

ABILITY TO LOCATE TROUBLE IN AN AUTOMOBILE THAT IS BALKY WILL OFTEN BE THE MEANS OF SAVING MOTORIST TIME AND MONEY

Simple Tests Show Under Which General Head the Ailment Lies

LOOK TO FUEL FIRST BEFORE STARTING TOUR

Lack of Gasoline is a Common Occurrence, Even With Experienced Drivers

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When something goes wrong with the car the motorist who knows how to find the trouble and remedy it is comparatively well off. He will avoid long delays on the road, prevent more serious trouble and save himself money into the bargain.

Motor car troubles may be classified under several heads. First, there are motor ailments. The engine refuses to start or is hard to start; it knocks, misses, lacks power or overheats. Then there are clutch troubles. The clutch may slip, drag, bite or knock. Then again the gears may be hard to shift or they may grind or hum. By classifying these different symptoms it is a comparatively easy matter in most cases to determine just where the trouble lies.

When the engine balks it is almost invariably due to some defect in the ignition or carburetion system. Of course, there is the possibility that some part of the valve mechanism has broken, but this is unusual. The most common starting trouble is lack of gasoline. Sometimes the tank is empty or you may forget to open the valve on the fuel line. Dirt in the feed pipe or in the carburetor or sticking parts might also prevent the flow of gasoline.

The first thing to do is to depress the float. If it is buoyant there is gasoline in the carburetor and you know that you must look for the trouble elsewhere. It may lie in the ignition.

The initial step in testing the ignition is to remove one of the high tension cables and hold one end about a quarter of an inch away from the engine while it is cranked. If a spark jumps between the cable and the engine the ignition system is in good condition, although the spark may perhaps be improperly timed or there may be moisture on the plug point.

If no spark appears when you make the test examine all the connections carefully. Be sure that every terminal is tight and that there are no short circuits. You can do this by thoroughly examining the insulation. If your car is run by battery ignition see whether or not the battery is run down.

Faulty Carburetion

When motors are hard to start that, too, is usually due to faulty carburetion or ignition. Either the mixture is too rich or too lean. Every carburetor is made so that you can temporarily enrich the mixture in order to obtain a few explosions. To do this you flood the carburetor or close the "strangle valve" which shuts off the air. In cold weather or when the car has been standing for some time you may have to prime the cylinders with raw gasoline injected through the jet holes.

Difficulty in starting may arise from a weak or incorrectly timed spark. If you have concluded that the balkiness is due to the ignition, look first at the plugs. Be sure that they are clean; that there are no cracks in the insulation and that the points are the correct distance apart (usually 1/16 inch). Furthermore, the breaker points must make good contact and be in adjustment. For most cars the gap between the points should be 1/16 inch, but this varies. If ignition is caused by a magneto, the magnet should be strong, and if by battery the voltage must not be too low. A temporary short circuit may also make your motor hard to start.

Sticking and jerky running are the result of intermittent and therefore faulty action of carburetion, ignition or valves. Missing may be caused by a flooded carburetor, which in turn may be due to dirt under the float valve or a float soaked with gasoline. Or missing may be caused by dirt in the feed pipe or in the spray nozzle. The various parts of the carburetor may stick. The float mechanism may refuse to work or the strangle valve may lie down. These troubles, too, will make your motor hard to start.

Ignition Troubles

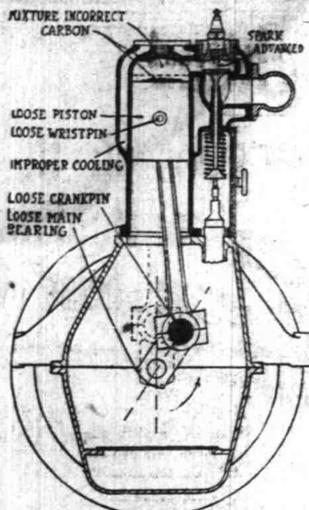
Proper carburetion may also be caused by improper adjustment and leakage of air into the manifold or into the cylinders through badly fitting valve plugs or through worn intake valve stem guides. The valves may stick or the springs may become weak so that they do not close as quickly as they should. If one valve spring is weak the missing will stop when you apply a "pull" to it.

The same ignition troubles which cause hard starting may produce missing. Look for dirty spark plugs, points out of adjustment, cracked porcelain, loose connections and worn insulation.

After your car has been run a few thousand miles it may develop a jerk. This may be traced to worn breaker points. When the motor runs irregularly at low speed look at the valves. They may need grinding.

Lack of power may be due to defective carburetion, ignition, valve action, lubrication or cooling. The first three points have already been covered. The last two are the cause of lack of power through overheating.

Aside from deficiencies in design, which need not be considered here, the causes of overheating are as follows: A loose fan belt, broken pump, dirty water jackets or radiator, stopped up intake or discharge pipes, retarded or too far advanced spark, too rich a mixture, lack of oil, lack of water or carbon deposit.



Knocks are caused by loose main, connecting-rod or wrist-pin bearings, loose pistons and push-rods, broken piston-rings, bent shafts, lack of oil, incorrect mixture, spark advanced too far, and inadequate cooling.

is usually loss of power. Then comes a knock. Causes of Knocks To find out if the trouble lies in the circulating system feel first the top and then the bottom of the radiator. You will find that from the water jackets to the top of the radiator the water will be hot, while the rest of the system will be cold. If your car is cooled by the thermo-siphon system be sure that there is water above the top connection of the radiator; otherwise it will not circulate, but will rapidly boil away.

Knocks are caused by loose parts, but since there is always a certain amount of play in the various components of the engine the immediate cause of the knock may be a too far advanced spark, a too rich or too lean mixture, carbon deposit, lack of oil or lack of water.

As soon as your motor develops a knock investigate it. There is always the danger of its developing into something serious. A loose bearing knock will be particularly noticeable when the motor is slowing down.

Clutch troubles are most frequently due to slipping. The clutch becomes worn and begins to slip, and the more it slips the more it wears. If the surface is faced with leather there is danger of burning it. Slipping may also be due to a weak clutch spring.

If the trouble is caused merely by the normal wear of the surface the remedy is a simple adjustment, although on some cars no adjustment is provided. Clutch facings should be cleaned frequently with kerosene. If the facing is of leather you may have to soften it with neat-foot oil after cleaning. If the clutch drags the trouble is the result of too close an adjustment, and all you need do is to reduce the adjustment. If it engages too suddenly it is adjusted too tightly, or, in the case of a leather faced cone, the leather requires neat-foot oil. The multiple disc type of clutch is usually operated on a half-and-half mixture of kerosene and ordinary engine oil, but this proportion may be varied one way or the other, depending on whether the clutch takes hold too gently or too fiercely.

Starting and Lighting Troubles

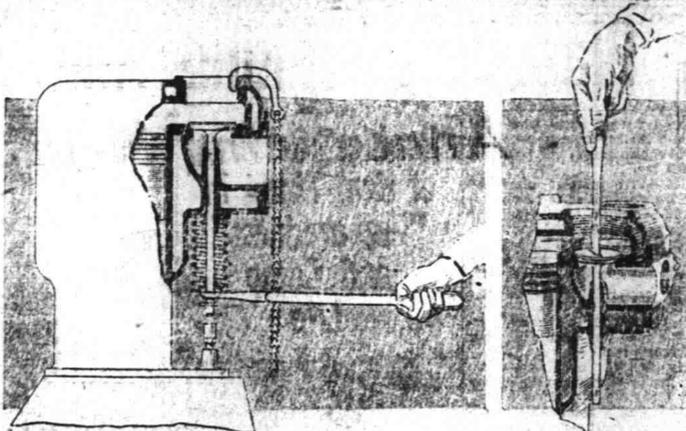
Starting and lighting troubles may be caused by poor connections, defective insulation, abuse of the battery, defective cut-out or voltage regulator. If the starter will not crank the motor trouble may be due to imperfect contact in the switch or a short circuit or a loose connection somewhere. But most likely it is due to a run-down battery.

Test the specific gravity of the electrolyte, and if it is below 1.150 you will know where the fault lies. You should keep the battery properly charged and filled with distilled water at least once a week. If you do a great deal of starting or stopping, with comparatively little running, you are likely to injure the battery. If you have to do this starting and stopping give the battery a chance by running the motor idle above the cut-out closing speed.

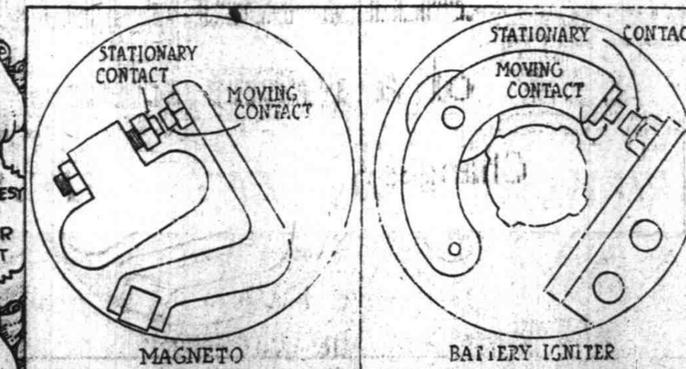
It is not possible here to give absolutely complete directions for finding starting and lighting troubles. You should remember, however, that batteries require careful attention; that the lamp bulbs should be of the proper candle power and voltage; that fuses of correct rating should be used; and that wiring, especially the terminals, should be frequently inspected to see that everything is in good condition. When your lights are too bright the reason may be a loose connection in the circuit, bulbs of lower voltage than that required or improper voltage regulation. The objection to too bright lights is that their life will be greatly shortened. Lights which are too dim may be caused by a slipping generator drive, high mica on the commutator, bulbs of too high voltage and also by run-down batteries.

Noise in Gearbox

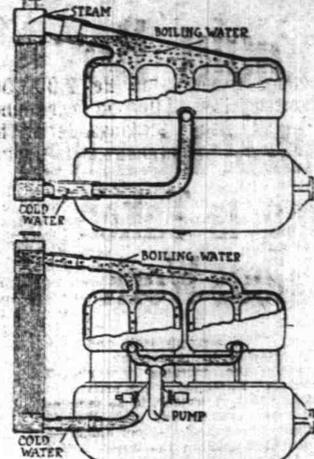
It is not often that you will have trouble with your gearbox. Sometimes difficulty will be experienced in shifting on account of loose bearings. A noisy gearbox is usually an indication of lack of grease. The case should be at least half full. If you fill it too full it probably will develop a humming sound. When the gears are meshed too close together a different sort of hum may be caused. A hum in the rear axle may be caused by the differential gears being meshed too closely together or too far



Left—The first step in removing the valve is to raise the spring and then pull out the pin. Then the valve is pulled out and the spring removed. Right—The valve face is coated with a grinding compound and then it is partially rotated, changing the position every few turns until all marks are removed.

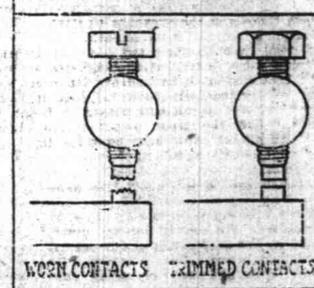


The breaker box on the magneto is usually placed at the rear just below the distributor. The contact points gradually burn away and after a few thousand miles must be filed and adjusted. The correct distance is usually about 1/16 in. The breaker mechanism used with battery ignition is generally placed directly below the distributor. It is similar in design to that employed on a magneto. In fact, in dual systems the same breaker is employed for both magneto and battery current.



In the thermo-siphon system circulation ceases when the level of the water drops below the top connection to the radiator.

Lower—A stoppage of the circulation will quickly be indicated by the fact that the water in the jackets and discharge manifold will be boiling while the rest of the system will be cold.



Appearance of contact points before and after filing. (A fine file should be used.) Although the gap is 1/16 in. for most cars, it varies. If the motor misses at high speed the points are too near. If at low, they are too distant.

PUBLIC DEMANDS SERVICEABLE CAR

Geo. Wells, Manager of Royal Garage, Tells of Desire for Good Machine

"At a time when there seems to be no agreement—no unanimity of opinion—among automobile manufacturers as to which type of car will make the strongest appeal to popular fancy and attract that class of buyers who are always willing to experiment with something new—in blase ignorance of the probable cost of doing

so—the more discriminating buyers seem to appreciate a concern that offers as its chief arguments just service satisfaction and the minimum of maintenance cost," says George Wells, manager of Royal Hawaiian Garage, local distributors of Reo cars.

"Never were so many different types of motors and of motor cars offered to the public as this year, and in spite of that, never has the demand for the sturdy, reliable, conservative Reo been so great as now.

"Never were there so many varieties and combinations of cylinders, and never was the popularity of the Reo so strongly emphasized.

"If we were asked to state what in our opinion is the strongest argument that could be used in favor of the Reo in this year, when the majority of cars have been less than a year in coming from the incubation to the announcement stage, from the birth of

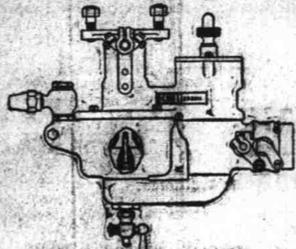
the idea to its debut, we would say that recommendation would be contained in the words: "This is the seventh season during which the Reo has maintained its supremacy among five-passenger motor cars.

"In the midst of sensationalism this great tribute is paid to conservatism, to standardization. The Reo is the acme of standardization.

"In the confusion resulting from announcements of many radically different, radically new, radically experimental types, the intelligent, cautious buyer selects for his a thoroughly tried, thoroughly proven product, the Reo, standard and the acknowledged leader for now seven seasons."

An unidentified woman, about 30 years old, was run down and killed at Forty-first Street and Tenth Avenue by a limousine car. One of the wheels passed over her face.

Stromberg—low mileage cost



Model K, Stromberg Carburetor

For any 4-cylinder automobile or any 4-cylinder marine engine needing a 1-in. carburetor.



The Ford Stromberg

—The Ford sensation of the year—running a Ford car 27 1/2 miles on one gallon of gasoline.

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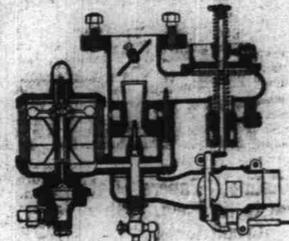
That even, steady purring of the motor, the mileage figures on the speedometer climbing up, the gasoline consumption keeping down, those are the ideal conditions that correct carburetion makes. Thousands of Stromberg users have decided that the Stromberg Carburetor is the most efficient carburetor.

There is another beauty about the STROMBERG carburetor: It is not only efficient but it may be had to fit any style car or engine. It puts maximum efficiency into all of them.

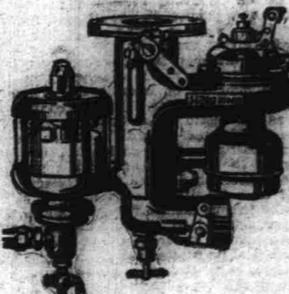
We have made it a point to carry in stock Strombergs to fit every style of car likely to be here in Hawaii. Just ask us what type is best. We can tell you.



Phone 1324



Model G, Stromberg Carburetor
A most popular type in Honolulu.



Model H, Stromberg Carburetor
Non-water jacketed. Sizes, 1 1/2 to 2 1/2.

SMOOT & STEINHAUSER, Ltd.

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COAST HIGHWAY TO BE MARKED BY COMMITTEE

Waddell and Griffin Recommend Road From Canada to Mexico Be Mapped

(By Associated Press)
SAN FRANCISCO, Sept. 23.—A real effort to have the coast highway from Mexico to Canada marked and placed in good shape for tourists by next spring will be undertaken by the International Highway Association, following a report made by Albert Gill Waddell and Jack Griffin, who recently made the run in the famous world's champion no-stop Maxwell.

Secretary Charles Heffer Linderman of the highways body has outlined a plan of action which, it is expected, will be endorsed by every chamber of commerce and commercial and civic body in the cities touched by the coast route. Active in the work will be J. E. Montgomery of the Marshfield Chamber of Commerce, one of the most strenuous and effective good roads advocates in the West.

"The principal thing to overcome is the effect of the number of tales which have been sent broadcast regarding touring conditions on the coast route," said Secretary Linderman. "The report of the Maxwell party shows the coast road in fair shape and of such construction as to permit of easy summer travel.

"Where fast time was desired the Maxwell party on its record run covered the ground at good speed. The old car they employed was by no means a racing machine, and was probably in no better shape than the average standard touring vehicle used by motorists. Yet the only stop for repairs of any sort was to replace a tire that had already seen 12,000 miles of service. This alone shows that the coast route cannot be in such shape as many have been led to believe."

Mr. Montgomery and his associates at Marshfield will lend the International Highways Association every assistance in having the coast route well marked and ready for next year's travel. "The trip of the Maxwell party has opened our eyes to many things," he said. "We knew that the coast road was reported as difficult and even unsafe, but until Messrs. Waddell and Griffin told us of some of their experiences in trying to secure information we were unaware of the dire effect. Slanderous stories had on our share of the motor touring travel."

"In many instances the Maxwell party members, after requesting and being given road information, asked their informant how long it had been since he traveled the particular stretch of road in question. 'Oh, I haven't ever been over it,' was the reply in a score of cases. That's one reason why we don't get our fair share of the tourist business."

Within the next month it is expected that Secretary Linderman will make a trip from Tia Juana to Vancouver, following the route taken by the no-stop Maxwell a few weeks ago. At all points he will be met with enthusiasm, as the Maxwell party has pioneered the way to assure the highway official of a hearty reception.