



The MGA Twin Cam 1762cc (actually 1760cc) Engine Conversion – Facts, Myths and Questions

Introduction:

The 1762cc MGA Twin Cam engine was first reported as running in the fastback version of SRX210 at the 1960 Le Mans held over the weekend of June 25/26.

Production of the Twin Cam ceased in mid April 1960, although Mike Ellman-Brown's specially commissioned car, YD1 2611, rolled off the production line mid June (14th) 1960. This meant the Twin Cam was finished from MG's perspective before the 1762cc engine project first saw the light of day, in public at least.

What is known:

We know there was never a 1762cc engine as such, only the availability of 1762cc pistons and head gasket along with the instructions given in Tuning Information Memorandum (TIM)#35, and this comprised the 'Kit' to which people have referred. The creation of the 1762cc engine from a 1588cc standard engine was thus 'do it yourself'.

We know the original BMC pistons, which had MOWOG stamped on the crown, had distinctive castings on the inside skirt showing EXP 6978. These original pistons were heavy, had a long skirt and three compression rings, unlike modern versions of the same piston which generally have two compression rings, a shorter skirt and are lighter. Modern pistons tend to be unbalanced because of the weight of the domed head relative to the shortened skirt.



We know the first record of a 3 1/8" piston is in the EX187 file, which relates to the development of the Twin Cam. It is entry #310, a drawing, dated five days after the 1959 Le Mans.

We know that MG made the 1762cc modification 'official' by creating TIM#35, although – undated, we can infer it as being after January 20 1961 and before March 3 1961 which are the dates of TIM#34 and TIM#37.

TIM#35 is available to view at:

<http://www.mgaguru.com/mgtech/twincam/pdf/tim35.pdf>

We know there is an 18 month timing window encompassing the 1959 EX187 #310 drawing, the ceasing of Twin Cam production, the 1960 Le Mans entry and the issue of TIM #35. There is no evidence that MG ever had a plan for a production version of a 1762cc Twin Cam.

We know this is actually a 1760cc engine not 1762cc. The self-perpetuating 1762cc misnomer came about because Colonel





Casting showing EXP6978

O'Gorman, the Chief Engineer for the RAC, but who was seemingly not listed as an RAC official scrutineer, did an imperial to metric conversion on May 9 1960, when he examined SRX 210's engine for the Le Mans entry, that gave 1762cc but which did not properly represent the actual imperial measurements. O'Gorman had 89mm x 79.38mm as the conversion of 3.5" x 3.125". The real figures are 88.9mm x 79.375mm which gives 1760cc. On the 1961 Le Mans engine examination sheet, which was signed by an official RAC scrutineer (J C Winby) and countersigned by O'Gorman, and the 1962 Le Mans entry, the metric conversion numbers are right but the 1762cc result seems to have stuck! The 1762cc nomenclature continues simply because that is what the big bore or Le Mans engine has become known as.

We know the 1762cc engine kit was supplied by MG not only for SRX 210 but also for Bob Olthoff's car (YRX 310) in 1961 and 1962 as well as to the South African distributor McCarthy Rodway in 1961. To add to the capacity nomenclature confusion the three South African big engined cars build plates have 1750cc on them (these are engine numbers 2260, 2261 and 2262) whereas the Autocar article on the 1962 Nurburgring 1000km refers to 1760cc when talking about the Olthoff / Whitmore car. Bob Olthoff himself refers to 1762cc in race entries and correspondence in 1961 and subsequently.

We know that SRX 210 and Bob Olthoff's engines were created for competition whereas the South African engines were used to market unsold Twin Cams two years after the car had ceased production.

What is speculation:

At the 1959 Le Mans Ted Lund had done well for 18 hours in the standard body profiled roadster version of SRX 210 with a 1588cc engine. The 3 1/8" piston drawing was logged in the EX 187 (Twin Cam) register five days after the 1959 Le Mans. Was this coincidence, was it to reward Ted Lund in anticipation of a 1960 Le Mans entry or was it even Syd Enever, Alex Hounslow and John Thornley living in hope of getting their EX 186 project to Le Mans in 1960 with the larger engine? Obviously we will never know. Surprisingly, having had to suppress Ted Lund's entry of EX 186 in 1959, MG went on working on that car, according to the EX register, later in 1959 after that year's race.

According to Peter Wood, TIM#35 called for blocks to be native bored to 3.125" with a presumption that some would fail, they were not to be lined. Did MG ever produce a 1762cc block? There is no evidence that they did. All existing engines would originally have been 1588cc based on the release date of TIM #35 and only standard 1588cc blocks were cast. The only caveat to this is the early prototype cast block (A164) with added ribbing on the side (at 1588cc) and that, plus the other two EX181 Supercharged blocks, one being on a display stand at Gaydon (the other presumably still fitted to the record breaker), are the only variant block castings known.

Who actually had access to the TIMs? The public certainly

could get the properly printed Tuning Booklets, but one was never produced for the Twin Cam. The nearest document there is to a Tuning Booklet for a Twin Cam is TIM#33 which does not address the enlarged engine. The TIMs were typed and Roneed and thus not in a state for general circulation. Whether dealers, competitors or only the factory and its chosen participants saw the TIMs is an open question.



South African build Plate

Speculation is that 20 1762cc 'kits' were made. Confirmation only exists for three engines – numbers 2260, 2261 and 2262. There is no evidence to support 20, or any other number.

Who else used the engine? The current knowledge indicates Ted Lund had the engine in 1960-1962, Bob Olthoff in 1961-1962 and South Africa fitted three identified cars with big engines in 1961-1962. Presumably others could get the 'kit' after TIM #35 but, despite searching, there appears to be no record of their being used in period for racing or otherwise. Certainly the factory production records were not updated with references to this kit.

This may well not be the last word on 1762cc. We know when and how it came to be created but not why. We know who used it and why but not whether they alone used 1762cc in period or whether others, as yet unidentified, did so as well.

Further reference material is available here:
<http://mgaguru.com/mgtech/twincam/tc320.htm>

Article contributors:

Edward Vandyk, Bo Giersing, Mick Anderson, Mark Hester, Colin Manley

If you have any information on this topic please email Edward at Edward@vandyk.co.uk

STOP PRESS!

We now have an update from Edward in connection with the previous article, and an interesting development. Whilst this is a more general MGA, not Twin Cam, point, it might be of interest following the 1762cc Twin Cam article.

An August 11 1962 Silverstone six hour annual relay race programme came to light recently This race (covered in a report on Page 16 of the October 1962 issue of *Safety Fast!*) had two teams of MGAs from the MGCC South East Centre: a Twin Cam team (#26), which finished fifth, and a Pushrod team (#31). There was also a team of Midgets. There are no details in the report.

The pushrod team had six cars entered including four 1588cc cars and one 1489cc car. Interestingly there was no 1622cc car, but it did have F W McComb in a 1762cc pushrod car. It is said McComb had access to Development Department 'bits'.

It needs a 3.175mm or 0.125" overbore to get from 1622cc to 1762cc. In September 1962 the MGB was introduced, at which point overboring a 1622 engine would have become inappropriate, as the MGB 1798cc block was then available.

Is this the only example of a 1762cc pushrod car?