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Author

Fercho

Member
Member # 25

Topic: CARBURETOR ASSEMBLY INSTRUCTIONS

 posted 03-20-2003 03:18 AM     “ ”

It is very important to have clean parts and work on a clean enviroment.

ONLY USE GENUINE MIKUNI PARTS

If your carbs are dirty, disassembled them and clean all of the parts in warm so water. You can completely wash the body of the carbs, soap & brush them, dry them with a blow gun.

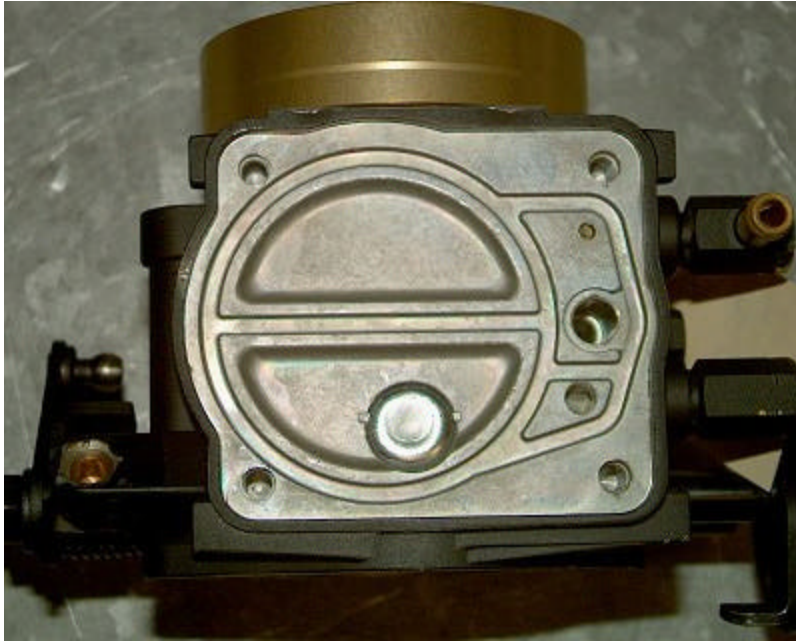
If any of the mounting surfaces have corrosion use a soft wire brush and clean w soaping or sand lightly using 600 grit sand paper. If any of the o-rings have buil up use WD-40 to soften it and dissolve it then soap.

Check your strainer for debri, backflush it and blow gently with compressed air. Replace if necessary

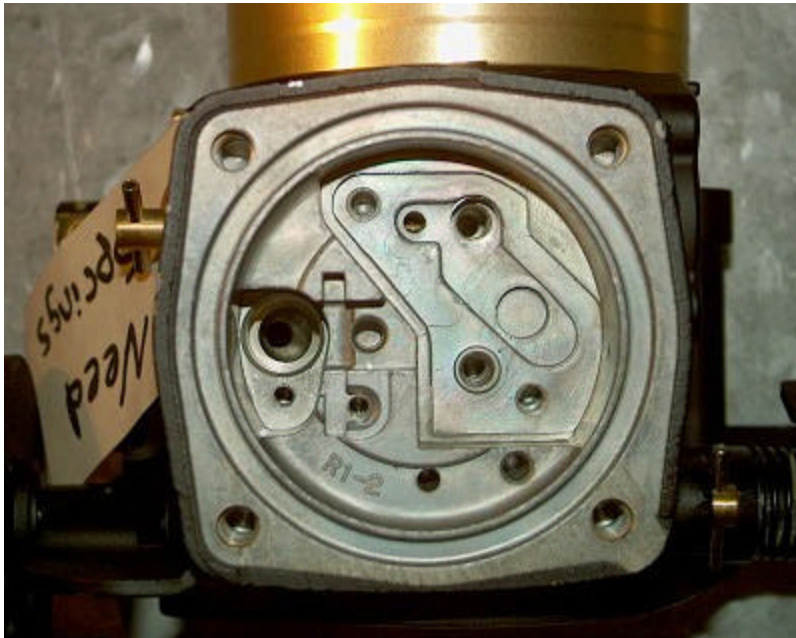




Tools Needed



Pump Side

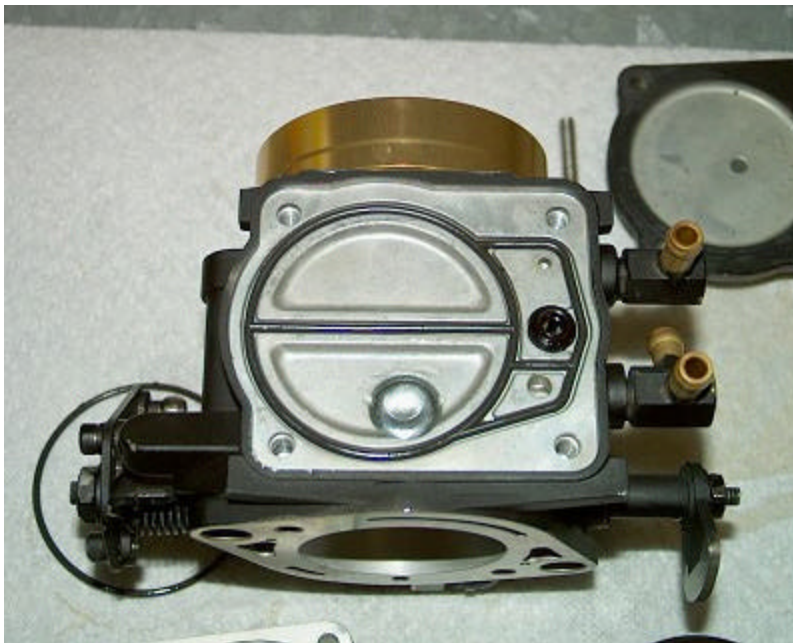


Jetting & Metering Side



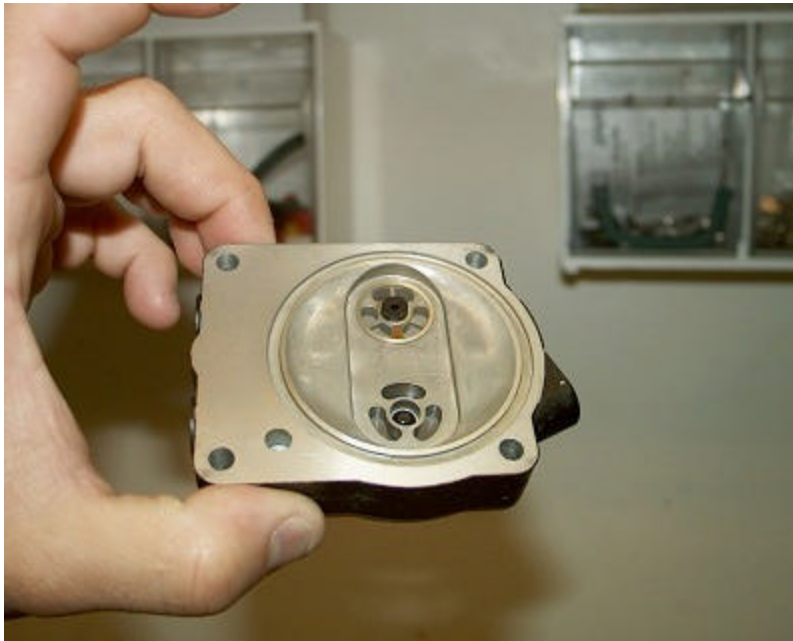


Components of pump side, strainer, o-rings, diaphragms, pump body and cover



Install corresponding o-ring in correct position and strainer





Install clear diaphragm, inspect checkvalves for creases (if you see one replace check valve accordingly). Next install rubber diaphragm. Note that diaphragms have corresponding cut-outs for the strainer, fuel inlet (larger hole below the strainer

built-in return line restrictor (tiny hole above strainer).
Align cut-outs of pump body with strainer.

[06-06-2003, 06:53 PM: Message edited by: Fercho]

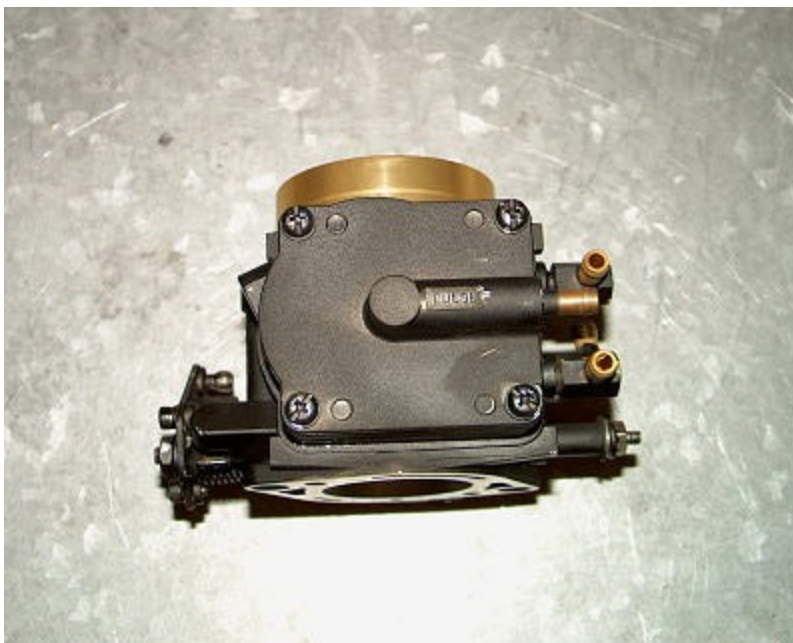
Fernando

"SUPPORT YOUR TROOPS AND REMEMBER WHAT MEMORIAL AND VETERAN'S DAY IS ALL ABOUT "

Posts: 5102 | From: Sugar Land, Texas | Registered: Dec 2000 | IP: [Logged](#)

Fercho
Member
Member # 25

 posted 03-20-2003 03:31 AM     " "



Install o-ring, cover and bolts.

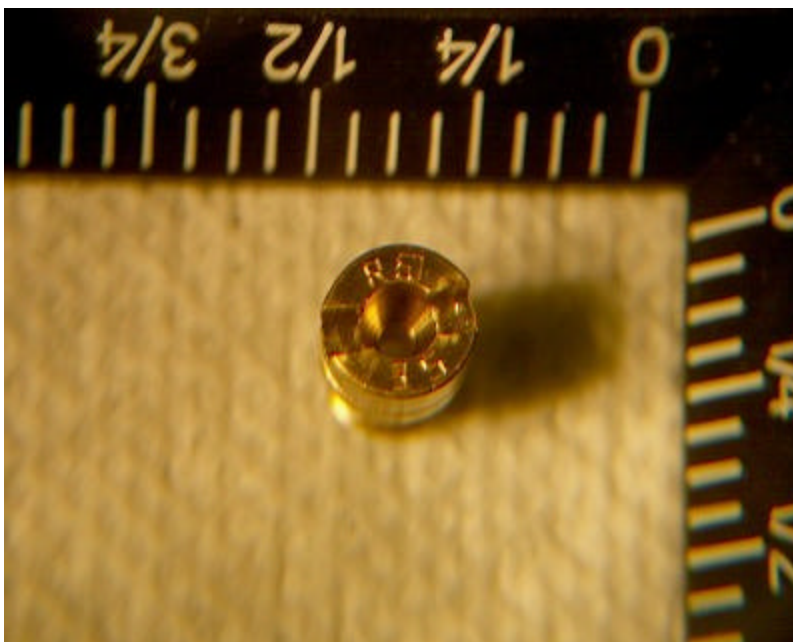
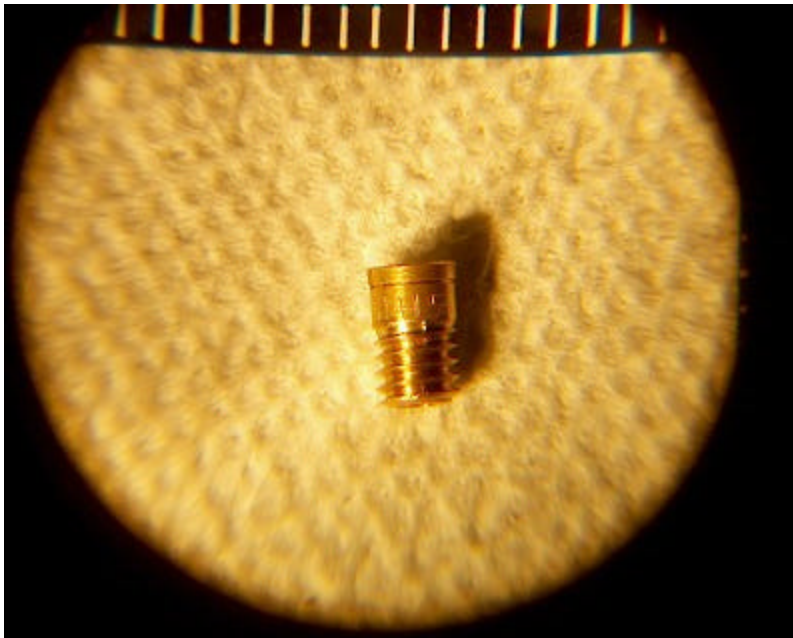
NOTE THAT ALL OF THE PUMP GASKETS BODY AND COVER CAN ONLY BE INSTALLED ONE WAY SINCE THE ENDS ARE NOT SIMETRICAL



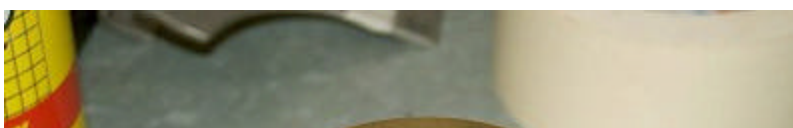


Jet & metering side components

spring, needle & seat, pilot Jet, main Jet, metering block, seal and bolts, N/S retaining horseshoe clip, N/S arm, Diaphragm, cover and bolts



Confirm jet sizes using a magnifying lense. Pilot jets have their size engraved on their side and main jets have them on top. In this case 115 Pilots, 135 Mains.





Install the jets, seal, and needle/seat. Lubricate the o-ring on the seat with WD-40 prior to pressing it in.

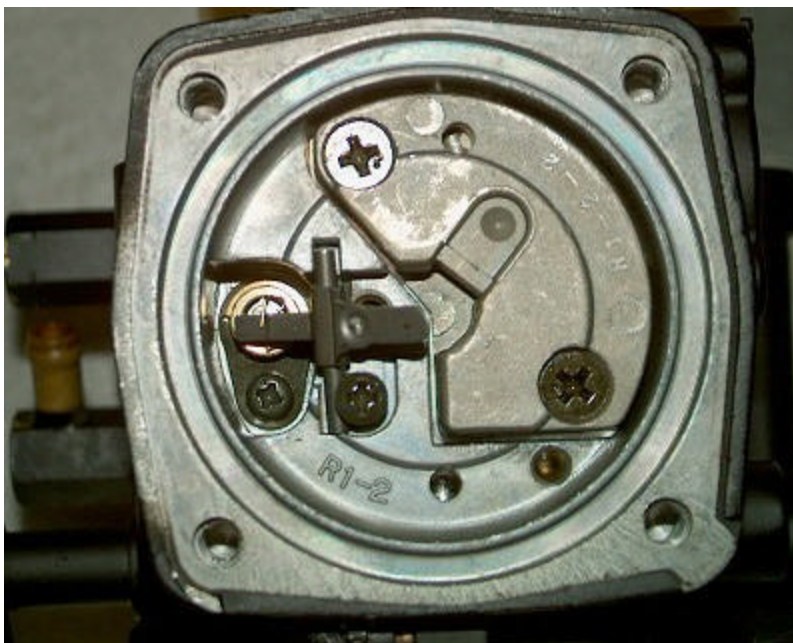


Drop horsehoe retaining clip and use a magnetized screw driver to set screw in.





Install spring and thread-in arm retaining screw a couple of turns to get it starte



Slide flat end under the needle wire and set the round end over the spring, slide crosspin in the groove and drive in screw to secure

[06-06-2003, 06:42 PM: Message edited by: Fercho]

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Posts: 5102 | From: Sugar Land, Texas | Registered: Dec 2000 | IP: [Logged](#)

Fercho
Member
Member # 25

posted 03-20-2003 03:48 AM





Use a blade to check arm elevation against body. It should be perfectly flush



Identify your low and high speed T -handles



Drop in the springs and spray some WD -40 to make the screwing of the T -handl

easy.



Put some waterproof grease in the O-ring and above the neck. This will help pre corrosion from forming between the aluminum body and brass T, specially on th high speed T-handles.

THIS IS VERY IMPORTANT. Some people have lost carbs due to corrosion in this area.

If any of the mounting surfaces have corrosion use some 600 grit sand paper ar carefully remove it.







[06-06-2003, 06:44 PM: Message edited by: Fercho]

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Posts: **5102** | From: **Sugar Land, Texas** | Registered: **Dec 2000** | IP: [Logged](#)

Fercho
Member
Member # 25

 posted 03-20-2003 03:56 AM      “ ”

Checking Pop -Off and synchronizing the same pressure in the carbs is critical.

Once you have established that the needle arms are at the correct height you w need to ensure that all of them have the same pressure. Yamaha specs are with /+ 5 PSI. I like to be -/+ 1 PSI.

First you will need a Pop -Off gauge

Riva carries a Mikuni brand which are available in 0-30, 0-60 or 0-100 PSI for th average tuner. Most likely you will use a 0-60 gauge.



For those who tune several carbs the Mikuni pop-off tool is a pain. I came across home made gauge that Yamaha had in their manual and also added a valve to check leakage within the carb.

Here it is.....

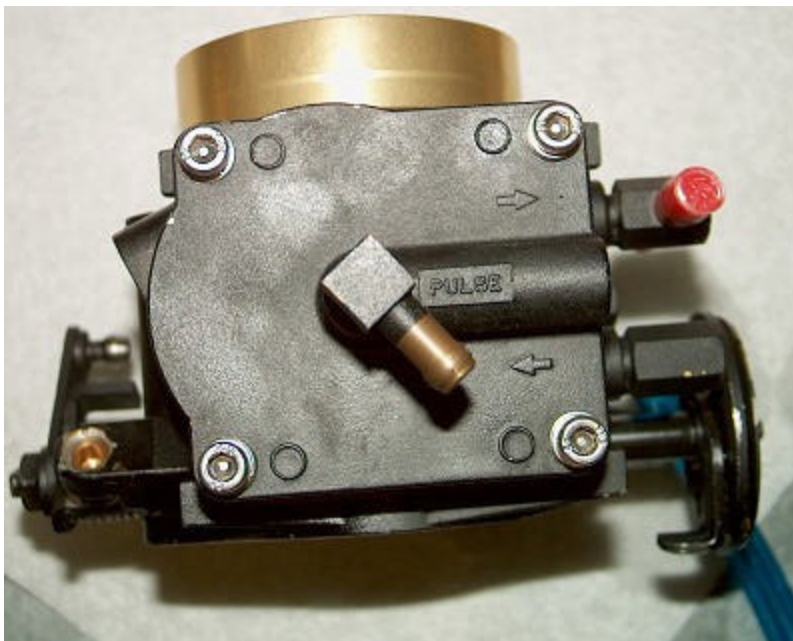


Regulator valve 1/4x1/8, 0-60 PSI gauge, 1/4 NPT to 1/4 barb fitting, 1/4 ball valve, 1 1/8 NPT plug, 1 foot 1/4 fuel hose and compressor fitting.





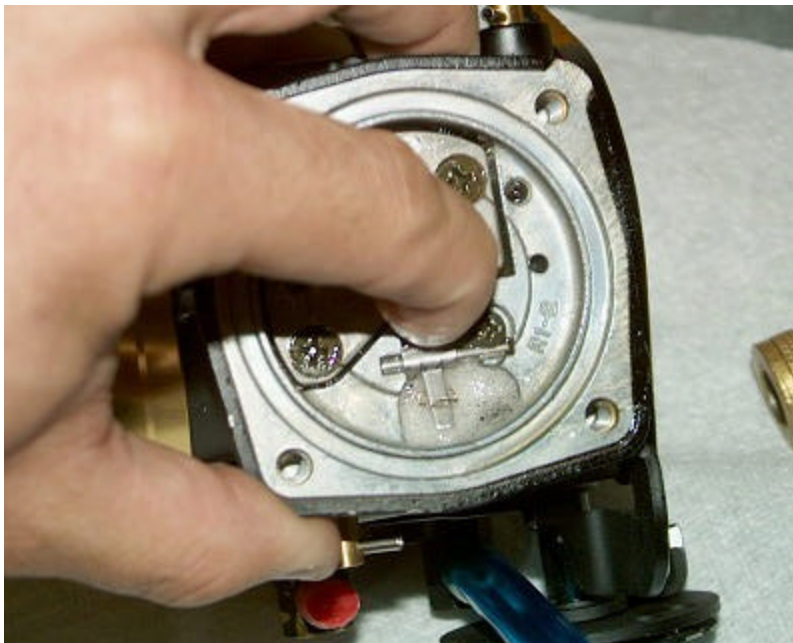
Here it is all put together.



To check pop-off you need to locate the fuel in and return fuel barb inlets and outlets in the carb. There are arrows on the pump side clearly indicating this. The arrows pointing towards the carbs are the in and the ones pointing out..Well you can figure that one out.

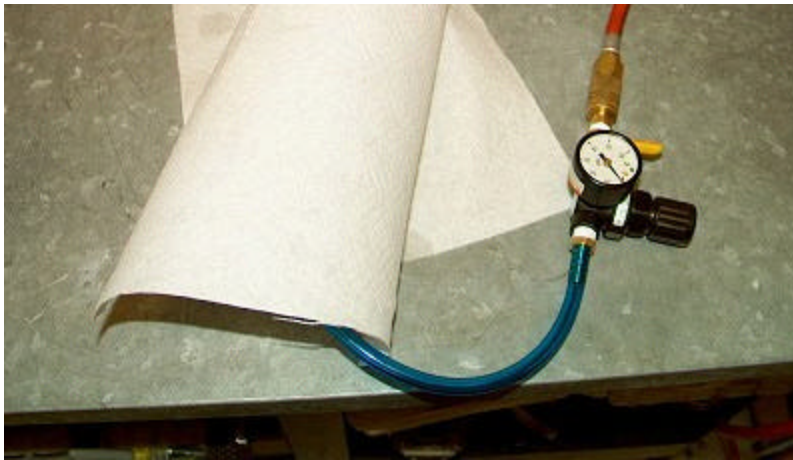


You will need to cap(plug) all of the barbed fittings except one of the in barbs w you will connect the pop-off gauge. Solid 1/4 plugs that will retain pressure with leakage are mandatory.



Place your carbs in a position where the needle valve is facing up, Spray some \ 40 in the valve, open it manually to allow the lubricant to reach the bottom of th needle. It is important to keep the needle valve wet at all times.





Place a paper towel ontop of the carbs to prevent the oil from being sprayed into your face when the pop-off goes off.

[06-06-2003, 06:46 PM: Message edited by: Fercho]

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Posts: 5102 | From: Sugar Land, Texas | Registered: Dec 2000 | IP: [Logged](#)

Fercho  posted 03-20-2003 03:56 AM     “ ”

Member
 Member
 # 25



With the combination of 1.5 N/S and 115 gram springs I am aiming for 45 to 50 PSI.

Connect your compressor hose to the pop-off gauge tool and with the ball valve open (yell handle valve) turn the regulator valve dial clockwise until you achive a pressure of 40 PSI (my case).



Close the ball valve and the carbs should retain the pressure. If you see that the pressure drops, the needle valve is leaking, the pump side gaskets and o-rings are not sealing well the caps on the barbed fittings are not properly sealing. You can confirm this by building up pressure and spraying some WD40 around these areas and look for bubbles.

If you use a Mikuni gauge all you have to do is connect it, pump and see if it retains the pressure prior to reaching the estimated PSI when it pops.

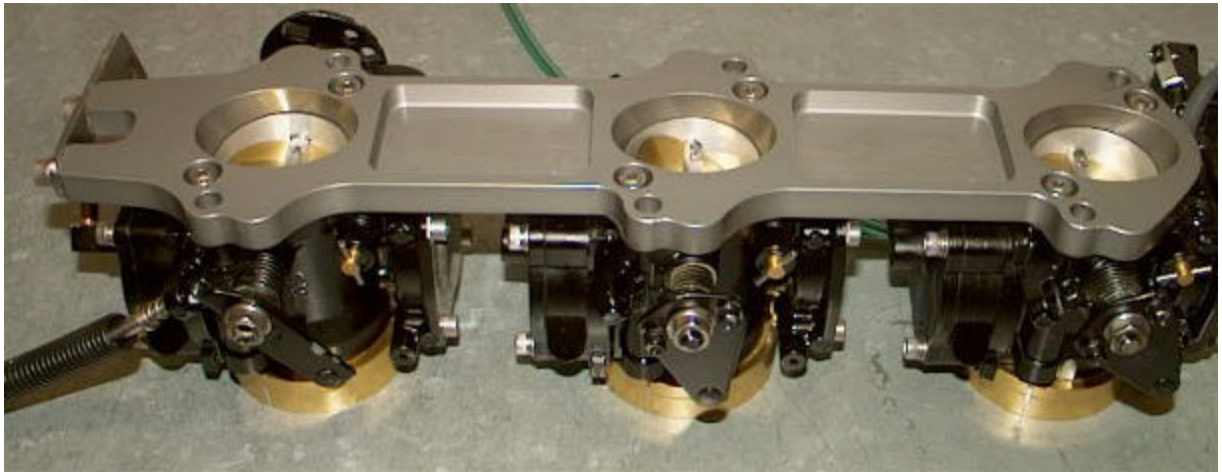


Once you have established a leak free carb continue turning the regulator counter clock w/ slowly (or pumping if you are using Mikuni gauge) until you hear the needle pop-off.

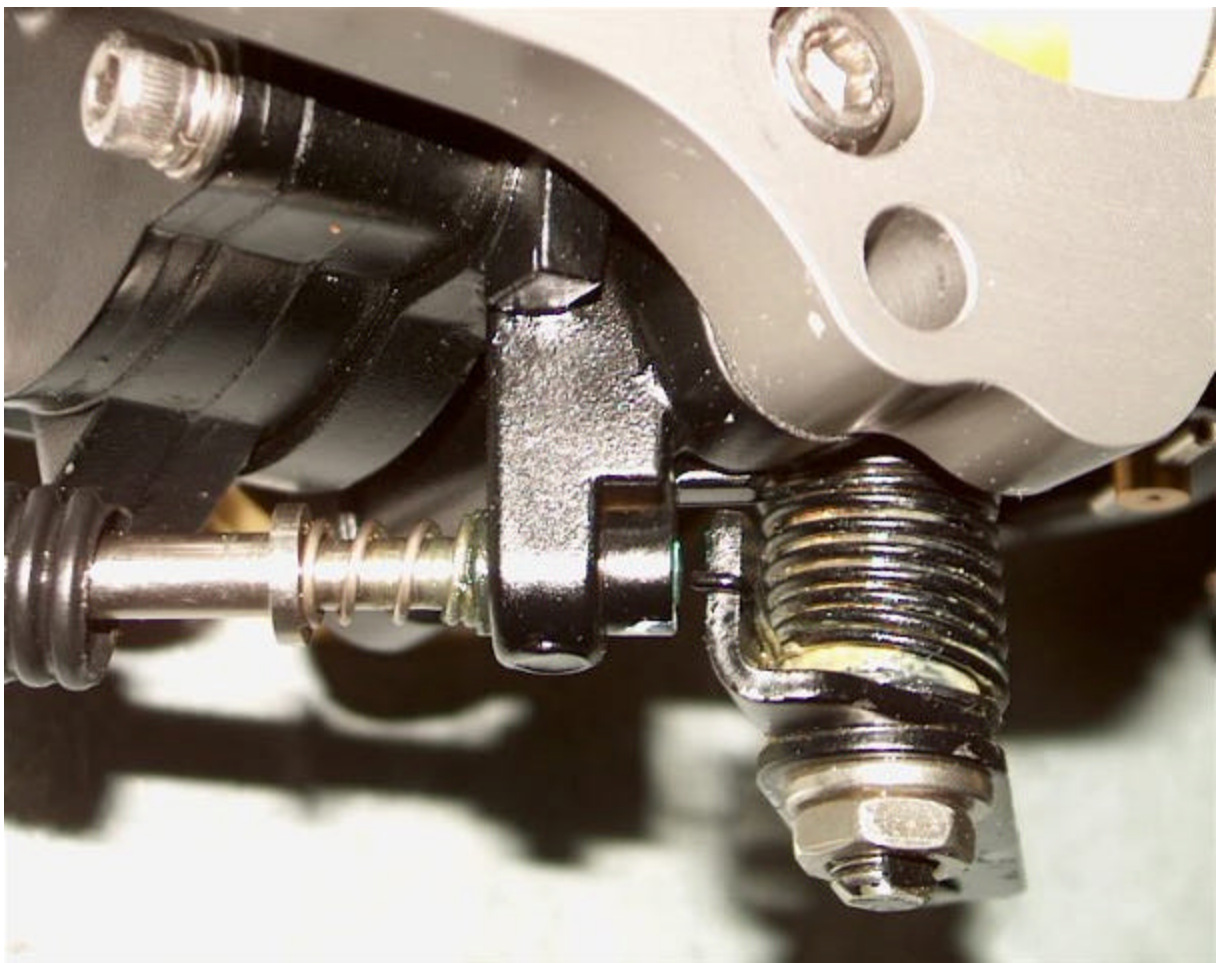
Repeat this process 2 more times and record the pop-off pressure.

Once you have check all 3 carbs match the ones with the highest readings to the one with

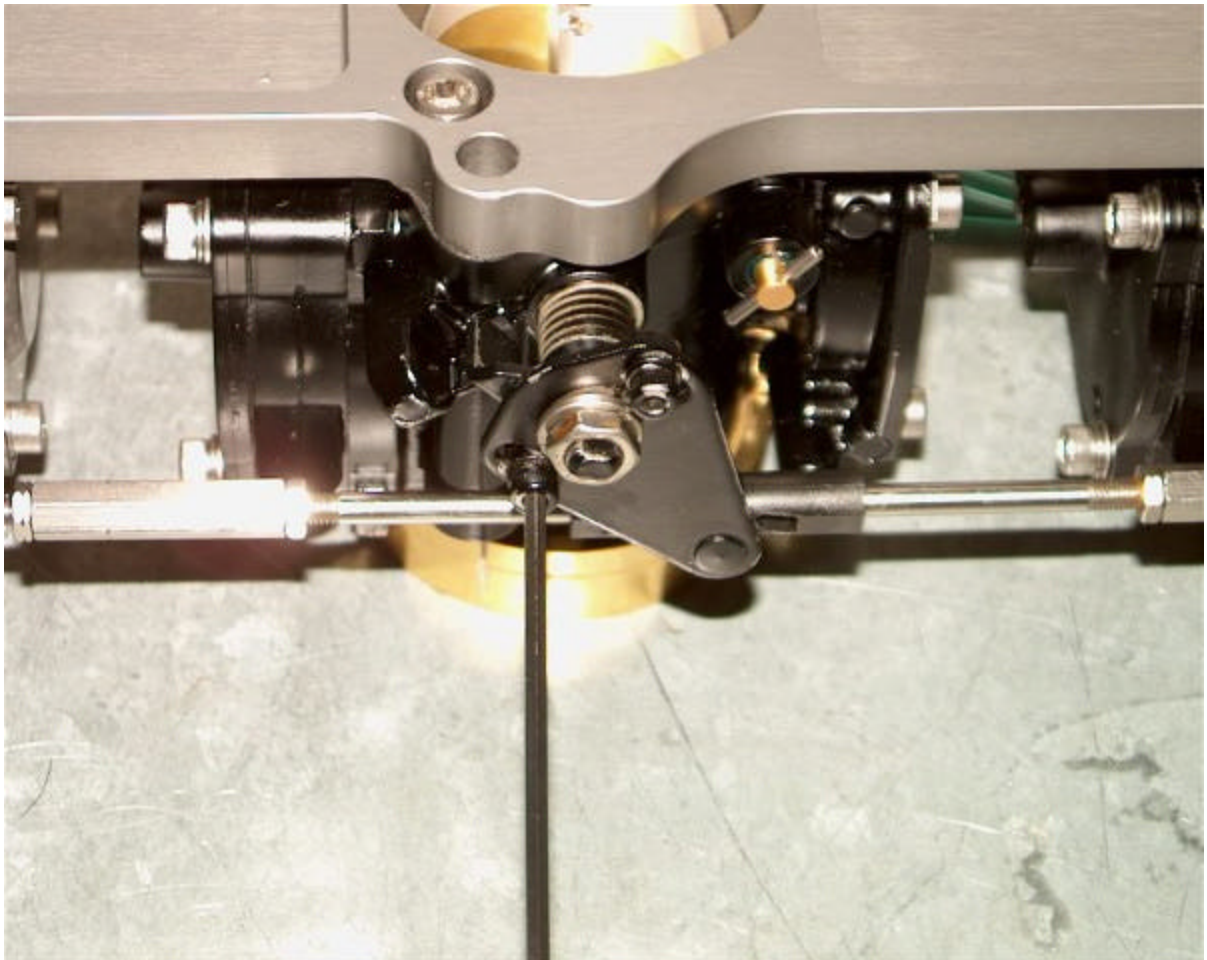
lowest. I do this by cutting 1/4 coil at the time out of the pop-off spring. DO NOT STRETCH THE SPRING.



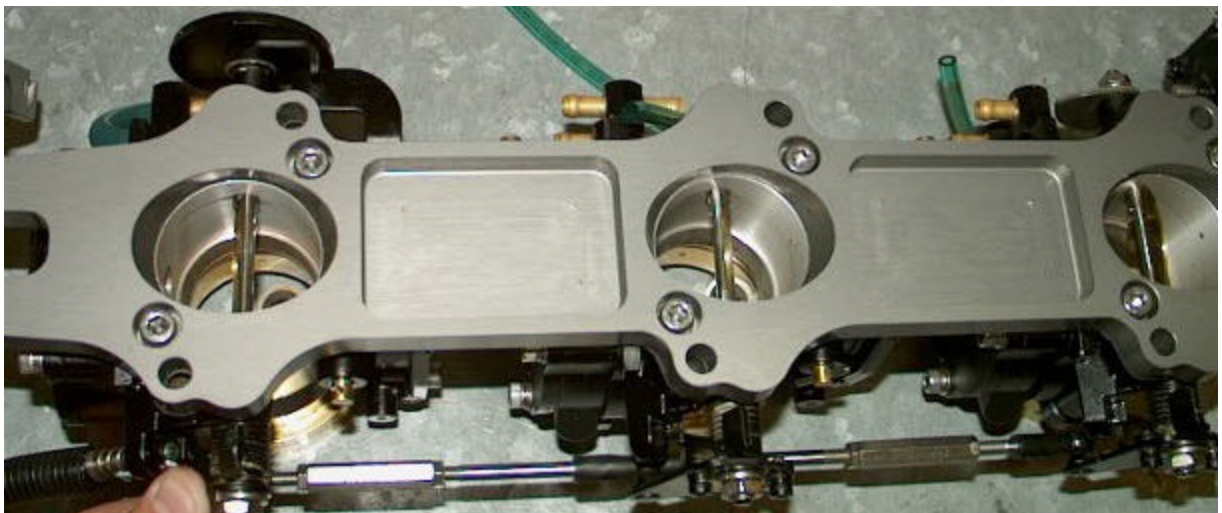
Once you have checked and synch the pop-off. Install the carbs on the manifold. Clean the mounting surfaces of the manifold and carb with acetone. If I re-use the gaskets I usually wash them with a bit of soap and hot water to remove any oil residue and try to get their spongy feeling back for better sealing. Remember to use red loctite on the 6 bolts that mount the carbs to the manifold and torque to 9 pounds



Synch of the throttle butterflies is critical for a clean hole shot. The first step is to remove idle adjuster screw or back it out until it does not touch the throttle arm any longer. This is for carb 1 only. You can now install the throttle linkage that connects all 3 carbs. Working with your carbs upside down makes the job easier



The next step is to loosen up the two allen head bolts that are located on the linkage side of carbs 2 and 3. Half a turn loose is more than enough.

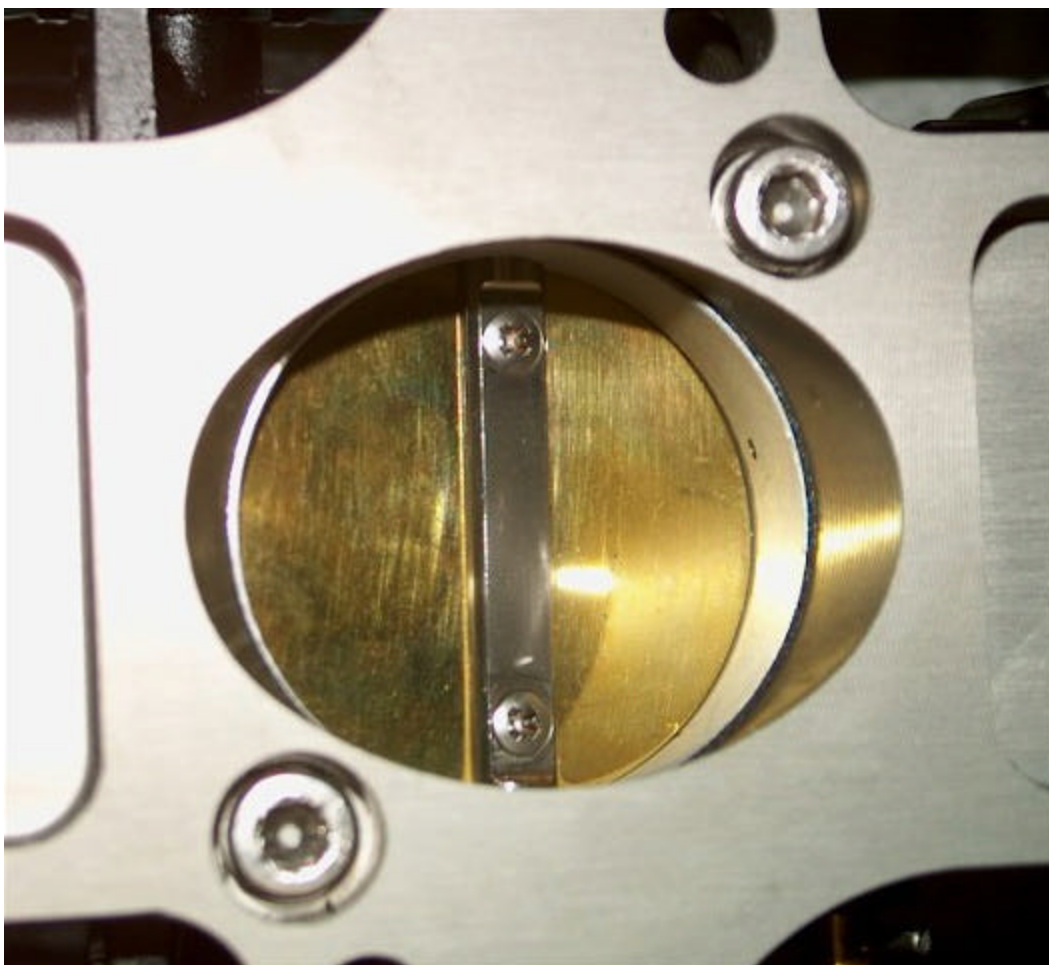




With the allen head bolts loose if you completely open turn the throttle wheel, you will not that the throttle butterfly on carb 1 will completely open to a 12:00 O'clock position an completely close, but on carb 2 and 3 will not have the same range of motion.

Now you need to release the throttle wheel, Since the throttle butterfly on carb 1 is completely close you need to manually hold the throttle arm on carb 2 in place to force its butterfly shut while you tighten up the allen head bolts, repeat this same procedure for carb 3. This ensures that all 3 carbs will be completely close at the same time.

You have now finished the synch of the throttle butterflies.



Finally inspect the washer and spring at the end of the idle speed adjustor. Make sure that washer is free and you can manually press it into the spring. Dip the threaded end in mari grease and install. Adjust you idle speed adjustor until you getabout a 1- 1.5mm gap betw the buttlerfly and the bore of the carb

[06-06-2003, 07:02 PM: Message edited by: Fercho]

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