

# MOTORS AND MOTORING:

A Page Full of Interest to the Owner or Prospective Owner of an Automobile.

## CIVIL WAR ON BIG SCALE THREATENS



London reports that military operations on a large scale are impending in Ireland, and the Republican forces are said to have taken up a line from Limerick to Waterford and to be entrenched in readiness for an attack. The line is shown on this map.

## KNOW YOUR CARBURETOR

An understanding of the principles of carburetion and what a carburetor is supposed to do is essential to the owner of an automobile. The carburetor is a device which vaporizes the liquid gasoline and mixes it with the necessary amount of air so that it will burn with a very intense heat in the combustion chamber of the gasoline engine.

In some carburetors the amount of gasoline that is sprayed is controlled by a needle valve which can be adjusted from the driver's seat. Others have the gasoline adjusted on the carburetor which can be adjusted only when the hood is raised. Many carburetors have no adjustment for the air; others have adjustment of air on the steering columns.

The general rule for adjusting a carburetor is to adjust the gasoline for low speed and the air for high speed; but, before a driver attempts any carburetor adjustments there are a number of things he should do. If all motorists would learn just one thing about carburetors there would be far less motor troubles that is, leave the carburetor alone until everything else has been made right. Never attempt to adjust this important mechanism until you have tested your compression, proven that your ignition is in first-class order, and that lubrication is good.

To test the compression, use the starting crank. With the ignition switch turned to off position pull up on the starting crank until a cylinder is under compression, hold against the compression with a steady crank pressure and note how long it takes for the compression to decrease to a point where the crank moves easily. If under a good steady pull the compression holds up for a half-minute, it is satisfactory. Turn to the next point of compression and repeat the test until all cylinders have been tested. If all stand the test there is nothing to be done, but if one or more cylinders are leaking this must be remedied. The commonest cause for lack of compression is leaking valves. They must be ground to make them air tight. Compression leaking past the piston rings is usually accompanied by an excess of oil in the combustion chamber; also a hissing noise can also be heard if the car is held close to the breather pipe while the compression is being tested. This is a serious matter and requires a trained mechanic to repair.

After testing the compression test out the ignition. This can be done by removing one wire at a time from the spark plugs and holding the end of it about a quarter of an inch from the head of the engine and note if a strong, steady spark

is delivered from the wire. This test is made while the engine is running on its own power. If the spark is good, test the next, and so on until all of the secondary wires have been tested. The next point is the spark plug. A plug should be clean with the points adjusted so that the opening between the points is .030 of an inch. This is correctly measured by a thickness gauge, but as few motorists have a thickness gauge something else is necessary, and it has been suggested that a dime be used, but a dime is too thick unless it is well worn. A cracked or dirty porcelain is a source of much ignition trouble, but a dirty plug does not of necessity mean a poor plug. If a porcelain is suspected as being defective and the porcelain is removable, take it out and clean and test it, if it cannot be taken out then substitute another good plug for the defective one and note results.

## DAMPNESS HELPS GAS ENGINES

Ever since the beginning of the gas engine industry operators have noticed that on damp days and nights when the air is more humid than during the day, the engine runs better and with more power on a given throttle opening than it does on a dry day.

The facts are these: Water fed to the engine does increase the power. At the same time it has a tendency to reduce carbon deposit, and under certain circumstances it is likely to remove a deposit of troublesome particles though it cannot be said with certainty that it will remove hard carbon.

The automobile engine is a notorious heat waster, though it is, strictly speaking, a heat engine and therefore should not waste any heat, or as little as possible. Yet fully one-third of the heat generated (and the heat is power) is lost by being passed to the cooling water. Now when water is sent into the cylinders upon the intake stroke the charge is naturally cooled. On compression it is heated, and upon explosion it is turned into steam, thereby taking away some of the heat which would ordinarily be wasted by passing through the water jacket into the water.

Later in the power stroke, when the power on the piston is reduced the steam gives up its heat in the greater part and thus helps put some more power where it is needed. In other words during the early part of the explosion stroke the water prevents a heat loss by taking some of the heat into the mixture only to give it up later when the heat is needed in the cylinder. This explanation may be taken as being correct and the theory as to water decomposition wrong.

## SPEEDOMETER MECHANISM

A problem which is comparatively rare, but none the less irritating, is the repair of the speedometer drive shaft. If you never perform this operation personally, you must pay for the endless fussing of the mechanic. Out goes the broken link. In goes a new one. Carefully the long chain is fed through the tube and then the fishing begins. If, in the first place, half a dozen extra links are attached, the surplus length makes it easy to pull the chain taut, the driving member being attached after the extra links are removed. Speedometer chains will not break nearly so often if the tube slopes uniformly downward, without any dips in its length to collect water and dirt. A little tying with straps or tape will arrange the speedometer tube properly.

## MOLASSES SAVES GASOLINE

Little dabs of cheap molasses on plain pine sticks in the hands of 61 oil inspectors in Minnesota have saved users of gasoline thousands of dollars during the past year, according to Hjalmar Nilsson, state oil inspector. Incidentally this simple test for discovering water in gasoline has gone out from Minnesota to a dozen other states.

On the theory that water is heavier than gasoline and always sinks to the bottom, Mr. Nilsson devised the simple test a year ago. A stick dipped in cheap molasses glides through the gasoline without showing any effect on the molasses. But when the water is encountered the molasses comes off the stick. When the stick is withdrawn the exact amount of water in the bottom of the tank is clearly revealed.

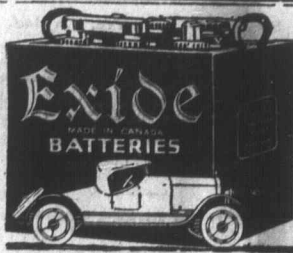
Don't pass a vehicle at an intersection.

A telephone pole never hits an automobile except in self-defense.

Shellac and soap are best to use as gasoline leak preventatives.

Two hundred cities and towns in Wisconsin have camp sites for automobile tourists.

Advertise in "The Acadian".



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## DON'T DO IT

Neglect the brakes.  
Argue with the cop.  
Drive without carrying a "spare".  
Stop or turn without giving a signal.  
Drive under influence of Volstead antidote.

Try to beat the other fellow to the crossing.

Try to take the right of way from a truck.

Drive at night with a single headlight.  
Leave car unattended without thief-proof appliances.

Try to make the cop believe you have influence higher up.

Blow horn loudly when only two feet from a pedestrian.

Try for boulevard speed records with either a new or old car.

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¶ In Dunlop Cord Tires you have "Traction" and "Ribbed" to choose from.

¶ In Dunlop Fabric Tires you have "Traction," "Ribbed," "Special," "Clipper," "Plain."

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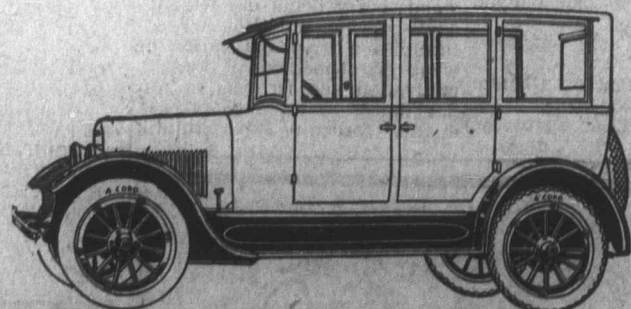
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