

## Balancing the Butterflies

### Step 1

#### **Starting engine for the first time**

When idle voltage & fuel pressure have been set, you can attempt to start the engine. You may have to hold the throttle to keep engine running.

To get the engine to run on its own you can screw the throttle stop clockwise slightly (Ensuring you do not go above the 0.36v & don't go more than approx 2 units higher or 1 unit lower than the idle Kg/Ph setting for your kit) until engine runs on its own, even if it's not smoothly.

### Step 2

#### **Balancing the throttle bodies to read the same**

*Engine revs may increase during this stage, unscrew the throttle stop to decrease revs (you can re set pot voltage in next step) to keep it within 2 units above required Kg/Ph setting for your kit.*

You now need to balance the butterflies using the syncrometer. Start by reading airflow through no.3 body, Adjust No.4 to read the same, then No.2 & then No.1.

When all 4 throttles read the same amount of airflow they are balanced. You can now do up the locknuts on the grub screws. Re check airflow & re adjust as necessary.



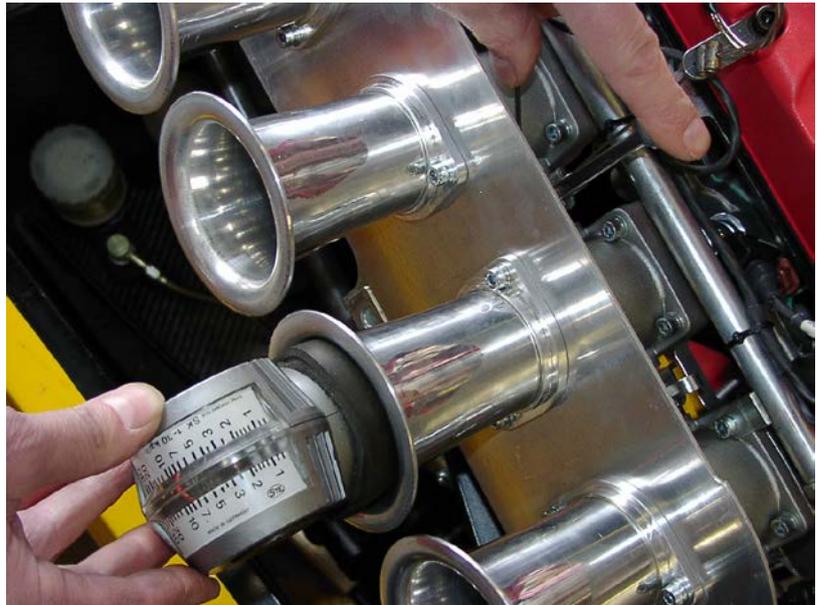
Reading Air flow through No.3 body.



Reading Air flow through No.4 body.



Reading Air flow through No.2 body.



Reading Air flow through No.1 body.



### **Step 3**

#### **Fine tuning airflow & throttle potentiometer**

*You will have to do this step a few times to get everything right. – It's worthwhile spending extra time & taking care on this stage because if everything is not correct then engine will not idle properly*

With the engine still running, butterflies balanced insert the syncrometer on No.3 body & set the correct amount of Kg/Ph airflow for your kit (by adjusting throttle stop screw). Once you have the correct amount of Kg/Ph, re set the throttle potentiometer to read 0.36v.

Keep checking & adjusting until Kg/Ph airflow & throttle potentiometer are correct for your kit. (RPM will be correct when Kg/Ph is set)

Tighten the throttle potentiometer clamp so that it can't move. – DO NOT OVERTIGHTEN AS THIS WILL DAMAGE POTENTIOMETER

Re check all readings again & re adjust as necessary.



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