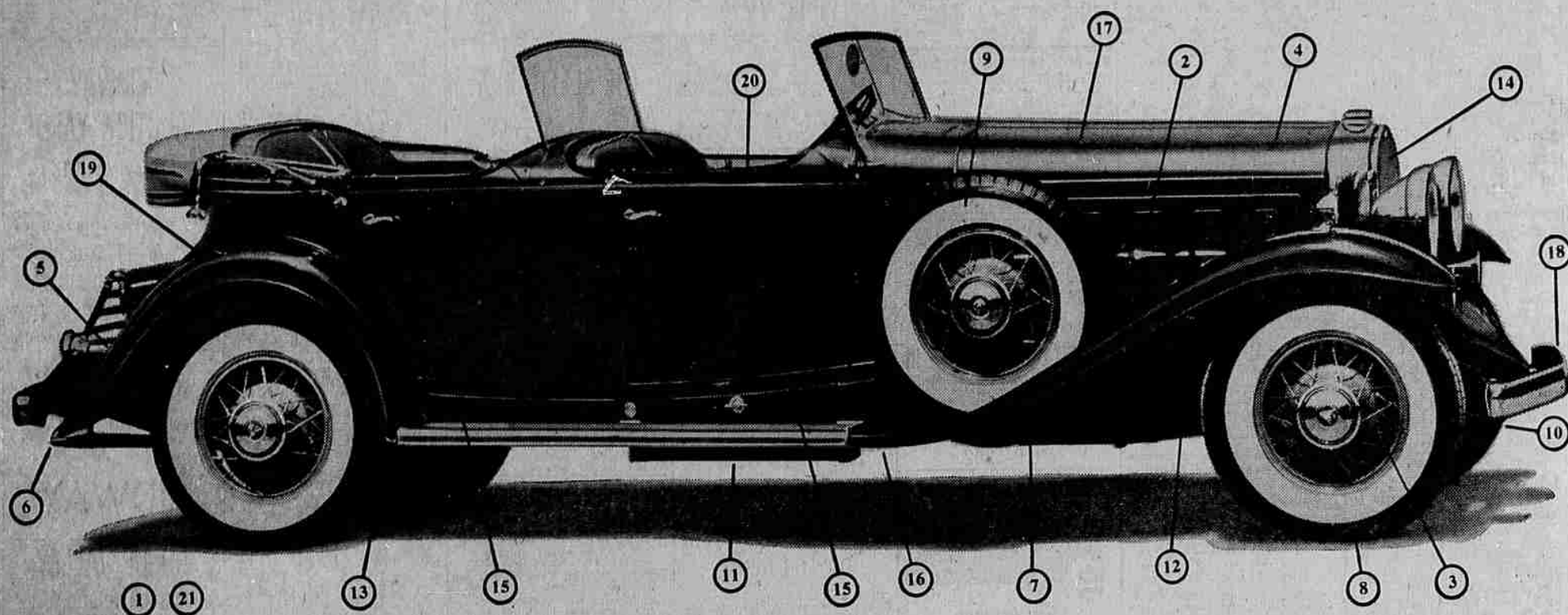




Shell's automotive experts have developed many ways to make their own cars run better and last longer. The numbers on this classic 1930 V-16 indicate some of the areas deserving attention, as described below.

Shell recommends 21 ways to make your car last longer

Shell scientists dedicate their working lives to the care and feeding of automobiles.

They can offer dozens of tips on prolonging the life of your second biggest investment. Here are some useful samples:

Americans spend more than 2 billion dollars a year on automotive replacement parts. This expense is enough to give every man, woman, and child in the U. S. a \$12 birthday present.

With a little care you can avoid much of this expense and keep your car youthful. Here are a few tips from Shell's experts.

1. Break in a new car properly. A long break-in period at low speed is no longer necessary. But manufacturers recommend:

A. Don't accelerate at full throttle or change gears abruptly. Sudden shocks to gears in the rear axle and transmission can cause lasting damage.

B. Vary your speeds—and especially avoid sustained high speed.

C. Try not to stop too suddenly—it can harm brake surfaces.

2. Warm up slowly. Racing an engine to warm it up ages it fast. A short warm-up at moderate speed is good for your car even in summer, and even more necessary during colder months when the oil tends to move sluggishly at first. Never race your cold engine to warm up, though. It may damage critical working parts before lubrication can be fully established.

There's no need for long idling; but drive slowly for the first few minutes.

3. Use your engine to save your brake linings. Anticipate your slowdowns. Use the brake as little as possible.

When you see you'll have to slow down, take your foot off the accelerator early and let the engine's compression do some of the job.

Always keep the master brake cylinder full of heavy-duty brake fluid. Shell's Super Heavy Duty brake fluid is designed to help your car's brakes deliver top performance.

4. Have your engine's spark timing set to proper specifications. The spark timing determines whether your plugs fire at exactly the right instant. With incorrect timing you lose power and cut mileage. Also your car may knock. Chronic knocking can eventually damage your engine.

5. Use a gasoline that controls knock. If your engine persists in knocking, you may need a gasoline with more anti-knock components, for a higher octane rating.

Today's Super Shell contains all of the anti-knock ingredients required to help your car deliver knock-free performance.

6. Learn to read tail pipe smoke signals. Blue smoke means too much oil is getting into the combustion chambers.

Excessive blue smoke is a warning that piston rings may be worn—and need replacing. Your mechanic calls this a "ring job."

Black smoke is an indication of too much gasoline in the air-fuel mixture. Your carburetor may need an adjustment.

White smoke is mostly water vapor. Don't worry about it. Your engine makes a gallon of water for every gallon of gasoline burned. On cold days some of this shows up as vapor.

7. Have your oil checked whenever you fill up with gasoline. An oil check is a simple safety check for your engine. It is also free, and takes less than a minute.

By the way, oil does not wear out. But it can be lost through leaks or burning. And it does get dirty. Worse yet, oil can become contaminated by combustion by-products—including acid.

To be really safe, use new Shell X-100® Premium Motor Oil. It only costs about \$3.60 more per year than regular oils—no more than most premiums.

New Shell X-100 Premium Motor Oil fights engine acid a brand-new way—with an amazing chemical shield that clings tightly to all metal surfaces.

For most cars Shell recommends an oil change once a month in winter, every 60 days in summer—never more than 2,000 miles between changes.

8. Avoid high speeds and save your tires. Every extra mile your tires last is money in your pocket. High speeds increase wear drastically—by as much as 80% over normal wear—so it pays to go easy.

9. Rotate tires every 5,000 miles. Your tires will last longer because they will all wear evenly, and at the same rate. Note: See your Shell dealer for a set of valve caps; they will prevent air from getting out and dirt from getting in around the tire valve.

10. Check wheel alignment and balance. The shock of hitting curbs or dropping into deep holes can cause misalignment.

This literally drags the wheel at an angle to the line of travel. Nothing wears tires out more quickly.

An out-of-line wheel can increase tire wear as much as 50 per cent. An unbalanced wheel pounds the tire against the pavement, wearing the tread unevenly.

Have an expert check wheel alignment and balance at least twice a year. Proper tire inflation at all times is also essential.

11. Save your battery with 11¢ worth of baking soda. Dirt and corrosion can actually cause current leaks—and can shorten your battery's life by many months. If corrosion is visible, wash the battery off with a solution of baking soda and water. Use a wire brush if necessary. Then rinse thoroughly with warm water. Ask your Shell dealer to check your battery terminals.

Caution: Never allow the soda-water solution to get into your battery; it could neutralize the acid which makes your battery work.

12. Change your oil filter element every other oil change. Abrasive specks as small as 1/1000th of an inch in diameter can shorten the life of your engine. The oil filter

element in your car has the exacting task of keeping tiny, dangerous specks of metal and other abrasives out of the engine, while allowing oil to flow freely.

The filter catches and holds these foreign particles until it can hold no more. But when the oil filter is clogged up, it cannot work effectively.

Replacing the filter element every other oil change helps your engine to last longer.

13. Get a lubrication job regularly. Dirt and moisture can work into chassis joints and bushings, causing friction and wear. Grease can also eventually pound out, leaving the parts unprotected.

See your Shell dealer for a Shelllubrication. He has the charts, equipment, Shell lubricants for your car, and the skill for a really thorough job.

14. Have your car's cooling system checked twice a year. In time, the inhibitors in your anti-freeze lose some of their ability to prevent rust, corrosion and sediment from forming in your cooling system.

Let your Shell dealer check the cooling system—including hoses and hose connections—no less than twice a year. When he drains and refills he will add a special Cooling System Protector.

15. Keep door and body panel drain holes clear to foil rust. You never see them, but there are little drain holes at the bottom of body panels and doors. They can get clogged so that the panels actually hold water. Rust forms more easily and can eat holes right through the metal.

You have probably noticed this ugly sight in other cars. Make sure drain holes are always kept clear.

16. Keep road salt washed off. Nothing can damage a car's appearance more than the chemicals used to clear icy, snowy roads. They can eat not only the finish, but the body structure itself. Make sure you get it all off—not only from the paint but from the bright metal parts, as well.

17. Use these tips to help your car stay new looking longer. A good coat of polish provides a film that protects your car's finish. But before you polish your car, always wash it—and always in the shade.

Some new car finishes need only a good washing to keep them bright, but others require waxing. It's a good idea to check your owner's manual. Older cars are almost certain to benefit from a good waxing.

18. Protect chrome against rust invasion. Chrome, itself, can't rust. But it actually has millions of tiny holes which can let the moisture right through to the metal beneath. Dirt invites this invasion, so clean the chrome thoroughly and frequently, and wax it for further protection.

19. "Bandage" minor scratches in your car's finish. Small scratches in the finish expose bare metal which can rust. Until you can have the scratches refinished, keep rust from forming with a coat of touch-up paint or even a strip of cellulose tape on the scratches. Use clear nail polish on scratches in the chrome.

20. Pamper carpets and upholstery. Ground-in dirt wears out carpets before their time. Give them a weekly whisking or vacuuming; shampoo once in a while.

21. Let your Shell dealer help your car last longer. Your car may have cost you thousands of dollars. After your home, this is probably your biggest single investment.

Treat it carefully. Feed it well. Let your Shell dealer help you on both counts. You will save money—and increase your driving pleasure, too.



A BULLETIN FROM SHELL RESEARCH—where 1,997 scientists are working to make your car go better and better.