

PROCEDURES FOR MECHANICAL AND PNEUMATIC SYNCHRONIZATION OF THE 912 CARBS:

Mechanical Synch of the Carburetors – Do this First

Bowden cables adjustment screws (cable housing adjuster) should be centered, but not mandatory. By having the Bowden cable adjustments in the middle of their adjustment range will give you a little more adjustment when you get to that part of the procedure.

Adjust throttle cables so that both carb throttle arms move simultaneously to both extremes (open and closed).

Ensure Idle Mixture Control Screw is properly set (on the bottom of each carb). Screw them all the way in then back each off 1½ turns.

Reverse the throttle arm springs so they pull toward “closed” throttle.

Unscrew the Idle Stop Screw. Make sure the throttle is closed in the cockpit. With a .004” feeler gauge between the screw and the arm tighten the screw until it just touches. There should be minimal friction on the feeler gauge.

Remove the feeler gauge and screw the Idle Stop Screw in 1½ turns.

Return springs to original configuration (i.e., pulling the throttle arms toward the “open position”).

Connect the Pneumatic Synch Tool

It is imperative to have the engine up to the operating temperature. Remove one end of the Compensating Tube between the two intake manifolds.

Hook up gauges. Secure one end of a gauge to the rubber end of the compensating tube and the other to the gauge to the 90 degree fitting coming out of the intake manifold where the compensating tube hose was removed. Secure both attachments with a hose clamps to prevent leaks. Leaks will affect the results of your sync process.

“On Idle” Synch

Bring the cockpit throttle lever to idle stop. Ideal idle RPM is approximately 1800rpm. Adjust idle setting to this value.

If the idle is high (say, 1900), adjust the carb with the lower value it is getting more fuel. Retard the Idle Set Screw until the vacuum readings are the same.

If idle is low (say, 1700), adjust the carb with the higher value it is getting less fuel. Advance the Idle Set Screw until the vacuum readings are the same.

Needles should now match.

“Off Idle” Synch

If while running the engine the gauge needles shake then you will need to install or close down the inline needle valves until the gauge needles stop shaking and pulsating. Needles will likely show different vacuum readings.

Run engine at 2800-3000 RPM. Do the “Off Idle” synchronizations at this speed.

Any further adjustments will be made only at the Bowden cable adjustment screws, do not touch the idle set screws.

Note*

The gauge/carb with the lower reading is getting more fuel and the gauge/carb with the higher reading is getting less fuel.

Compare vacuum gauge readings . Adjust the carb with the LOWER vacuum reading (getting more fuel). Adjust the Bowden cable screw outward (toward reducing the fuel) so the throttle arm backs off (decreased RPM) to bring vacuum reading to a higher value.

When vacuum readings are equal, lock it down.

If vacuum readings are the same, bring throttle lever back to idle stop, then advance it again to 3000. Verify vacuum readings are still the same for both carbs. If readings are different adjust the carb's Bowden cable with the lowest gauge reading to match the higher gauge. Once the gauges are aligned move the throttle back to idle and back to 3000 rpm a time or two to make sure the carbs stay equal.

Throttle to idle. Re-adjust the Idle Stop Screw if necessary at this point. You are now done. Remove the gauges and hook the carb compensating tube back up.