

# MULTI-CARB SYNCRO

No matter who you are or how many times you have adjusted multiple carburetor set ups, you have NEVER gotten it perfect without the use of the *DVORAK MACHINE* Multiple Carburetor Synchronizer.

OBJECTIVE: What your new Synchronizer does is equalize the amount of air being pulled through the venturies and throttle blades between both carburetors being tested. This process allows the engine idle speed to be reduced to new lows without engine stall or loading. It also idles and revs cleanly and the off-idle to floorboard is outstanding. It is also possible to discover some problems in the carburetors, like throttle shaft sealing and sticky linkage. Having one carburetor "leading" the other makes for sloppy off-idle as well as lazy part throttle. When it's RIGHT, you feel it, hear it and even smell it.

OPERATION: The first thing to do is to get the **DVORAK SYNCHRONIZER** within its operating range for the engine being tested. After you adjust the glass tube so that it is vertical, place the synchronizer on either carburetor and adjust the synchronizer such that at regular idle speed you place the "float" roughly in the center of the glass. This is done by screwing the *air flow control valve* in or out (located in the center of the synchronizer) and observing the float move up and down in the graduated tube. The valve allows more or less air through the air horn. In some extreme situations, (extra high idle speed) it may be necessary to drill some holes close to the top to allow more air through and bring the float down the tube for closer calibration. This is rare however. **The procedure now is to simply adjust BOTH carburetor idle screws (NOT THE MIXTURE SCREWS) as you move back and forth between the two carburetors until they both read exactly the same float level in the glass tube. EXACT! It doesn't matter what the reading is, only that they are exact.**

**BOTH CARBS MUST BE UNHOOKED FROM ANY LINKAGE WHILE TESTS AND ADJUSTMENTS ARE BEING MADE. THE LINKAGE CAN NOT INFLUENCE THE CARBURETORS IN ANY WAY.**

**AFTER THE ADJUSTMENTS ARE MADE, THE LINKAGE MAY BE CAREFULLY INSTALLED, ADJUSTING THE LINKAGE AS YOU GO SO THAT THEY JUST "SNAP" ON OR "SLIP" ON WITHOUT INFLUENCING THE ADJUSTMENT OF THE FLOAT. YOU SHOULD DOUBLE CHECK THE ADJUSTMENT AFTER THE LINKAGE HAS BEEN RE-INSTALLED. IT SHOULD BE IDENTICAL.**

**TIPS:**

**ALWAYS HAVE THROTTLE RETURN SPRINGS ON BOTH CARBURETORS OF SUFFICIENT STIFFNESS TO RETURN CARB TO EXACT IDLE INSTANTLY!**

**NEVER LET THE THROTTLE CABLE CONTROL IDLE SPEED. THIS IS A FUNCTION OF THE IDLE SCREWS ONLY.**

**TIPS:** While the engine is running and before each check of the float, rev up slightly the carb to be tested (by itself, it won't hurt anything) and let the carb throttle adjusting arm SNAP back against the stop screw. Check the repeatability. You might find something sticking or not closing properly. You will read that as a higher than expected float level and a faster idle.

**YOU MAY BE READING SLIGHTLY CRACKED SECONDARY BLADES WHICH WILL AFFECT THE READING, ESPECIALLY ON HOLLEYS. VISUALLY INSPECT THE BLADE TO BORE CONTACT WITH A LIGHT AND MANUALLY (WITH THE ENGINE RUNNING AND THE PISTON STEADY IN THE GLASS TUBE) CLOSE THE SECONDARY BLADES BY MOVING THE LINKAGE THAT CONNECTS THE PRIMARY TO THE SECONDARY. THIS IS A MAJOR SOURCE OF TROUBLE.**

**USE A NICE FRESH GASKET BEFORE YOU DO THE ADJUSTMENT. LET WARM TO OPERATING TEMPERATURE AND RE-TIGHTEN CARBURETOR NUTS BEFORE ADJUSTING.**

**BUY YOURSELF A STACK OF CARBURETOR GASKETS AND NEVER RE-USE THEM ONCE THE CARB HAS BEEN REMOVED FOR ANY REASON. IT IS IMPOSSIBLE TO PLACE THE CARB ON THE GASKET EXACTLY THE SAME PLACE IT WAS BEFORE AND THE PATTERN OF WELLS AND HOLES WILL OVERLAP AND POSSIBLY BE THE SOURCE OF INTERNAL AIR LEAK.**

**GET IN THE HABIT OF SLIDING THE CARBURETOR BACK AGAINST THE REAR STUDS (OR FRONT, OR SIDE....) IT DOESN'T MATTER AS LONG AS YOU DO THE SAME THING EVERY TIME. THAT MAKES THE LINKAGE ALWAYS CORRECT LENGTH AND WILL CHANGE THE ADJUSTMENT YOU JUST MADE, THE LEAST.\***

**\*YOU SHOULD FIND WHERE THE CARB IS BEST PLACED TO ALIGN THE THROTTLE BORES WITH THE BORES IN THE MANIFOLD. (AND THE GASKET). YOU WILL FIND THAT SLIDING THE CARBS TO STOP AGAINST THE STUDS IN AT LEAST ONE DIRECTION, WILL MAKE A GOOD ALIGNMENT**