

- Special Automobile Number -



CAREFUL DRIVER USUALLY DOES NOT GET IN TROUBLE

Auto Manufacturer Gives Some Hints On the Proper Driving of Cars

"Everyone thinks he or she is a careful driver, but very few are really experts. It's the little things that are frequently overlooked that sometimes count the most," says a prominent auto manufacturer.

Always drive your car as carefully as you want others to drive. Careful driving not only protects your life and the lives of others, but also protects the life of your car.

Hints on driving motors are very interesting at a time when so much stress is being laid upon safe driving and numerous safety campaigns are being launched, both locally and nationally.

The fundamentals of good driving are confidence, care and caution. The good driver is careful and cautious unconsciously from mere force of habit.

One of the most important points, yet one which very few motorists consider a vital requisite, is the manner of holding the steering wheel. The wheel should be held firmly with the right hand grasping the wheel about one-third of the distance from the bottom point on the right side, and the left hand similarly placed at a distance of one-third from the bottom point on the left side. Good drivers always grasp the wheel from the bottom of the rim with the palms nearly up. This allows, free, easy movement.

Turn the wheel with a steady motion. Avoid jerky steering and use regulation traffic signals.

In starting a car a careful driver does it with an even and quiet acceleration of the motor, dropping the clutch in with a smooth, velvet-like motion, and shifting into the various

gear changes without clashing. The change from low to high should be accomplished in such a manner that the passengers in the car are hardly conscious that the change is taking place.

Low gear should be utilized whenever necessary. It is well to remember the law of mechanics: In order to gain speed you must sacrifice power; in order to gain power you must sacrifice speed. If a driver approaches a steep hill he needs all of the car's power. Do not try to make a hill on high when the motor is being strained as a result.

When descending a steep, tortuous grade, it is always good driving practice not only to use the foot and emergency brake, but also to shift the car into gear before the descent.

Driving rapidly over rough spots not only produces discomfort, but is unusually hard on tires.

Avoid skidding in wet weather. It is dangerous and causes excessive wear on tires. Apply the brakes slowly, remove the foot from the accelerator and do not disengage the clutch until the car has slowed down to about five miles per hour. This will result in a graceful stop, even on slippery pavements.

Never pass another car on the right. Always sound your horn and pass on the left.

Many motorists who are otherwise careful drivers do not park their cars properly. Parking should be done carefully, giving thought to the interests of the "other fellow."

In parking on a down grade always turn the wheel at an angle against the curb, as a safety measure. When it is necessary to park on an up grade, the front wheels should be turned outward and against the curb. As an additional precaution, the careful driver sets the gear shift in low and pulls up the emergency brake.

DRY BEARINGS

One cause of insufficient lubrication in the bearings is found in obstructions in the grooves in the bearing holder. Sediment often collects in these grooves so that they cannot perform their appointed function of carrying lubricating oil to the bearing surfaces. An excess of graphite, if he used with the oil, sometimes produces the condition.

Automotive Lubrication and Its New Development

Thorough Lubrication of Car Chassis Every Five Hundred Miles Recommended by Manufacturers. Type of Oil Vitrally Important. Popularity of Alemite.

Possibly the most outstanding achievement of the automotive engineer during the past few years, is the tremendous improvements in the method of lubricating the automobile chassis. By the term "chassis" is meant all bearings and moving parts except the engine proper.

On cars born early in automotive history, the open oil-hole had to suffice. Then, very little more than a decade ago, the grease-cup was hailed as the solution of the lubrication problem—for problem it had developed into—a serious type.

It was soon discovered that the grease-cup was not an unmixed blessing—the grease caked in the cup; the stem, from the cup down to the bearing clogged up—the thread buried, preventing the cup being turned down. Any one of these mishaps was equally disastrous—grease could not reach the bearing that the cup was intended to supply, with the result that the bearing received little or no lubrication.

Multiply this case by the number of grease cups on the car and it would not require a big stretch of imagination to realize that any car in such condition was at least on the high road towards the repair shop—often in the hands of the wrecker.

The need for a thorough—positive—system of lubrication was by this time so imperative that the best engineering brains of a continent were grappling with the problem.

The result to-day, is that nearly twelve million cars are equipped with either the Alemite or the Alemite-Zerk System of High-Pressure Lubrication. The system is simple. Special types of fittings of convenient shape are fitted in every lubrication opening on the car. These fittings are equipped with a ball check valve to overcome the back pressure set up when the lubricant is forced through

the fitting by the High-Pressure Gun—either hand size supplied for the individual car owner—or larger sizes used by modern Service Stations. The force exerted by any of the High-Pressure Guns is sufficient to force out of the bearing all the old grease, leaving a new film or lubricant all round every part of the bearing.

To-day every automobile manufacturer emphatically recommends to the purchaser of his product the thorough lubrication of the car chassis every 500 miles. He does this conscientiously from a knowledge based on years of experience. He knows that every car he sells is praised or damned depending on the service the car gives, but he is also aware that in many cases a car which does not give the service the manufacturer knows it should give, has not received frequent and sufficient lubrication at the hands of the complaining owner.

Coupled with the need for "Every 500 Miles Lubrication" is the use of a proper grade of lubricant. It must be of a high type to prevent breaking down in the bearings. A lubricant composed largely of "filler" is just as destructive as lack of lubricant. That is the reason the engineering force which developed the Alemite and Alemite-Zerk System of High-Pressure Lubrication were forced to develop their own high grade lubricant for use with their system.

WORTH REMEMBERING

The correct position for driving a car is to sit comfortably in the driver's seat, grasp the steering wheel firmly but lightly on each side, usually with the right-hand palm up and the left-hand palm down, each upper arm and forearm bent to approximate a letter L. With the steering wheel held in this manner the car will steer easier and there is less fatigue.

MOTOR INDUSTRY SIXTH IN CANADA BY PRODUCTION

To Avoid Danger in Regard to Poisoning by Monoxide Gas, Etc.

Despite the fact that garage doors and windows are usually kept open during the warm days of summer, public garages should be ventilated by positive mechanical action says Motor Trade.

That is the warning of public health authorities and automotive engineers who have been studying the effect of temperature and other climatic conditions on the deadly carbon monoxide gas which is taking a huge toll of life.

The smaller type of garage can be made safe by the use of exhaust fans, but larger garages, where numerous cars are operated, should provide a properly designed exhaust system of ducts connected to suitable exhaust fans, these authorities declare. Tests have shown that climatic conditions vary so much that vitiated air will not exhaust by natural means through vents located on the roofs. The air and gases must be driven out by fan action.

The plant engineers of such big producers as Willys-Overland, General Motors, Ford, Studebaker, Franklin and others have sent out warnings to their distributors and dealers to make it a point to see that proper ventilating systems are installed and operated in their garages and service stations. One manufacturer sent out this message:

The repair room where the mechanics are making adjustment of carburetor or testing engines should by all means be amply ventilated at all times. In fact special attention should be given to this room, to provide sufficient ventilation in order to protect the workmen properly. It is a good plan to have flexible metal hose connections, with a series of adapters, so that the exhausts of the cars being tested may be connected to duct outlets where there is sufficient mechanical draft to expel the gases. During the rush periods the generation and accumulation of gases become greatest. Therefore, during these periods the ventilating equipment should be operating continuously at maximum capacity, in order to exhaust the vitiated air as quickly as possible.

Physicians of the public health service have urged that the air in all garages be completely changed at least five times every hour. This, it is pointed out, would be sufficient to dilute the deadly gases so as to remove serious danger of poisoning, the use of small exhaust fans in private garages is being widely adopted since many automobile owners prefer to work on their own cars, but are frightened by the dangers of carbon monoxide.

In tests of the exhaust of a small 23-horse-power automobile engine, it has been found that it discharged approximately 25 cubic feet of gas per minute, samples of which gave an average of 6 per cent. carbon monoxide, or 1½ cubic feet of the gas per minute. A ratio of 15 parts carbon monoxide to 10,000 parts of air is considered a dangerous concentration to be exposed to for a considerable time, and the small 23 horse-power engine, in "warming-up" and giving off one cubic foot of monoxide, would contaminate the air of a small closed garage 10 by 10 by 20 to the danger point in about three minutes. Automobile exhaust gas contains an average of from 7 to 10 per cent. carbon monoxide. The quantity of the poisonous gas expelled by a cold motor is greater than that expelled by a motor already warmed up due to the greater proportion of gasoline or "richer mixture" required.



The danger of poisoning by paint in paint shops has been greatly reduced by provisions for correct systems of air-conditioning while the automotive industry itself has learned to use mechanically controlled air in practically every phase of manufacture for both protecting the health of workmen and speeding up production.

It has taken the aggressive lead in a national movement for better air conditions in cities and to reduce the "sewage of air" which has been created as the by-product of industry.

Provision is made by the Ottawa Car Manufacturing Co., of Ottawa for a blower system which draws off the deadly carbon monoxide gas. No engine is allowed to run in that large garage without first connecting the exhaust with the suction pipes.

FIRST ENDURANCE AUTO TEST RUN MADE IN 1901

The first endurance run of an automobile was held in 1901, when A. L. Riker, an early maker of automobiles, started a trip from New York to Buffalo, a distance of less than 500 miles, in his own gasoline model, according to Betty Shannon and Elsie Johns in Liberty Magazine.

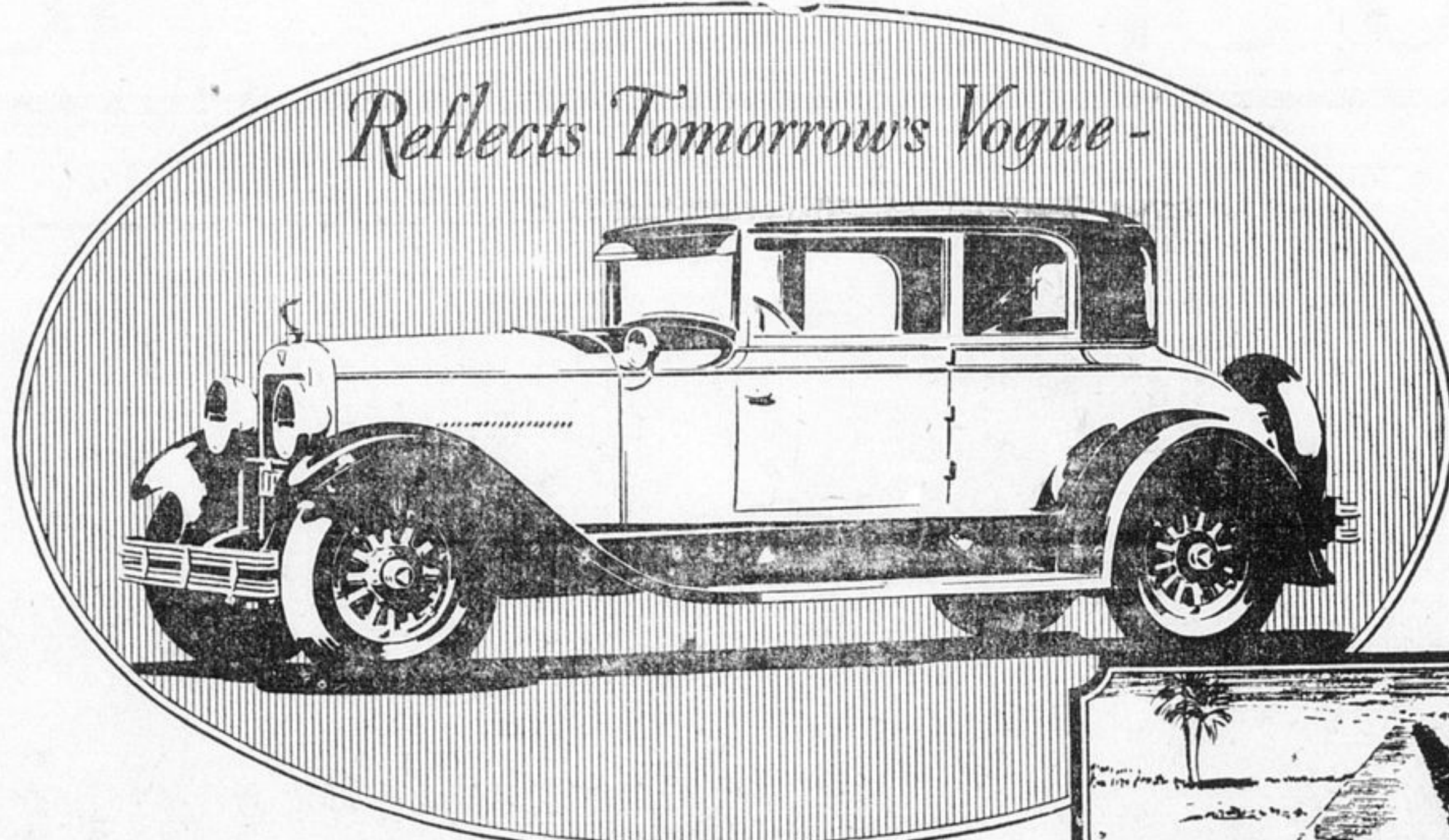
"The car was built for 50 miles an hour, but once out of sight of brick and cobblestone it made headway with the greatest difficulty," the authors continue. "This difficulty may be imagined when it is stated that it took from Wednesday morning to Saturday noon to cover the distance from Albany to Herkimer, less than 100 miles. At Rochester the plan was abandoned because of the death of President McKinley."

HOSE PROTECTOR

Oil is the deadly enemy of rubber. It is a good plan to protect the inlet hose from the radiator to the pump from the effects of oil by giving it a coat of shellac and then a couple of layers of tape and shellac over that. This shellac prevents the oil soaking through and getting at the rubber.

CLEAN PLUGS

Many car owners do not realize the importance of keeping the spark plugs clean. The points of the plug seldom need cleaning, but grease and mineral dirt do accumulate on the exterior and interior of the porcelain, so that the current passes that way instead of jumping the gap as is intended. The plugs should be kept clean or ignition troubles will follow.



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The Custom Victoria



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- All prices f. o. b. Windsor, taxes extra*

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