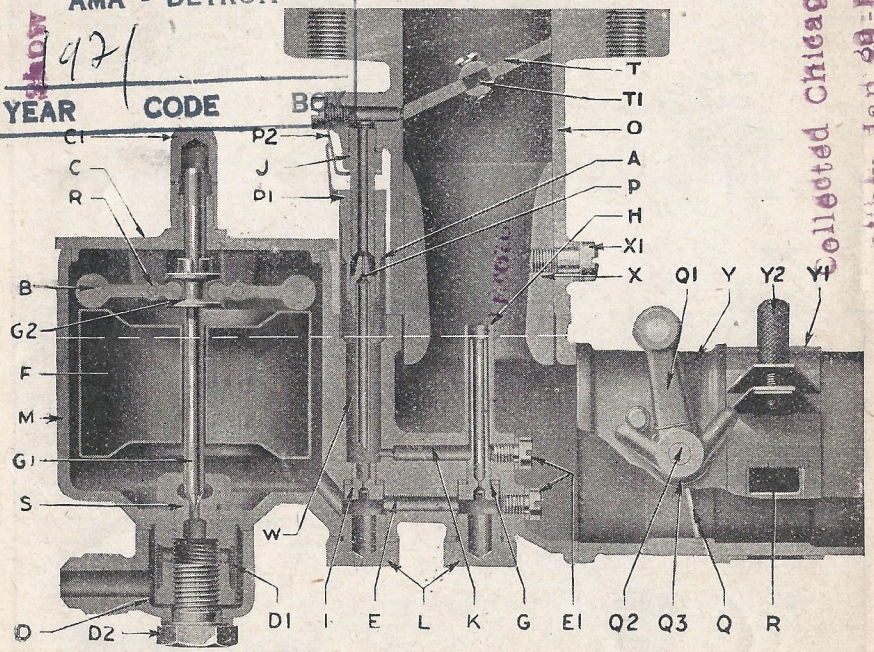
INSTRUCTIONS

The Operation and Care of

Zenith Carburetor

Model T4

The carburetor supplied with this car is manufactured by the Zenith Carburetor Company, Detroit, Michigan. It consists of a float chamber, or bowl; a carbureting chamber, or barrel; a system of nozzles and air passages, and a hot air sleeve.



Gasoline from the tank enters the strainer body D, passes through filter screen D1 and enters the bowl through needle valve seat S. As soon as the gasoline reaches a predetermined height (shown by the horizontal level line) in the bowl, the float, acting through levers B and collar G2, closes the needle valve G1 on its seat S. From the bowl to the motor gasoline flows through three different channels, in various quantities and proportions, according to size of nozzles, speed of the motor and degree of throttle opening.

B

The sizes of the nozzles have been determined at the factory and should not be changed. The only adjustment which might be useful is the Idling Adjustment. When the butterfly throttle valve T is nearly closed and the motor is "turned over" there is a strong suction at the edge of the butterfly, where the idling hole is located. Under this condition little or no fuel is supplied by main jet G or cap jet H. Gasoline from compensating jet I flows into atmospheric well W, the suction then lifting it through idling jet P which has a calibrated measuring hole at its upper end. From this point it is carried into the idling tube J, where it is mixed with the air measured past the conical upper end of the idling jet, and thence through the idling hole into the carburetor barrel and to the motor.

Idling tube J is screwed into a projection from the barrel and its position is thus "fixed." Idling adjusting tube P1, which is permanently assembled to idling jet P, screws onto the idling tube and is screwed up or down to secure the proper adjustment for idling the motor. Screwing down increases the air passage left between the conical upper end of idling jet P and the flared out lower end of idling tube J, admits more air and thus thins or "leans" the mixture. Screwing up reduces the air passage and thus "richens" the mixture. The adjustment is locked by the idling spring P2 which engages the knurled surface of the idling adjusting tube.

STARTING THE ENGINE—Open the throttle "just a crack" and close the strangler valve Q tight. Thus will create a very strong suction on the idling hole and will raise the gasoline. Immediately the motor starts, open the strangler valve. Strangler spring Q3 normally holds the strangler valve in open, or running, position.

HOT AND COLD WEATHER—Hot air taken from around the exhaust pipe is drawn into the carburetor from the hot air stove through tubing to the carburetor hot air sleeve Y. This sleeve is provided with a band Y1 which can be rotated about the sleeve, opening to any desired degree the two rectangular cold air openings R, and which can be locked in any position by a knurled screw and nut Y2. By this means the temperature of the air entering the carburetor can be maintained at the same point irrespective of the outside temperature, and thus does away with the necessity of changing the carburetor jets to take care of the different requirements of winter and summer driving.

CARE OF THE CARBURETOR—Keeping the carburetor clean (free from dirt and water) is the only care necessary. This should be attended to periodically by removing the filter plug D2, dropping union body D and cleaning filter screen D1. Lower plugs L should be removed at the same time and any accumulation of sediment cleaned out. If necessary, the carburetor may be entirely removed from the motor, taken apart and replaced without fear of changing the adjustment. **Each part has its place and can go in no other.**

For more detailed information about the carburetor, address the Zenith Carburetor Company, Detroit, Michigan, asking for "The Compound Nozzle Explained" and "Instruction Book," mentioning the make, model and serial number of your car.