

Do You Have Trouble With Your Carburetor?

Some Hints as to How Car Owners May Save Themselves a Great Deal of Trouble

How many times have you driven up to a garage with the car jerking and bucking, asking, as you enter, for a good mechanic who knows something about a carburetor? Sometimes you drive away with a smile and sometimes you cry vengeance for the mechanic who sent you away without fixing the trouble.

Whenever a car develops a sudden illness, the carburetor is invariably the first object of attack, for even if the carburetor is not the direct source of trouble it is the victim of the average driver. When the trouble is actually elsewhere the carburetor has to worry along with its new adjustment, be it good, bad or indifferent. A few hints may help you to solve serious road trouble, even if the car refuses to run.

One of the most common carburetor troubles is backfiring. Let us assume that after the car has been driven several miles you reach a nice stretch of road in the country and are tempted to open her up a bit. Everything is lovely, the speedometer reads thirty-five miles an hour, and you are about to skim to the top of a long hill, when much to your disgust, you hear a muffled pop under the hood. The carburetor makes a loud, though short spitting sound at the same time. You are forced to slow down, and although the car picks up again it will perform the same way on the next long hill. To the experienced driver this means too lean a mixture at high speeds and the trouble can surely be remedied by opening the gasoline needle valve a little more, or, if the car has a jet, by substituting a larger jet.

Should the carburetor backfire in this manner when the car is being driven at a slow speed and no recent adjustments have been made the lack of gas may be caused by a partial stoppage in the gasoline line or jet.

The presence of even a small quantity of water in the gasoline will cause a decided popping and spitting in the carburetor. Water will entirely shut off the gasoline, which it displaces as the drop of water passes through the jet. This condition will sometimes be very apparent when quickly accelerating the motor even if the car is standing still.

Sticking Valves

Since the average car of to-day is

provided with a choking device for cutting off air where admitted to the carburetor, this means of enriching the mixture should be tried to prove to your satisfaction that the trouble is caused by a stoppage in the system rather than by a mixture condition. This will prevent needless tampering with the carburetor.

Other causes of backfiring, often confused with carburetor trouble, may be attributed to an intake valve sticking open. This permits the exhaust gases to leak into the inlet manifold and explode or burn the gasoline in the carburetor. This often sets the gasoline thus blown out, on fire. This condition may be apparent when the car is running idle. Placing the spark plug wires on the wrong plugs will cause explosions to take place in the cylinders when the intake valves are open and the same results may follow. While not so common as the above, poor distributor condition, in your ignition unit, be it a battery or magneto, might cause a spark to jump across the distributor so as to fire a charge of gas in two cylinders at once, the one with the inlet valve open firing back through the carburetor.

We will now pass to the other extreme—too much gasoline or too rich mixture. This will first be noticed by lack of power in the engine, even if it be firing perfectly on all its cylinders. To prove this condition watch the exhaust from the muffler. Black smoke is a certain sign of too much gasoline, and if the fumes are confined in a room without ventilation smarting of the eyes and tears will result. Water for this black smoke and avoid the small, unventilated garage for death has resulted in several cases from inhaling these fumes of imperfect combustion. This caution may be entirely ignored when out in the open. Do not confuse blue-gray smoke, a sign of excessive lubrication, with the distinctly black smoke from a rich mixture.

Leaky floats Late ignition will also rob a car of its power. Be sure that the leather coupling in the magneto drive has not stretched and that the breaker box is being advanced when the spark lever is advanced. These points should be noted before you

touch your carburetor. Closely akin to a rich mixture is the flooding carburetor. Here, again, dirt generally causes the trouble. Grit or waste, no one seems to know where it comes, often lodges under the needle valve, preventing the shutting off of the gasoline, which will leak out as soon as the float chamber has become filled.

The function of a float is to shut off the gasoline when it has reached its proper level in the carburetor. If the float leaks it will not shut off the gasoline and flooding certainly will result. If you suspect the float of leaking remove it and shake it to see if any gasoline is inside. Assuming that your float leaks and that you wish to find the hole, submerge the float in hot water. This will expand the air in the float and air bubbles will rise from the hole, thus making it visible to the eye. Enlarge the hole to drain out the gasoline, and solder.

A large percentage of the new cars and equipped with vacuum tanks, and in spite of the fact that they have many troubles in common with a carburetor they are excellently fitted a long felt want.

Here again look out for a leaky float and dirt. If the float in the vacuum tank leaks it will not rise to the point necessary to shut off the air suction which creates the vacuum. You tear along at a high speed for several miles, but in the meantime the vacuum tank becomes filled to the brim.

The continuous suction of the motor draws pure gasoline into the inlet manifold in large quantities. High speeds may consume this excess gasoline, but slow down on a hill or stop for traffic and then attempt to accelerate and the engine will stall. The self-starter will not start, for, crank as you may, the raw gas will not ignite, if you know the trouble you will not have to be towed home. Disconnect the suction line from the manifold, open the petcocks and expel the excess gasoline and the motor will start. Leave off the suction pipe until you get home and rectify the trouble in the vacuum tank.

Improved Carburetors.

In closing here are a few don'ts: Don't expect to avoid these troubles unless you are willing to strain your gasoline.

Don't expect too much from an old carburetor designed for 76 gasoline when you are using 54. Get a new carburetor.

Don't neglect to have the inlet valves, a snug fit in the cylinder guides, since any unnecessary clearance here will mean the sucking of pure air into the cylinders.

Don't fail to have all gaskets a perfectly airtight fit on all manifold connections. To test these gaskets squirt gasoline on them while the motor is running throttled down. Should there be any leaks the admission of gasoline into the manifold through the defective gasket will immediately change the engine speed.

Don't be too eager to install a device to save money on gasoline consumption until a competent carburetor man is satisfied that the carburetor you have needs this help. A device which may help a poor carburetor will ruin the action of one which is perfectly designed and do more harm than good.

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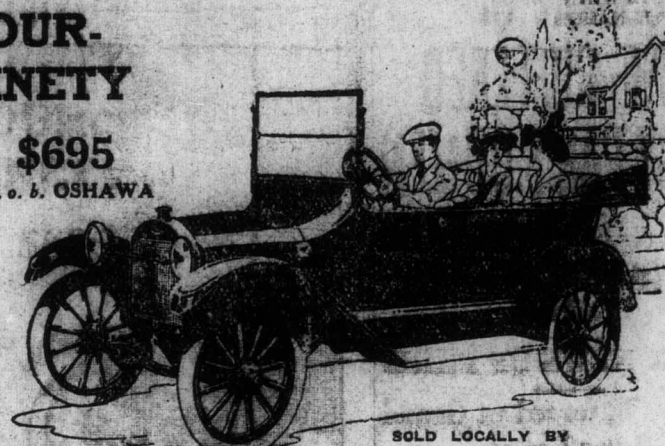
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"It was not the haggardness, it was not the pallor of the wounded and the sick from the battlefield. It was the wan faces of the children, the tear-stained lined faces of the thin and poorly clad mothers that struck me most forcibly. They are fighting the greatest battle ever fought—a battle two and a half years long and against that merciless enemy, starvation."

"When I saw all this, I was mad with the fight once again. The cowardly German has done his worst here. He would have been more merciful had he bayoneted these women and little children. They would have suffered less than they are suffering now. Then the heroism of their deaths would have been heralded far and wide, now they suffer in silence. Do you wonder then, I am mad to get at these Hun again? My business is to fight, yours to send the food you have to these silent sufferers."

Surely no appeal could be stronger than this, Belgium—without sources, without money, without food except that given her—is the home of seven million starving mortals. Will you help? Send your money to the Belgium Relief Committee, 59 St. Peter St., Montreal, or to the branch of the committee nearest you. It is needed to-day.

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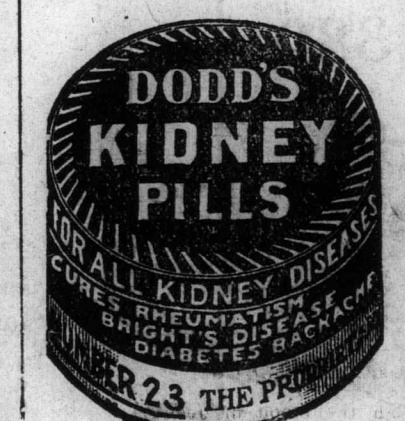
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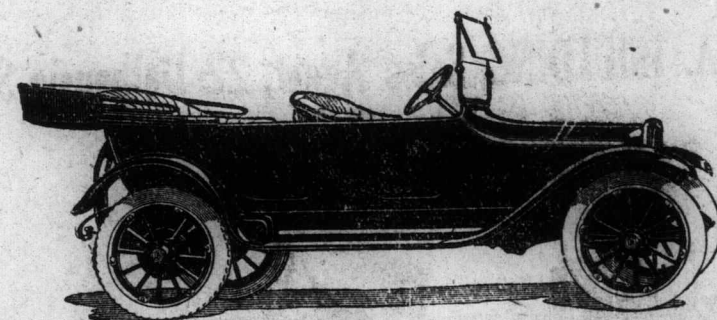
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