Care and Adjustment
Of the Holley Model "NH" Carburetor

(From an original Holley Document, ca 1921)

Once properly set there are no parts of the Holley carburetor to get out of adjustment. Compensation is secured automatically and without the use of moving parts, by the distinctive arrangement of the fuel passages with reference to the air passages. The needle valve in the fuel orifice is the only adjustment. and the effect of a change in its setting is manifest over the entire range of motor operation.

The quality of gasoline has been declining steadily for several years, making it increasingly difficult to vaporize. For this reason it is advisable that the carburetor needle setting be obtained with the motor thoroughly warmed up. To start when motor is warm, the throttle should be open very little beyond the idling position. The motor will automatically draw a slightly over-rich priming charge, with usually an immediate start. If it should not immediately start, however, close the strangling shutter (NH-14-X) while the motor is being turned over once or twice, and then release. For power and economical running the strangling shutter should be in the wide-open position after the motor has warmed up.

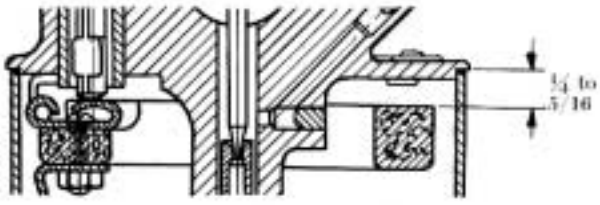
To start when motor is cold, as in winter weather, open the throttle but very little beyond the idling position; then close the strangling shutter (NH-14-X), and keep it closed while the motor is being turned over once or twice; then gradually open strangling shutter, being careful not to open it too soon, as in doing so the flow of fuel is decreased and the motor will stop. While the motor is warming up, it will be necessary to keep the strangling shutter partly closed, but after the motor has warmed up be sure that the strangling shutter is wide open.

To adjust the carburetor: The needle valve (NH-48-X), located on the top of the carburetor, is the only adjustment, and usually requires from 7/8 to 1-1/8 turns; this, however, may vary somewhat for different motors, so, in preparing for starting, the needle valve should first he turned clockwise until it can be felt to come into light contact with its seat and then turned counter-clockwise one and one-quarter turns**,** which position should give a supply of gasoline sufficient for starting and a little in excess of that required for good operation. Now turn over the motor, and after it has started allow it to become thoroughly warmed up and then make the needle setting. A proper needle setting is one that will give the least fuel consistent with proper acceleration without missing or backfiring.

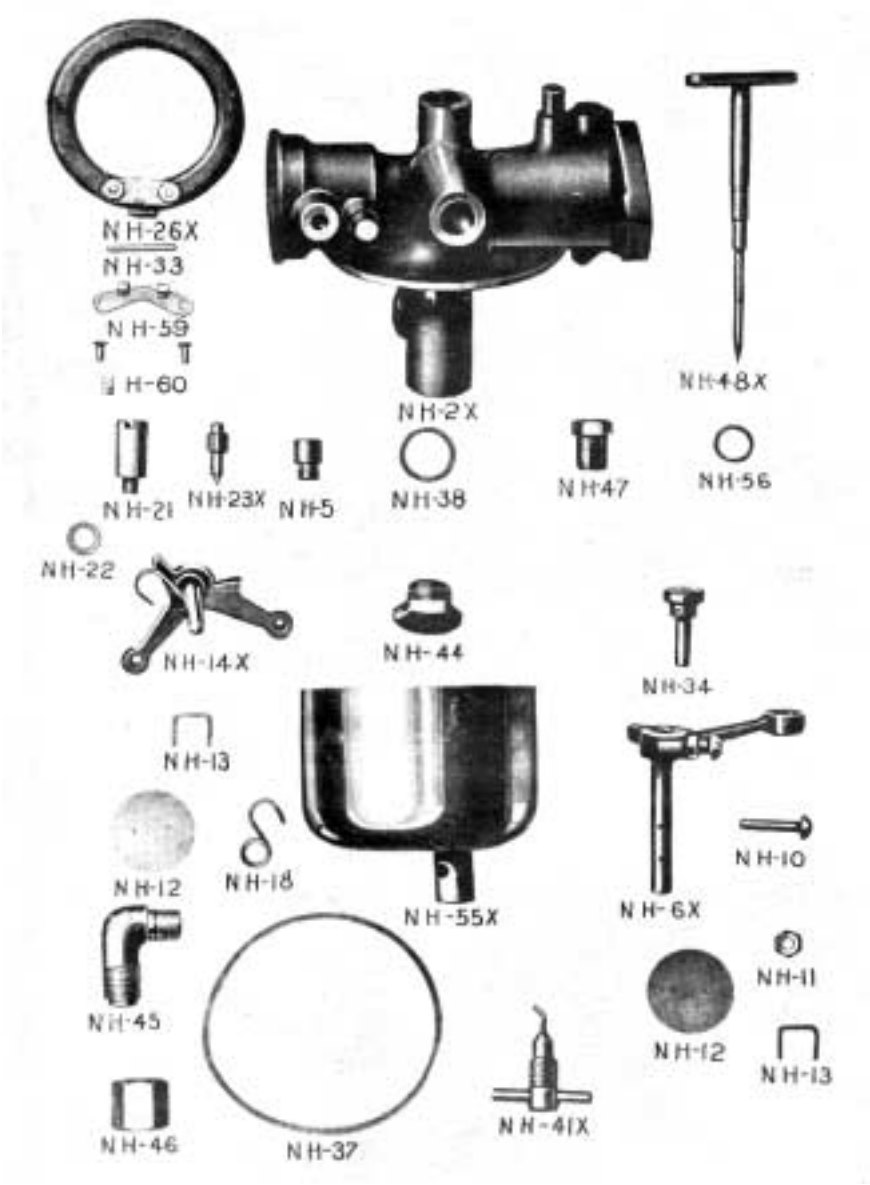
To secure a proper needle setting (NH-48-X), proceed as follows: With the throttle control slightly open and the spark lever set at a little below turn the needle (NH-48-X) clockwise to cut down the gasoline supply, until the motor begins to slow down, miss or backfire. Then gradually increase the gasoline supply by turning the adjusting needle (NH-48-X) very slowly counter-clockwise until the motor picks up and runs regularly without missing, with spark lever about half-way down on the quadrant. To determine the final adjustment, open the hand throttle or accelerator while motor is idling. If the motor backfires or pops, increase the gasoline supply very slightly. Repeat the operation until the motor does not pop or backfire. Study carefully the effect of the gasoline adjustment and remember that the Holley, once properly set, automatically adjusts itself properly to all speeds and loads. If, after the final adjustment is secured, the motor should stop when the spark and throttle are fully retarded, or if the motor should run too fast when the hand throttle is at its lowest, position, adjustment is necessary. Directions for which are as follows: Loosen lock nut (NH-11) on the throttle adjusting screw (NH-10). Place the hand throttle in slowest position. If the motor runs too fast the adjusting screw (NH-10) should be unscrewed to allow the throttle to close more, and if too slow it should be screwed in. After a proper setting has been secured be sure to tighten the lock nut (NH-11).

Occasionally drain the gasoline out of the carburetor by means of the drain valve (NH-41-X). It is put there for that purpose and if used occasionally, will keep the carburetor free from water and dirt, thereby reducing the possibility of trouble**.**

The fuel level is correctly set as the carburetor comes from the factory, However, should it become necessary at any time to check up on the fuel level. the sketch below will be of assistance. (1/4" is the distance to float, not the fuel level.)



To secure the correct fuel level, the float lever should be bent so the distance from upper edge of float to under machined edge of mixer-chamber is ¼ to 5/16" as shown in the drawing above. For metal floats, distance should be 3/16 to 1/4 inches.



Holley NH carburetor components, typical 1920-1922. Later 1922 to 1925 were similar except for the fuel bowl which then had the drain in the center, screwing into the casting and replacing the NH-44 retaining screw. The 1922 and later models also had a brass float instead of the cork. In 1925 the adjusting screw had a universal joint to allow adjustment from the choke rod as in the 1926-27 models. The model NH was discontinued as regular equipment during the year 1926, and was replaced with the Holley Vaporizer (which used many of the same parts in the bowl section).