

A Useful Automobile

How one farmer makes his automobile do odd jobs

Concerning a car and the uses to which it can be put on a farm, I will tell some things that I know. My car has not the regular car body but one made similar to that of a democrat. The running gear and engine and attachments are one of the most popular makes. I find this style more useful for carrying loads from town, as I live six miles out and have not time to go to town very often. I can and often have gone to town during noon hour while the horses were feeding when repairs for machinery, etc., were necessary, covering the distance of six miles in twenty minutes. I did not get my car for luxury alone, but for use and pleasure. I find it more pleasure to attend picnics, etc., during the warm weather, as it is not hard on horses and no one is suffering from heat. The picture shows the right hind wheel blocked up and a belt running to the pulley on the sawing machine. In



Farm automobile hitched up to cut wood

the same way I run a chopper, chopping easily half a bushel in one minute.

WALLACE B. McDOUGALL, Wainwright, Alta.

Note: Thousands of cars are now owned by farmers on the prairies. We want to hear from farmers just how much value these cars are to them. We are offering \$10 in prizes for the best letters we receive showing of what use or pleasure, or both, the automobile is on the farm. Any letters received which we can use will be paid for at our regular rate.

IMPORTANCE OF LUBRICATION

The upkeep expense of an automobile greatly depends upon the lubrication. When two parts of a machine rub together it is necessary to use some means to prevent excessive friction, and this is usually done by placing a film of oil between the two metals. The friction then comes between the particles of oil, since the metal parts cannot touch. A bearing in which a shaft is turning at a constant speed requires a constant supply of oil, which must be fed to it regularly. Too much oil is wasteful and too little allows the bearing to heat.

Designers are still trying further to simplify the methods of lubrication, and have reduced the number of distinctly different systems to less than a dozen. There seems to be no reason why this number could not be reduced even more. If this was done, persons would find less difficulty in learning the details of a single system or two, rather than the complicated details of many systems. The names of ten lubrication systems are here given, and the name of a common car using the system:

Oiling System	Car Using It
1—Full splash	Ford
2—Splash with circulating pump	Buick
3—Pump over and splash	Palge
4—Force feed and splash	Lozier
5—Pump over	Pierce Arrow
6—Separate force feed	White
7—Force feed	Franklin
8—Full force feed	Marmon
9—Knight slide valve motor	Willis-Knight
10—Oil fed with fuel	Many 2-cycle engines

Good lubricating oil is usually furnished in four grades, depending upon the density. These grades are: Light, medium, heavy and extra heavy. A well known oil company has recommended the following grades of oil to be used with the above systems for summer and winter:

System	Summer	Winter
1.....	Medium	Light
2.....	Medium	Light
3.....	Medium	Light
4.....	Heavy	Medium
5.....	Heavy	Medium
6.....	Heavy	Medium
7.....	Heavy	Medium
8.....	Heavy	Medium
9.....	Extra Heavy	Heavy
10.....	Extra Heavy	Extra Heavy

The above applies to new motors. Very often when the engine becomes somewhat worn and the oil has a tendency to work past the piston, a heavier grade of oil than that mentioned will improve matters.

The very best quality of oil should be obtained. One of the assurances of good oil is the reputation of the concern from which the oil is purchased.

As to the matter of chassis lubrication, the manufacturer of the car usually furnishes an instruction book which gives a list of bearings that should receive oil at intervals of 100 miles, 200 miles, 500 miles, and so on. These instructions usually are reasonable and logical. However, if a person would follow these instructions to the letter he would have little time to enjoy the car. It is better to study the parts that need lubrication, and use good common sense, which will soon make chassis lubrication a matter of second nature and actual service requirements.

The following lubrication don'ts are offered by a well-known oil concern, which, if followed carefully, should prove valuable to the automobilist:

Lubrication Don'ts

Don't expect your lubricating oil to perform the impossible task of correcting mechanical defects. Too much clearance between the piston and cylinder, or bad and leaky piston rings will surely fill the explosion chamber

with carbon, even when the best lubricating oil is used.

Don't fill the sump or reservoir of your motor above its correct level and expect your motor not to smoke and not to carbonize the cylinders. Enough is sufficient—too much is useless waste and the cause of trouble.

Don't say to a garage man, "Give me some oil," when touring. It is safer to buy in original packages or to take a supply of oil you know to be good along with you.

Don't fill your motor by pouring oil into it thru a dirty or sandy funnel. Sand and dirt do not lubricate, but they do destroy.

Don't use too light an oil under the impression that an oil must be very light in order to reach all parts. The temperature of your motor is so high that too light an oil will be so thinned out as to be of little use as a lubricant. For efficiency and economy use the heaviest oil permissible with your lubricating system. Even heavy oils run freely when exposed to the heat within the crank case.

Don't forget that an air-cooled motor requires heavier oil than a water-cooled motor, because of its higher operating temperature.

Oil Will Wear Out

Don't think that oil never wears out. When you drain the old oil from the crank case always rinse it out thoroughly with kerosene before filling in the fresh oil. Be sure to close all drain cocks. A more responsive motor will be your reward.

Don't judge the viscosity—or body—of your oil at atmospheric temperature. Remember that when oil passes thru the bearings it has a much higher temperature than the surrounding air.

Don't use grease which is not semi-fluid in your transmission or differential housings. After the gears have cut tracks in hard grease further lubrication is impossible and rapid wear is the result.

Don't fail to consult your chassis oiling chart, which shows where and how often lubricant should be applied. This is very important.

Don't drive your engine at high speed while the bearings are tight. Wait until you have made at least 500 to 1,000 miles and the bearings are properly worked in. Over-lubricate, rather than under-lubricate, while your car is new and stiff.—Nebraska Farmer.

First Banker-Farmer Conference

Many vital questions discussed—Bankers realize necessity of more liberal credits to put business on a cash basis—Anxious to adjust complaints—Good progress.

It has for many years been the customary thing to read of conferences between organized bankers and representatives of other organized businesses for mutual benefit. In the development of any great business enterprise it has always been considered that a necessary preliminary was a conference with the bankers and an arrangement of credit facilities, but in all such conferences nobody ever heard or read of a conference between organized farmers and organized bankers for the purpose of improving agricultural credit facilities. A fresh chapter in Canadian history was written on Thursday, July 27, when the general superintendents in

charge of all the banks in the prairie provinces and the leaders of the organized farmers in all three provinces gathered together with their feet under the huge table in the board room of the Industrial Bureau in Winnipeg. It was a sight well worth looking at. Lined-up on one side of the long table were the farmers and on the other side were the bankers, the before the day was thru there was more or less intermingling and party lines were pretty thoroughly broken. The day was extremely hot and close and sticky, and the farmers who stripped to their shirt-sleeves were soon followed by quite a number of the bankers, tho the major-

ity of the financial fraternity maintained the dignity of their coat and vest despite the oppressive heat.

By the suggestion and motion of the farmers' representatives, J. McEachern, chairman of the Western Bankers' Association, was made chairman of the meeting, and he filled that position to the entire satisfaction of everybody present. From the very outset of the meeting the chairman, on behalf of the bankers, expressed a desire for the fullest and freest discussion possible on every phase of the banking question of interest to the farmers, and he was supported in this expression by the other bankers present. It was very plainly the desire of the bankers to have every possible grievance thoroughly discussed in order that the farmers might be fully aware of the policy of the banks and that any injustices might be cleared away. One add all of the bankers declared that the prevalent opinion that the chartered banks were not anxious for farmers' business was totally erroneous. They had already loaned out at the present time to farmers in the prairie provinces more than \$50,000,000, and there was no class of business for which the various chartered banks were competing more keenly than the business of the best farmers in the prairie provinces. They also were heartily in accord and emphasized again and again their agreement with the organized farmers in their desire to bring about a situation by which the farmers would do all their floating credit business with the banks and transact a cash business with everybody else. They said, as did the farmers, that credit in the purchase of the various necessities of life and of equipment for the farm was the most expensive credit which the farmer gets, and that the cost of it could be very largely reduced by placing this part of the farmers' business on a cash basis and doing all credit business with the local bank.

Policy of the Banks

The meeting between the farmers and the bankers was the outcome of a resolution passed by the joint committee of commerce and agriculture at a meeting held in Winnipeg last February, at which the following resolution was passed:—

"Resolved, that in the opinion of this joint committee, it is desirable in the general interest that an understanding be reached between the banks and the farmers with regard to the further development of rural banking credits; and that a conference should be arranged between the bankers and the farmers to discuss the following points:

"1—The extension of the time usually granted for short term credits, so as to permit of the more effective and profitable production and marketing of grain and other farm products.

"2—The provision of credits of sufficient duration for the feeding and raising of livestock.

"3—The facilities that the banks would be prepared to give the co-operative circles of farmers who might pool their credits.

"4—The extent to which banks would be prepared to recognize the additional safety thus provided by granting reduced rates of interest to such co-operative circles."

At the opening of the meeting the bankers presented a written statement covering the points in the resolution and also some other points as follows:

1—(a) Chance of promissory notes: In granting credits to farmers it has always been recognized by the banks that payment of the advances could not be expected until the proceeds of the season's crop would be available. Notwithstanding that credits are usually established for the season, there is an implied understanding that their continuance for that period is conditional on a maintenance of good faith on the part of the customer, and the object of limiting the term of discount is to enable a bank to protect itself at reasonable intervals in the event of any development seriously detrimental to the customer's standing. The same custom applies to all commercial credits. In practice this limitation is never taken advantage of unfairly to the injury of a customer, and its reasonableness has seldom been questioned.



In the exhibit of Manitoba Agricultural College at Brandon Fair the Engineering Department made a good showing with ironwork finished by the students of the first and second years.

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