

cover from the carburetor, draw out the wire holding the lever weight axles and remove the needle valve entirely from the cover.

Take a knife, or any sharp instrument, and mark around the needle valve at the lower side of the collar (the side towards the point). This will show the original setting of the collar in case it is found necessary to bring it back to this position.

To lower the level, scratch a mark on the needle valve $\frac{1}{32}$ of an inch above the collar.

Provide a block of hard wood through which a hole slightly larger than the largest diameter of the needle valve has been drilled. Put the needle valve into this, with the point down.

Now, with a flame soften the solder holding the needle valve collar on the valve, first wetting it with soldering acid or paste, and when the valve is free in the collar tap it down to the upper mark, or $\frac{1}{32}$ of an inch. Allow it to cool, thus again setting the solder, and replace in the float cover. This will lower the level.

If further lowering is found necessary repeat the above, but never go further than $\frac{1}{32}$ of an inch at a time.

Next, replace the cover on the carburetor, press the needle valve down tight against its seat with the finger and make a line around it at the upper edge of the boss on the cover that takes the thread of the dust cap. Remove the cover from the carburetor and with the fingers bring the mark on the valve back to the above position and see what position the lever weights are set. If they are not horizontal it means that you have gone too far, that the travel of the valve will be insufficient, and that the float mechanism will not function properly. This travel should not be less than $\frac{1}{8}$ of an inch.

To raise the level, move the collar towards the point of the needle valve.

To do this grip the needle valve between two blocks of wood in a vise. Provide a piece of copper or brass tubing which can be slipped over the upper end of the valve and against the top of the collar. Tap lightly on this tube to move the collar and be very careful not to mar or bend the needle valve.

Never bend the lever weights to change the level, and do not put additional gaskets under the needle valve seat.

Before reassembling the float chamber cover, see that the counter-weight levers swing freely and do not bind in the needle valve collar.

How to Remove the Idling Jet—Model O-4 Carburetor

Remove the carburetor from the motor.