



## TTP Jetting Kit Guide

TTP jetting kits have been developed using genuine Keihin jets for consistency and are to be used with the standard OEM needles. The OEM needles were developed by Triumph to take into account the characteristics of each of the engine specs. To give an example, if we take both the 790cc and 865cc Bonneville, there is a 75cc increase in capacity and milder cams in the 865cc Bonneville, but they both use the same jetting from the factory. Looking at the hardware changes you would expect completely different jetting, but this difference in jetting has been adjusted with needle profiles to make sure the air fuel ratio (AFR) is correct throughout the rev range.

### OEM Needles

790 Bonneville/T100 = NAGB

865 Bonneville/T100 & Thruxton = NBZT

790 America/Speedmaster = NBAD

865 America/Speedmaster = NBZY

865 Scrambler = N3RL

Our jetting kits come with two sizes of main jets, larger than OEM pilot jets and four needle shims.

### Main Jets

When jetting with our kits, we recommend using the largest size of main jets supplied to provide good power at  $\frac{3}{4}$  to full throttle. The smaller pair of main jets are supplied to be used if you decide on using the larger pair of pilot jets.

### Pilot Jets

We supply a larger pair of pilots jets for use if you are experiencing excessive popping and banging on the overrun. Some owners like a noisy overrun, but if you don't, then use the larger pilot's to reduce the noisy overrun and the smaller main jets to stop a rich mid to top end with the larger pilot's.

### Shims

The four shims are provided to make the low to mid-range a little bit richer. One under each needle should be enough, but the extra pair are provided just in case.

### Preparation

Before you start work on your jetting project, it's important that your carbs and the surrounding area are squeaky clean as it can take only a single particle of grit to block a jet and if this happens it will cause bad running and give false results of your jetting so far. It is also important that your carbs are correctly balanced. Unbalanced carbs can cause unwanted engine vibration and inconsistency of jetting results.

### Jetting Procedure

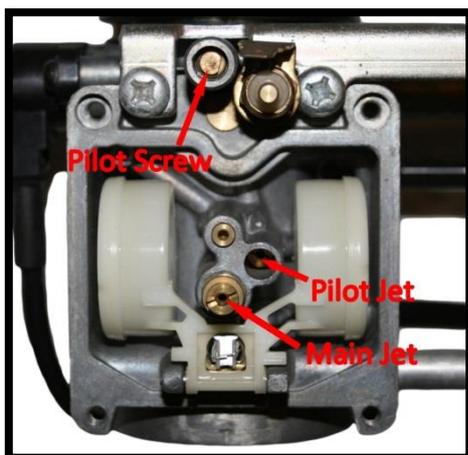
Achieving correct carburation is rarely a one off change of jetting. It's usually a case of making one change at a time, going for a ride and making another change and then another ride and another change etc.. But perseverance will make you and your bike happy.

Also you will need to make sure your bike is at normal working temperature to ascertain if your change of jetting is working for you. It usually takes 20-30 minutes of riding from a cold engine to get to normal working temperature and about 10-15 minutes of riding if starting from a warm engine.

- 1) Install the larger size main jets supplied and go for a ride. You're looking to see if the overrun popping and banging is too much for you, if it is, then turn out the pilot screw a turn and go for another ride. If the overrun noise is still too much, then you will need to use the larger pilot jets and smaller main jets supplied.
- 2) Now that you've settled on your mains and pilots, it's best to work on your idle. With the OEM pilots fitted the usual range of the pilot screw is from 1.75 to 3 turns out, with the larger pilots installed this range is usually from 0.75 to 1.5 turns out.
- 3) The final stage will be using the shims supplied to sort out any flat spots in the low to mid-range or whilst cruising. The use of shims is more prevalent when using the OEM pilot jets, but may also be required when running the larger pilots.

It may not be immediately obvious that you need to use the shims as your bike may run well with the jetting carried out so far. But during the next few rides after jetting, you may notice when using light throttle at cruise, a few blow back pop's/fart's through the carb's, this is usually a slightly lean condition and can be eradicated with a shim or two on each needle.

Also acceleration on partial/full throttle may not seem as crisp as it should in the low to mid-range, a shim on the needles can help here too.



#### **Tips:**

The pilot screws must not be turned out more than 3.5 turns from closed or the pressure spring becomes ineffective and you stand a chance of losing them. If you've not used pilot screws to adjust your idle mixture before, try Googling "idle mixture", you'll find plenty of advice on how to carry out this task to get good results.

Only carry out one change of jetting at a time, any more than this will confuse the positive or negative interpretation of that change.

To balance your carb's you will need a pair of vacuum gauges/carb balancer which can be bought quite cheaply on the net. Try Googling "motorcycle vacuum gauges" or "carb balancer".

Use the correct tools for removing jets and adjusting carburation. Brass jets are softer than tools and can gall if the correct tools are not used and small particles of brass can block jets.

**N.B.** - This is only a guide, you must be fully competent with the tasks in hand, if you are not, have a fully qualified mechanic carry out these tasks. Triumph Twin Power cannot be held responsible for any damage or injury you inflict on your bike, yourself or other people. - Triumph Twin Power - ©2014