluid.** You'll want to check your transmission fluid with the engine warm and running. Set the parking brake and make sure the car is on level ground. Make sure your shift lever is either on Neutral (Manual Transmission) or Park (Automatic Transmission). Use your transmission dipstick and repeat the procedure that you used for checking engine oil. If the fluid level is too high or low, you'll want your technician to check what's causing this for you. It is important that your fluid be clean, manufacturer approved, and at the proper level. Otherwise, your transmission's life will be shortened.

**Drive Belts.** Check your belts quarterly. Turn the car off and let it cool. Drive belts should be fairly tight, with no more than  $\frac{1}{2}$ - to  $\frac{3}{4}$ -inch of slack. If belts are loose, cracked, split, or worn, you'll need to have them replaced. If belts are squealing, they may be glazed or slipping due to improper adjustment. If readjustment doesn't help, you'll need to have these belts replaced.

**Hoses.** Breakdowns often occur because of coolant leaks due to broken hoses. Check your car's hoses at

the same time that you check drive belts. Look for dryness, cracking, deterioration, or loose clamps. If hoses are too hard, too dry, cracked, or spongy, you'll need to have them replaced. Like belts, this is a problem that can be fixed easily and quickly.

**Battery.** If you are going to work on or around the battery, follow these rules. **NO SMOKING. WEAR GLOVES. WEAR EYE PROTECTION.** Failure to take these safety precautions can lead to injury. Remember that you are working with flammable, volatile battery acid. Most of today's batteries are maintenance free, but some older batteries still need to be checked. Check the fluid level through the battery housing. If you cannot see through the battery housing, and need to remove the cap, first flush the dirt off the top of the battery with clean water (preferably distilled). Then remove the cap and check the fluid level inside the battery. Fluid level should fall between the minimum and maximum marks. If it doesn't, consult your technician. Also consult your owner's manual to see if your battery has a colored check indicator in it. If so, be sure to check that the indicator is the correct color. Visually check battery posts and cable leads for corrosion; too much corrosion can cause a poor connection. If corrosion is present, the battery should be cleaned. This is another procedure that your technician can do for you.

**Windshield Washer Fluid.** Check your windshield washer reservoir. If it needs fluid, just lift the filler cap, fill the container, and replace the cap.

**Air Filter.** Follow your manufacturer's suggested replacement intervals for air filters. To check your air filter, remove the lid to the air filter housing. Take out the air filter and hold it up to the light. Can you see daylight through it? Then it's probably fine. Can't see much of anything? Now's the time to replace it.

**Brake Fluid.** Look at your brake fluid reservoir. Fluid should always fall between the maximum and minimum marks. A sudden drop in brake fluid level should prompt a visit to your technician.

**Coolant Level.** You'll want to check your coolant level monthly. Most cars have coolant recovery tanks with markings that enable you to check fluid for either hot or cold engine condition. If you do need coolant, wait until the car is cool and then be sure to add a 50/50 mix of water/antifreeze. **NEVER OPEN THE PRESSURE CAP WHILE THE ENGINE IS HOT.**

**Power Steering Fluid.** With the car parked on level ground, engine idling, check the power steering fluid level. Lift the reservoir cap. Pull out and clean the dipstick. Then reinsert and pull it out again to check the fluid level. If the level is down, add the fluid recommended in your owner's manual, and then tighten the lid.