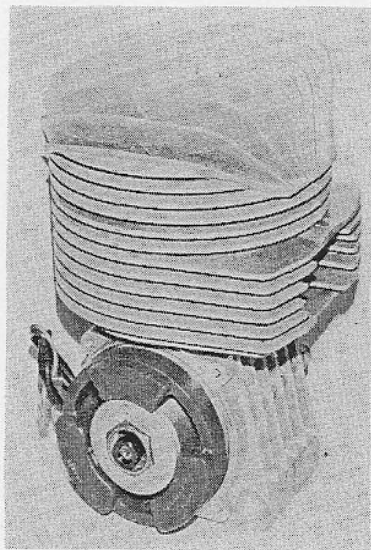


THE

KOMET



K80 TT FROM IAME

by
ALAN T. BURGESS

There was a time when it would have seemed inconceivable that there could be 100cc karters in Britain and the U.S.A. who would not respect the name Komet as of any importance, indeed some not even be able to spell it! But such is the case and it takes a conscious effort to remember when that brand swept all before it. A down-turn in the U.S.A. market and the cessation of importation into Britain by Talko so they could make their own engine, provided a vacuum that was filled by other makes and Komet have yet to regain their previous esteemed position.

When there is no great customer demand for a foreign product then there is little competition amongst dealers to tie-up distributorship. Komet is the special baby of Mr. Grana of IAME, and his designer Mr. Bossaglia, for it represents the foundation stone on which their empire was built. It must have been ranking for them to see the make punted around a variety of traders like a tin of baked beans. This situation surely will not be endured for long — the question is, does the K80 represent the breakthrough into the winners circle?

The K12

The first Komet was the K12 which saw the introduction of the classic and much-copied 'over-square' bore of 50.8 and stroke of 48.5mm. Presumably on the basis that if something is unusual yet works then you may as well exaggerate it in the hope of further improvement, and also to follow the McCulloch dimensions to encourage the Americans to buy, the next generations of K22 to K55 used a 54mm bore and 43.5mm stroke. By the end of 1964 the K77 arrived with the original dimensions and we were destined to see that fan shaped cylinder head sell in many many thousands, particularly here and in the U.S.A., and capture every worthwhile title to be won.

Five years after the debut of the K77 it was decided that a new appearance would stimulate U.S.A. sales and enable the introduction of a cheaper to produce cylinder head shape with vertical fins. This was obviously the right time to bring the Komet into line with other makes which were more convenient to mount because they had a flat base, this new model being called the K88. IAME was now growing apace and gobbling-up other makes so Komet received little attention in the ensuing period and this coincided with the decline of fortunes of the make.

Complex K75

For the homologation period commencing 1975, two distinct lines of development were brought in, both still using the 50.8 x 48.5mm dimensions. The K75 was a reed valve motor of great technical interest with its innovative crankcase that split horizontally. Although not a 100% waste of tooling effort and money, because some elements were incorporated in subsequent IAME reed valve motors, this model can largely be ignored. The K78 combined the convenience of the K88 crankcase with the beautiful but expensive cylinder head of the K77 and has been available in booster port and TT versions. The last homologation, effective January 1978, saw three models introduced with all using the standard dimensions and consisting of the K55 (not to be confused with the model of the same number of 15 years ago) with a reed into the crankcase, the K80 looking much like the K78, and the K84 as a water cooled version of the K80.

Sisley Karting were kind enough to strip down a K80 for us that they had been using and they currently have good stocks of all Komet motors and spares. As mentioned, the head is as the K78 as is the cylinder barrel. As homologated, the K80 ports are shown as being lower and less wide than the earlier model but this is probably of no significance in judging the likely dimensions as actually delivered. There is a far greater cutaway in the lower barrel fins to clear the carburettor.

Continued on page 208

ILLUSTRATIONS OPPOSITE

Left column from top to bottom.

1. Increased carburettor cutaway on K80 barrel
2. Sturdy crankcase top
3. K78 crank (left) K80 (right)
4. K78 with nylon stuffer (left) and K80 with aluminium type (right)

Right column from top to bottom.

1. K80 crankshaft
2. Early piston (left) and strengthened version (right)
3. From left to right. C3 main bearing with metal cage. C4 nylon cage. Fibre cage type. Above is a nylon half cage.
4. Close-up of the nylon half cage without the ball bearings

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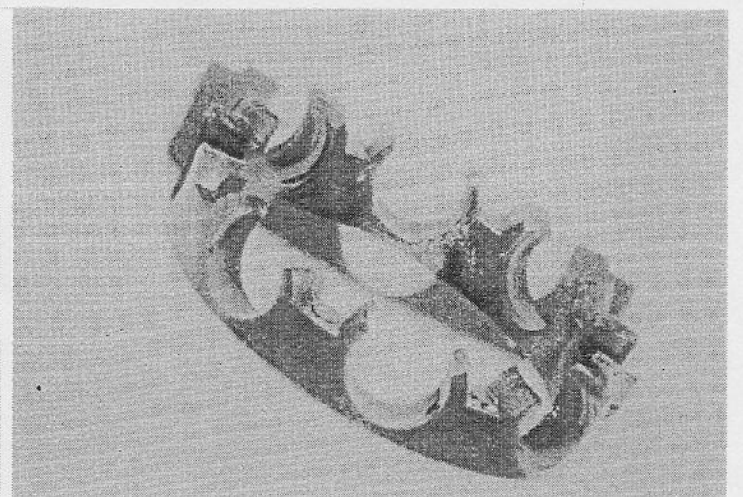
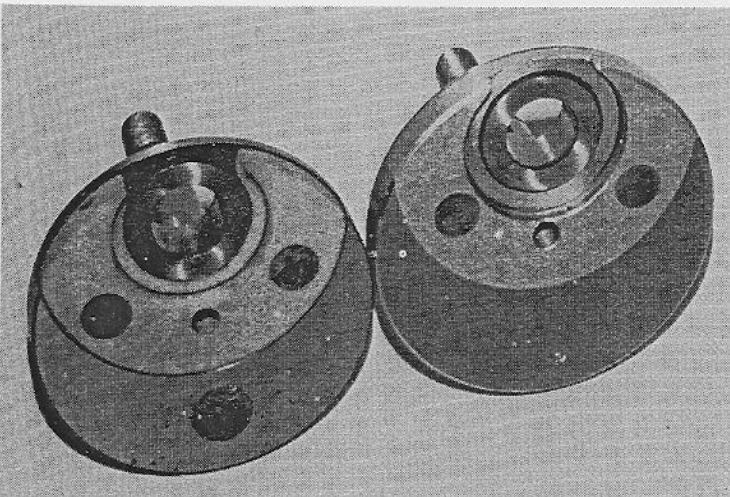
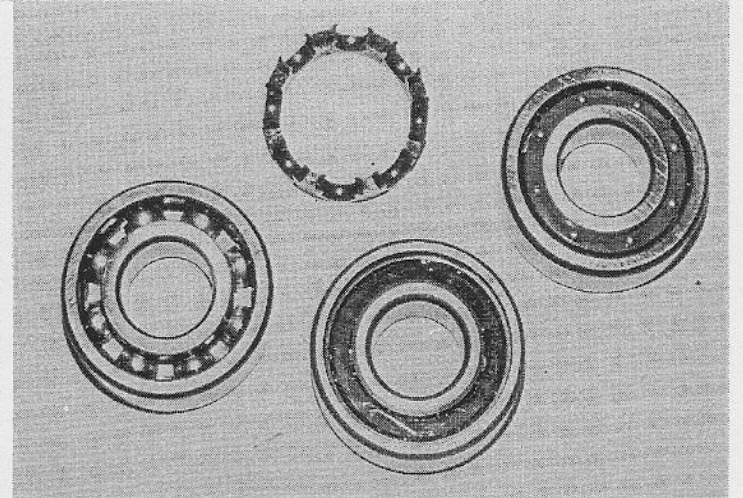
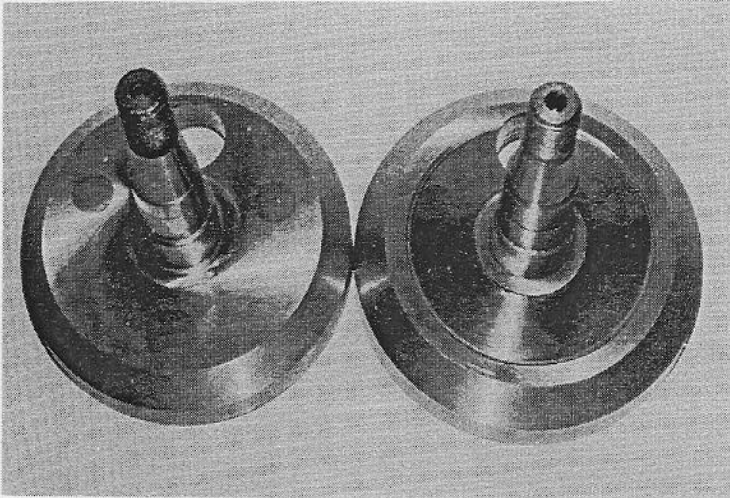
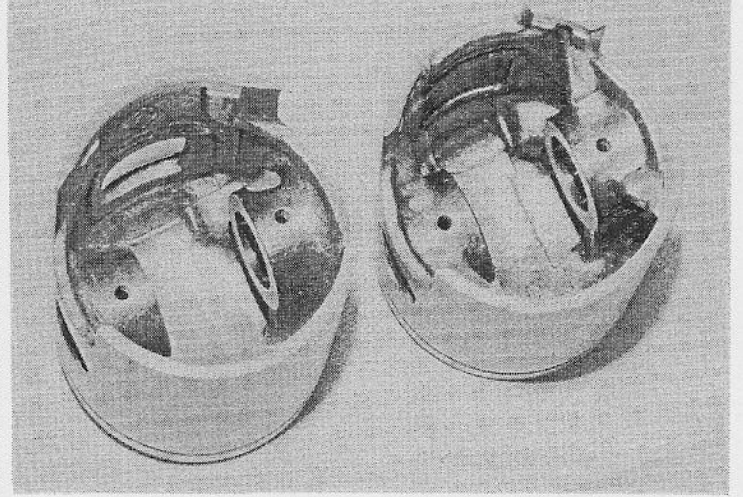
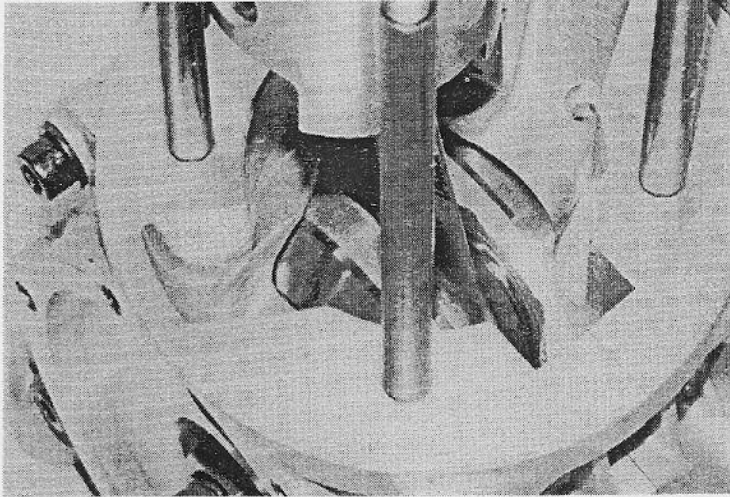
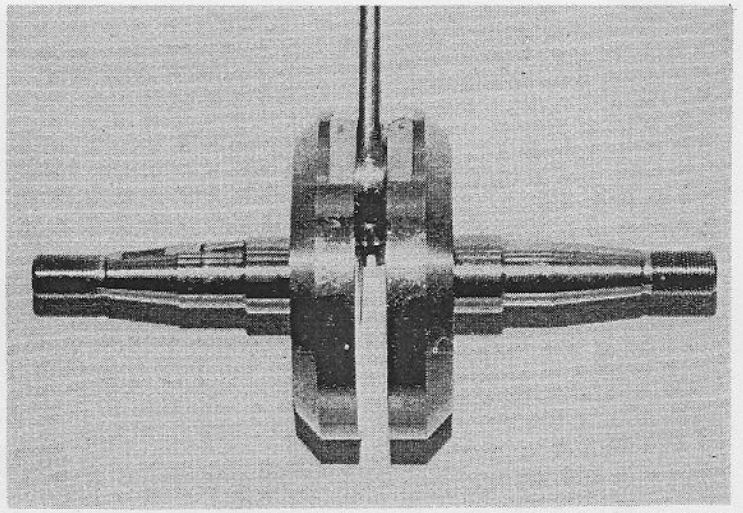
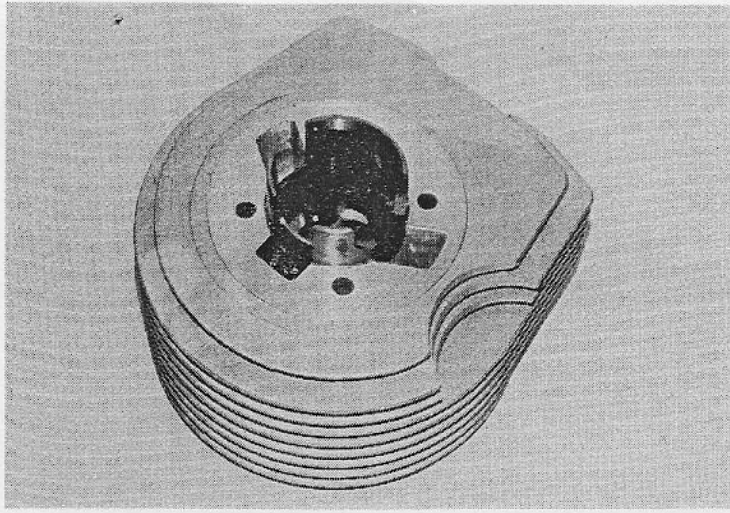
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KOMET K80 Continued

The rotary valve cover recess has increased from 95 to 98mm on the K80 compared with the K78 and the valve itself is of 2mm greater diameter and has changed from a triangular drive collar to hexagonal. The valve cover itself now incorporates a coil bracket and a reduction in thickness means that the carburettor is closer to the valve. The inlet tract in both valve cover and crankcase half is of a totally different profile to that on the K78. Part of the standardisation process is the adoption of the larger Parilla type oil seals.

The crankshaft wheel diameter has been increased from 83.5 to 87mm with the wheel thickness and the journal diameter for the valve also being greater. The big-end pin is longer than on the K78 for officially the width overall of the crank wheels is 2mm greater.

Dear Bearings

This is the moment to talk about main bearings for some incredible prices have been banded about and all is not made clear as to the alternatives if one examines the official parts lists. The metal cage C3 seems to come on the Parilla TG14, SS20 and Komet K88, K78. And a typical retail price would be about £3.20. The C4 is a nylon cage unit and can be found on all models, including the K80, and sells at around £3.50. There is a 'Super' nylon half-cage version found on the K80TT Super that sells for about £11 and Sisley do a full fibre cage that because it is quieter is thought to produce less vibration at £6.40. There is also a bearing found on the TT Super. Super motors and known as the 'Casa' that retails around £20.

Strengthened pistons are now around but it appears to be worthwhile to change to that intended for BM engines for it seems to prevent trouble with the top lands. Alloy stuffers complete the crankshaft instead of the plastic type fitted on the K78 and there is a corresponding change from copper to steel rivets.

LITTLE RISSINGTON

Bromsgrove Kart Club's July 1st meeting was held at Rissi in fine weather, the gearbox entry was down in numbers with Donington on the same day, but the entry still in the 130 plus region. With our usual starter on holiday yours truly had his first experience in that official capacity.

250 National/250 International. An easy win for D. Rhodes who led from start to finish. J. Shilcock was ahead of D. Jones (250) National and P. Sheppard (250) National.

Junior Britain. By the end of lap one Paul Andrews held a comfortable lead, which he increased throughout the race. D. Pope held 2nd until lap three when Mark Beddal moved through at the chicane. Andrew Bundy forced through into 3rd by lap four and moved away from Pope. S. Collins took 5th place from Susan Cox in the latter stages of the race.

100 National 'B'/100 Britain. Steven Moore held the early lead with Andrew Povey closing, leaving a small gap to a close bunch contesting 3rd headed by K. Beckley. By halfway, Povey was in the lead having moved through past Moore in the chicane, Dominic McGee had moved up the field and was

As always with a Komet, the K80 has well detailed and finished castings although the make has put on weight over the years to provide increased sturdiness and vibration damping. Patient evolution and development have enabled increased rpm and power, but then the same has been found for its rivals. The change in crankshaft balance factor and geometry might be significant but surely it has to come down to whether one thinks an oversquare, equal or undersquare stroke/bore ratio are needed to do the job.

Top. Crankcases of the K78 (left) and K80 (right).
Bottom. Rotary valve cover of the K80 (left) and K78 (right).

Top. The two valve covers back to back. K80 above and K78 below.
Bottom. The valve drive collar has changed from triangular on the K78 (left) to hexagonal on the K80 (right).

