

TUNE AND TWEAK THAT ISETTA FOR MAX PERF
By Bruce Fullerton



Yes, this could be you. Doing the proper, simple tweaks on your Isetta can make a big difference. Graphic courtesy of Ron Thums.

By popular request, here's a shot at tuning your Isetta up for maximum performance along with a few areas to be aware of if you think that big block isn't putting all the horsepower it's capable of to the pavement.

Speaking primarily to my yellow car but also to the scads of postings concerning Isettats that won't start or have developed a finicky personality, it would seem that Isettats are very particular about having certain things a certain way. No, it's hardly unique to Isettats and is Auto Mechanics 101 to many. On the other hand, witness Jim Jacenek's article, "*What Went Wrong?*" in the Fall issue of *Minutia 2003*. Here was a case of his car cruising along, for a while, and then shutting down on him. After some extensive head scratching, Sherlock found a bad, overheating coil to be the problem. John Wallace of the Central Texas Micronuts Car Club here in Austin had the identical problem recently.

Let's start with your Bing carburetor. This may be the most cussed fuel delivery device in history. First, it's prone to leaking. Leaking from the top of the float bowl, bottom of the float bowl, fuel bowl, jet screws on the bottom of the carb, blah, blah, blah. One Bing tech commented to me that they all probably leaked the day they rolled off the assembly line!

Straight, clean surfaces where any part comes into contact with another is a key factor here. A good example of that is where the fuel bowl assembly mates to the carb body. Another would be the carb flange that mates with your intake manifold. If you haven't already done so, you can pick up a rebuild gasket kit from Bing or just the

separate gaskets you may need to fix a problem-at-hand.

If you suspect any carb-related problems, pull it off the motor and completely dismantle it. That should take you 10-15 minutes to do. Crank up your air compressor and blow out all jets. The openings are very small and it doesn't take much to clog one. You'll probably need a magnifying glass to read them but check to make sure you have the correct jets installed. Your start jet should be a #55. Your idle jet should be a #35. Your main jet should be a #135. Now, if you're operating out of Denver, you're a candidate for slightly different jet bore to compensate for altitude. If that's the case, give Bing Agency tech support a call at (620) 767-7844 and follow their recommendations.

I had fits with my Bing with it bogging down. Bogging to the point I didn't think it was safe to drive. Heaven forbid I had to stop pointing uphill with cars behind me! Assuming you've cleaned your carb out, verified that the jets are squeaky clean and made sure that your slide pot clip is in the second notch from the top of the slide needle, you might want to zero in on your idle air screw. Bing specs one and a half to two turns out for proper performance. Based strictly on my case, don't let the "idle" in idle air screw throw you off. If it's too far out, it will allow more air to enter the venturi than it should and you'll bog the motor down. Get a friend to press the accelerator while you adjust that air screw ... clockwise for starters. You'll know it when you hit the sweet spot.

In Isettats that have developed starting problems, a culprit that owners have reported is a cracked, worn out choke piston that's no long providing a good seal. Remove the choke assembly from the carb and make sure that puck on the bottom isn't cracked. There should also be a subtle round indentation on the bottom which will tell you that it's seating right. Those can also be sourced from Bing for under ten dollars.

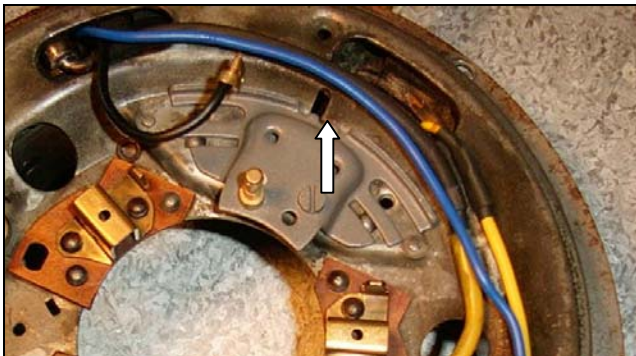
On a final carb note, if you still experience bogging problems, make sure that it's bolted on good and tight and that you have a good gasket in place. One way to check this potential culprit is to spray carb starter or similar product on the point the carb flange meets the intake manifold. If your engine revs up, you have a leak that will require your attention. Oh yeah, and make certain that your carb's mounting flange is perfectly flat by laying a straight edge across it. Any warping will cause this problem. If this is the case, a machine shop should be able to true it up for you pretty easily and quickly.

Your spark plug can be a simple, under-your-nose culprit. BMW fitted Isettats with the Bosch

W4AC plug at the factory. John Wetzel has run the hotter W7AC for quite some time and recommends it over the W4AC to compensate for the fact we're running unleaded gas these days. Works for me. When it came to starting problems, I pulled the plug out and it seemed OK. It was making a spark and was gapped correctly. A car friend was over one day and said "I don't care what it looks like or if it's sparking. Put a new plug in there and try it." Whammo! It cranked right up. Go figure.

If you've had your engine recently rebuilt, you might want to have several new plugs on hand. Why? As your new rings begin to seat, you may experience some oil burning. That will foul any plug out quickly. More than one owner has been stumped on this one, seemingly-obvious problem.

The points in your Isetta are interchangeable with early VW Beetle units. Might not hurt to keep a spare set around in your service spares along with those extra plugs. The proper gap should be .024. In the picture below, make note that the bracket the points mount to has a couple of small V-shaped notches in the top-center. There is a corresponding slot punched into the Dynastart housing face that is intended for a reference point.

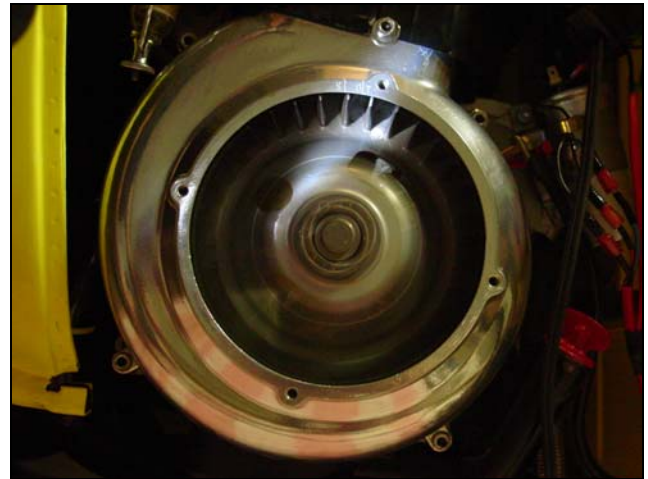


Here you can see the small oblong notch in the Dynastart housing just above the points bracket. The center V-notch sits just to the right of it at the bottom.

Start your points adjustment by aligning the center V-notch on the points bracket with that slot. Now connect your timing light to the battery posts and coil wire. The timing mark on your blower fan should be stationary at the "S" (static/idle) mark on the blower fan housing at idle. If your timing mark is to the left of the "S", move the bracket to the right or clockwise. Vice versa if it's the other way around. You don't have to move it much to see a difference.

Now, have someone slowly press the accelerator. You should see the timing mark cruise to the left of the "S". Full advance should be roughly an

inch away from the static mark as the revs come up. Once you have your timing mark set correctly, make double sure the securing screw on your points is good and tight.



Didn't move any or much at all when you revved the motor? Don't feel the power you think you should in the seat of your britches? It's probably time to rebuild that timing advance. Rebuilding consists of disassembling the unit, making sure everything is good and clean and applying a very light coat of bearing grease to the components. The real fix is replacing those two advance springs. What's probably happened is the old springs have rusted and aged to the point that they aren't extending much/enough to allow any advance, kinda like me. You can source these guys through Isetta parts suppliers for under \$10. It takes about 10 minutes to do the whole job, assuming you have the 17mm extractor bolt handy. Suppliers can fix you up with one of those as well. If you have to perform this procedure, be sure to lay the parts out as you take them off. It's possible to put the cam in backwards and cause unnecessary confusion.

If the timing mark is way off, like 180 degrees, it's a good bet that you put your fan on upside down. No harm done mechanically except for the fact you have no reference point for your timing mark. Just flip it 180 and you should be done with it.

As mentioned earlier, Jim Janacek's Isetta was all dialed in but it would just die after 15-20 minutes of cruising. A new coil fixed him right up. If this type of intermittent hassle should arise, CAREFULLY touch your coil. It should be warm from being parked on front of the motor but if it's hot enough to light a Pall Mall off of, you've probably located the culprit. I've been very happy with the coil sourced from John Wetzel. They're around \$30.00 and fit the factory coil bracket perfectly. For a couple of extra bucks, go ahead and replace that condenser too. John also sells a replacement voltage regulator that works like a champ and is very reasonably priced.

One final knit-pickin' observation that might help a new owner out that hasn't become familiar with all the foibles of their Isetta is to keep the gas tank as full as possible with fresh gas. Gravity is what's pumping gas down to your carb. You may find yourself on an incline or rough road and have the motor time out on you if it's so low that gas is sloshing around in the tank. There's no baffle in there. Replace that fuel line ever couple of years or so. Consider the alcohol-resistant line Bing sells too. It might last longer, requires no clamps on either end and is clear so you can see the fuel flow, or lack thereof. If you change your existing line out for a new one, make sure it's all downhill from the fuel tap and as short as possible while leaving a smidgen of extra length to accommodate engine vibration.

While hardly an all-encompassing tuning troubleshooting guide, perhaps the above tips will help new owners solve some of those pesky problems that they will inevitably encounter. Having no reference point for anything when I got my car back together didn't help. Without fail, 100% of the gremlins were right under my nose and, as usual, a flat blade screw driver and/or an under-ten-dollar part fixed it. Every time.

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Isetta and Messerschmitt T-Shirts:
www.radiorumpusroom.com/speedshop/shirts.html

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