SBJ: WALBRO TAMPER-RESISTANT ADJUSTMENT TOOLS

Due to EPA and California Air Resources Board emissions regulations, Walbro is no longer allowed to produce or sell carburetor adjustment tools. Carburetor adjustment tools continue to be available; however, they are only available through authorized OE dealers or from the Original Engine Manufacturers.

Walbro's official disclaimer reads as follows:

A Walbro tamper-resistant adjustment system features integrated components that collectively provide tamper resistance according to regulatory requirements. A Walbro tamper proof adjustment system requires special "Tools" intended for trained and facilitated service technicians to make adjustments for service purposes. A Walbro tamper-resistant adjustment system also prevents end users from adjusting the low speed and /or high speed needles in such a way that exhaust emission compliance is not attained. In order to adjust a carburetor using a Walbro tamper-resistant adjustment system, engine manufacturers are offered special tools for sale by Walbro. Maintaining control of the distribution of these tools or similar tools is critical to assure the continued certification by CARB and/or EPA (or other regulatory agencies) of a Walbro tamper proof adjustment system.

Walbro's 500-505 tool kit as well as all other individual tools are still available through your nearest Walbro Central Warehouse Distributor.

PROPER IDLE AND HIGH SPEED NEEDLE ADJUSTMENTS

What was once a standard one turn setting for both the idle and high speed needle on our diaphragm carburetors has evolved somewhat over the years. With the emphasis on more lean and clean running engines, our carburetors are required to meet standard parameters. These leaner and cleaner engine requirements have required calibration changes that affect idle and high speed needle tips, finer threads, tighter tolerances to gaskets and diaphragms. Needle settings can now range between 1 ¼ turns to 4 turns open after seating.

The procedure has always been that Walbro pre set the needles to a specific needle setting before they leave our factory for the OE manufacturer. Once the engine manufacturer gets the carburetors, they in turn fine tune the carburetor to meet the final engine performance specification. Therefore, it's not feasible for Walbro to know or publish suggested needle settings. The best suggestion today is for the dealer or technician to review the engine service manual or contact the engine manufacturer for the specific needle settings. Due to EPA and C.A.R.B regulations, the adjustment needles on many of our carburetors are not easily accessible because of the limiter caps placed over the needles or the needle head profile. EPA and C.A.R.B. regulations require that any tools for adjustments be made available by the engine manufacturer and not by Walbro.

METERING LEVER SETTING

Setting of the metering lever height for a diaphragm carburetor is one most important adjustment to be made in a diaphragm carburetor. The metering lever's functionality starts with the atmospheric pressure entering from the vent hole in the metering cover. This atmospheric pressure forces the metering diaphragm assembly down while the low pressure (vacuum) under the metering diaphragm helps to draw it down onto the lever. The lever is depressed, over rides the metering spring and lifts the inlet needle off the inlet seat to allow the fuel mix to enter into the metering chamber of the carburetor. The correct metering lever setting is critical. A lever set too high can cause the metering diaphragm assembly to contact the lever too early and create a rich condition. If the lever is set too low, a lean condition can occur due to the length of travel the metering diaphragm assembly has to make to contact the lever. Our C-1022 Service Manual shows you and walks you through the proper procedure for setting the metering lever height by using the Walbro 500-13 metering lever gauge.