

## **The History of the 911 Carrera Cup**

Written by Melvin Spear and first published in the book entitled **“Porsche Carrera RS - The Fifteen Year Rise of a Track Day Icon”** by Tony Carey - ISBN 0-9547169-3-0

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From 1986 until 1989 Porsche pioneered the Cup series with a total build of 150, 250bhp modified 944 Turbos. However, with the advent of the 964 model in 1989, the Carrera Cup 911 was born to race in its first year in Germany in 1991. This was joined in 1991 by a French Carrera Cup series, featuring F1 *pilotes* such as Jaques Laffitte, and in 1992 by Japan.

Racing engineer Roland Kussmaul pared the Carrera 2 down by removing carpets, all sound deadening, designing a special plastic induction chamber instead of the original aluminium, (saving 1.2kgs!) discarding the blower fan and commissioning lightweight alloy wheels that saved a total of 11kgs. All these modifications were sufficient to give a dry weight of 1120kgs. This, coupled with a 265bhp blueprinted engine, lightweight clutch, revised gear ratios, limited slip diff provided drivers in the Carrera Cup with a pure race car.

To prevent speculators cashing in on the rare Cup Cars, teams had to put up a DM100,000 bond, only returnable once the car had competed in six races. The races generally supported the Formula One circus, often with an invited guest driver such as Walter Rohrl, Chris Rea, Mika Hakinen, Spanish driver Jesus Pareja, F1 driver Jean-Pierre Jarier, Australian biker Wayne Gardner and motorcycle world champion Kevin Schwantz. Due to the competitiveness of the series, guest drivers rarely won, Hakinen being the notable exception. It turns out that at an interview at after his win at the '92 Monaco race, that he had never driven a 911 on the road before, let alone raced one. Rohrl, finishing third, basically having a ring side seat of the battle for first place between Hakinen and Uwe Alzen, was asked what he thought of Hakinens performance –“I think he has future”, was his reply. He raced again in the Cup at the Hungaroring in the same year and won again!

Incidentally, the winning driver in the first '90 season was Olaf Manthey, still a name in the Porsche racing and tuning world. The winning car is now owned by Colin Belton in the UK.

The winner in 1991, Uwe Alzen –still a force to be reckoned with on track some fifteen years later.

The international Porsche Supercup, which now supports most rounds of the Formula 1 World Championship, started in 1993 and with the introduction of the 911 Cup 3.8 in 1994.

The first racing version of the water-cooled 911 (996 ) appeared in the Supercup in 1998 and made its way into Carrera Cup national racing in 1999, with the current GT3 Cup car a development of that base design.

As the years have progressed, newer Cup models and on-going technical developments have resulted in the Porsche GT3 Cup becoming a constantly in-demand race car for both the Supercup and Carrera Cup series around the world.

There are now seven Carrera Cup series around the world - Germany, France and Japan later being joined by Asia, Great Britain and Australia in 2003 and Scandinavia in 2004.

Carrera Cup often supports the major touring car championship in each country: Australia supports the V8 Supercar Championship Series; Germany supports the DTM; Scandinavia supports the Swedish Touring Car Championship; Japan runs alongside the Japanese GT Championship; and Great Britain supports the British Touring Car Championship.

Main features of the 964 Carrera 2 Cup car

### **General**

- Designated code M001
- pre-'92 models based on modified Carrera body shells
- 1992 model based on 1992 Porsche 911 Carrera RS N/GT (Group N for large series production based touring cars and Group GT for Turismo class racing)
- Built for the Carrera Cup series in Germany, France and Japan and the worldwide Supercup series
- Dry weight 1120 kg (Carrera 2 1350kgs)
- Most bodyshells were Grand Prix White (code P5) with some other colors produced like black and red.
- Final assembly at Porsche Weissach racing division after installation of Matter welded in cage, which gave 50% more torsional rigidity to the shell

### **Body**

- Aluminum bonnet
- Hood pins retrofitted
- Non-telescoping bumper reinforcement tubes (complete aluminum bumper reinforcement was often removed for competition)
- Lightweight rear bumper
- Special welded brackets in boot to support ABS brain, etc.

- Electric system cutoff installed with interior and exterior pull switches
- Special lightweight minimal wire harness
- No fog lights -replaced by blanks or brake cooling ducts. The latter NEVER appear to have been utilized for the Carrera Cup races
- No bulbs in front side markers
- Rolled wheel arch lips
- No door beams
- Fully welded Matter roll cage
- Dash material cut out on each end to clear rollcage and side window demisters deleted
- Single Recaro SPG fire resistant race seat
- Mounting points for six point racing harness installation
- Racing harness installed
- Firebottle and bracket installed on passenger side floor
- Wood floor board on driver's side (still present on the latest Carrera Cup cars)
- No tabs in body for mounting interior panels
- A/C deleted. Various fresh air tubes were used to route air to driver, at the discretion of team and driver
- Petrol flap lever replaced with wire loop.
- Radio deleted
- Sun visors deleted
- Sunroof/headlining deleted
- Electric mirrors deleted
- Central locking and alarm deleted
- Underbody rust proofing/undercoating deleted
- Interior sound deadening deleted
- Carpets and headliner deleted
- Interior panels deleted
- Rear seats deleted
- Lightweight door panels with manual window regulators
- Lightweight side and rear glass (3mm)
- RS small capacity water bottle

## **Chassis**

- Bilstein "Cup" shocks
- Eibach progressive rate springs, rates 200-600 lbs/inch front and 240-800 lbs/inch rear
- 24mm 5 way adjustable front anti-roll bar
- 18mm 3 way adjustable rear anti-roll bar
- Suspension fully height adjustable
- Non-assisted steering
- Ride height 100mm (road surface to bottom of boot)
- Front and rear control arm bushings made from stiffer rubber

- Rear camber eccentrics allow greater negative camber
- Monoball upper strut bearings on all four corners
- Aluminum front strut brace
- Switchable ABS using the Carrera 4/Turbo high pressure hydraulic system
- Steel Turbo front brake hub carriers
- Aluminum front hubs
- Turbo brake calipers and discs
- Pagid Black or Orange brake pads
- Solid engine mounts
- Harder rubber transmission mount

### **Engine**

- Published 260 horsepower 3.6 liter type M64/03 engine (actual hp probably higher than published value)
- Engines specially balanced and blue printed
- Engines selected for identical power. Called "high engines" at the factory.
- Engines sealed with a wire wrap and a lead seal around studs of the timing chain cover and other spots. The top three cars in each race were returned to Weissach for inspection
- Cup DME brain programmed for extra output and 98 octane RON fuel. Primary silencer deleted, "Cup" pipe substituted.
- Single groove pulley
- No engine hot air blower, replaced by plastic tube
- No fan on engine oil cooler
- DME brain relocated to behind driver's seat (vertical on cars without air jacks and horizontal on rear seat indent on cars with air jacks)

### **Transmission**

- G50/10 five speed manual
- Competition gear ratios
- Limited slip differential with 20% lockup under load and 100% lockup under braking
- Steel synchronizers
- Short shifter
- Lightweight flywheel and sintered sport clutch, saving 7kgs

### **Wheels/Tires**


- 1990-1991 8x17" front and 9.5x17" rear one-piece cast magnesium Cup wheels, saving 11kgs;
- 1992 onwards 8x18" front and 9.5x18" rear three-piece "Speedline for Porsche" wheels. The size was changed due to ready availability of Pirelli 18" slicks in the German DTM series and the ability to replace only parts of the Speedline wheels

when damaged; this also enabled a much more variable suspension set up and quicker lap times!!

- Michelin or Pirelli racing slicks

## Special

- Air jacks retrofitted on some cars that competed in Supercup series
- Cars that raced in Supercup had an extra door bar welded to the cage.
- From 1992 the small Cup wing mirrors were replaced by the Cup flags due to a 110 sq. cm. minimum surface area wing mirror ruling

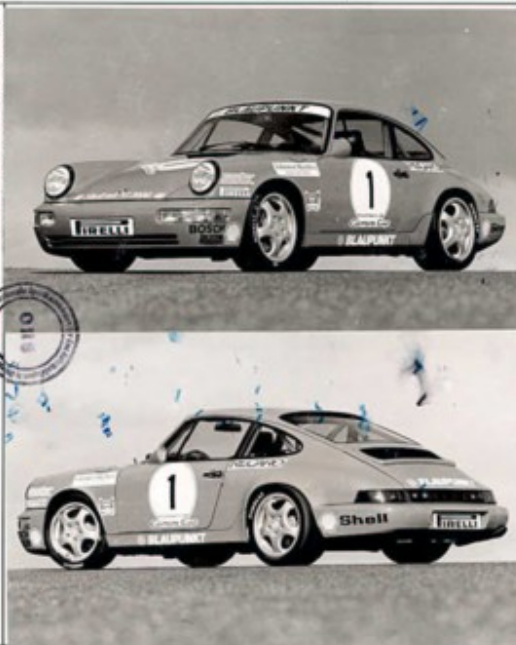


**1992 Porsche 911 Carrera 2 Cup**

Abnahmebescheinigung Überrollvorrichtung aus Stahl			
Abmessungen	Hersteller	Typ	Diagnostik
Rohrmaterial: Ø mm			
Wandstärke mm			
Material			
Zugfestigkeit N/mm²			
Belastung			
Verbindungsstelle			
Bemerkungen			

Die Überrollvorrichtung entspricht den Richtlinien der PK/CNS

Bitte bei eventueller Überwindung  
Kontakt 0 110 1 42 00



This is a copy of a 'Wagenpass' and would list all the vehicles details including races/drivers

### type 964 Carrera Cup Production Numbers:

Model Year	Number Produced	Series	VIN Range
1990	50	L	96 LS 40 9001 to 96 LS 40 9050
1991	120	M	96 MS 40 9001 to 96 MS 40 9120
1992	112	N	96 NS 49 8001 to 96 NS 49 8112
1993	15	P	96 PS 49 8001 to 96 PS 49 8015

SOURCES:

Porsche 911 Story –Paul Frere

Porsche Panorama May 1993 –Lightweight Carrera Confusion

[www.cupcar.net](http://www.cupcar.net)

Porsche Sport 1993 –Ulrich Upietz

Various Official Porsche AG race videos