TECHNICAL TABLE

Chassis	Maranello RS7
Homologation	87/CH/11
Tube diameter	30/32 mm
Front hubs	80 mm
Rear hubs	90 mm
Front and rear height	chassis low
Front track	2,5 shims
Rear track	139,5 cm
Axle	ø 50 mm, standard
Camber	neutral
Caster	maximum
Bars mounted	front
Tyres	Bridgestone YJB
Engine	Parilla Reedster F2
homologation	13/M/15
Exhaust valve opening	2 notches
Exhaust	one 5 mm shim
Ratio	12/79
Spark plug	NGK BR10EG
Carburettor	Ibea 24
Ignition	PVL
Fuel mixture	4% of olio

We tried one of the new international racing karts for the 125 KF class, a KF2 (ex-ICA) mounted on a Maranello RS7 powered by a Parilla Reedster F2 engine. A test session in Lonato that enabled us to see for ourselves how these new vehicles worked and at the same time be put to shame by the world champion, Foré who was also there (but on a KF1).

Drivers' playground

Report: M. Voltini – Photos: C. Avolio

For some they are the glorious future of karting; for others the abnegation of the true concept of kartin; and yet others an inevitable and ineluctable evolution, which must be accepted. The thing is that the new 125 KF – that's what we're talking about – have taken over from the "old" single-gear 100 cc in international events. Obviously, as a consequence, there's some (perhaps better to say lots of) curiosity also on behalf of the most sceptical, on the actual performance of these new engines. And, I guarantee, we're not talking about speed and lap time (they are only a means for themselves) but of the feeling the driver gets concerning delivery, drive and set up. We were given the chance of actually trying one of these new karts on occasion of the Maranello and lame test sessions in Lonato. There was just one problem, David Foré was there with us, with his undeniable skill and class that put us to shame. To try and overcome the embarrassment of actually driving the same vehicle driven by such a champion, well aware of our limits, mere consolation he was test driving a KF1 while ours was a KF2. The different class though doesn't mean that we wanted to avoid a direct match, which we knew we'd lose (so it wasn't a case of being humiliated, on the contrary), it was the fact of knowing that the KF2 is the "most important" class in karting, the most commonly practised (just like the Ica was), while the KF1 (x-FA) is more a top-driver class.

Carburettor 24 and 15,000 max rev.

The aspect of the vehicle we're about to test isn't bad, basic colours are red and black, a Maranello RS7 chassis (the latest chassis that has been homologated by the Brescian factory) is rather nice and mounts the object that we're curious to know better, a Parilla Reedster KF2. More than the engine itself, what underlines the fact that it is a KF2 engine (looks like the KF1) are the accessories: in fact, the carburettor is an Ibea with 24 mm choke instead of 30 mm and the green ignition rev limiter unit showing setting at 15,000 rpm max instead of 16,000 for the KF1 (red unit). For the rest, you have all the other elements that are typical of KF engines: liquid cooling, centrifugal clutch, electric start and, not in view but well-pondered, the balancing countershaft, integral water pump and above all displacement volume 125 cc. Furthermore the exhaust valve is the same for the KF1 and KF2 (not for the KF3 x-Junior class).

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The Maranello RS7 is a traditional chassis with a double curve, 30 and 32 mm diameter. Above, besides the front bar, you can see the cam register for caster and camber. Top right hand picture shows a start key instead of a button; you can also see the green unit that limits rpm to 15,000.

Made at Crg, but traditional

In the following pages, Marco Natoli will tell us in detail all about the engine, so here, we'll take a look at the chassis, a Maranello RS7. Everyone knows that Crg make these chassis on behalf of Armando Fellini, the owner of the firm that takes on the same name as the homeland of the Ferrari, and this is quite evident when we look at the details. It's also true though, that the red ones chassis are always quite apart from the layout of the black range. The RS7, in particular is quite traditional, double curve in longitudinal members (at the foot of the tank) and parallel flow; the tubes that support the spindle Cs are the ideal longer front supplementary bar, always present during the test in the standard configuration. Another two supplementary bars can be mounted, rear and lateral, both traditional and usually not mounted.

The RS7 has been homologated for all the classes (250 included); initials are 87/CH/11 and it mounts 30 mm diameter tubes, except for the two rear and central bars, which are 32 mm. In all, there are 9 curves, and wheelbase is 1050 mm, that is, slightly longer than the average 1040. Spindles are the "big" type, like those used in the latest generation constructions. The axle is a standard 50 mm one and the binders that bearings support are the "winding" type, i.e. closed at the top as seen in other models made by Crg. In this case we had a K-Kart braking system whose main characteristics is that it's self-registering, with opposed double pump and callipers and self-ventilated disc, 17 mm thick.

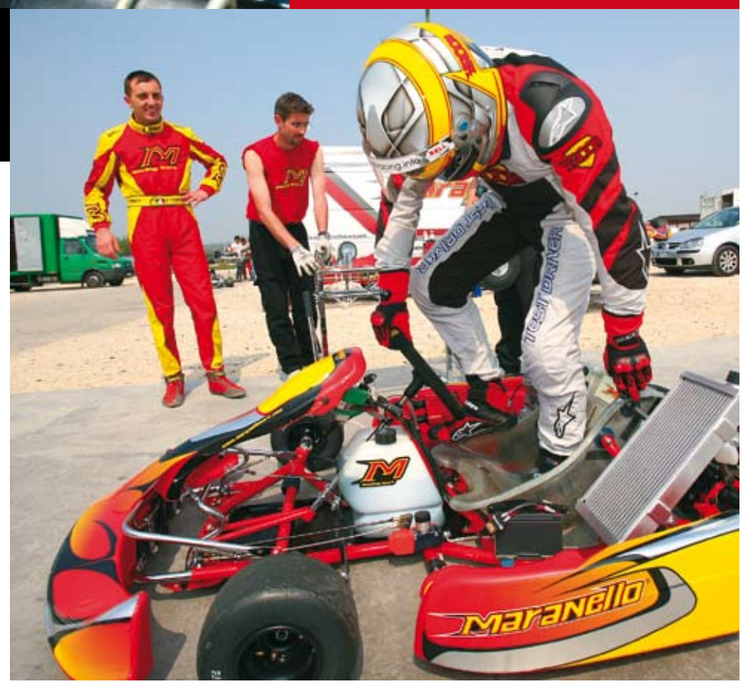
We also have the notorious key behind the steering wheel, which when turned starts the Parilla and off we go onto the track. Over the first few metres, with the engine not yet warmed up, there doesn't seem to be less vibration compared to the 100 cc, and to be honest we didn't find the kart as comfortable to drive as one would have expected, considering that there is a countershaft. However, this is but a detail. To a certain extent, we had a bit of difficulty at corner entry, and yet the braking system – we mount a single rear disc, while Foré mounts a braking system that also has discs at the front – it's not bad, braking is immediate but at the same time quite gaugeable and what's more with no drop through use and the heat (and you can see why when you see look at the thickness of the disc). The thing is that the rear is very "light" already on braking, enough to make is a bit difficult for us to follow a corner entry line properly, so we often draw too close to the inside curb too soon, and are unable to tackle with the difficult (and numerous) corners here at Lonato as we'd really like to, and cause engine to undergo some terrible under-torque.

When you've got the thrust, but it comes too late

We pit, they are anxious to hear what we've got to say about the engine, but we disappoint them by talking about set up, telling them that we weren't able to drive as we'd have liked, it was as though the seat was to far forward. Then, the answer took us by surprise: with these engines, set up has got to be like that, in fact you must "free" rear otherwise you wouldn't exit corners properly. This because the 125 KF have a special torque that starts from about 7,000 revs (compared to the 8,000 for the 100cc), but using a considerably longer ratio, minimum 25 percent because of the limited rpm, you rarely manage to race round corners with over 6,000 revs. So, under-torque is normal and not a consequence of a wrong drive style! Obviously being able to drive round slow corners at highest speed possible helps to contain "time damage", and this is what we try to do when we go back onto the track without having done anything to set up but only having changed the setting of our mental attitude. And all was done to see if we could interpret this new class in the beast of ways. However, the lack of thrust as we go round corners brings about two evident things: when the inside rear wheel touches the ground, drive torque is not enough to avoid a certain amount of rear "pull" that also effects front directionality and drive line. This fact to means adopting a set up which is quite extreme, and luckily the steering wheel is quite light (physically speaking) and the strain can be used for steering to the nearest millimetre. Above all, at the "hardest" braking points, with the harmful influence of the centrifugal clutch that cuts engine (unbalancing it) you also have the smoothness of this set up: now we begin to see the reason for some "haphazard" corner entry recently seen.

Accelerator? All and immediately

Another consequence of this lack of torque round corners is that, once you have let go of the brake you can press on accelerator pedal: hardly anything happens, instantly, engine thrust starts when you are almost on corner exit, almost as though there you had an old generation boost. When wheels are straight there's a net, but not difficult torque, and at this point you really start to appreciate the engine. Also because, don't forget that this Parilla has proved to be a reference engine, the early results of this international racing season is proof enough. Besides, we'd hate it to think that some might say that we just to underline the aspects that didn't strike us so much. Luckily, the track in Lonato isn't only made up of corners, even if it counts a lot (too many?). "When we eventually get to the



main straight as best we can, the engine repays by giving a good thrust when we are still halfway along the external curb and takes us smoothly round to the braking point at the pit. Thrust is certainly greater than that of the 100 cc, even if not daringly strong and thanks to the long ratio (which has not enabled us to reach rev limiter) we go along to the big corner at a higher speed than usual. In fact, we have to vary our normal drive line: it's better to close the left determinedly after the next curve, at the finishing line, so as to tackle the long fast right bend with a better line, even if this means covering more metres.

Let's forget "Brand Cups"

Well, what is our opinion after having actually raced with the new engine? First of all, it has nothing to do with the other units used for Brand Cups: here there's a greater thrust, but it is also harder to drive for the less experienced drivers. And the problem is that we're not talking of a difficulty which is due to power (which could be rewording in the end) but connected to the type of delivery and the compulsory use of set drive rations, very long. The lack of low revs cannot even be resolved by adjusting the valve on the exhaust, which would perhaps help a bit, because only thr rpm at which it opens is adjusted and not the amount of action. However, considering the generosity of all the other rpm starting from 7,000 revs, it is right to think that the evolution of such engines (especially if homologations re-open) will undergo a change in widening the delivery range. If you could get more pleasure maintaining the same thrust at average-high revs, we could well have a very fine kart indeed.

The braking system used in the test is made by K-Kart. It's self-registering, without front discs and with a rear disc in its place almost 2 cm thick.

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