

Hints for the Motorist

By Albert L. Clough

Editor Motor Service Bureau, Review of Reviews

EXCESSIVE FUEL SUPPLY



J. M. G. asks: Can you tell me the cause of the following trouble: My engine will not speed up and it seems to be choked all the time? It does not fire regularly and, thinking the spark was at fault, I took out the plugs, and found them badly sooted, but the spark proved to be as strong as ever. The carburetor has had nothing done to it recently.

Answer: It looks as though your engine is getting too much gasoline and not enough air. If your carburetor has an auxiliary air valve designed to open as the engine speeds up, you better inspect it and see that it is not stuck in the closed position. If it is, this accounts for your trouble. Many cars have a strainer or choker, which is used to close the carburetor air intake when starting and perhaps the mechanism which operates this has gone wrong, so that it stays closed. Be sure that this air passage is free. Sometimes there is valve trouble in the vacuum feed tank which causes gasoline to be sucked directly into the intake manifold. Possibly the needle-valve adjustment of your carburetor has worked loose and opened the spraying nozzle too wide.

LOST MOTION IN TRANSMISSION SYSTEM



A. W. P. writes: Sometimes, when I start my car into motion, I notice quite a loud "snap" and a slight jerk, neither of which ever occurred until lately. Does this indicate that something is wrong?

Answer: The cause of this is well worth looking into and removal before its effects become any more marked. Probably, lost motion has developed in some of the transmission parts as the result of wear. So long as the engine is delivering power to the wheels, this looseness is kept taken up but, when the brakes are applied, it is developed so that, when you apply the clutch, certain parts move freely for a short distance and then take up the driving load suddenly with the noise and jerk which you notice. If you can expose the driven clutch member to view, try pushing the car alternately back and forth upon the garage floor and see if there is a period in the car movement when the clutch does not revolve. If there is, there is lost motion in the transmission, universal joints, final drive gears, driving wheel connections or elsewhere, which ought to be removed.

EFFECT OF SHORT PISTONS ON COMPRESSION



R. H. P. writes: I am rebuilding an engine of obsolete model and the only pistons I can obtain for it are 1/8-inch shorter than they should be, from wrist pin to head. Using these will, of course, reduce the compression. How much if any will the power be diminished?

Answer: You do not mention what the stroke is. The effect upon compression of this eighth-inch difference will be less in proportion as the stroke is long and vice versa. If the stroke is fairly long and the engine was built sometime ago, when high compression ratios were in vogue, these pistons may prove satisfactory. If the flanges at the bottom of the cylinders are thick enough to possess some excess strength you can perhaps have them accurately drilled or slightly, which will tend to raise the piston travel. In some engines having flat piston heads, plates have been riveted on them to decrease the compression space, but this method has some objections. Why don't you try these pistons and, if they make the compression too low, adopt some of these expedients? Quite likely they may work well as they are.

SLOW LEAKS IN TIRES

S. G. asks: Why is it that I have so much trouble from the tires of

my car getting soft? It seems to me that I pump them twice as often as other people. There seem to be no real punctures.



Answer: Most likely because the plungers in the valves are leaky. These have to be changed frequently, as the seat is very small and wears out rapidly. The old plunger is removed by screwing it out, using the slotted end of the valve cap as a spanner and the new plunger is screwed into place with the same tool. It should be seated firmly and a cap, with a good rubber packing, should be used over it. It is possible that some of your inner tubes have developed very slight leaks and you can assume this to be the case, if renewing the valve plungers does not prevent the premature deflation of your tires.

GIVING THE FUEL SYSTEM "THE ONCE OVER"

A Free Flow of Clean Fuel is an Absolute Necessity

The principal requirements for the successful action of the fuel system are that it shall be kept tight and free from obstructions and foreign matters. Assuming a rear tank vacuum feed system, the following suggestions are offered. Draw off liquid from the rear tank settling-pocket into a glass bottle and see if any water or sediment is present, rocking the car meanwhile. Keep drawing off samples until only perfectly clean gasoline comes out. See that the gasoline pipe connection is perfectly tight, that the gauge operates freely and correctly and that the filler cap makes a perfect seat and that its vent hole is unobstructed. If possible, follow the gasoline pipe along to the vacuum tank, making sure that it is securely clipped in place. Uncouple the feed pipe of the vacuum tank and clean the strainer, which is usually found there, replacing the union with care. Collect a little gasoline in a bottle from the draw-off at the bottom of the vacuum tank and, if it is not perfectly clean, collect samples until you secure a perfectly pure one. See that the gasoline connection at the bottom of the tank is perfectly tight. If the pipe is wet it probably leaks and ordinary soap on the union faces will tend to make it tight. Try the unions on the suction pipe from the tank to the manifold, to make sure they do not leak. With the gasoline turned on, wipe the bottom of the carburetor clean and inspect it again after an hour or so. If it is then wet, the float valve leaks or the fuel level is above the spraying outlet and adjustment or replacement of parts is required. If there is a screen at the point entrance of fuel to the carburetor, clean it and, if replacing the union connection, wipe it clean and see that it does not later become wet. In case there is a draw-off at the bottom of the carburetor bowl, open it and allow gasoline to flush through it until it comes perfectly clean. Also try the bolts that hold the carburetor flange to the flanged intake opening, to ensure that they are tight enough to prevent any air leak.

MAKING CRANKSHAFT REPLACEMENT



S. J. G. writes: The crankshaft of my 1916 car is broken. Please tell me how to remove and replace it myself. Is it necessary to get a new shaft or can the old one be repaired?

Answer: Unless you have regular repair shop facilities, this will be a pretty hard job. The best way is to lift the power plant right out of the frame, after breaking all the connections and rest it upon convenient horses. Remove the clutch and transmission and detach the main and connecting rod bearings, which will free the shaft and flywheel. Detach the latter and fit it to the new shaft. You will have to "scrape in" the main bearings to fit them properly and then assemble. Crank shafts can be electrically butt welded, but special fittings and very accurate workmanship are required and the process is expensive and none too certain of success. We advise you to buy a new shaft. Per-

haps you can obtain one in good condition and at a reasonable price, from one of the wrecking companies. As we say above, this is really a job for the professional mechanic.

GAS CONSUMPTION INQUIRY



S. writes: Drivers of Ford cars often tell me that they get from 18 to 24 miles out of a gallon of gasoline and some of these statements I believe are true, but I cannot average better than 12 miles to the gallon in the regular running of my Ford, which I use for delivering milk to my customers. Shouldn't I do better than this?

Answer: You cannot expect very high gasoline mileage because you doubtless idle your engine a good deal and use up considerable fuel in starting your car at each stopping point. The power expended in acceleration is, of course, lost when the brakes are applied at the next stopping point, which may be only a short distance away. High fuel economy records are made in cases where long distances are uninterruptedly covered at speed and the mixture is run as lean as possible, with the engine fully heated up. Operators use the dash carburetor adjustment too little and in most instances a leaner mixture than is customarily used could be successfully employed, a good part of the time. Perhaps you can help matters somewhat by attention to this point, but we fear

Questions of general interest to motorists will be answered in this column, space permitting. Address Albert L. Clough, care of this office.

Dairymen's Association

The annual meeting of the Provincial Dairy Association opened in Prince of Wales College yesterday forenoon. Owing to the storm which delayed the trains the attendance was small.

In the absence of the President, Rev. Dr. Gauthier, the Vice President Mr. J. H. Simpson of Bay View presided, and read the minutes of the last annual meeting. This was the only business done in the morning and the meeting adjourned to meet again at 3 p. m. The afternoon meeting was largely attended, Rev. Dr. Gauthier, the President occupying his place after a strenuous journey from Victoria through the storm.

He opened the proceedings with a short address referring to the great importance of the Dairy Industry to Prince Edward Island. He stated this Province held a premier position in the live stock situation in Canada, the number of live stock per square mile in Prince Edward Island exceeding that of any other Province. He said that important matters were to come before the convention and he hoped that their deliberations would bring about results that would be of great and far-reaching benefits to all concerned.

Inspector, Morrow then submitted his report which follows:—

DAIRY INSPECTOR'S REPORT

During January and February, I attended several sessions of "Short Course" held in different centres throughout the Island. The subjects dealt with were milk production from the standpoint of keeping individual records, and the care of milk and cream on the farm. Both subjects were selected as having a practical bearing on the work of the average dairyman. I also inspected the creameries in operation. Most part of March and April I spent at the Maritime Dairy School at Truro, assisting the staff with the different branches of the work.

The course consisted of practical cheese and butter making, milk and cream testing and the handling of the different makes of hand separators. Quite a number of the students from each Province attended both courses. Our classes were so crowded that it made it almost impossible to do them justice. If we had a larger, better equipped building we could do ever so much better work.—E.

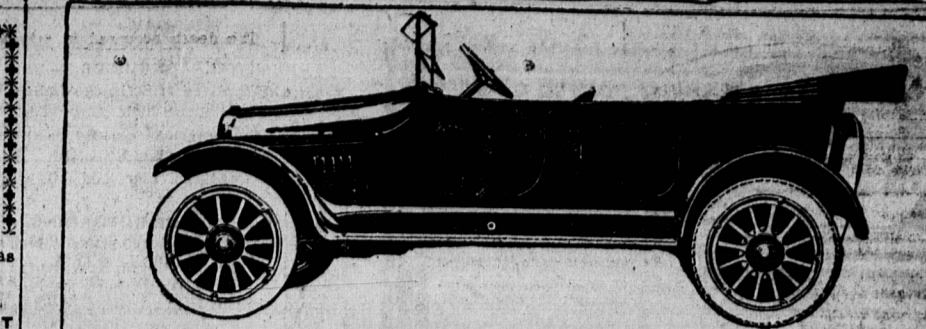
After returning from Truro, my time was spent in assisting dairy companies to secure the necessary help to operate our factories. At one time it looked as though we were not going to be able to keep sufficient help to manage our work properly, the call for men was so urgent. The assistance rendered by different officials in charge of the military work was given with good results. Our cheese season was mostly satisfactory. The production was as great as we expected considering the condi-

tion and at a reasonable price, from one of the wrecking companies. As we say above, this is really a job for the professional mechanic.

CARE OF THE TOOL EQUIPMENT

The Tool You Need The Most is The One You Haven't Got

A very fair kit of tools is usually furnished with every new car that is bought, but in too many cases these tools are soon lost or broken and, when an emergency arises, the very one that is essential is found to be missing. When tools are used upon the road, it is very easy to leave them on the ground or upon the running boards or fenders and, in the hurry of the moment, to drive away and leave them or to scatter them along the highway. It is best to take an account of stock each time that the equipment is used in this way. Many tools are bent or broken by using them in prying or pounding operations, for which they were not intended, such as in changing tires. A hammer is provided for hammering and it is better adapted for this purpose than is a wrench or the pliers. Small weak screwdrivers and hardened tools, such as pinchers and files, will not serve well as levers. It is very easy to ruin a small monkey wrench or Stilson by using it on heavy work, when one is hurried and nervous and it only takes a few seconds to get a suitable tool. Small tools should never be left where they can fall into an open housing. They fall in easily and sometimes it is almost impossible to extricate them from such places, where their presence may cause extensive damage. If tools are carelessly allowed to touch electrical connections, it may mean a run down battery.



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home, that is, there is a feeling in the direction of home dairying and we cannot hope to either build up our dairy industry or make it as profitable or as large as it should be along those lines. We must encourage co-operative dairying and this along most favorable lines.

The solution of the problem would seem to lie in the establishment of a large creamery at a suitable central point, where the patron takes good care of his cream; it can easily be shipped a considerable distance without suffering any injury. A large creamery would be well equipped and well manned and would have facilities for caring for and marketing butter, and the combined results would be a comparatively low manufacturing cost, a large make of both uniform and superior quality, the proper care of a perishable product until marketed and the best of market-facilities. Such a creamery would look to quality through grading both the cream and the finished product, and all would spell increased profits.

The combined efforts of such a creamery and some of the best creameries now in operation on the Island would soon build up an enviable reputation for P. E. I. creamery butter. Another point, most of our cheese factories operate during less than half the year, and if we are to dairy as we should, we farmers should dairy throughout the year. A good central creamery would, without working injury to these factories, afford to their patrons a means of continuing co-operative dairying during the fall and winter months.

Mr. Morrow's excellent address was followed by that of the Secretary, Mr. J. F. Profit:—

Gentlemen, We are meeting today in Twentieth Annual Session of the Prince Edward Island Dairy Association to report on the work for the past year and to discuss ways and means for the still further development of the dairy industry in our Province.

We are pleased to realize, I trust, that since our last annual meeting this great world war has ceased with triumphant victory for our Allies in their defence of the cause of Liberty and Justice, and just here we would pay a word of tribute to our fallen heroes who made the supreme sacrifice in order that we might enjoy our freedom. We would place them among that noble host of men whose names are written in the hearts of the whole British race, Gordon who died that the Blacks of the Sudan might be saved, Livingstone who gave his life to bring light to darkest Africa, Nelson, Kitchener and a host of others who gave their lives that the name of Britain might be respected and revered among all men.

The year 1918 has been a most prosperous and successful one for the dairy industry, and I feel safe in saying that this year will go down in history as the high water mark, so far as high prices for dairy products are concerned. Previous to the year 1914 it did seem as if the dairy business in our Province was on the decline. The fox industry was offering great inducements, but the outbreak of the war changed everything. The price of foxes went down while the

price of dairy cows went up. The price of dairy products soared high and put new life in the dairy industry, and if those who are responsible, manage the various factors skillfully, and if good leadership be maintained there is no doubt whatever but that the dairy industry will expand and develop if for no other reason than to supply the increased demand for dairy products.

In reviewing the reports of our factories one cannot fail to notice, particularly among the larger centres, a large increase in milk production according to the number of cows kept in the herd, results which have followed intelligent breeding and selection combined with good care and feeding of dairy herds. Hence the great

to give place to more modern methods. Now I realize that I am apt to stir up discussion when we advocate centralism of creameries, but we can not get away from the fact that a large creamery can manufacture a pound of butter for less money than it costs the small creamery. Secondly, they use better equipment and machinery and more up-to-date appliances. Thirdly, they can engage the best butter-makers and have the very best methods, because they are doing business sufficiently large to get these things. Fourthly, a more uniform quality is usually made in large creameries, and the fact that they can usually ship carload lots is a very decided advantage. I will now submit to you the statements for the past year.

COMPARATIVE STATEMENTS

| | Cheese | Butter |
|------------------------|-------------------------|-------------------------|
| Milk Supply 1917 | 24,089,686 lbs. | 12,627,080 lbs. |
| Milk Supply 1918 | 23,397,012 lbs. | 14,678,475 lbs. |
| | Decrease 663,674 lbs. | Increase 2,051,395 lbs. |
| VALUE OF OUTPUT | | |
| Butter and Cheese 1917 | 36,687,766 lbs. | |
| Butter and Cheese 1918 | 38,075,687 lbs. | |
| | Increase 1,387,921 lbs. | |
| Net | | |
| Cheese 1917 | Gross \$466,635.98 | Net \$408,092.81 |
| Cheese 1918 | Gross \$538,503.03 | Net \$426,659.18 |
| | Increase \$ 71,867.05 | Increase \$ 23,566.37 |
| Net | | |
| Butter 1917 | Gross \$218,358.46 | Net \$164,731.52 |
| Butter 1918 | Gross \$266,490.59 | Net \$202,046.18 |
| | Increase \$ 48,132.14 | Increase \$ 37,314.66 |
| Net | | |
| Butter and Cheese 1917 | Gross \$684,994.43 | Net \$567,543.55 |
| Butter and Cheese 1918 | Gross \$804,993.92 | Net \$666,723.82 |
| | Increase \$119,999.49 | Increase \$ 99,180.27 |

set need of the dairy industry in our Province at the present time is the economic production of milk, and as the greatest factor in the economic production of milk and fat, it naturally follows that the greatest problem confronting the dairymen of this Province today is how to eliminate the unprofitable or low producing cows from the dairy herds.

Let us not forget that the production of milk and butter is today without question one of the most important branches of agriculture. It keeps up soil fertility, produces a regular cash income and promotes better farming methods.

What about the future? New problems await solution. The world is passing through one of the greatest transformations ever known in the history of mankind. The labor problem, high cost of supplies and keen competition are factors tending to drive the small factories out of business. Already it looks as if the small factory is being forced to the wall. Consolidation of these small concerns will be essential if we are to continue the Dairy business in anything like the same ratio as has been done in the past. In a word the manufacture of butter and cheese will be standardized and placed on a sound, scientific and business basis the same as other manufactured goods.

The present system is wasteful, hence not economical and will have

In conclusion let me say that the whole thing that appeals to both producers is the question of price for their product. For years past we have been impressed with the fact that we have not been getting sufficient price for our products, all things being considered.

To my mind, the cost of labor and supplies will be equally as great as last season. Hence the necessity of our National Dairy Council in putting forth strong efforts to maintain prices equivalent to last year. Great Britain has been our market, but there are other markets which will likely be open to us in the not far distant future. As a Province we have made a good start in the dairy industry, the leading industry of our Province, must bear a large part of it, and if we can by any means increase the amount of milk produced and increase the quality of our product, so much the better for our dairy farmers, and the dairy business as a whole.

Respectfully submitted,
J. F. PROFIT, Secretary.
An interesting extempore address followed from Mr. W. M. Lee, M. L. A., on the need of specializing dairying which contained much useful information on dairying in general. Most of the speakers spoke in favor of starting a co-operative Central Creamery in Charlottetown, pointing out the many advantages which would occur from such.