



r-stroke from the UK - circa 1980s had its rotor replaced with a reliable modern during its recent refurbishment



typical two-needle carb

until the engine becomes responsive. If you are happy with the throttling performance of the Nitromethane content to improve things.

er booster but it also makes the engine less fussy on needle adjustment. I use two engines, large or small - two or four - to avoid issues surrounding Nitromethane reliability improvements and corrosion of Methanol!

- it should but I'll wager that many will mess up - have a good flight and then revert to the old 'needle fiddling' habits prior to starting in my Laser 300 V which has two home brew radial that has five of the gas those without problems. Certainly I'd like to constantly readjust things, which is a trouble go wrong!

vice is to set the needles on your model periodically reset at roughly the same time as the vehicle that you drove to the patch - stick to my method - all future starts only!

review for you in the shape of the CMS 120 on the heels of the excellent 120 we have in the interim, take a look at the vintage and identify it for me. Emails as usual to rcmw@rcmws.com will enjoy a speedy reply as per.

COPY THIS TO YOUR FLIGHT BOX, CLUB NOTICE BOARD ETC. ASSUMING THAT YOUR GLOW BATTERY - YOUR PLUG - YOUR FUEL AND YOUR ENGINE ARE ALL GOOD!

SETTING A TWO-NEEDLE CARBURETTOR

PART ONE - MAIN NEEDLE ADJUSTMENT

- STEP 1 - Charge the tank to about one third full (only)
- STEP 2 - Open the throttle wide and close the main needle completely
- STEP 3 - Open the main needle three whole turns from closed
- STEP 4 - Place a finger over intake and with a gloved hand rotate the propeller 6 times
- STEP 5 - Remove finger and close throttle to one third open
- STEP 6 - Connect glow battery
- STEP 7 - Start engine - either by hand or with starter
- STEP 8 - Gently (important!) open throttle to flat out setting
- STEP 9 - Remove glow clip (with extreme care)
- STEP 10 - Hold nose of model up at 60 degrees or so with propeller arc well clear
- STEP 11 - Close main needle until engine rpm's peak
- STEP 12 - Open main needle one or two clicks from absolute peak rpm
- STEP 13 - **DO NOT TOUCH THE MAIN NEEDLE SETTING FROM THIS JUNCTURE**

PART TWO - IDLE NEEDLE ADJUSTMENT

- STEP 14 - Close throttle to one quarter (i.e. fast idle)
- STEP 15 - OPEN secondary needle one quarter turn
- STEP 16 - WAIT for 5 seconds and observe results
- STEP 17 - If idle rpm SLOWS, close secondary needle back to where it was
- STEP 18 - CLOSE secondary needle one further quarter turn
- STEP 19 - WAIT 5 seconds and observe results
- STEP 20 - If idle rpm speeds up then you are moving in the right direction - opening or closing the secondary needle slightly until idle speed peaks is your goal
- STEP 21 - Open throttle wide and check response
- STEP 23 - If engine hesitates open secondary needle by a click or two
- STEP 24 - If engine splutters and throws fuel droplets from the intake, close secondary needle by a click or two
- STEP 25 - Open throttle wide and recheck main needle setting with nose of the model raised

DO'S AND DON'TS

- DO NOT TOUCH THE MAIN NEEDLE SETTING ANYTHING OTHER THAN COMPLETELY WIDE OPEN FULL THROTTLE!** (This is THE most common mistake)
- DO NOT** make engine adjustments with the glow clip connected
- DO** set the engine up with the tank only ONE THIRD full (to represent an 'average')
- DO NOT** adjust the engine with the propeller arc in line with your body (safety first)
- DO** all FULL POWER adjustments with the engine with the model's nose HELD ALOFT at about 60 degrees
- DO NOT** move the main needle after flight to close the fuel supply off undoing all the good work - DISCONNECT the FUEL FEED PIPE
- DO** FILTER your fuel as it enters and particularly as it EXITS your fuel caddy
- DO NOT** assume that if a plug glows (or is new) that it must be good - it could well be faulty and if you are having problems - SUSPECT that it is
- DO** make sure that your plumbing isn't leaking (bubbles in the fuel supply)
- DO** keep your fuel caddy SCRUPULOUSLY clean
- DO NOT** leave raw fuel in the engine - carb and tank
- DO** use the recommended plug
- DO NOT** change the settings from flight to flight - nor even week to week - once set the chance is that the engine will remain set! (this is the SECOND most common mistake)
- DO** mount the tank securely in foam supports