



WHEN MERCEDES TURNED

IT UP TO 11
Twenty years ago the marque teamed up with Sauber

BY GARY WATKINS

The first pure-bred Mercedes-Benz racer for 35 years. A World Championship winner. The car that gave us Michael Schumacher. The machine that laid the foundation stone of the German manufacturer's graduation to F1. The Mercedes-Benz C11 can claim all those accolades, and more. Not least that it was a thing of beauty which still looks good 20 years on.

The C11 was the fruit of an unlikely relationship. A back-door deal to supply engines to the Swiss Sauber sports car squad in the mid-1980s paved the way for Mercedes to return officially to motor sport in '88. For 1990, the partnership produced the first bespoke Mercedes racing car since the marque's withdrawal from competition after the 1955 Le Mans disaster.

That car, the Mercedes-Benz C11, went on to sweep all before it on the way to winning the 1990 World Sports-Prototype Championship

with Mauro Baldi and Jean-Louis Schlesler. One of the five drivers to notch up victories in the C11 was a young Schumacher, who'd been plucked from Formula 3 to become part of a junior programme conceived by new Mercedes motor sport boss Jochen Neerpasch.

The dominance of the C11 in 1990 had a part to play in the marque's return to F1. By the following year, Mercedes was gearing up to build a Formula 1 Silver Arrow with Sauber. That project was quickly canned, but the Three-

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to produce the C11 – a car that ruled all and influenced a return to F1

Pointed Star was soon back at the pinnacle of the sport as an engine supplier.

The tiny Sauber team from Hinwil had made contact with Mercedes in 1981. A young road car suspension engineer by the name of Leo Ress did the suspension geometry on the Sauber C6 Group C car and later put team boss Peter Sauber in touch with the right people when he was looking for aerodynamic help on its successor, the C7. When Sauber realised he was getting nowhere with the straight-six BMW

engines, it was natural that he should look to Mercedes' road-car range for a replacement. He reckoned the 5-litre M117, in lightly turbocharged form, would be the ideal powerplant for the Group C fuel formula.

"It started off, I would say, as an under-the-table co-operation," explains long-time Sauber team manager Max Welti. "Peter had connections with some ambitious Mercedes research and development engineers who were willing to do something with him. I have to

say, they didn't take a lot of convincing."

The official line was that the engine was developed for racing by renowned Swiss tuner Heine Mader. But Welti explains that this arrangement was a smokescreen.

"Officially they were done by Mader, but that was only to keep everything hidden," he says. "Maybe Mader built up one or two engines, but no more." The engines were developed and built at the Mercedes engine facility at Untertürkheim under the auspices of Hermann Hiereth. ▶▶



C11's V8 Merc engine had better fuel consumption than its rivals in a fuel-restricted formula

The first Merc-engined Sauber, the C8, appeared in 1985. The following year, Mercedes badging appeared on the Sauber for the first time at the behest of new sponsor Kourois, the Yves Saint Laurent aftershave brand. A first World Championship victory at the Nürburgring in '86 and another win at the same track in the German Supercup sports car championship the following year played a role in persuading Mercedes to return to motor sport in an official capacity. The historic board decision, which also encompassed the DTM, was made on January 12, 1988.

Two cars would be entered in the full WSPC that year under the Team Sauber Mercedes banner with sponsorship from the AEG electrical goods company, which was owned by Daimler-Benz. The following year, the cars would become Silver Arrows and go on to win both the World Championship and the Le Mans 24 Hours.

The C11 was a Mercedes-Benz rather than a Sauber because it was the first car designed by the Swiss team with access to the manufacturer's full resources. That was in stark contrast to its predecessor, the 1989 WSPC-winning C9/88, whose origins could be traced to the early '80s.

The C9 had been built around the same aluminium honeycomb monocoque as the C7, which Ress had designed in 1982. Interestingly, he had found the time to draw the tub while on gardening leave after quitting Mercedes to go to work for BMW. It wasn't until 1985, with the Merc project already under way, that he would become Sauber's first full-time engineer.

Sauber's technical department grew together with its relationship with Mercedes. Yet it didn't have the expertise to produce a carbon-chassis car. Not until Englishman Dave Price joined as team manager, or as he puts it "a glorified race engineer", early in '88. Coincidentally, Price had just started DPS Composites in Surrey.

"I saw a business opportunity and sold them the idea of using carbon bits and pieces," he says. "We started off doing splitters, rear wings and turbo plenums, and from there it went to us producing the tubs for the C11 and the C291 race cars."

The first Mercedes Group C car built on the experience of the C9/88, a family resemblance is evident, but it was in effect all new.

"The C11 was an improvement in every area,"

says Ress. Those improvements included the carbon tub, a switch from rockers to pull-rod suspension and a bespoke gearbox developed by Mercedes to replace the previous Hewland transmission. "That allowed a proper integrated rear end that was much stiffer than before."

The big advance, however, was in terms of aerodynamics. The detailing on the C11 in these photographs, the very first chassis built, stands in comparison with the best LMP prototypes of today.

"We learnt a lot about getting air out of the wheel arches," explains Ress. "We could do all these details because we were using a rolling-road wind tunnel for the first time. I think we were the only team using a rolling-road tunnel. We made a lot of small steps that added up to a very nice car." And a beautiful car.

"It was very much my design style, something I learnt from Mr Sauber to pay attention to the details," Ress continues. "Peter always told me that a racing car has to look nice."

The first C11, number C11-89-00, had its maiden run at Paul Ricard in October '89. This chassis, built by a Swiss supplier rather >>>



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than DPS, is what Ress calls a “test piece” that remained in service throughout 1990, even though it was unable to race because of some minor rule changes.

The new design didn't race until round two of the WSPC at Monza in May. Sauber hedged its bets for the season opener at Suzuka, taking one C11 and one C9/88, only for Schlessler to crash the new car in qualifying. He and new teammate Baldi had to revert to the spare C9/88.

If the C9/88 was good enough to beat rivals from Jaguar, Nissan, Toyota and Porsche, the C11 pummeled them into submission. Baldi and Jochen Mass qualified one-two at Monza, the pole man ending up the better part of two seconds ahead of the ‘best of the rest’, the Jaguar XJR-11 driven by Martin Brundle.

That set the tone for the rest of the season. The only time the Merc would be beaten was at Silverstone. Baldi and Schlessler were on course for victory when an engine failure brought an end to their race when they had a lead of 50 seconds after just 40 laps. There was no back-up car in the race, because the car Schumacher shared with Mass had been thrown out of the event for receiving outside assistance after stopping on track in practice.

Baldi rates the C11 as “probably the best prototype I ever drove” and the “only one of the cars from my career that I ever wanted to own”.

“The C11 was the first car after I left Formula 1 that was really enjoyable to drive,” he explains. “It gave you the same feeling as an F1 car. You could really drive that car, even though it was a heavy sports car.

“It was such an honest car: you could feel what was going to happen next, if you were going to lose the front or if you were going to lose the rear.”

So good was the C11 that Baldi took Eau Rouge flat on the way to pole position for the Spa race in early June. Not bad for a 900kg car with perhaps 1000bhp in qualifying trim.

Team Sauber Mercedes may have switched to Goodyear tyres for 1990, but a development programme embarked upon with Michelin in '89 paid dividends.

“Michelin was able to put telemetry on the car, which meant we were probably the only team able to measure suspension loads and tyre temperatures and pressures,” recalls Ress. “We learnt a lot about how downforce changes and how to put it on the road. The centre of pressure didn't shift in braking or acceleration. That made the C11 very easy to drive.”

There were any number of reasons why Team Sauber Mercedes was nigh-on unbeatable in 1990.



Jaguar XJR-11 couldn't live with the C11 in 1990 World Sports-Prototype series

“It was a state-of-the-art chassis, with a very good engine that had excellent fuel consumption,” reckons Ress. “And, of course, we had very good drivers.”

Sauber had paired its two superstars for 1990. Baldi and Schlessler had gone head-to-head for the title in '89, the Frenchman coming out on top. Meanwhile, veteran Mass would act as tutor to the youngsters: Schumacher, Heinz-Harald Frentzen and Karl Wendlinger.

Silk Cut Jaguar team leader Brundle has few memories from the 1990 WSPC bar “desperately trying to hang on to the Mercs” aboard the latest turbocharged XJR-11.

“We could just about stay with them on a banzai lap, but we could race with them. That Mercedes was driveable: it had more downforce than us and less turbo lag. We couldn't match them for fuel consumption, and, of course, they had some tidy pedallers.”

Price, who left Sauber over the winter to join Nissan's British-based assault on the WSPC, reckons it was barely a fair contest. The low-stressed V8, with a four-valve head since the

start of 1989, was the key. This, remember, was the last year of the Group C fuel-formula: each C1 car was restricted to an allocation equal to 51 litres per 100km.

“They got much better fuel numbers than anyone else,” he says. “A big-capacity single-cam lightly turbocharged was perfect for Group C, and ‘Schless’ was exceptional on the fuel and Mauro pretty good, too. That was probably why they were unbeatable.”

The successes of the C11 in 1990 played a part in the decision to go F1. Neerpasch told *Motor Sport* in 2005 that F1 was on the agenda from the moment Mercedes returned to racing. Welti and Ress aren't convinced; they don't remember any talk of F1 until 1990.

“The C11 was so much better than everything else,” says Welti, “and I'm sure that was a key element in the decision to go F1.”

Harvey Postlethwaite joined up to lead the technical assault on F1 early in the summer, only to leave before the leaves fell from the trees. The Mercedes board opted against signing off the F1 programme at a time of recession. Sauber went ahead and made the jump, ostensibly on its own, for 1993 and in '94 its Ilmor V10s carried Mercedes badges.

The success of the C11 may have set Mercedes and Sauber on the path to F1, but it also resulted in complacency. Its successor for the 3.5-litre formula was not a great car.

“Do we have to talk about the C291?” asks Ress. “It is not a nice time to remember.

“Making the C11 had been quite easy: it was amazing how little effort we had to put in to make such a good car. Maybe that affected us.”

The C291 was beset by what Ress calls “engine, gearbox and performance problems”, hence the reason Team Sauber Mercedes ➤

started 1991 in the renamed Sportscar World Championship with one of the new 3.5-litre cars for Schumacher and Wendlinger and a C11 for Schlesser and Mass. The old-generation cars had been allowed to continue, albeit in the case of the Mercedes with 100kg of ballast to ensure the new Group C machinery was in the ascendancy.

Mercedes had opted not to defend its Le Mans crown in 1990, a year the 24 Hours was off the World Championship schedule. The big race returned to the championship in '91, which meant Sauber and Mercedes went back for what would be the C11's swansong. "There was no point going to Le Mans with the C291," says Ress. "The chances of finishing would have been very small."

Schlesser posted the fastest qualifying time, outgunning the benchmark 3.5-litre car, Jaguar's XJR-14. The Frenchman and team-mates Mass and Alain Ferté dominated the race. With three hours to go, the car was three laps to the good. Then something very 'un-Mercedes' happened.

An alternator bracket broke just as Ferté was passing the pits.

The same pulley drove both the alternator and the water pump, which meant the V8 was rooted by the time the car returned to the pits. After one slow, exploratory lap, the C11 was retired.

The car driven by young guns Schumacher, Wendlinger and Fritz Kreuzpointner had suffered an identical failure little more than half an hour before, though it had been caught in time and the offending item changed.

"When we replaced it on the youngsters' car, there was some discussion about changing it on the lead car as a precaution," says Ress. "But everyone thought it was a one-off because in five years we'd not had a problem with that part."

It turned out the bracket had failed because, for the first time, it had been anodised "to make it look nicer", says Welti. This process resulted in what Ress calls "overageing" which made it brittle.

"We could have changed it," says Ress. "It meant taking off the underfloor, but I don't think we would have lost more than a lap doing it."

The youngsters, who had endured two stops for gearbox repairs, finished fifth, seven laps behind the winning rotary-powered Mazda. The third car, which Jonathan Palmer shared with Stanley Dickens and Kurt Thiim, went out after running over some debris.

How and why the bracket came to be anodised, Ress isn't sure. "That's the problem when organisations get bigger," he says. "I don't want to blame Mercedes, but I'm sure someone there knows."

A Le Mans victory in its final race would have been the crowning glory to the career of the C11. It wasn't to be, and it still rankles with Ress.

"A few months ago, we had a party to celebrate 20 years of our Le Mans victory in 1989," he says. "Pretty quickly, we got onto the subject of '91. We are all still frustrated by that race. I have to say, it is the biggest disappointment of my life." **M**



"Do we have to talk about the C291?"

LEO RESS

RIGHTING A WRONG

Le Mans and Silverstone wins may not elude the C11 for much longer

The Mercedes-Benz C11 could finally avenge its two most notable defeats in 2010, albeit in the historic Group C Racing series. The championship for Group C and IMSA GTP cars will visit both Silverstone and Le Mans next year, and C11-89-00 will be on the grid.

Three-time Thoroughbred Grand Prix title winner Bob Berridge bought the unaced car from Peter Sauber after a long chase together with restoration specialist Phil Stott. "It's a thing of beauty," says Berridge, who raced a Nissan in '08. "I fell in love with it."

Berridge's participation in the series during a difficult period resulted in him being invited to become race director.

"They knew what I had done with TGP, ASCAR and Grand Prix Masters," he explains. "That's why they asked me to put my shoulder to the wheel."

The first task has been to firm up the 2010 calendar and Berridge has pulled off a coup by securing the support race at Le Mans on the morning of the 24 Hours. That will be the centrepiece of a six-round calendar "likely to start and finish in the sun in southern Europe", with British races at Silverstone and, most likely, Brands Hatch. Berridge is expecting an increase in grids for 2010 after a recession-hit season in '09.

"We're aiming at 20 to 26 cars," says Berridge, who plans to step down from his management role before the first race. "We'll have the usual Porsches and Jaguars, but we've also got a couple of Lancia LC2s coming. The quality should be up too."

