

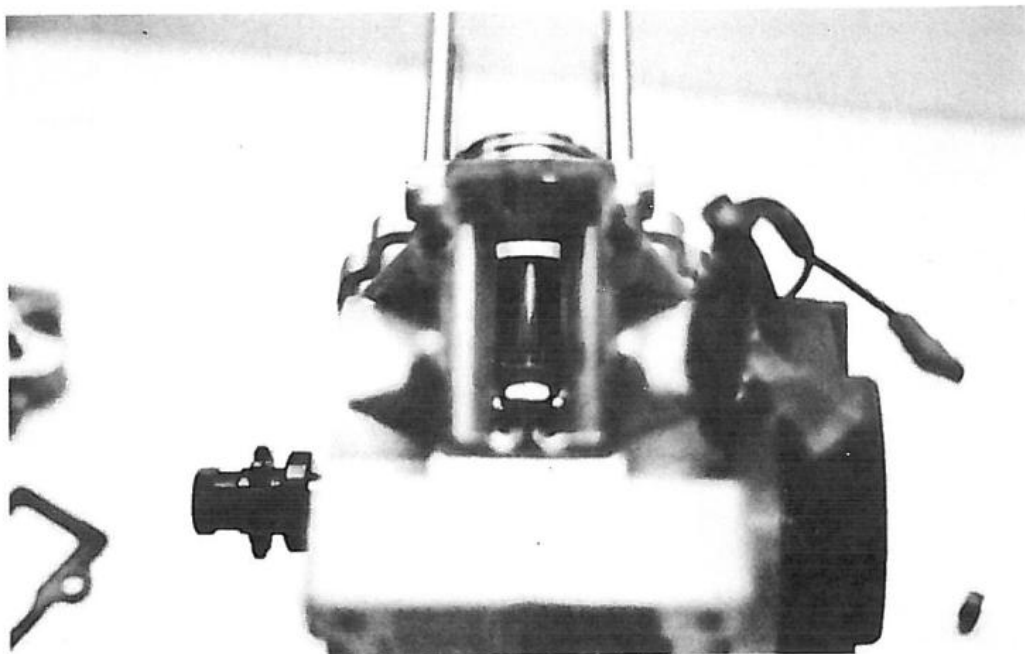
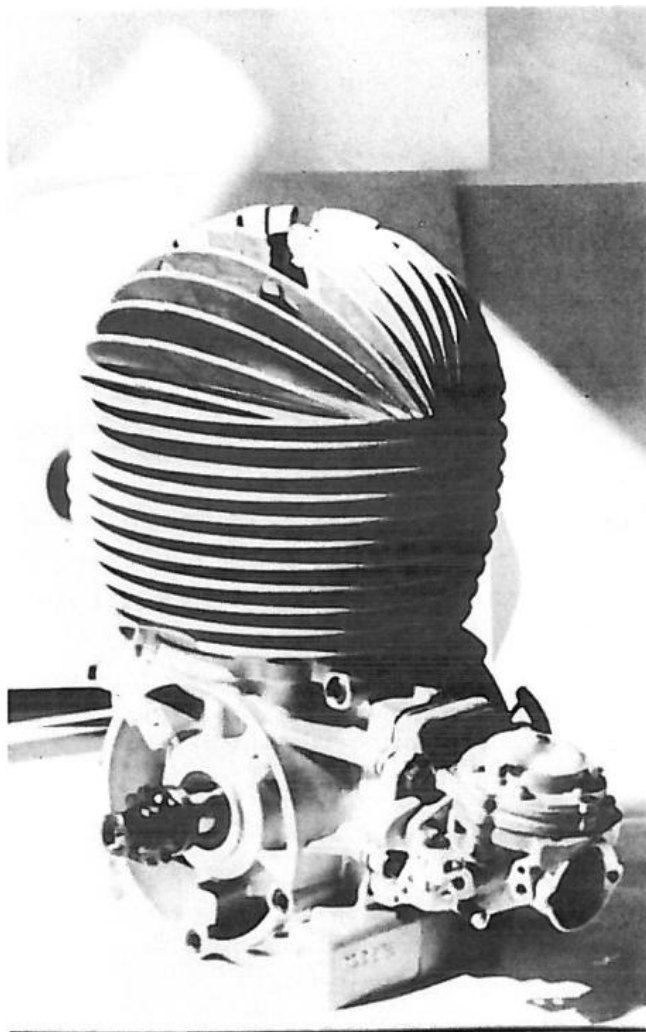
PARILLA TT25 THE DEMON REED!

Australian Kart Report has just had the pleasure of inspecting the best finished Stock 100 Class engine that we have yet seen. The engine, the Parilla TT25 reflects the fact that the Parilla engine has always been the baby of the I.A.M.E. factory and thus seems to get the priority treatment.

The engine that we inspected is the only example of the TT25 at present in this country and was kindly supplied by Howard Heath of Tecno Karting Centre in Brisbane. Howard was quietly confident when he handed over the engine for us to measure and photograph. After carrying out these tasks, we now realise why he was so keen to let us look the engine over.

On stripping the engine, the first thing that is noticed is the excellent finish throughout the entire unit. The crankcase ports have been carefully hand finished and the cylinder ports are very nicely cast with all of the joints between the iron liner and the aluminium cylinder matching almost perfectly. Certainly, any work spent by the engine tuner in these areas would be a total waste of time.

On the measurement side, the engine stacked up just as well. The piston to bore clearance came out at an excellent .08mm with the little end side clearance correct at .25mm. Ring gap was .25mm for the top ring and .30mm on the bottom ring. Both measurements being good for performance and wear factors.



The inlet tract is very clean and as can be seen, offers excellent lubrication to the big end assembly.

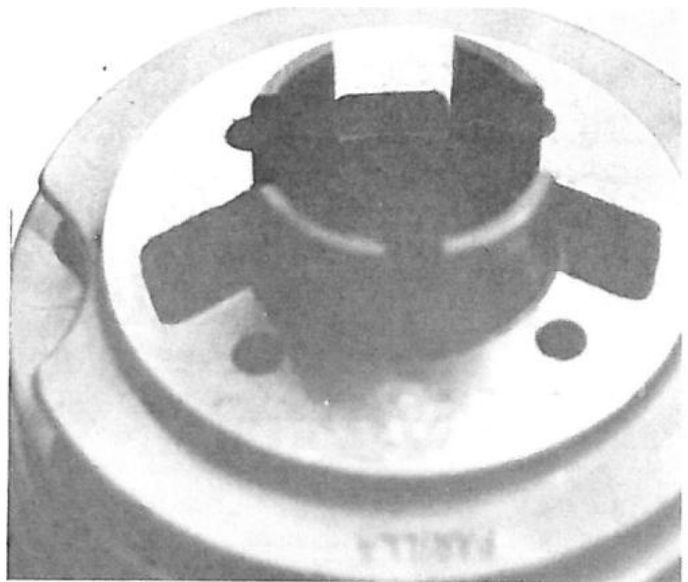
In the bottom end of the engine the crankshaft end float was spot on at .2mm and crankshaft runout was .004mm on the drive side and .006mm on the ignition side. Certainly there could be little improvement in these departments. Providing that all production units are the same, the cost of blueprinting and modifying the engine should be quite low.

On re-assembling the engine, it was noticed that the reed assembly is beautifully cast up and that all porting is designed to give excellent flow characteristics and at the same time achieves excellent lubrication to the big end assembly. Lubrication, in fact seems to have been high on the list when the engine was designed as the main bearings are catered for with large oil drillings into the crankcase halves.

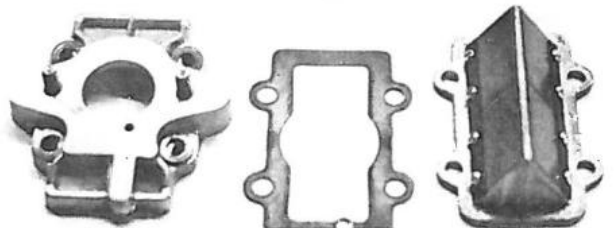
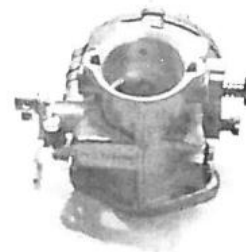
The final task when assembling the engine was to check the piston to head clearance and this also came out well at a figure of .75mm to complete an almost perfect set of dimensions. Howard assures us that this engine was a regular production unit and that all units that come into the country will be of the same standard.

Having seen some of the recent Parilla international class engines, AUSTRALIAN KART REPORT has no reason to doubt this as being a fact and believe that the way in which the engine is built does justify the higher price that will apply to the Parilla TT25 in comparison to all the other reed valve engines.

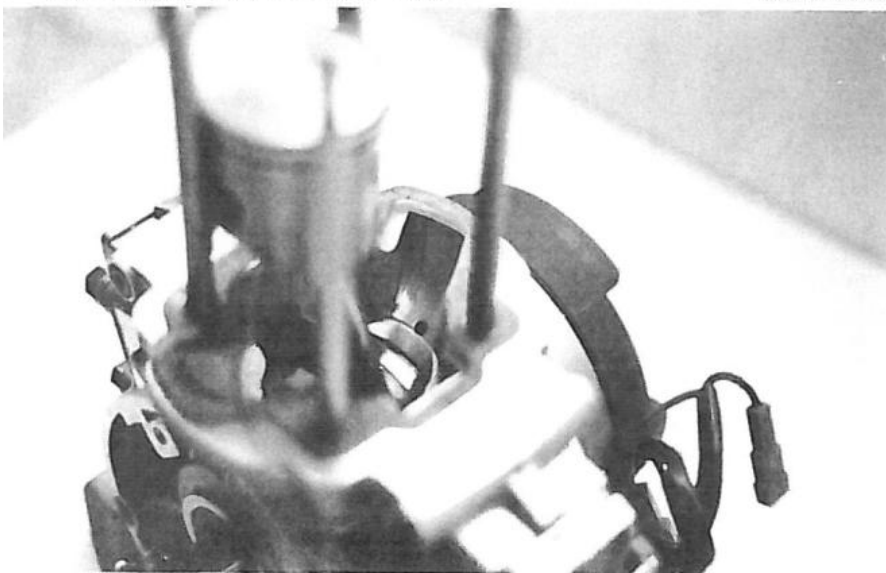
The price? Well as yet, as we understand it, the price has not been finalised, but it is hoped by Howard that it can be retailed for \$650.00. Yes, we agree that is is not cheap, but like anything, you only pay for what you get and in this case, quality seems to be what you are paying for. Performance, we cannot comment on as we have not had the chance to test the engine, but to our mind, a long stroke reed valve engine makes a lot of sense.



The cylinder is specially cast for the TT25 where all other I.A.M.F Reed cylinders come direct from the relative Rotary engine. This reflects I.A.M.E. priorities.



The manifold and reed block are beautifully cast. The carburettor comes already bored to 25mm.



The crankcase ports are nicely hand finished. In fact the whole engine was very well finished indeed. Main bearing lubrication is well catered for.

MAINTAINING YOUR PARILLA TT25 REED ENGINE

The Parilla TT25 Reed Valve engine is probably the quickest of the currently available Reed Valve engines and in the right hands is hard to beat in the Stock 100 Class. This has been proven by Ian O'Hara at Oran Park where he is the current holder of the Stock 100 lap record and it must be remembered that Oran Park is predominantly a power circuit. However, the Parilla tends to be a little fragile, but correct maintenance and preparation can overcome this problem and provide a winning engine for the conscientious operator.

Early versions of the TT25 were a little prone to connecting rod failure. It must be stated here that I.A.M.E. have seemingly overcome the problem with their new connecting rods and the problem is now past history.

TOP END OVERHAUL - A complete top end overhaul should be carried out every three race meetings. This includes the replacement of the piston, rings, little end assembly, piston circlips and the deglazing of the cylinder bore and the decoking of the cylinder head and the exhaust port.

At this stage the cylinder to piston clearance should be checked and the cylinder honed if necessary.

For the benefit of a cooler running little end it is advisable to replace the original little end assembly with the now available steel little end spacers and the Yamaha KT100S little end cage. This system is easier to assemble and is proving extremely reliable.

Each time the top end of the engine is disassembled and reassembled it is necessary to recheck the cylinder head capacity so as to ensure the engine remains legal for the Stock 100 class. Also important is the need to check that the squish clearance is still on the safe side each time the engine is reassembled. Most European engines have the tendency for the cylinder liner to drop in the cylinder causing a reduction in squish clearance. This can be corrected with additional cylinder base gaskets.

COMPLETE OVERHAUL - A complete overhaul of your TT25 should be carried out every six race meetings. This includes the replacement of all previously mentioned top end components plus the connecting rod, the big end bearing, the crankpin, the big end spacers, the main bearings and the crankcase seals. At this stage the carburettor should be completely overhauled and the reed valves should be replaced.

CRANKCASE SEALS - For any person serious about keeping their TT25 up on top performance the crankcase seals should be replaced every two race meetings.

REED VALVES - Again, the serious competitor wishing to keep his engine on top performance should replace the reed valves every three meetings.

THE CONNECTING ROD - As mentioned earlier, I.A.M.E. have pretty well solved their earlier connecting rod problem, however it is still recommended that a shot peened and polished connecting rod be fitted to the Parilla engine as an additional insurance against breakage. The small additional cost is certainly worth the peace of mind it conveys.

CLEARANCES - The following clearance and fit recommendations will give fast and reliable

performance providing the above maintenance schedule is adhered to.

SQUISH CLEARANCE - The minimum squish clearance is .75mm. Ideally the squish clearance should be set between .75 and .80mm.

PISTON TO BORE CLEARANCE - The piston to bore clearance should be set at between .85mm and .90mm. This recommendation for the Parilla engine is a little larger than usual due to the fact that the finning on the Parilla engine is smaller than on most engines and in our hot climate the engine has a tendency to seize if the clearance is set too close. By setting the engine up at the above figure the engine will also tend to run strongly for the duration of a race. If the piston to bore clearance is set too close the Parilla has a habit of slowing down towards the end of a race.

PISTON RING END GAP - The piston ring end gap should be set at a minimum of .15mm. If the end gap exceeds .5mm, the rings should be replaced.

LITTLE END SPACER TO PISTON FIT - This should be set at a minimum of .20mm and a maximum of .30mm.

THE PISTON PIN TO PISTON FIT - Should be a light finger pressure fit. Never fit tight as piston failure could result.

CONROD TO CRANKPIN FIT - To check this place the conrod, cage and crankpin assembly in the vice, gripping the ends of the crankpin. Then, holding the bottom of the conrod steady, 1.0mm of side movement should be available at the little end. If excessive movement is evident the assembly should be replaced. If there is no movement, then incorrect matching of components is the problem.

BIG END CAGE END CLEARANCE - Should be set at a minimum of .55mm. This clearance is better to be excessive as a tight fit will almost certainly result in big end failure.

CRANKSHAFT END FLOAT - The crankshaft end float should be set between 1.5mm and .30mm. If using angular contact bearings then the minimum should be 0.25mm and the maximum .05mm.

RUNNING IN THE ENGINE - If new piston and piston rings are fitted to an old bore the engine should be run in at half speed, varying the throttle setting every three or four seconds, but never using full throttle, for a period of 30 minutes. If a new piston and rings are fitted to new cylinder bore, then the above procedure should be carried out for a period of 60 minutes. In the case of a full engine rebuild the engine should also be run in for a period of 60 minutes.

LONG FAST CIRCUITS - When racing on a circuit with a length in excess of 800 metres, always count that race meeting as two race meetings. These circuits are usually faster and result in longer races, thus effectively doubling the wear on the engine.

SET UP INFORMATION - The following information will assist with the running of your TT25 engine.

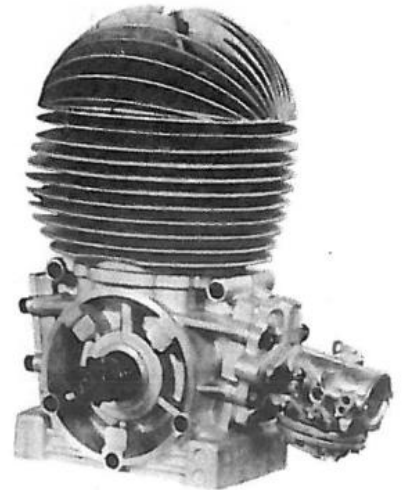
SPARK PLUG - Motorcraft AG403.

IGNITION TIMING - For fast tracks = 2.75mm BTDC. For slow tracks = 2.5mm BTDC.

CARBURETTOR BLOW OFF PRESSURE - Should be set at between 10 and 12 PSI.

NEXT MONTH we will start a new series on

setting up your kart for racing in the various classes. This series will deal with all aspects of kart chassis preparation and will refer to all single engine classes in sprint racing.



CHANGE OF DATE

ORANGE KART RACING CLUB NOW PRESENTS IT'S TRAINING DAY ON SUNDAY NOVEMBER 27

John Pizarro, Paul Ardill and Mark Carey WILL ADVISE ON:- DRIVING TECHNIQUE CHASSIS ENGINE AND TYRE SET UP.

BRING YOUR KART OR JUST YOURSELF YOU WILL LEAVE A BETTER KARTER

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