

## The Engine

In the original pictures the engine wasn't visible, there was a glimpse of an engine casing, but that was all. This was no real issue to us much time and money can be spent on rebuilding an engine when in reality a complete spare can usually be sourced for a fraction of the cost of a gasket set.

The 750 SE Japan market engine is for all intense and purposes a GSX 750 ES/D/E/F/G engine with painted gold covers. So our possible avenues of a replacement were quite far reaching.

CHRIS 44 from Bolton had a spare 750 SE engine of unknown quantity hanging about from a project he had bought some time ago and it was never going to be used, or at least not in the foreseeable future, especially since he had lost his storage space. This engine was moved from his location to Fossie's house for onward transportation to a place where it would be checked over and painted if necessary. Devon.

POP KAT. Who runs a motorcycle repair centre (Bideford Motorcycle centre) received the engine in September 2013 at the Wussey Kat rally, but just before Christmas 2013 his verdict was in, the engine was not happy, the compression was low on at least 2 cylinders and there was an errant nut (of the bolt variety) in one of the chambers. This deemed it (BER\*).

Oh dear how sad, never mind. Within a day or so another engine from a 750 ES had been donated, (by Suzuki Spares who made no promises on condition but it was free and he liked the idea of our project). this time over on the East coast of England. This was collected by FBJ and delivered to CALLYBOY who met him en route between Peterboro' and London.

The engine remained in CALLYBOY's MPV for a week or so as he couldn't lift it out due to an injury.

His children sharing the school run with it.

Once out, the layers of Norfolk could be washed off and a compression test carried out. The missing covers would be united with the engine once SPARKI had sprayed them Nissan Mettalic Gold.

Finally the compression test was carried out by Callyboy, the results were not very encouraging at all. The first readings came back as Nil...0..

That can't correct, tried again and again... diesel was poured down the spark plug holes and left for a few days... this brought the readings up a bit.. Clearly the rings were gummed up with the time left in storage unmoved.. Time was running out and Callboys work area and family commitments meant he wouldn't be able to carry out any top end remedial work.

But he would strip off the paint and prepare it for painting.

Enter Johnr into the mix. He arranged to go and collect the engine with the old BER\* one and make a good one. He would meet half way between his home in Preston and Callyboys in London. So 3 Fridays before the Bike build weekend they set off to meet each other, but that Friday most of London left at the same time so eventually the meet took place at a motorway services near Oxford. Johnr arriving home early hours Saturday, but then so did Callyboy.

The next weekend Fossie nipped up to Preston to give a hand stripping the top ends off the engines, while POP-KAT sent the gasket he had from Devon.

During the following weeks Johnr rebuilt the engine and painted it as it had been prepped previous.

All that was needed was to get it to the rally site on the Friday night of the build weekend. So it was loaded into the back of the plumbers van ready. However a call out meant that the engine went to Blackburn first arriving at the Hollins Green pub site at 9pm. that's cutting it fine.

Saturday morning at 10 am. was the first time the frame and the engine met when the frame was placed over the engine in the carpark.

The rocker cover was removed ( though this was just a scabby one as the nicely painted one would go on after engine insertion.) the oil filter cover and sump was also removed .This gives just enough room to slip the frame over the engine without a struggle. Once together the freshly zinc plated bolts were fitted . The covers were fitted after the forks , swingarm and wheels had been fitted to avoid damage.

The engine was finally started at 2314 hrs on Saturday night after the electric gremlins had been vanquished.

At start up there was quite a bit of smoke but this was to be expected.

Subsequent running has proved the engine to be sweet, oil tight, and a credit to those who carried out the work.

The differences between the ES engine and the SE engine are minimal . Depending on market the BHP is the same . The ES clutch pushrod is shorter as the ES is cable operated. The ES has a gear indicator sensor by the neutral switch , this is left in place just use the blue neutral wire on the SE.

The ES engine has an oil temperature sensor under the cam chain tensioner. Leave this in situ it wont leak oil as it is just a swtch with a ball bearing that closes a gap to make a contact that transmits an earth reading so if no wire is connected it is just a plug.

\*BER - Beyond economical repair.