

MOTORS AND MOTORING: A Page Full of Interest to the Owner or Prospective Owner of an Automobile.

MODERN GASOLINE OF POOR QUALITY

It is perhaps a fortunate thing for the automobile industry that in its beginning the early builders had for a fuel gasoline of a far different grade than that which we use today. Though we still call our motor fuel "gasoline", it actually much more resembles kerosene than it does gasoline that the designers of the first automobiles knew.

The gasoline of 20 years ago was an extremely high grade, volatile fluid, that mixed with air so rapidly that the early designers really never knew what a carburetion problem was. In fact the very earliest cars of French and English design actually had no such thing as a carburetor. From the top of the fuel tank under the front seat hung a number of wicks such as were used in kerosene lamps. Drawn up by the wicks, the gasoline evaporated, and mixed with the air and was drawn directly into the cylinders through a long tube. It may be imagined that the designers of those days had their hands full with such problems as ignition and lubrication, and it is probably just as well that the problem of carburetion did not give trouble until later years when the other questions had been satisfactorily solved.

By the time fifteen years of motoring had elapsed, the carburetion problem had begun to be very serious indeed. The consumption of motor fuel had reached such enormous figures that despite the utmost efforts of the oil industry it was impossible to produce anything like an adequate supply of gasoline that approached the old standards.

The early day gasoline was one of the very first products of the process of distillation, one of the lightest oils that rose at the lowest temperature in the still. It became necessary to use more and more of the heavier fuels that were less volatile and required a higher temperature to make them evaporate in the still. The result is that the "gasoline" of today is now hardly distinguishable from a very light kerosene.

It soon became evident to users and to engineers alike that the heavier fuels were not giving the same degree of satisfaction that the lighter fuels did. In the course of their investigations to find out what was the trouble, engineers actually put glass windows into the side of the carburetors and manifolds of their experimental cars to see what was causing the trouble. This is what they found:

Into the stream of air drawn by the suction of the piston the carburetor sprays the gasoline. Little drops of the heavier elements of the gasoline are carried along by the stream of air. If they strike a sharp corner in the intake manifold they fall, or if the stream air moves too slowly they also fall. Drop adds to drop, a little puddle of raw gasoline collects and is drawn into the cylinder. It runs down the cylinder wall past the piston, "cutting" the essential film of lubricating oil from the cylinder wall and, dropping into the crankcase, dilutes the lubricating oil and ruins its lubricating propensities. Carbon deposits form. All sorts of motor troubles develop. Bearings wear and "knocks" and all kindred symptoms of motor "grief" appear.

CAUSE OF STARTER FAILING

When pressure on the starter pedal or button fails to cause the engine to be cranked the trouble is not difficult to find, though it may be quite difficult to remedy.

The usual causes of such troubles are: Weak battery, poor contact of the cables with the battery, a short circuit caused by cable insulation being worn through, switch trouble, or trouble in the starting motor.

A battery test will quickly tell if the source of the current is at fault. If the battery is up to charge, then the cables should be examined and the terminals cleaned and tightened. Then the cables should be examined.

The starting motor brushes being worn often causes trouble and in much-used starters the commutator may be worn. The starter switch may stick or make such poor contact as to deliver little current.

If in pressing the pedal there is a whirling sound but no cranking, the spring on the starting motor shaft may be broken.

If the sugar speculators are caught in the drop in prices, there will be no tears of compassion for them from the next consuming public. Thanks to the "break" in the American market, the people at last have the promise of relief. Sugar is on the toboggan slide.

BRAKE LININGS NEED CARE

You probably have noticed that at times your brakes don't hold. It frequently is the cause of serious accidents, for the brakes are the only safety device on a motor car.

Very likely the brake lining has become coated with oil or grease, which acts as a lubricant. This condition is dangerous, for it may cause the brakes to slip when applied. At the earliest opportunity the lining and the brake drums should be wiped clean with kerosene.

The brake lining may have become worn so that insufficient pressure is brought to bear against the revolving metal drum, and the car cannot be stopped quickly. A few adjustments, which any mechanic can make while you wait, will often compensate for the reduced thickness of the worn lining.

If the lining has become worn beyond the margin of safety, it is best to have the brakes relined. In the selection of new brake lining, the motorist should be guided by the experience of the leading automobile engineers, who have made numerous analyses and tests of various kinds of brake lining material.

The wise motorist is satisfied not alone in being able to drive a car, but thankful that he can stop it. He values a smooth, short stop no less than he appreciates a quick, easy getaway. Watch the brakes—enjoy greater comfort and safety.

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So far as British manufacturers are concerned the peak of high prices in motor cars and their fittings has been reached and a gradual decline may be expected, is the opinion of J. H. Rose, manager of a large London firm dealing in automobile accessories, who is now visiting Montreal with a view to developing trade with Canada.

The horse and buggy driver knows but little about a motor car, but little experience soon teaches him that some car drivers are continually fighting their cars, just as some horse drivers are continually fighting the horse. Others car drivers let the machine glide along in a manner resembling the poetry of motion as some drivers guide the horse.

While expecting capture by the Germans, an Australian soldier swallowed a banknote of large denomination. Recently he received a new note from the British government.

The average rent for a 6-room house in the month of June in the entire Dominion was \$25.28.

So great has been the slump in the prices of sugar in the States in the last ten days that Boston's two big refiners, the American and the Revere, have withdrawn their product from the market. Boston brokers are offering sugar at from \$18.25 to \$22.25 a hundred pounds.

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