

## **The Sierra RS Cosworth**

The Sierra RS Cosworth programme began in the mid 1980's when Stuart Turner, then director of motorsport at Ford Great Britain paid a visit to Cosworth Engineering to discuss the Formula 1 engine programme. While walking through the engineering shop, he spotted a 2 litre Ford Pinto block with a different cylinder head. On asking Keith Duckworth what it was, he was told the head was a 16 valve unit they had developed for the Pinto destined for low-volume production for the tuning market. It was suggested that the unit be combined with a turbocharger and be fitted to the Sierra so Ford could beat the all-conquering Rover SD1 Vitesse in Gp.A touring car racing.

Triple British touring car champion Andy Rouse had developed a racing version of the Ford Sierra to take on and beat the Rovers already - In 1985, Andy ran a Ford Sierra XR4Ti in the British series. This was essentially a Sierra XR4i, but was fitted with the 2.3 litre 4cyl turbo engine from Ford USA's Mustang. The Sierra was marketed in the USA with the turbo motor as the Merkur XR4Ti, hence homologation was not an issue for the car to run in the UK. Development of the Ti continued throughout 1985 and the car proved its pace and ability on several occasions. During this time, Andy also worked with Ford on the soon-to-be-released Sierra RS Cosworth. This was to be a high-performance roadgoing Sierra featuring a number of race-bred enhancements from the now well developed XR4Ti racers. The biggest difference was however under the bonnet where the Cosworth powerplant was installed.

As expected, in 1986 touring car history was to change forever when the new Sierra RS Cosworth hit the racing circuits and roads of the UK and Europe. The crude 2.3 litre turbocharged Mustang engine had been replaced with the highly developed and very powerful 2 litre DOHC 16 valve Cosworth engine. To this was fitted a Garrett AiResearch T03 turbocharger and large air to air intercooler. The car featured a sophisticated engine management system - one of the first on any production car in the World. The shell was also different. The heavier four pillar XR4 shell being replaced with that of the lighter base-spec three door Sierra. A unique aero kit was applied to the car which was like nothing ever seen on a road car. Deep front bumper and spoiler, side mouldings and a huge high downforce rear wing more akin to something from a Lamborghini Countach than a Ford hatchback made the RS Cosworth stand apart from just about any other car on the road.

On the racing circuits, it was clear that the car was a force to be reckoned with. The successful XR4Ti had evolved into an altogether scarier animal with bigger power, higher speed, better handling and more reliability. It was immediately apparent that the RS Cosworth would be a force to be reckoned with.

## **The Sierra RS 500 Cosworth**

Another prominent figure in the RS Cosworth development was Ruedi Eggenberger of Eggenberger Motorsport. The crack Swiss outfit was selected by Ford to run the Works team and the resulting black Texaco backed cars were the cream of the Touring Car crop. An expert with forced induction motors after success with the turbocharged 240 Volvos, Eggenberger immediately realised the potential of the Sierra RS Cosworth. At the same time he was also very aware that the standard equipment on the cars was not up to the job when it came to ruling the Gp.A roost.

Early in the RS Cosworth programme, Eggenberger held discussions with Stuart Turner and Ford Motorsport Europe technical experts on how they would best use the 'Evolution' rule within the Gp.A regulations. The end result of these talks was the definition of the specification of the 500 evolution variants of the RS Cosworth, later to be come known as the Sierra RS 500 Cosworth. Essentially, the RS500 was an Eggenberger creation in all but name.

Ford then had to build 500 Sierras with the necessary high performance parts fitted for road use. Only then could the race cars have these parts fitted to unleash the extra performance. Ford struck a deal with long-time partner Tickford to produce 500 very special vehicles. These were to become the RS 500's. Ford were well aware of these rules and at the end of the 5000 run of Sierra RS Cosworths, they produced an additional 500 vehicles that were stored away. It was these cars that went to Tickford to be modified to RS 500 specification.

It could have been a very different story, however. Eggenberger themselves were slated to do the conversion from RS Cosworth to RS500, only a lack of time and the fact that the necessary 500 cars were already in the UK swung it in Tickford's favour...

There were many differences between the cars, most notable the following from front to back...:

- Different front bumper and splitter for improved cooling and aerodynamics
- Front fog lamps replaced with mesh covered brake ducts to cool brakes
- Different bonnet vents
- Larger intercooler to get more dense air into the engine
- Larger T04 turbocharger to force more air into the engine
- Strengthened block to cope with higher specific output
- Second fuel rail and four additional fuel injectors (8 in total) to allow greater levels of fuelling
- Modified battery tray to accommodate the second fuel rail and injectors
- Different exhaust downpipe featuring a restrictor on the road cars to combat overboosting
- Second set of rear suspension arm pickups to allow more -ve camber on the race track
- Higher flow fuel pump
- Different rear spoiler featuring a narrower chord and a high downforce Gurney strip
- Lower rear spoiler for additional downforce
- RS 500 decalling

Many less informed fans of the car think it's called an RS 500 because it has 500bhp. This couldn't be further from the truth. In Gp. A racing form the cars did indeed develop power levels north of 550bhp, but the roadcars left Tickford with just 224bhp. Still a large amount of power for 1987...! The cars were called RS 500 because of course, there were only 500 made, all in right-hand-drive and all modified by Tickford in the UK. For this reason, all the Group A racing cars aren't \*really\* RS 500's at all. Most were built from the ground up to be racers, starting out with a special motorsports shell which was seam welded and had an integral rollcage welded in.

The RS 500 went on to become the most successful Touring Car in the World with the WTC eventually changing the rules to effectively outlaw the Sierra as it was too good. The RS 500 still holds an unbeaten record of 40 straight wins in the British Touring Car Championship. The Sierra blitzed the arduous Bathurst 1000 on several occasions as well as stamping it's mark all the way across Europe. The RS 500 truly is the King of touring cars...!