INSTRUCTIONS FOR O.S. TYPE 2B, 2CA, 2CB & 2H AUTOMATIC CARBURETTOR

This new carburettor incorporates an automatic mixture control device which ensures that the engine receives a correctly balanced mixture of fuel and air at all throttle settings. The device progressively reduces the effective size of the fuel jet orifice as the throttle is closed, thereby preventing the engine from running too rich at low speeds. This also means that an air bleed is no longer required and, with its elimination, maximum suction is maintained at the fuel jet at all times. This is a most important factor where manoeuvres have to be executed at low engine speeds and through wide variations of fuel level within the fuel tank.

Under average operating conditions, the carburettor will normally function satisfactorily as factory set. Simply start the engine in the normal way and adjust the needle-valve for maximum r.p.m. On closing the throttle, the engine should idle at between 2,500 and 3,000 r.p.m. and also run steadily at all intermediate speeds. However, different fuels and/or climatic conditions, may require minor readjustments for optimum results.

If mixture control screw is moved unnecessarily, observe the re-setting as follows:

1. Unscrew the throttle rotor set screw and set the rotor at a position where the rotor hole is completely closed from the carburettor body hole.
2. With the rotor set as above, slowly screw-in the mixture control screw until it reaches the maximum point. Avoid trying to force it in abruptly. Otherwise, the tapered tip of the mixture control screw ruins the fuel jet hole. Unscrew the mixture control screw one turn from the maximum point.
3. Re-set the rotor so that the rotor hole opens approximately 0.5 mm (0.02 in.) from the fully closed position. Screw-in the throttle rotor set screw and fix it with lock-nut.
4. Do the final setting of the mixture control screw in accordance with the carburettor adjustment stated below.

ADJUSTING THE CARBURETTOR

Three adjustable controls are provided on this carburettor:

1. The Needle Valve (located on left-hand side of carburettor).
2. The Mixture Control Screw (located on right-hand side).
3. The Throttle Rotor Set-Screw (angled at rear of body).

The Needle Valve is used in the same way as on all model engines, i.e., for adjusting the high-speed mixture strength. Start the engine and, with the throttle fully open, gradually close the Needle-Valve until it is running at its maximum speed. Caution: Do not close the throttle too "lean" a setting as this will cause the engine to overheat and slow up.
Set the Needle-Valve very slightly to the "rich" side of the peak r.p.m. setting. Make sure that the engine is fully "broken-in" (about 1 hour of total running time in short runs) before operating it continuously at full throttle.

II. The Mixture Control Screw is for adjusting fuel mixture strength at part-throttle and idling speeds. Having set the Needle-Valve as detailed above, close the throttle. The engine should idle continuously and steadily without further adjustment.

(a) If, however, the engine begins to idle unevenly, open the throttle. If the engine then hesitates before picking up to full speed, it is probable that the idling mixture is too rich. Check this by closing the throttle again and letting the engine idle for a little longer before again opening up. If the engine now puffs out a good deal of smoke and hesitates or even stops, it will be necessary to close the Mixture Control Screw. Do this by turning it clockwise. About 5 ~ 10° turn should be sufficient.

(b) If instead of being set too rich, the Mixture Control Screw is set too lean, the engine will stop when the throttle is closed, or will lose speed while idling and then cut-out abruptly (without smoking) when the throttle is opened again. In this case, turn the Mixture Control Screw about 5 ~ 10° turn counter-clockwise.

SUBSEQUENT OPERATION AND CARE

Once the required settings have been established it should be unnecessary to alter them. Such slight needle-valve alterations as may be necessary to cope with differences in atmospheric conditions or fuels, do not affect the other two adjustments. The engine should start readily with the throttle in the idle position.

It is important that the carburettor operates under clean conditions. Make sure that fuel is properly filtered before use. We advise fitting a filter to your fuel can and another filter in the delivery tube between tank and engine, to reduce the risk of the carburettor jet becoming partially clogged and upsetting running adjustments.

If dust or dirt is stuck in the carburettor causing it not to function properly, dismantle and clean the carburettor in the following way:

1) Loosen the lock-nut and take off the throttle rotor set-screw.
2) Pull off the rotor from the carburettor body. Be careful not to lose the rotor spring set in the depth of the rotor.
3) Get the needle out of the needle valve.
4) Screw out the nozzle-nut and push the nozzle out of the carburettor body from the side where the rotor was set.
5) Take off the fuel inlet.
6) Fit the notch at the nozzle's largest diameter with the notch inside of the carburettor body.

The specification is subject to alteration for improvement without notice.

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<th>PARTS LIST</th>
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<tr>
<td>R/C Needle valve assembly</td>
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<td>Rotor stop set-screw assembly</td>
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<td>Throttle lever</td>
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