



Dyno runs and the Remote Fine Tune Service

This service is offered by TTP to fill a gap, as there are not many dyno operators out there who are familiar with the TuneECU programme that is used to carry out fuelling changes to the EFI Triumph twins. We have extensive knowledge of modifying the fuelling maps with Tune ECU and can adjust the fuelling accurately by looking at the AFR (air/fuel ratio) graph produced by a dyno run and then adjust the fuelling to suit.

Once you have bought the Fine Tune Service and we have your bike and engine details, we will send you a tune that roughly suits your bike. Download the tune to your bike and then carry out the Reset Adaption routine. With this in place we know the fuelling of your bike.

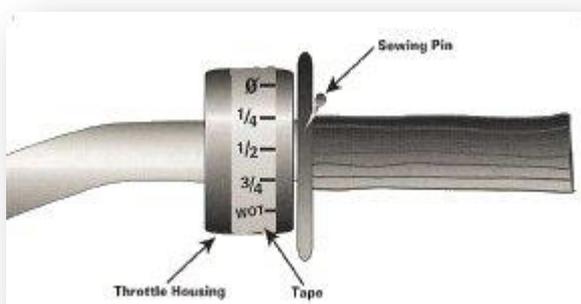
Next you will need to book a dyno session and have the operator carry out five runs, one at each of the following throttle settings, 100%, 75%, 50%, 25% and 10% and also a couple of minutes at idle. You will then need to email the six dyno trace files or print outs to TTP. From these traces we will modify a copy of the initial tune we sent you and mail it back to be downloaded to your bike. The dyno runs shouldn't take any longer than 15-20 minutes to complete and as the operator won't be making any fuelling changes, the process shouldn't be expensive.

Preparation before a dyno run

Before going to the dyno there are a few checks you should carry out to your bike in preparation. These checks are for your bike's well being as your engine can get quite hot and also to make sure you get the most out of the time and money spent on the dyno.

- 1) If your bike is due for a service, carry it out before you dyno your bike.
- 2) Ensure your oil level is correct.
- 3) Ensure your valves are shimmed to the correct tolerances.
- 4) Ensure your carbs/throttle bodies are correctly balanced.
- 5) Ensure your final drive chain is adjusted correctly.
- 6) Ensure your tyres are correctly inflated.

Finally, throttle indexing. Throttle indexing is necessary so the dyno operator can accurately carry out partial throttle runs for fuelling at different throttle settings. This enables us to modify the fuelling maps correctly to reflect where the existing tune is either lean or rich.



The picture to the left shows a good method of throttle indexing. For accurate indexing, it is best to connect your bike to TuneECU and use the TPS % reading and mark on the tape where the reference sewing pin falls at the correct throttle opening.

The indexing required for good fuelling is 10%, 25%, 50%, 75% and WOT (wide open throttle), although WOT is not strictly necessary as it's obvious when you're there.

Dyno Run Requirements for a remotely fine tuned tune

We have found when the EFI Triumph twins are dyno'd, that the fuelling runs rich for the first couple of full throttle runs, so the operator will need to carry out a couple of WOT runs to get the engine up to temperature and the fuelling to settle. The operator needs to start the runs at around 2,000rpm and hold at the index point until you reach the rev limiter. You will start recording runs from the third WOT run and then record the subsequent 75%, 50%, 25% & 10% throttle runs and a couple of minutes showing the AFR at idle. This will give a fuelling graph for each of the throttle settings throughout the rev range which we can then work from.

Things to ask the dyno operator

- 1) For a couple of WOT runs for the fuelling to settle before recording the third and subsequent runs.
- 2) For five recorded runs, 100%, 75%, 50%, 25% & 10% and reference each run for identification along with an AFR graph for idle.
- 3) To start the runs at around 2,000rpm and go to the rev limiter.
- 4) To set the AFR reference line at 13.0 AFR on his dyno programme.
- 5) To set the bottom scale to RPM not ROAD SPEED
- 6) To preferably give you the run files (.drf if a DynoJet dyno) or 2nd choice, good quality print outs of each run which can be scanned and emailed to us. It would be a good idea to take an empty USB memory stick for the operator to copy the files to. (make sure it is empty as they may rightly be concerned about viruses if your stick has files on it).

Example layout for a partial throttle run

