



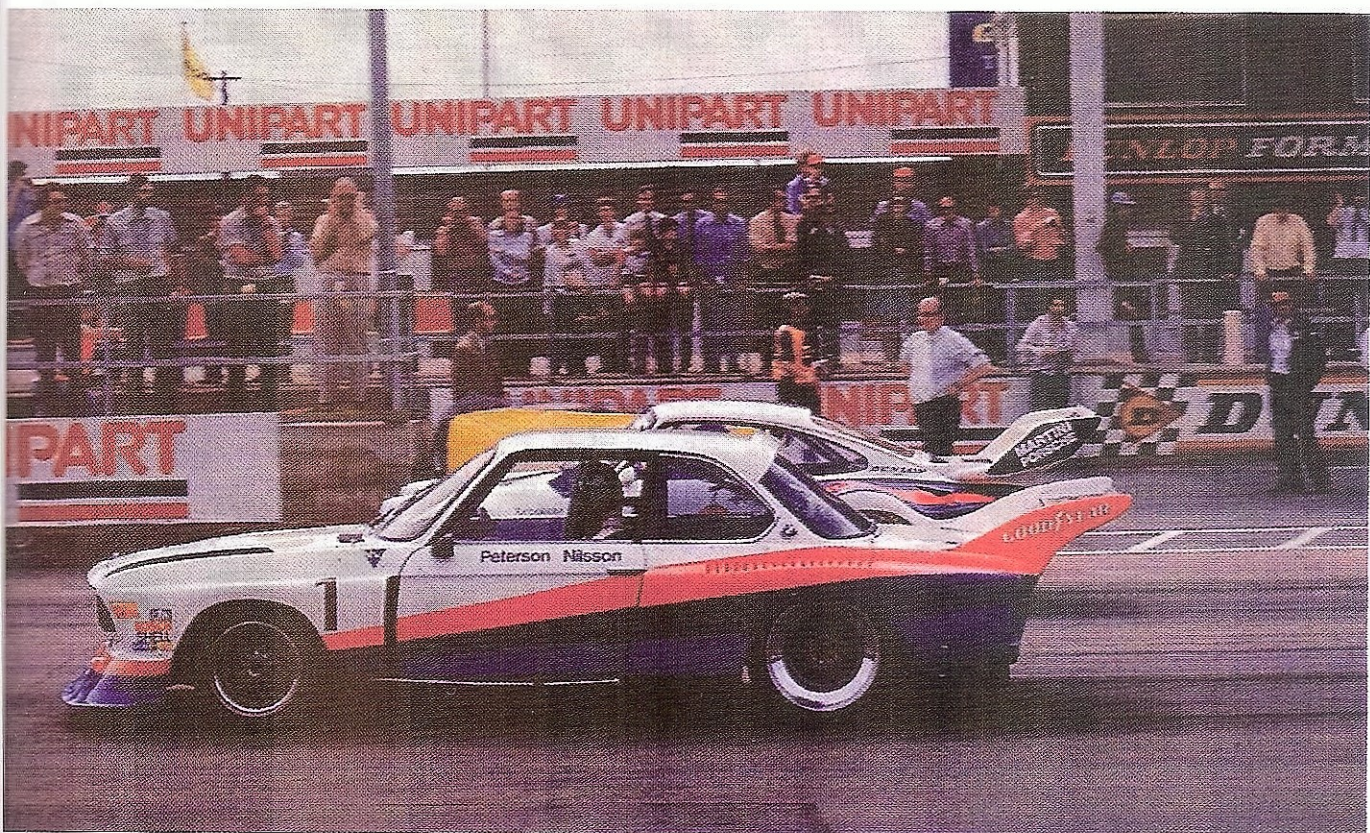
The Group 5 turbo-charged CSL at the factory, a new 'cow-catcher' front spoiler was matched to a sweeping extended rear wing

40 YEARS ON FROM THE ULTIMATE BATMOBILE

SILVERSTONE 6 HOURS – 5 MAY 1976

Words by John Castle Photographs BMW Classic

Paul Rosche is rightly credited with being the father of the BMW M30 straight six engine, which started its production life in 1968 in the 2800 E3 saloon and was still in use in the E32 7 Series saloon in 1994. It was this engine which Rosche used as the basis – in ever more upgraded versions – to power the BMW Motorsport CSLs in competition in 1973 and 1974. In 1975, in the wake of rule changes by the FIA on engine modifications for Group 2 competitions, BMW decided that further development of normally aspirated versions of the engine should be handed over to Schnitzer and Alpina so that the factory development team could concentrate on the engines for the M1 Procar Championship series and for the 4 cylinder turbo-charged engine for the 320i Group 5 BMW Junior Team cars.



Peterson lights up the rear tyres

“ Depending on gearing, top speed was between 178mph and 212mph as measured later at Le Mans ”

Less well known is that in December 1975 BMW also decided to continue further development of the M30 derived competition engines using turbo-charging to contest the Group 5 World Championship of Makes in 1976 to take on the Porsche turbocharged 935. But the work was 'contracted out' to Joseph Schnitzer. His starting point was the Roche designed 3.5 litre 24 valve version of the engine introduced by the team in September 1973. In its Group 2 form the M49 had always been inclined in the CSL at 30° just as it had been in production cars since 1968, but as the power had increased from the initial 420bhp in 1973 to 480bhp in 1974, oil circulation was becoming a problem. So Schnitzer's first modification was to require the new engine to be installed upright. This eased oil circulation and also allowed more room for the exhaust and two KKK turbochargers set at a boost of 1.3bar. The swept volume was reduced to 3.2 litres to improve the cylinder head sealing (bore reduced from 94mm to 92mm) and significant changes were made to the engine cooling, for use in the World Championship of Makes Group 5 category, for cars over 3 litres, and under 6 litres the engine with its turbos equated to 4.1 litres. For Group 5 the new engine was built into one of the last two remaining 21 CSL shells which had been taken by the factory from the Karmann production line in 1972. A new 'cow-catcher' front spoiler was matched to a sweeping extended rear wing and the radiator was moved to the rear. Massive 16" by 12" wide tyres were fitted at the front and 19" by 14" wide at the rear with extra wide GRP wheel-arch extensions to match. Depending on gearing, top speed was between 178mph and 212mph as measured later at Le Mans. With the FIA multiplication factor for turbo-charging of 1.4 the car was considered to be running the equivalent of a 4.5 litre naturally aspirated engine.

Those of you of a mechanical disposition will note that missing from the brief description of the car is anything about the transmission. It is all very well increasing the power from 480bhp to 750bhp but that extra power has to be transmitted to the road, and BMW have never built their own gearboxes or differentials so there was nothing available on the market they could use. In addition the new turbo engine was heavier, and this exacerbated the weight distribution to 56% front to 44% rear (the Group 2 was about 50/50) so the car was going to be more spectacular than perfect.

The car was not finished in 1976 until the third race of the Group 5 World Championship of Makes at Silverstone 5 May 1976 where it

would be up against the turbo Porsche 935. Silverstone was the only UK round of the World Championship of Makes and had not exactly attracted the enthusiasm of British race goers. But the new Group 5 car and four Group 2 works supported private team cars gave just a hint that BMW might just give the two Porsche team cars a run for their money. In practice the two Porsches (Jackie Ickx in the lead car) were just over a second faster than the turbo CSL driven by Ronnie Peterson, with the four Group 2 CSLs behind two privately entered 935s. Unusually for World Championship races which used rolling starts, the UK race had a standing start. As the flag went down, Jackie Ickx in the 935 gained 10 yards on Peterson who had hesitated with the wrong revs before the KKK turbo spooled up and almost set the 19" rear Goodyear tyres alight as he powered away, causing the Porsche in trying to keep up to veer towards the pit wall and stop on the grass at Maggots. Ickx had disintegrated the Porsche clutch which had been designed for rolling starts. Peterson led for the first 14 laps ahead of the second team Porsche, even having to ease the throttle coming out of Becketts to prevent wheel spin at the start of the Hangar Straight. Top speed was measured at 178mph. However the weight distribution of the car was having an effect and at the end of lap 14 Peterson had to bring the CSL in for new tyres in a 90 second pit stop which allowed one of the private Porsches to take the lead. During the next hour Peterson slowly caught up to within 10 seconds of the Porsche until eight minutes later the gearbox failed and the turbo was out of the race. For BMW however it was a bitter sweet finish because the reliable tortoise Group 2 CSL driven by John Fitzpatrick and Tom Walkinshaw in the Hematite sponsored CSL – which had qualified last of the Group 2s – beat the Kremer brothers in a 965 which had needed a 20 minute pit stop to replace its turbo. Group 2 CSL had beaten Group 5 Porsche.

The story then gets less clear. The team car which competed at Silverstone is often recorded as chassis number 2275981. But just 37 days later the famous Frank Stella turbo-

charged CSL appeared at Le Mans. Some accounts are that BMW built a new car for Stella using the last of the 21 shells, 2275980, and indeed this is the VIN attributed to the car in the Le Mans archives. Once again, after qualifying eighth in practice the car was retired after four hours with an oil leak. The same 'Art Car' took part in the Dijon 6 Hours on 4th September with Ronnie Peterson qualifying the car on the front of the grid but again succumbing to transmission failure after 33 laps (the drive shaft this time because the gearbox and differential had been strengthened!).

The Frank Stella 'Graph Paper' Art Car is now an exhibit in the BMW Museum, and Stella describes it as "a blueprint transferred

“ Unusually for World Championship races which used rolling starts, the UK race had a standing start ”

onto bodywork" which as a work of art was completed in just 48 hours. So it is possible that the Graph Paper car is indeed 2275981 repainted from its white, red and blue scheme as used at Silverstone, rather than a new car 2275980. As far as I can find there is only one Group 5 CSL turbo in existence, the Art Car. If the Silverstone car exists, then it has disappeared, as has one of the last two of the 21 shells taken from the production line in 1972. 2275980 or 2275981 – take your choice. The Group 2s carried on being used by privateers and they won the European Touring Car Championship in 1977, 78 and 79. Six ETCC titles in seven seasons. Next came the turbocharged 320i – and that is another (success) story. 🏁

