

WHO WILL GRASP THE TASSEL?

BY
ALAN
BURGESS

Should you ever see an old style Sicilian funeral in some remote village, then you may notice that draped over the coffin is a black shroud with a silken tassel at one corner. As the coffin is lowered into the grave so someone may step forward and grasp this tassel which will thus signify to those present that he takes up whatever role was played by the deceased in the "Brotherhood" and that vengeance will be in his hands according to the rules of the vendetta. Melodramatic stuff may be, but the current goings on in the U.S.A. with the demise of McCulloch do not excessively stretch my analogy.

It is easy to glibly talk about the McCulloch importance in U.S. karting without appreciating how all embracing was its involvement. As elsewhere in the world, karting activity in the U.S.A. has had to endure cycles of support and it was the decision to create special classes for reed valve engines, then to require them to be motors of American manufacture and finally to finish up with several McCulloch-only classes, that provided the driving force to shove American karting out of a bad patch of doldrums. McCulloch classes were provided for every possible age and weight of driver until at the moment of McCulloch's withdrawal, perhaps around 80 per cent of all karts were so powered. Four major groups — IAME and Corsair from Italy, Hewland from Britain, Yamaha from Japan and Lumello in the U.S.A. are all hoping for the largest slice of this tasty action that suddenly came up for grabs in the Autumn.

Dan Lumello was born in Milan as was his mother and they own the firm of APPCO, which stands for American Performance Products Company, in Ohio. They are primarily wholesalers of kart equipment such as Margay and Bug and import BM engines. Mrs. Dolores Lumello is a former wife of three times married George Russell. With Christianson (of carburettor fame) as front man, it was the Russell/Mrs. Lumello combination who provided the A in IAME which stands for Ital-American Motor Engineering. After the divorce so Mrs. Lumello founded APPCO to import BMs and Russell imported Komets, so continuing the bitter rivalry between these two makes that was a feature of the Italian scene at that time. Faced with the difficulty of getting engines from Italy, the take-it-or-leave-it attitude on prices and the persistent feeling that the U.S. market was receiving poor quality engines made from reject parts, the Lumello's decided to go ahead with their own engines. Sensibly they have decided not to break new ground and indeed the prototype units have been running with modified castings from other makes.

Three different models are being investigated, the 80 c.c. having 45.5 mm. bore with 48.5 mm. stroke, the 100 cc. a 50.8 mm. bore and 48.5 mm. stroke, and a 135 cc. with 56 mm. bore and 54 mm. stroke. Induction is by reeds with a new model carburettor from Tillotson on the front of the barrel. All the porting is within the cylinder so that the barrel can be turned in any direction to provide right and left hand drive engines. Cooling is by direct air without any fan assistance. The crankshaft is of the three piece type and the silver plated big end cages by Torrington. A clutch will bolt straight on to the engine on the drive side. The forged Wiseco piston has two rings, a Dykes at the top and a 0.04 in. chrome plated bottom ring. An investigation is going on as to why this piston results in a 3% power reduction compared with an Italian Asso., however carefully the American piston is machined to the same dimensions.

Possibly they have different coefficients of friction although it is assumed that they had the silicon content about right at 13%.

The prime objective has been to achieve a 20 hour zero failure rate for the complete engine and naturally some performance has had to be forsaken to achieve that end. Early tests show a similar power curve to rotary valve engines with some gain at the top end and obviously a loss in the bottom and middle range. The first motors have been sandcast but the change will be made to permanent moulding with the castings made in New York using an aluminium one grade below A132 (used for air cooled castings in aircraft). Porting is similar to that of the B Bomb and two auxiliary transfer passages wrap around the cylinder. Dan Lumello reckons he can sell 2500 engines within a year and at the time we spoke to him was quite confident of producing 300 for homologation by the IKF November homologation date but the deadline came and went without it being achieved and has now been put off until April 16th, 1977.

Margay, one of the U.S.A.'s dominant kart manufacturers, has been collaborating on the production of the LMR engine with their excellent grinding and machining facilities and they eventually hope to be able to offer a complete kart and engine package. Distribution of engines will be by both APPCO and Margay. Prices quoted by Lumello were around \$300 and apparently a stock Italian engine with magneto ignition is about the same with a Motorplat-equipped Komet K88 at \$375.

The motivation behind the LMR appears to stem from a sense of frustration over the supply of Italian engines for a long period of time. Of course anyone trying to market the BM range before IAME took over has had nothing but problems due to the erratic and minimal production rate and troubles with warranty claims and communications with the factory. Dan Lumello's assessment of the situation is that the average American customer is sick and tired over the lack of reliability, poor quality control and high prices of Italian motors, hence the laying down of parts for an initial 2,500 engines. Even those Italian engines being raced tend to be only brought out for important events such as the Nationals with virtually none taking part in normal weekend events, where McCullochs predominate. The McCulloch withdrawal came well after the groundwork was laid for the LMR and inevitably this has somewhat changed the basic design requirements. It is no longer necessary to match the Italian competition to become top dog of the last fraction of a horsepower and they can now settle for slightly lowered sights that will provide ample rewards in increased reliability yet better performance than the McCulloch.

The same Italian flavour that permeates the American scene has also left its mark in the Japanese current interest in karting. In the late 50's Grana was employed as Sales Manager by Mr. Parrilla who made the Parilla and Saetta Vills and whose sons now make the DAP Corsair. The 250 c.c. World Motorcycle Racing Championship had been won by the Italian twin overhead camshaft Mondial and Honda, who were then just making their first tentative steps in that sport, desperately wanted to get their hands on a winning machine. The owner of Mondial was a great friend of Mr. Parrilla and it was arranged that Grana could handle the deal and it is rumoured that the bike was sold for six million lira. It should come as no surprise that Honda then

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Illustrations opposite. The Yamaha KT100S engine. Row 1 — The exhaust port faces forwards and the clutch with outboard engine sprocket is on the righthand side. For conventional direct drive use, the sprocket can be mounted on the righthand side shaft. Row 2 (Left). The carburettor is separated from the barrel by an aluminium adaptor and a thick insulating spacer. (Right). The Walbro U.S.A. type WB3AD6 designed carburettor but made by Keihin in Japan. Inlet bore is 28.9 mm, venturi 23.7 mm and engine side bore 25.3 mm. Row 3 — Engine has a 52 mm bore and 46 mm stroke to give a capacity of 97.6 cc. Recommended fuel: oil ratio is 15:1. Shallow domed piston crown has a small central "flat". The girder type connecting rod has little end thrust washers whilst the big end is fully floating. Ignition is of the TCI type with lightweight rotor. Row 4 — (Left). Main transfer passages are enormous and each feed a single window. Small passages feed separate ports which have an area of approximately half of the main ports with the latter opening 0.5 mm in advance of the small transfer ports. (Right). The head is attached to the barrel by six domed nuts and the barrel is secured to the crankcase with four long cap nuts. A ring type copper head gasket is provided and the thick liner cannot be removed.

Photos: Kart-Pix

