

**CARBURETOR TROUBLE AND HOW DISCOVERED**

**Systematic Process of Elimination Best Method for Locating It**

In tracing carburetor trouble of any kind, regardless of its nature, time can always be saved by elimination, eliminating the units, which are found when tested, to be all right. In locating carburetor troubles, these can be divided into various groups. These can all be traced by certain symptoms. Thus, too lean a mixture will cause backfiring and stall the engine when the throttle is opened suddenly. Misfiring, when due to carburetion is caused by unequal fuel distribution, while refusal to start is due to a lack of mixture at the carburetor. The above troubles frequently present themselves in cold weather and are more frequent than those mentioned below, as one is always interested in obtaining the maximum economy and likely to favor too lean a mixture, says the Automobile Digest.

**Test While Running**

The first step in shooting carburetor troubles is to test the running and noting its general action to establish the symptoms. To do this testing it is many times necessary to race the engine, but this should be avoided whenever possible, as it will eventually lead to troubles of greater consequence, such as loose bearings, noisy engine, etc. A careful study of the symptoms will readily lead one to the general nature of the trouble and then permit a systematic search for the cause. Careful attention to details while making the test is essential and will in the end result in the definite location and repair of the trouble. Trouble should never be looked for in the carburetion system unless the engine is warm and in good running condition otherwise. Correctness of any carburetor adjustment can be determined by the idling condition of the engine. Too lean a low-speed adjustment will cause the engine to idle poorly and it will often die after running spasmodically. An extremely rich adjustment of the low speed at idling speeds will produce a very pungent odor of the exhaust. Too rich a mixture at high speed produces a black smoke at the exhaust and too lean a mixture will cause backfiring through the carburetor. The high-speed adjustment is correct when the engine faintly indicates backfiring with retarded spark which disappears when the spark is advanced.

**Some Symptoms**

When the above symptoms present themselves, one should not jump at conclusions and assume that the car-

buretor adjustment is at fault, for these conditions can also be set up by mechanical defects. Any restriction of the fuel through the carburetor will cause the backfiring and irregular running; this is also true of air leaks at the manifold connections or valve stems. A leaky float or worn float valve will disturb the adjustment of the mixture, making it more rich and thus cause a sluggish action of the engine. Wear in the valve at the carburetor to the choke or dash control will cause hard starting and a rich mixture.

The carburetor adjustment may be wrong, but this cannot be proven until the engine is running; therefore, the logical point to start with is the fuel supply. Examine the rear tank for gasoline, open the lower drain of the vacuum tank and insert a wire in the opening if gasoline does not flow, as sediment many times will clog this outlet. Next lift the float valve of the carburetor for a few seconds. This systematic examination of these units will prove the presence of fuel in the float chamber and eliminates the possibility of major troubles, permitting an analysis of the minor details.

**Y. W. C. A.**

The national board has announced a Gift Bringing week to be held in Young Women's Christian associations from Dec. 16 to 23. Highland Park is one of over 400 towns and cities, in which the week will be observed, as a recognition of the work now being done, for women and girls, by the Y. W. C. A., both nationally and throughout the world. The work is organized under the direction of a national committee. Special gifts of love, service, and understanding of the world fellowship program, of the Y. W. C. A. are asked of every member of this organization.

A special Christmas service will be held at the headquarters Thursday evening, Dec. 20, at 8 o'clock. Every member is invited to come and see Santa Claus. A delightful program is being planned and the occasion promises to be a real contribution to the Christmas spirit.

The Mothers' club met last Tuesday. Plans were made for the Christmas party. Mrs. Oleson announced a stereopticon talk to be given by Mrs. C. A. Winston of 525 Sheridan road at the next meeting Tuesday, Jan. 8. Mrs. Winston will tell about her personal experience on a Mediterranean tour.

A new class has been added to the Americanization group for those who wish high school English. Splendid work is being done by 40 young men and women who attend.

Mrs. Carl Pfanstiehl gave a very interesting talk to the girls Sunday evening at vesper services. She told the history of some of our most beautiful, sacred hymns. Vesper services are held every Sunday afternoon from 5 to 6 o'clock. This service is the outgrowth of the policy of the board of directors of the Y. W. C. A.—"to associate young women in personal loyalty to Jesus Christ as Saviour and Lord." Every one is invited to these services.

Remember the Glee club Wednesday evenings at 8 o'clock. Those who are not in it are missing some valuable training.

The Girl Reserve clubs are very busy with their bits of service work and their Christmas parties. Plans

are being made for the organization of a new club this week.

The Sunshine club of eighth graders invited the Reserves from Lake Forest to a supper Tuesday night. The guests hiked a part of the distance. Needless to say this group of 30 young people had a good lively time.

The Junior-Senior Reserves will have charge of vespers Dec. 30. They are planning an interesting helpful service.

Some of the people who hollered at the top of their voices when the soldiers went off to the war, may not be heard making any audible sound when the veterans come around looking for work.

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