

MOTOR CAR SERVICE IS HIGHLY SPECIALIZED

By C. A. Triphagen, Sales Manager of the Reo Motor Car Company.

He might have been a bicycle salesman or a blacksmith, but the exigencies of a changing world had forced him to take up a new and more complex means of earning a livelihood. Armed with a screw driver, with a monkey wrench and a hammer close at hand, he was digging into the car's mechanism. By a process of elimination he hoped eventually to arrive at the seat of trouble. Time meant nothing. He was learning a new trade in the school of practical experience, one that might lead to something big. His frequent mistakes and wasted time were at the other man's expense. He was the automobile repair man of the early days.

To-day, perhaps, he is a well-to-do automobile dealer, or the owner of a prosperous garage. He may be the head of a busy service station, ministering scientifically to the ills of the modern car through the employment of men as mechanically efficient as he is himself.

Service is a comprehensive word in the motor car field. Wonderfully as the automobile has been improved, amazingly popular as it has become, its progress in these directions has been no more striking than in the methods of service, which comprehends maintenance from the day it passes into the owner's hands and through its entire period of usefulness.

The modern public garage, though its primary function is the storage of cars, is a general service station, just as are the headquarters maintained by individual manufacturers and dealers in all cities for attention to the particular makes of cars they produce or sell. Both types of plants are thoroughly equipped to meet any emergency, though the station devoted to one make of car is naturally in the position of a specialist. From top to bottom, its employees are expert diagnosticians of the ills that may afflict their particular make of cars through accident, neglect or long use.

The type of service stations maintained by the Reo Company in all the larger cities is illustrative of the quality of attention that the representative manufacturers furnish their customers. In nearly every case the customer visiting one of these stations need give only the barest outline of the nature of his car's trouble and the expert instantly knows what is needed. Not only does he know, but he has at hand the exact parts and machines or tools required to effect a cure.

In contrast with the old days, when the repair man discovered the need of a new part and had to send to Detroit or some other distant city for it, involving a week's delay, the modern service station stocks every possible part that any emergency could demand. Some of the larger stations in New York could assemble at least one, and perhaps three or more complete cars, from their parts departments, and do it as exactly as would the factory mechanics.

It would be difficult to compute accurately the amount of capital invested in the service angle of the motor car industry throughout the United States, but it runs into hundreds of millions of dollars. The service station, in many ways, is even more important than the salesroom—indeed, it would be difficult to sell any make of car in these days unless the customer could be assured of a place where he could expect quick and efficient attention for his car in case of necessity. This, too, in spite of the fact that the modern motor car should, and generally does, perform without the need of even minor repairs for extremely long periods.

As the Reo Company and other large manufacturers regard the matter, the great value of the modern service station lies in its ability to ensure nearly unbroken service from its products. In other words, it enables repairs and adjustments

Why Not One American Car Lasts as Long as Reo Not One

On December 31, 1925, there were 124.9% as many Reos in registered use as had been produced in the last eight years. No other car shows as high a percentage. Only three others show more than 100%, and each of these three is at least \$1500.00 higher in price than Reo. The registration figures which are the basis for this computation were compiled and furnished by R. L. Polk & Company, automobile statisticians. All American cars that have been built for seven years or more, and are still being produced, were compared. Not only for eight years, but also for seven and nine years. Reo headed the list with the longest average life of any American car.

Three major factors determine how long automobiles last:

1. The durability that is actually built into the car.
2. The low cost of repairs and repair parts.
3. The infrequency of radical changes in design.

The first is the most vital

Correct engineering, the best of materials and superior workmanship, contribute more to the long life of an automobile than any other factors.

But, given two or more cars of equal durability, the other two factors become important.

The effect of low repair costs

There may be left, in two cars of equal age, an equal amount of serviceability.

In the case of one, however, the cost of repairs may be so high that it may be cheaper to discard this car and buy a new one.

In the other, the cost of repairs may be so low that it pays to keep the car running, thereby getting out of it the last 15,000 or 20,000 miles of service.

That is one reason why the Reo, of all the cars built in America, is the longest lived.

REO MOTOR CAR COMPANY OF CANADA, LIMITED

Windsor, Ontario

That is why, on the basis of the most accurate tests yet devised for determining the relative longevity of automobiles, Reo has a longer average life than the highest priced cars built in America—cars which, like Reo, are notable for their high standards of engineering and manufacturing.

For, since these cars are many hundreds of dollars higher in price than the Reo—and since they are larger cars than the Reo—it follows as a matter of course that the price of repair parts for them is considerably higher than the price of the corresponding parts for the Reo.



Reo's withstand severe highway punishment for thousands of miles more than owners expect.

It also follows, equally as a matter of course, that even though the essential quality of the Reo may be no higher than the quality of these other fine and larger cars, the comparative inexpensiveness of Reo repairs makes it sound economy to operate the Reo after the higher priced car has been discarded.

And the third—obsolescence

The losses in resale values caused by frequent and radical changes of models are what the scientists studying automobile life call obsolescence.

Professor C. E. Griffin, of the University of Michigan Bureau of Business Research, in a recent study entitled "The Life History of Automobiles," makes the following observation:

"Marked style changes and frequency of change

of models have a bearing, indirect but none the less important, upon the rate of scrapping... A deliberate policy of frequently changing models is socially wasteful... There is no need for confusing genuine improvement with a deliberate policy of issuing new models for the purpose of stimulating sales."

It is noteworthy that not one of the four manufacturers occupying the leading positions in the long life league has pursued this "socially wasteful" policy of frequent model changes.

It is equally noteworthy that cars occupying more modest positions in the long life ratings—cars whose quality is demonstrably not comparable with the quality of the four leaders but which are measurably well-built automobiles—are considerably lower on the list than they would be if they had not resorted to this policy which forces the premature junking of their older models.

The three combined

The explanation of Reo's astounding margin of leadership in long life is not found in any single one of the three factors, but in the Reo combination of all three:

1. Quality of materials and workmanship equal to that of the finest cars produced in America.
2. Low repair costs which lengthen the life of a Reo car even beyond that of the other first quality cars.
3. And, finally, a persistent avoidance of the frequent model changes which hasten obsolescence and thereby shorten automobile life.



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PREFERENCE

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CHAMPION Dependable for Every Engine A Canadian-made Product Windsor, Ont.

to be effected so quickly that the owner does not feel that he has been deprived of the use of his car for an hour longer than necessary. The service station duplicates the best service that could be rendered were the car taken to the factory. This quality of attention, more highly specialized from rear to year, has played a tremendous part in the marvelous development of the automobile industry. It represents, in short, the maker's guarantee of satisfaction.

NEW FORD PLANT IN GERMANY OPERATING

The Ford Motor Company of Germany has begun operations in its new plant at Plozensee, a suburb of Berlin. Production was scheduled to start at about April 22nd. Two acres of floor space are available in the plant.

Two buildings, each 75x404 1-2 feet, and two stories high, house the new plant, which utilizes a total floor space of 31,935 square feet, with approximately one thousand feet of waterfront served from the German seaport by barge canals.

Equipment has been shipped to Berlin from the Antwerp plant of the Ford Motor Company of Belgium, from the display assembly line maintained for some time at Wembley, England, and from Detroit. The plant is designed to follow the standard assembly practice of the most modern domestic branches, receiving material completely knocked down rather than already partially assembled, as do some of the less modern plants.

When the plant begins to operate

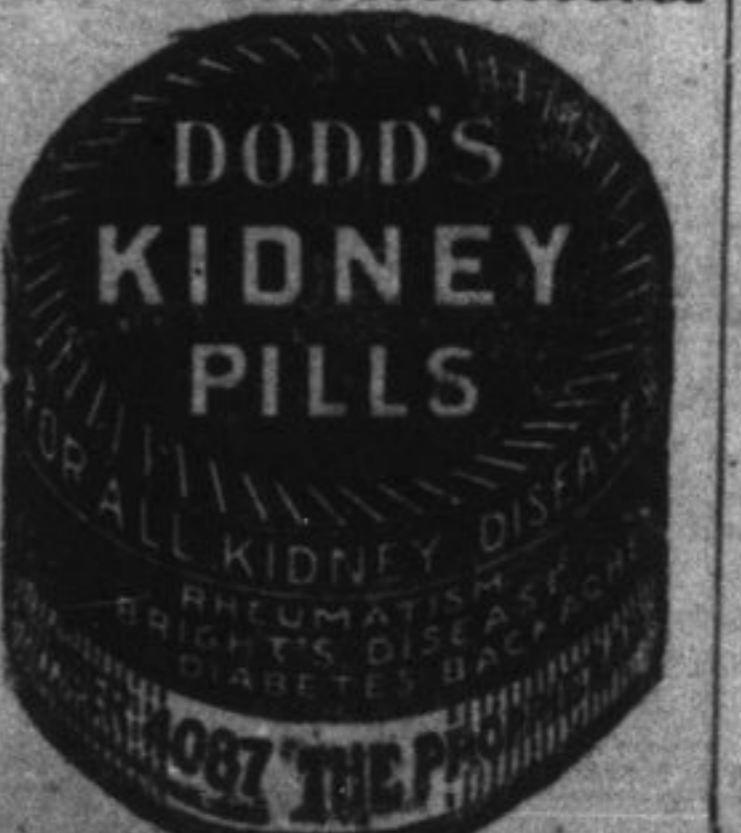
at one-shift capacity, as is expected soon after assembly begins, there will be storage space for 90 days' stock. At the present opening of the standard assembly line, however, it is planned to build only about seven hundred cars the first month.

Plans Quebec Roads.

The highway department of Quebec is planning to spend about \$8,000,000 for maintenance and completion of roads this year. The principal road to be completed is the Lewis St. Lambert Highway connecting Quebec and Montreal.

Annual Motor Race.

The 500-mile International Sweepstakes at the Indianapolis Motor Speedway will be held Monday, May 31st, this year. Many Americans and foreign racers have already entered.



HINTS FOR THE MOTORIST

ALBERT L. CLOUGH

Pre-Dilution of Engine Oil

Turning Objectionable Effects To Serviceable Ends

WHEN AN ENGINE IS SUPPLIED with fresh oil, leakage of unevaporated fuel past the pistons begins to dilute it and reduce its viscosity or "body," as soon as the engine starts and after about 100 miles of running, enough gasoline residue has mixed with it to thin it materially, this action keeping on until its lubricating value is much reduced, even below the safe point.

Postponing Excessive Thinning If, instead of filling with an oil of ordinary viscosity, a heavy oil of very high viscosity is used, a larger amount of fuel ends will have to leak into it to reduce its lubricating value to the danger point and a larger mileage can be driven before the oil becomes prohibitively thinned, but the employment of very heavy oil, in winter weather, is impracticable because, when cold and stiff, cannot be depended upon to circulate reliably and furthermore it makes an engine turn over too hard.

A Limit To Dilution Effects

However, the thinning effect, due to the run-down of fuel ends, does not continue to increase indefinitely with service because after a certain proportion of gasoline residue accumulates in the crankcase, this diluent begins to be evaporated by engine heat, the rate of this evaporation increasing with the amount of the diluent present—and a time arrives when the resulting rate of loss of diluent equals the rate of its entrance, thus bringing about a stable condition of maximum dilution and thinning.

Thinned Oil Usable If Still Viscous Enough

If, when this condition of equilibrium is attained, the oil is still viscous enough to lubricate properly, it can safely be used until it has become dirty and this result can be achieved if a heavy enough oil is used for the filling.

A Heavy Lubricant Initially Diluted

It is proposed, on good engineering authority, to take advantage of these facts as follows: To fill the crankcase not with oil alone, but with a mixture of an unusually viscous oil and the correct

equilibrium proportion of a naphtha equivalent in volatility to the fuel diluent, thus creating a lubricant of adequate viscosity, but not too heavy to flow readily at starting, and already containing practically its ultimate proportion of diluent so that its composition will not materially alter, from gasoline admixture, for a considerable period of use.

How The Idea Is Applied

Knowing the maximum percentage of dilution reached by the oil of any engine, the use in it of an oil sufficiently heavy, that when this percentage of naphtha diluent has been added to it, it is still a safe lubricant, should result in easy starting, good oil distribution under cold conditions and longer mileage intervals between fillings.

STEERING-GEAR BINDS

and you can probably eliminate much of the lost motion by loosening the clamp at the top of the column housing and turning inward the housing until it just begins to bind. Imperfect alignment of the front wheels is probably the cause of the car's pulling toward the left. You can align them by readjusting the tie-rod length. Possibly, too, the front axle may be out of parallelism with the rear axle.

TOO LATE OR TOO EARLY SPARK?

E. M. O. asks: How can it be determined whether ignition is set too late or too far ahead?

Answer: When ignition is set late (too much retarded) an engine acts "loopy," accelerates sluggishly and will not reach a very high speed, the exhaust noise is unusually loud, the water heats abnormally and, in extreme cases, the timing-gears are very noisy and there may be occasional backfires in the carburetor. When ignition is set too early, the engine usually clicks or knocks, especially when the throttle is widely opened, there is considerable loss of pulling power and usually some overheating of the circulating water.

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.