

AUTO SENSE



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Oil dilution is one of the worst enemies of your engine. Moving parts are protected by a film of oil which prevents metal from coming into contact with metal; that is, when your lubrication is perfect. A film of oil and gasoline will not serve the purpose.

All valves are closed on two of the four strokes which form the cycle of an engine. One is on the

compression stroke and the other the power stroke. If your piston rings do not fit as they should, part of the gasoline vapor will pass the rings as the compression increases.

No engine has perfect compression. If you doubt this, remove the cap from the oil filler tube and try to hold your hand down on it while the engine is running. If it were not for this leakage the same oil

might hold up for several thousand miles.

Too rich a mixture is responsible for much dilution. You give the engine more gasoline than it can burn in a sharp clean explosion and part of it passes the rings on both the compression and power strokes.

Dilution is more rapid in winter than summer because your engine is

hard to warm up and you use the choke too much.

Fresh oil shows up well on the oil gauge, but old oil, regardless of its dilution, will keep the needle over against the peg too. Test oil between your fingers. If it is diluted you can "feel through" it as you rub your fingers together. If it is good your fingers are really separated by it.

OIL DILUTION

By Williamson

REO PROFITS MORE THAN FIVE MILLION

Financial Condition Is Best Ever; Current Assets Exceed Liabilities by \$16,000,000.

That the Reo Motor Car Company is in the best condition of all its twenty years of existence is the message brought to stockholders of the company by the annual report of the board of directors now in the mail. Current assets exceed current liabilities by nearly \$16,915,000.00 and there exists a surplus of \$7,819,007.24.

The surplus for the year represents an increase of more than two millions of dollars over the surplus of last year. Profits for the year, after current federal taxes have been provided for, amount to \$5,603,478.98.

The statement of assets and liabilities shows the following items: Current assets—Cash on hand and in banks, \$4,849,340.12; eight drafts outstanding, \$765,881.78; receivables less reserves, \$8,818,891.45; United States bonds, \$202,731.09; inventories, \$10,135,089.43.

Total current assets amount to \$19,471,933.85. Capital assets—Buildings, \$2,097,587.93; machinery and equipment, \$6,506,441.62. Total \$8,604,029.55. Less reserve for depreciation, \$2,672,187.77. Land \$511,049.80. Total capital assets, \$6,442,891.48.

Deferred charges total \$180,895.89. Investments—Stocks and bonds, \$299,082.00; Reo Motor Car Company of Canada, Ltd., \$47,000.00. Total investments, \$346,082.00. Total assets, \$26,441,803.22.

Current liabilities—Accounts payable, \$3,194,830.11; accounts payable miscellaneous, \$92,550.00; accrued pay roll, \$97,528.86; reserve for federal and local taxes, \$1,172,891.75. Total current liabilities, \$3,567,800.72.

Deferred credits, \$65,295.38. Capital and surplus—Capital stock authorized and issued, \$15,000,000.00; surplus, \$7,819,007.24. Total capital and surplus, \$22,819,007.24.

The 1922 statement showed total current assets of \$16,288,864.88; total capital assets of \$5,750,926.51; and total investments of \$249,275.00. The same statement showed current liabilities listed at \$2,788,025.68 and the surplus listed as \$5,719,813.61; deferred credits were \$19,093.75.

In the report of the directors, no value is reflected in the balance sheet of the good will, patents, and copyrights of the company. These, it is pointed out, have a value naturally, and it would be much easier to replace the physical assets than to acquire the good will and organization now enjoyed by the company.

The report says, in conclusion: "It is appropriate and fitting to pay tribute to the zealous co-operation and loyalty of the entire organization. Much has been accomplished. By increased and efficient manufacturing and wider distribution the way is paved for greater accomplishments, and to this end all are giving their best efforts."

CAR IS BOOSTING CLOTHING TRADE

Garment Makers Find Country Areas Buying More.

Instead of cutting down the amount of money they spend for clothing, people are actually spending more for apparel since the automobile has come into general use, according to a bulletin of the International Association of Garment Manufacturers.

"No man or woman is going to climb into a shiny new car wearing a worn-shiny suit of clothes or an out-of-date hat," states this report.

The bulletin points out that the increased contact between town and farm due to motor travel has improved the market in farming sections. The increase in the use of country clubs made possible by the automobile has stimulated the demand for sport clothing. The use of camping togs and the wear and tear on clothing through more active outdoor life are other ways in which, in the opinion of the Garment Makers' Association, the automobile is promoting larger sales of clothing.

AVOID ACCIDENTS STARTING MOTOR

Safety Method Also Helps Car in Winter.

Push on your clutch pedal every time you start your motor—especially in the winter time.

Such is the advice of G. Clark Mather, chief engineer of Paige and Jewett motor cars. Mather says that this will conserve your battery and make starting easier.

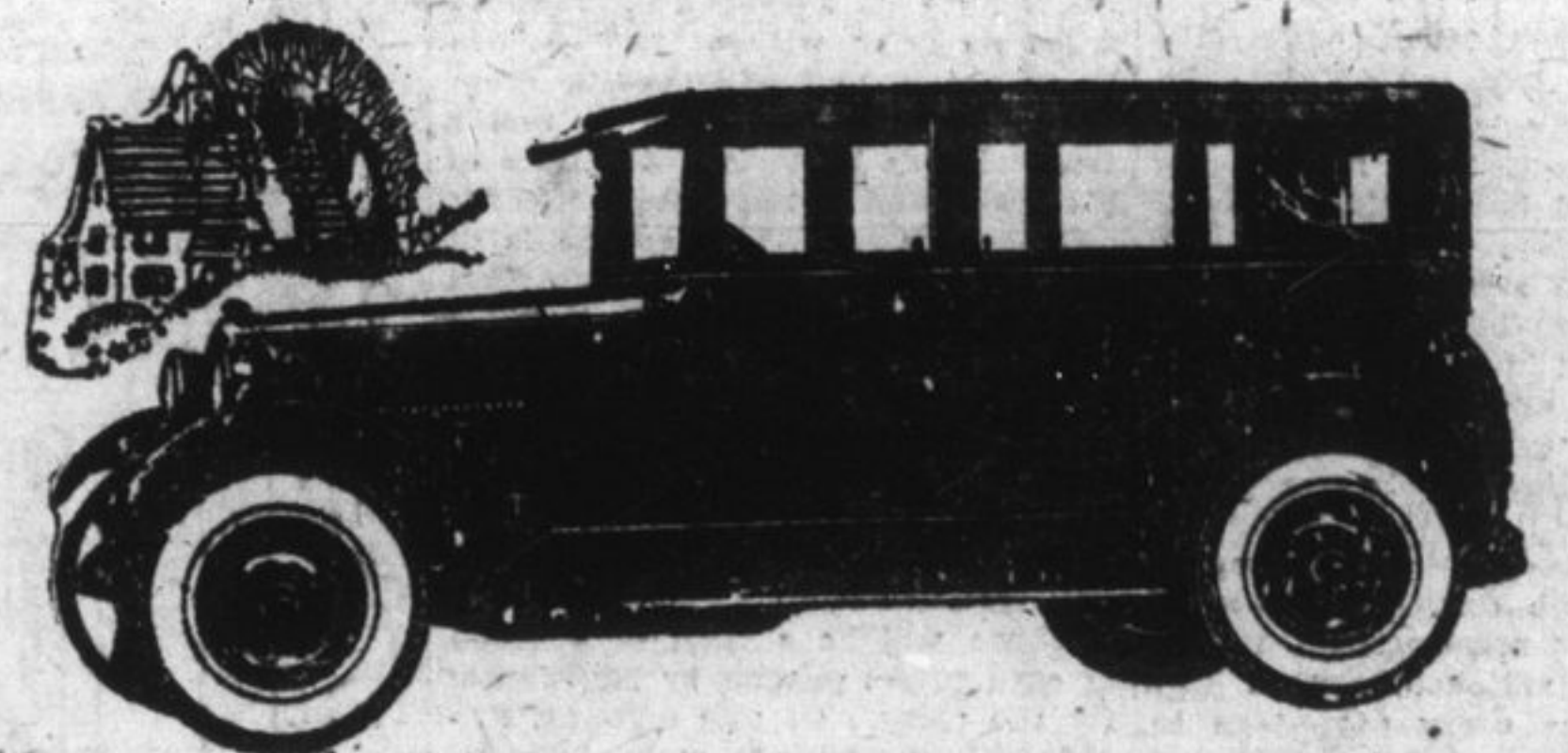
"The average man does less driving in winter and uses his lights more," says Mather. "Moreover, it requires more electricity to start with cold oil. By taking out the clutch for each starting operation the starter has less work to do because the clutch and transmission are thus disconnected.

"Another very important reason for always taking out the clutch first is for safety. It is an easy matter to leave your car in gear without knowing it, and many accidents have resulted from this oversight.

Stopping Cold Engine.

Much trouble in the way of oil dilution and scoring of cylinder walls is found in fall and winter driving by reason of stopping the engine while it is still cold. You step into the garage, crank up, back out, and, not wishing to drive off "right away," switch off the engine. Running with the choke out, the gas vapor immediately condenses and begins to do its dirty work of gradually injuring the engine. The more of this vapor you burn up before switching off the

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HINTS FOR THE MOTORIST
ALBERT L. CLOUGH.

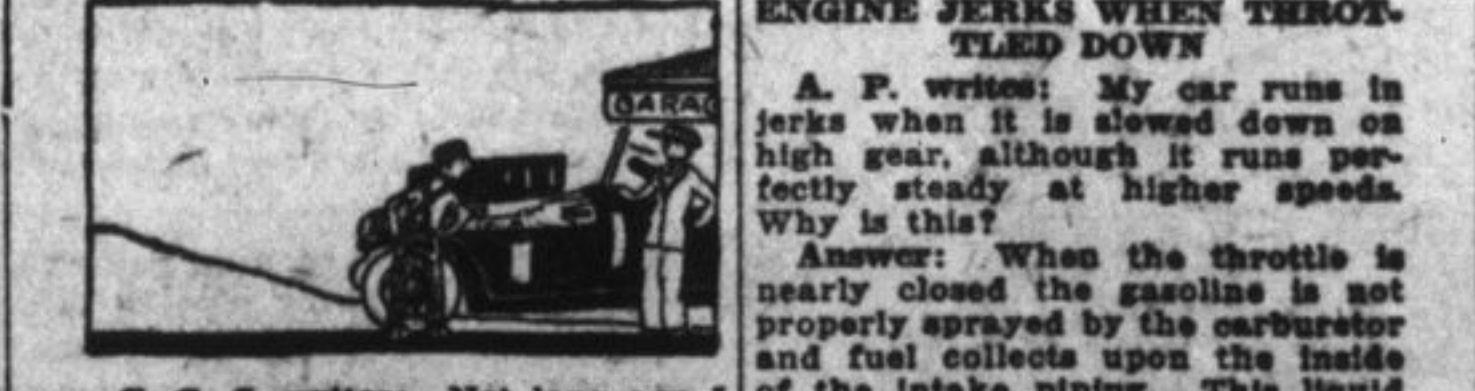
Loose Rear Wheel Bearings

THE FOLLOWING SUGGESTIONS apply particularly to axes of the semi-floating type of one of the most widely used makes, employing an inclined roller bearing on the tapered outer end of each axle-shaft. Wear at these bearings is slow and the necessity for adjustment infrequent if they are given adequate lubrication, which is commonly by grease forced into the bearing enclosure.

Effects Of Bearing Looseness
Lack of tightness of these bearings permits of end play on the part of the shafts and their keyed-on wheels and the chucking in and out of the parts subjects the bearings to injurious shocks as well as making a noise. If looseness is excessive the wheels will run slightly out of parallel and there may be so much in-and-out fluctuation of shaft and wheel position relatively to fixed parts of the brakes that the edges of the brake drums will rub against them and cause an irregular grating noise.

Detecting Looseness
After each 5000 miles or so of service the condition of the bearings can be tested as follows: Jack up both rear wheels, grasp two opposite horizontal spokes of one firmly and alternately try forcibly to pull it off and to push it on. Be sure that the brakes are released when doing this. If the wheel can be pushed in and out by more than a just perceptible amount, the bearings need to be taken up.

WATER IN LUBRICATION SYSTEM



C. G. E. writes: Not long ago I found the cylinder-head bolts of my engine were loose. After tightening them and changing the oil, the three front cylinders were found scored when I returned from a trip. The mechanic tells me this was the result of water getting into the oil, through leaks between the head and block. What do you say?

Answer: Very likely it was. If water accumulated in the crankcase above the pump intake, the engine would receive very little oil and probably the pistons would run practically dry and score their bore. With a lot of water leaking into an engine, the pressure shown by the oil-gauge is usually abnormal and steam shows plainly in the exhaust. If the leakage is considerable, the crankcase oil level does not fall and sometimes even rises as the car is used. It seems strange that you noticed none of these signs. Just why the three front cylinders were the ones affected, if the trouble was due to water, is not at all clear. As a matter of fact, was there much water in the oil when the crankcase was drained after the damage had occurred? If not most likely there was fault in the oil distribution pipe.

QUESTIONS of general interest to the motorist will be answered by Mr. Clough in this column, space permitting. If an immediate answer is desired, enclose self-addressed, stamped envelope.

engine, therefore, the better. That is why it is often a good plan to start the engine and let it run an instant after switching it off, provided that you do not have to choke it again to do so.

Can't Have Everything.
Motorists who know well enough that their motors will lack pep when the tappets are too close frequently forget that the same thing applies to a demonstrator when they are shopping for a new car. If you demand quietness in a demonstration you can't have pick-up and hill climbing performance. A quiet motor will seem to show high speed without effort because our conception of speed has much to do with noise and vibration.

Winter Fire Hazard.
The process of closing up all the louvers of the hood as a means of keeping the engine's heat from warming the universe instead of the driver's feet is advisable provided fireproof material is used. Some drivers use cardboard, and while they usually get by with it, the element of danger is not worth risking. Sheet metal of some kind will meet all requirements, or better still, asbestos board.

Sudden Overheating.
That sudden overheating of the engine on a cold day is, in nine cases out of ten, the result of failing to roll down the radiator cover in time. But the wise motorist considers the odd chance and raises the hood to see if the fan belt has broken.

A LONG TIME INVESTMENT

In buying a motor car, consider what the cost will be when distributed over a period of years.

What is the car's reputation for satisfactory service after the first year? After the second? And after the third—and fourth?

These considerations, in the final analysis, are the true basis of economy in motoring.

The reputation of Dodge Brothers Motor Car for long and faithful service is definite and universal. Wherever there are judicious buyers it is recognized that the car's staunch construction guarantees owners a long time investment—and a long time satisfaction.

M. OBERNDORFFER
124 CLARENCE STREET.

