

THE MAKING OF A LEGEND



BENTLEY





FIVE FACETS OF BENTLEY

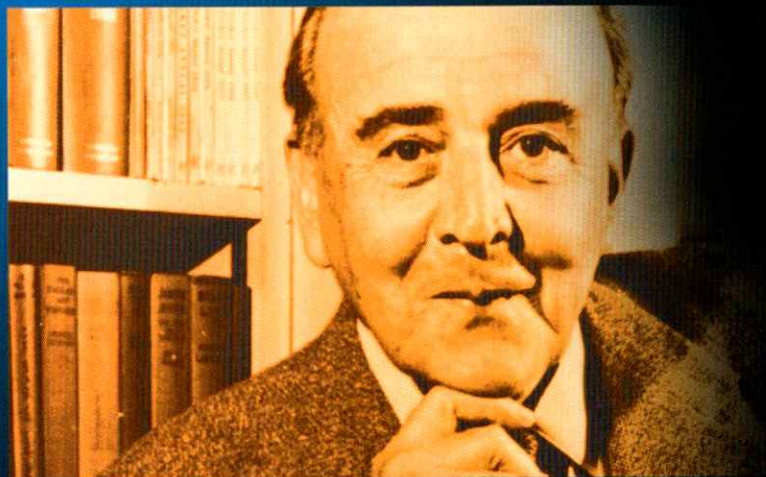
IN ITS 83 YEARS OF EXISTENCE, THE BENTLEY MARQUE HAS AMASSED AN UNMATCHED WEALTH OF LEGENDS, TRUE STORIES, HEROIC DEEDS, RACING VICTORIES AND WORLD RECORDS.

THE COMPANY'S EFFORTLESSLY POWERFUL, HAND-BUILT GRAND TOURERS HAVE A STYLE AND A PRESENCE THAT IS ALL THEIR OWN. A STYLE THAT'S INSTANTLY RECOGNISABLE, WHETHER ENCOUNTERED ON THE ARNAGE CORNER AT LE MANS OR IN BERKELEY SQUARE, LONDON.

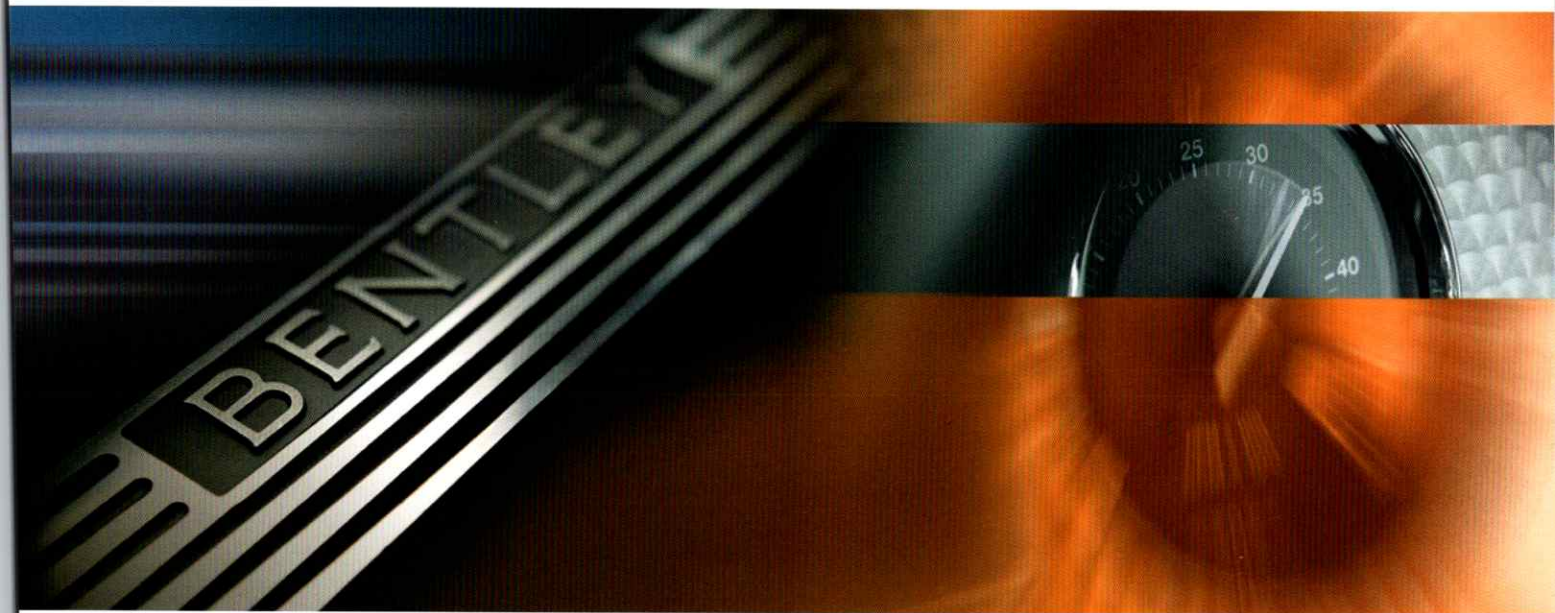
WHILST THE FULL STORY OF BENTLEY WOULD RUN TO HUNDREDS OF PAGES, THIS COLLECTION OF BENTLEY FACT, FIGURES, MYTH AND INSIGHT IS IN FIVE CHAPTERS, EACH ILLUSTRATING A FACET OF THE MARQUE. POWERING, DRIVING, RACING, CRAFTING AND DESIGNING; IN EACH ASPECT OF ITS CHARACTER A BENTLEY IS UNMISTAKABLE, WHETHER IT WAS BUILT IN 1919 OR 2002.

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THE IRRESISTIBLE FORCE



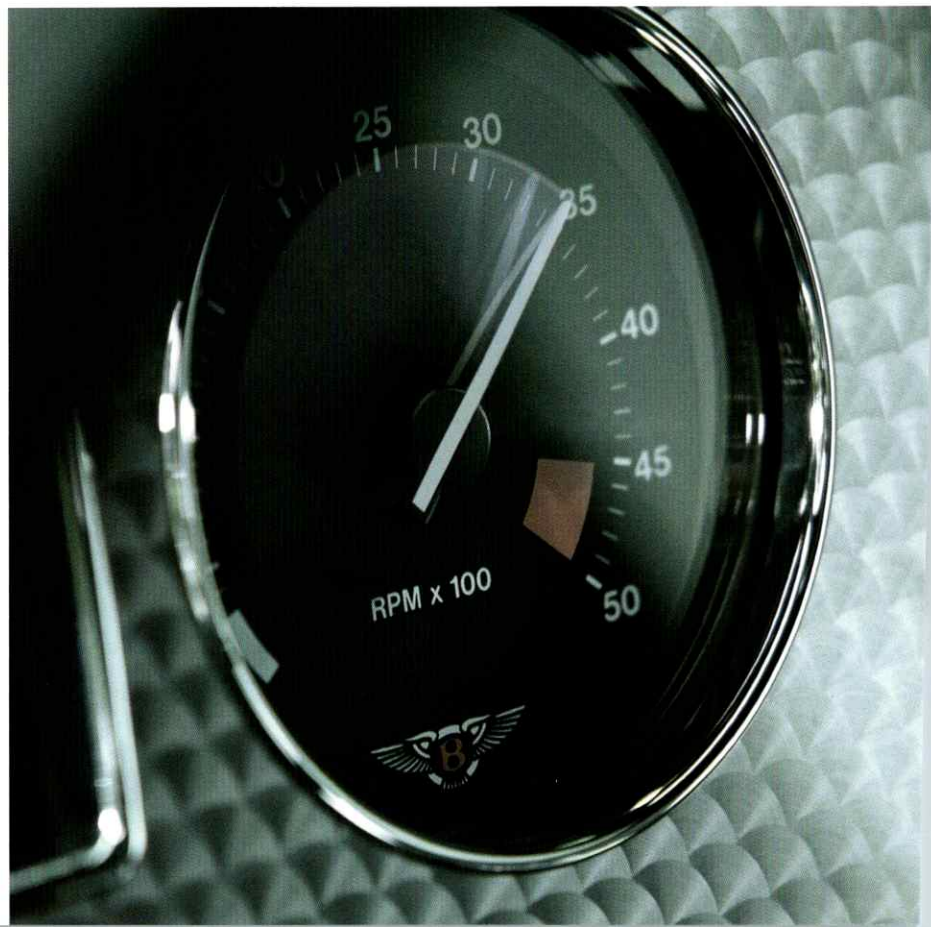
POWER. MORE THAN ANY OTHER TRAIT, POWER IS THE DEFINING CHARACTERISTIC OF BENTLEY. FROM 1920 BENTLEYS HAVE FEATURED LARGE CAPACITY ENGINES, PRODUCING HIGH LEVELS OF TORQUE AT LOW RPM, OFFERING EFFORTLESS OVERTAKING AND ENDURANCE.

1 REDLINE AT 4,500

Nothing defines a Bentley quite like its engine. The tachometer on the Arnage T, one of the world's most powerful production cars, is red-lined at 4,500 rpm, a speed when other high performance engines are barely getting into their stride. But in the Bentley, 645 lb.ft. (875Nm) of torque arrives at a mere 3,250 rpm, barely above idling speed, delivering a sensation like the hand of a giant pushing you with inexorable power towards the horizon.

2 BIRTH OF A LEGEND

The first Bentley engine roared into life in New Street Mews, London, in October 1919. With an open exhaust and straight cut gears, the sound was so loud that the matron of a nearby nursing home appeared at the door of their makeshift workshop to demand that they stop the test. Tongue in cheek, W.O. Bentley commented privately that it would have been *"a happy sound to die to."*





W.O. BENTLEY IN A DFP

W.O. BENTLEY - RAILWAY ENTHUSIAST

Born in 1888, Walter Owen Bentley's first love was the railway. He served his apprenticeship as an engineer on the Great Western Line, a training that included working as a fireman on the footplate of the main line express trains. He wrote in his autobiography:

"I was fascinated by the feeling of power as we pulled out of King's Cross, up the steep gradients and tunnels of North London, up the steady grind for another eleven miles to Potters Bar and by the sudden irresistible surge of acceleration when the track levelled off and fell away. There is nothing I know to compare with the sensation of rushing through the night..."

DORIOT FLANDRIN AND PARENT

In 1912 W.O. Bentley and his brother took on the import concession for DFP - a French maker of two-litre sports cars. Bentley both drove and tuned the DFP, achieving great success in its category, winning hill climbs and setting records at Brooklands.

Whilst discussing further plans at the DFP factory, W.O. noticed an aluminium paperweight on M Doriot's desk in the shape of a piston. He quickly realised that aluminium pistons could improve both performance and reliability in high performance engines and pioneered their use - taking great care to conceal this innovation from his rivals!

BENTLEY TAKES TO THE AIR

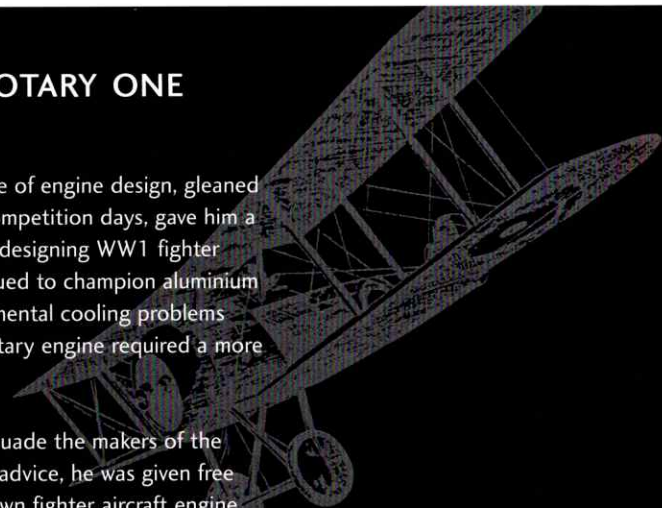
During World War 1 W.O. Bentley became an aero engine designer. The dual disciplines of power and reliability were to become the hallmark of his cars.

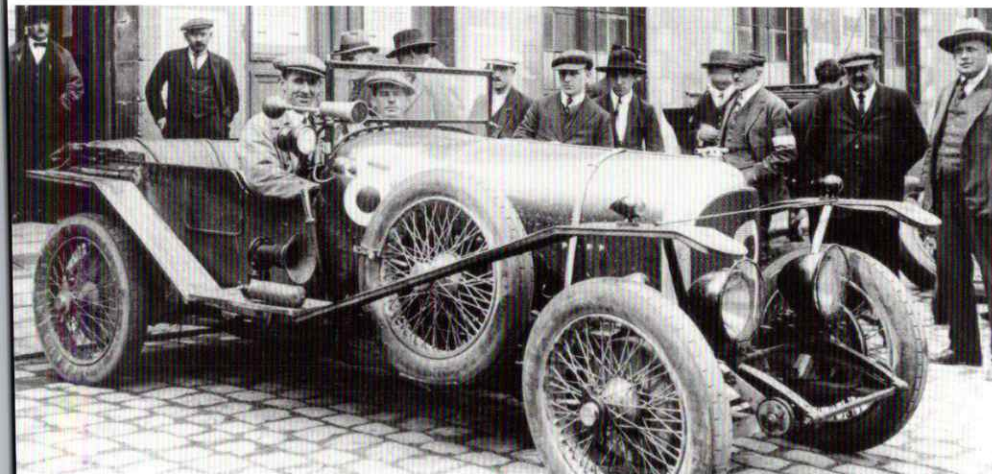
Fighter pilots, of course, needed both - it was literally a matter of life and death; *"From the onset the appalling sense of responsibility hung over me and never left me for the rest of the War: the figure of a pilot killed by engine failure leaning over my shoulder like some ghostly conscience whenever I was at work..."*

BENTLEY ROTARY ONE AND TWO

Bentley's knowledge of engine design, gleaned from his pre-war competition days, gave him a good insight when designing WW1 fighter engines. He continued to champion aluminium pistons, but fundamental cooling problems with the Clerget rotary engine required a more dramatic cure.

After failing to persuade the makers of the Clerget to take his advice, he was given free rein to design his own fighter aircraft engine from scratch. B.R.1 and B.R.2 - Bentley Rotary One and Two - were the result. By the end of the war they were in widespread use. It was a Sopwith Camel, piloted by Captain A.R. Brown and powered by a 230 bhp B.R.2, which finally shot down Baron Manfred von Richtofen, the infamous Red Baron.





CLEMENT AND DUFF, 3 LITRE BENTLEY, 1924

3 LITRE

Like a fighter aircraft's engine, Bentley's original 3 Litre of 1919 was both powerful and reliable. Monobloc, with 4 cylinders in line, overhead camshaft and twin spark plugs per cylinder, it was both advanced and yet soundly engineered. The pent roof, four valves per cylinder design with its crossflow cylinder head would still have been considered modern more than sixty years later, and Bentley took out several patents for the 3 Litre design. The 3 Litre's power - it produced 85 bhp - and reliability stood the marque in good stead, either on the road or on racetracks such as Brooklands and Le Mans, which it won twice - in 1924 and 1927.



SPEED SIX AT LE MANS, 1929

SPEED SIX

The Speed Six was announced at Olympia in 1928, an extensively improved and modified 6½ litre engine. Power was raised from 140 bhp to 180 bhp with no loss of reliability and Speed Sixes went on to win Le Mans twice - in 1929 and 1930. Many consider the Speed Six to be the finest of all the 'Cricklewood' Bentleys produced between 1920 and 1931. W.O. Bentley was quoted in the *Morning Post*; *"the ideal we have kept before us in the design of this car is not to sacrifice one atom of silence and flexibility to speed."*

THE FIRST 6-CYLINDER BENTLEY

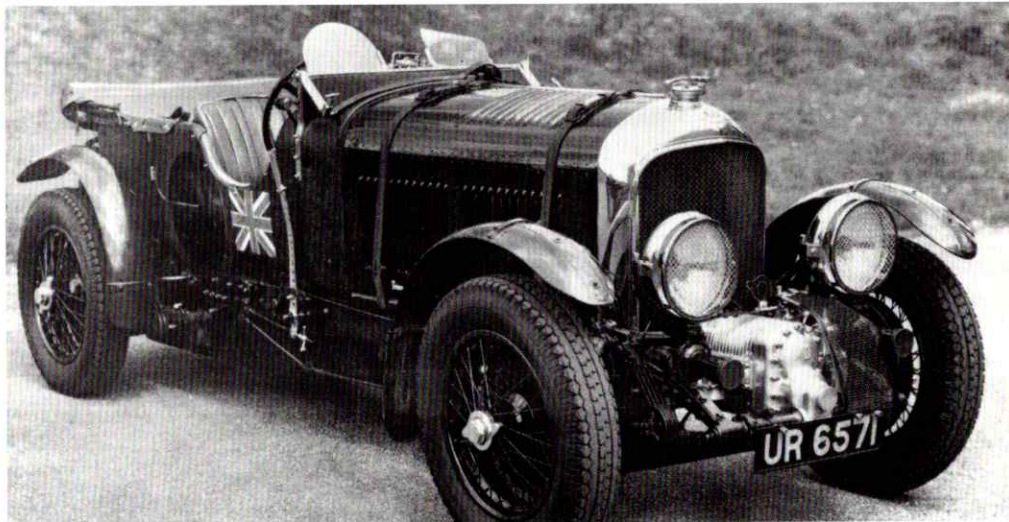
In 1925 Bentley developed a 6-cylinder engine of 6597cc producing 140 bhp, mainly for customers wanting larger and heavier saloon-bodied Bentleys rather than the 3 Litre sports model. The 6½ Litre's bore/stroke dimensions were 84mm bore x 140 mm stroke - with this long stroke and larger capacity it had great smoothness and flexibility. It was considered a rival for the Rolls-Royce Phantom, but it was not intended to be a sports car.

4½ LITRE

By 1927 both the pressures of competition and customer demand made it clear that a successor to the 3 Litre engine was needed. The 4½ Litre Bentley engine was a development of the 3 Litre, with a number of detail changes and improvements. Like the 3 Litre it had four cylinders, and it featured rockers in an alloy called Duralumin, larger bores to increase capacity, new camshaft and a one-piece sump with improved oil pump. EXP 5 - the first 4½ Litre - was on test in February 1927. Power output for the larger-engined car went up to 110 bhp. A 4½ Litre Bentley won Le Mans in 1928.

THE BLOWER

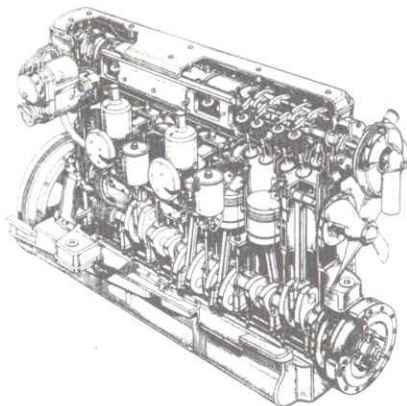
11
The famous Blower Bentley - supercharged 4½ Litre - was produced on the insistence of one man, the Hon. Sir Henry 'Tim' Birkin in his quest for more and more power. Amherst Villiers designed the supercharger installation but later famously fell out with Bentley Motors. The Blower was undoubtedly fast - depending on the version, it produced between 175 bhp and 240 bhp - but the additional stress and heat produced by the supercharger meant that it rarely lasted the distance in endurance racing. Nobby Clarke, Bentley team racing manager, once remarked "A Blower eats plugs like a donkey eats hay".



BLOWER BENTLEY

THAT BLOODY THUMP

12
Not every customer approved of the smoother, quieter Bentley engines after the roar of the early 4-cylinder engines. As W.O. Bentley recounted, "*when the 6½ Litre came along we sold one to an old Bentley owner (E.R. Foden, founder of a famous make of British lorry) who was always very nice to me about his 4½. The next time I met him I eagerly asked him how he liked his 6½. I was looking forward to hearing what he had to say because he was very pleased with that car. He looked slightly embarrassed and said: "Oh, I like it, but I do miss that bloody thump".*"



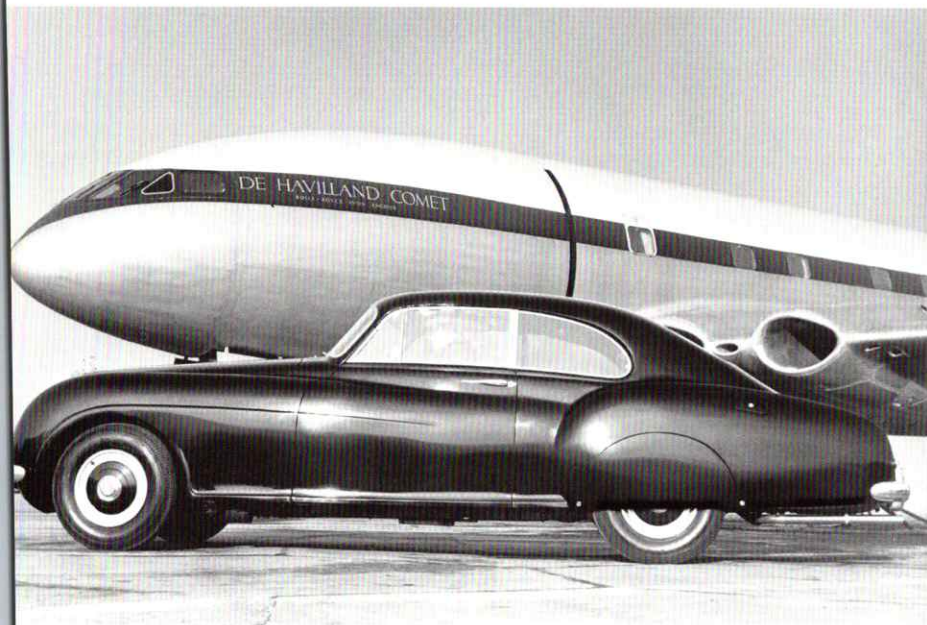
8 LITRE

W.O.'S SWANSONG

W.O. Bentley's last engine design - the 8 Litre of 1930 - survived only a few months before the company went into receivership. It was the largest-engined car offered on the UK market at the time. The crank case was made of Elektron, a magnesium alloy that combined strength with lightness. The 8 Litre was staggeringly fast for the era, and considered by many to be a better car than the Rolls-Royce Phantom. W.O. thought it was his finest work: *"I have always wanted to make a dead silent 100 mph car, and I think we have done it."*

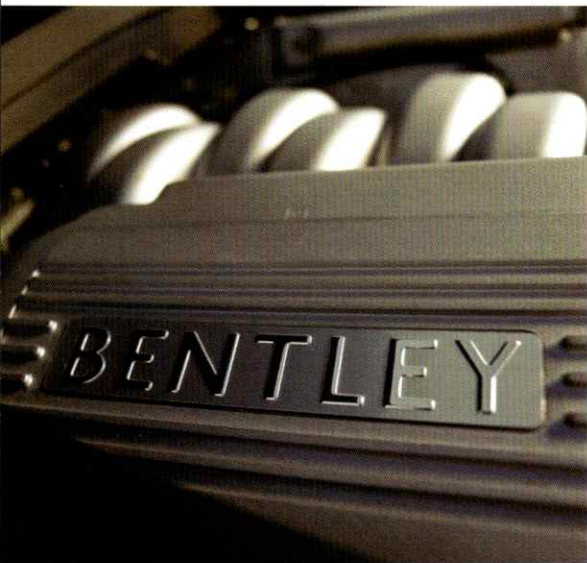
THE AUTOCAR AND THE 8 LITRE

On December 5th 1930, The Autocar recorded a 1/2 mile terminal speed of 101.12 mph for the 8 Litre Bentley. Between then and 1939, only one other car - an 8C 2300 Alfa Romeo - recorded a faster speed. The 8 Litre Bentley remained the fastest production Bentley ever made until 1952 and the Bentley R-Type.



R-TYPE

The R-Type Continental of 1952 had a 6-cylinder in-line 4,566cc engine. With a raised compression ratio and other performance modifications - the work of Ivan Evernden - it produced 153 bhp, and thanks to careful attention to aerodynamics and light weight was able to reach 120 mph, a world first for a four-seater saloon.



THE 6.75 LITRE V8

The basic layout of the Bentley V8 has evolved over more than 25 years. Constant evolution - turbocharging in 1982, fuel injection in 1986, ever more sophisticated engine management systems - has delivered even greater power and torque, whilst conforming to increasingly stringent emissions regulations.

Both block and cylinder heads are made of aluminium alloy. The Bentley V8 has two valves per cylinder operated from the centrally mounted camshaft. Two valves offer better low down torque whilst the increased complexity and weight of valve gear for a 4-valve combustion chamber only shows power benefits at high rpm.

THIRSTY RACE ENGINES

The Le Mans racing Bentleys of the 1920s had a healthy thirst for engine oil. In racing conditions, a 3 Litre would consume a gallon of oil every 100 miles, whilst a 4½ Litre improved on this to a gallon every 150 miles. Quick top-ups in the pits were vital, and the team devised extended oil filler necks so that the bonnet did not need to be raised. Special 'treacle taps' in the sump automatically drained off any excess, saving valuable seconds.

CREWE

The Crewe factory - home of Bentley Motors - was originally built to produce the Rolls-Royce Merlin aero engine, which powered the Spitfire, Hurricane and many other famous combat aircraft. In 1946 it became the home to both Rolls-Royce and Bentley - and the factory produced its first car, a Mark VI Bentley. A Merlin engine still has pride of place in the works.

EXP SPEED 8

EXP Speed 8 - the 2001 Le Mans racing Bentley - produces 600+ bhp and over 600 Nm of torque from its 3.6 litre twin turbocharged V8 engine. It is capable of well over 200 mph.



SUPERCHARGERS AND TURBOCHARGERS

Today's Bentleys use a turbocharger, a compressor driven by the exhaust gases which forces larger quantities of air (and thus larger quantities of combustible oxygen) into the combustion chamber to increase power dramatically. The charged air is also cooled in the intercooler to increase its density and power output still further. In contrast, the original 'Blower Bentley' - Birkin's 4½ Litre - was supercharged, the compressor being driven off the engine's crankshaft. By using energy that would otherwise be wasted, a turbocharger is a more efficient method of forced induction.

TEAMWORK

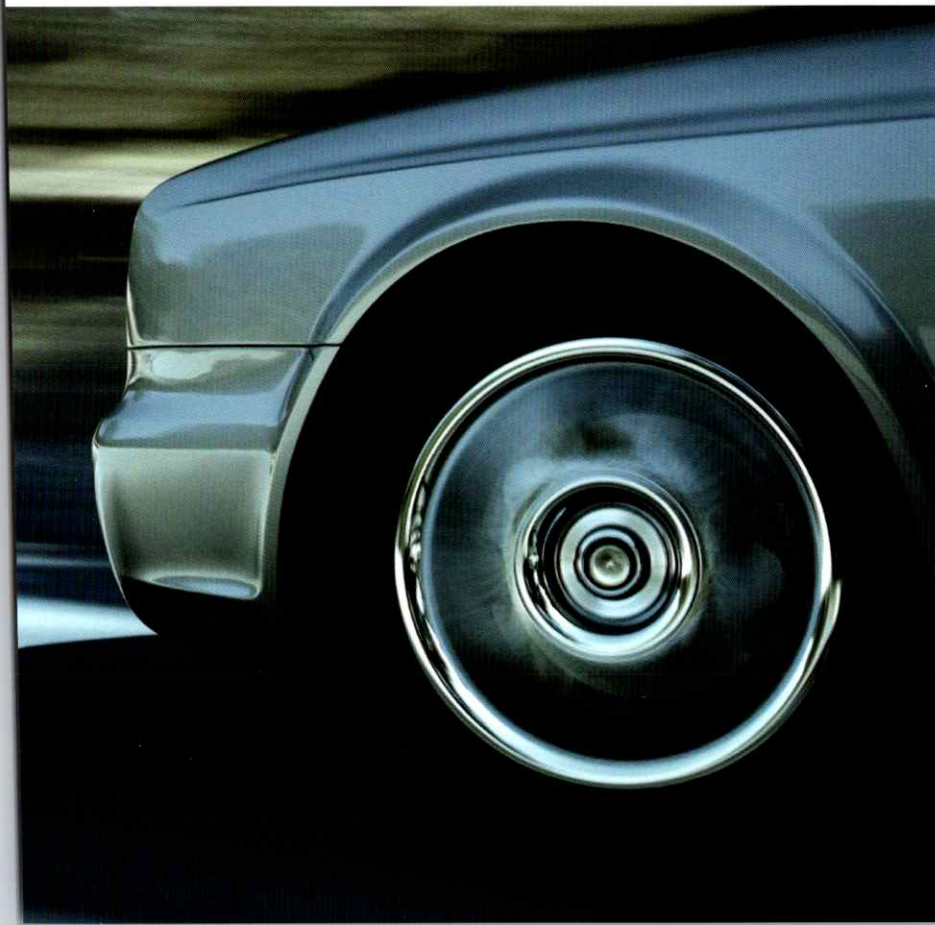
Today, at Crewe, Bentley engines are hand-assembled by a team of 36 people. Every member of the team has to sign off each piece of work for which he or she is responsible. All reciprocating parts are balanced individually, and all engine bolts' torques are checked after tightening. Each completed engine is run on a test bed for up to 30 minutes, at speeds between 1500 rpm and 3000 rpm, whilst testers check the engine functions, including oil, coolant leaks and any unacceptable mechanical noise.

RETURN OF THE BLOWER BENTLEY

Bentley's renaissance can be traced back to 1982 and the launch of the Mulsanne Turbo. A four-door saloon developed from the Rolls-Royce Silver Spirit with which it shared a bodyshell, the Mulsanne Turbo was the first true performance Bentley in decades. The press hailed it as '*the return of the Blower Bentley*' and sales of Bentley started to rise dramatically from that point.







A WORTHY STANDARD-BEARER

The black enamel badge has always denoted a Bentley of exceptional power and speed. Today's Arnage T, a spacious four-door performance sports saloon, can accelerate from 0-60mph in 5.5 seconds (0-100km/h in 5.8 secs) and through to 100mph (160km/h) in 13.4 seconds, with a governed max. speed of 168mph (270km/h). A performance that is on par with many two door supercars.

450BHP

The Bentley 6.75 Litre engine in the Arnage T has the highest power output of any roadgoing Bentley. It features twin charge coolers, with pulse separated exhaust manifolds and electronic throttle actuation. It has a maximum power of 450bhp (336kW) at 4,100 rpm and achieves maximum torque of 645 lb.ft. (875 Nm) at 3,250 rpm.



FLYING THE GROUND



NOTHING CAN QUITE PREPARE YOU FOR THE FIRST TIME YOU DRIVE A BENTLEY. IT'S AN ENTIRELY NEW EXPERIENCE; THE TIDAL SURGE OF POWER WHEN YOU ACCELERATE, THE DEEP GROWL OF THE ENGINE, THE COCOONED COMFORT OF THE COCKPIT. MILE-EATING APPETITE...



AUTOCAR, 1930

1

"Motoring in its highest form."

- The Autocar's road test of the Bentley
8 Litre, December 1930

AUTOCAR, 1952

2

*"Whatever memorable motoring experiences
one may have had, this was something
different... This Bentley is a modern magic
carpet which annihilates great distances and
delivers the occupants well-nigh as fresh as
when they started."*

- The Autocar's test of the R-Type
Continental, September 1952





SUNDAY TIMES, 2001

"... the ability to go from 0 to 60 mph in extreme comfort and in under six seconds is just a useful by-product of owning a Bentley. Most people who enjoy driving would want to own a Bentley."

- Sunday Times, April 2001

AUTOCAR, 1952

"One might think that such tremendous performance would be used only on rare occasions, but the controls are so superbly responsive that the experienced driver quickly finds himself making full use of its potentialities, to over 100 mph, then effacing the speed smoothly and quickly with a touch on the mechanical servo brakes."

- The Autocar's test of the R-Type Continental, September 1952



THE SAVOY LIFE

5
“The handcrafted workmanship was impeccable.” - The Savoy Life

EVO, 2002

6
“It (the Arnage T) sets a new benchmark among deranged super-saloons that will be very hard to beat.” - EVO, February 2002

AUTO EXPRESS, 2002

7
“It (the Arnage T) taps directly into the firm’s sporting bloodline, and builds on the strengths of what is already a fine vehicle. The perfect way to start what promises to be a vintage year for the Crewe company.” - Auto Express, January 2002



AUTOREVUE 5, 2000

"Those 835 Nm which hurl the Bentley (Arnage Red Label) forwards are supernatural. They make the car nimble, they make the weight disappear, except in bends where gravity sets in." - Autorevue 5, 2000

AUTO BILD, 2000

"The Red Label therefore gains a progressive, very sensitive, precise and sufficiently strong steering, springs and dampers are sporty and firm without being uncomfortable, and body stiffness was increased by 20%. Result: You can drive this 5.39m long machine fast, relaxed and without effort."
- Auto Bild, January 2000

AUTO EXPRESS, 2001

"Utterly unique in an era of mass production and global component sharing, the Bentley remains a hand tailored jacket in a world of off-the-peg suits." - Auto Express, April 2001







AUTO MOTOR UND SPORT, 2000

"Yet the most important and serious innovation is the return to the old V8. This 6.75 litre power plant turns the Arnage into a connoisseurs' Bentley – superior and cool, drawing on unlimited resources." - Auto Motor und Sport, February 2000

AUTOMOBILE MAGAZINE, 2001

"The Arnage is utterly delightful to drive quickly on a winding road."
- Automobile Magazine, June 2001

RACER, 2001

"Wrapped exquisitely around these mechanicals is a classic Bentley bodyshape - unmistakable, yet not overstated." - Racer, June 2001

AUTO MOTOR UND SPORT, 2002

"The sound that emerges from the tailpipes, themselves as thick as a man's arm, is like Luciano Pavarotti warming up after a night spent partying on the beach. Impressive."
- Auto Motor und Sport, February 2002





MORNING POST, 1928

"I consider this car to be one of the most remarkable engineering achievements of the century, the balance of speed, silence and flexibility having been maintained in a unique manner. Regardless of price, this car is the nearest to the ideal road vehicle that I have ever driven."

- Morning Post report on the Speed Six, 1928

CAR, 2002

"This is perhaps one of the last truly unique driving experiences" - Car, February 2002





EVO, 2001

"... with a response time of 1/100th of a second, the suspension reacts to increased cornering loads almost instantaneously." - EVO, March 2001

AUTOFOCUS NO.1, 2001

"The Continental T Personal Commission is a handcrafted sculpture made by well-practised artists who by means of wood, leather and metal transport the most important heritage of Bentley's history from the past to the present: sportiness and a quality of finish that has set standards for generations." - AutoFocus No.1, 2001

AUTOCAR, 2002

"It (The Arnage T) can blow the doors off a Boxster." - Autocar, January 2002

AUTO MOTOR UND SPORT, 2002

"A light touch with the right foot and the pure power of the 6.75 litre issues an unmistakable wake-up call: the Bentley is on the loose!"

- Auto Motor und Sport, February 2002

AUTOCAR, 1920

"As the speed increased to over 70 mph, the landscape leaped at us, wind shrieked past the screen... as the roar of the exhaust rose to its full song..."

- Sammy Davis' road test of EXP1, the first-ever Bentley, published in The Autocar, January 1920



RACER, 2001

"It's also apparent that careful attention has been paid to the car's weight distribution under all load conditions, because it never felt off balance." - Racer, June 2001

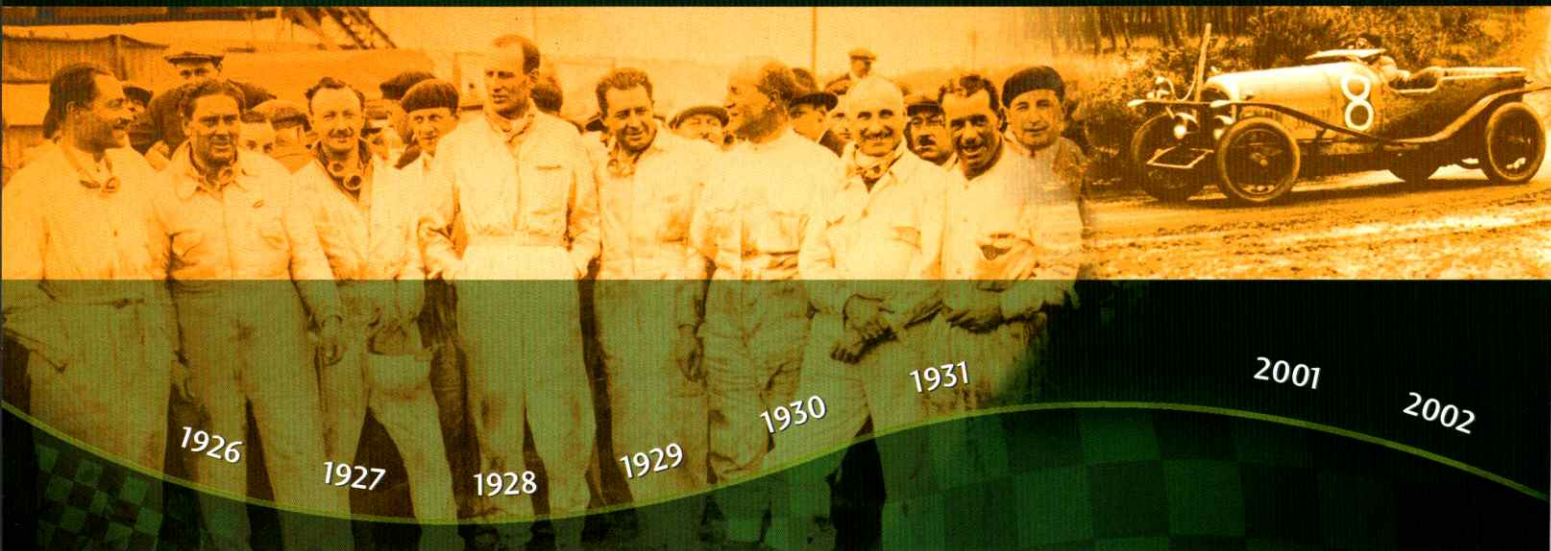
AUTOMOBILE MAGAZINE, 2001

"The Arnage covers the ground with an unyielding, locomotive-like surge that's like nothing else you've ever experienced." - Automobile Magazine, June 2001

BUSINESS WEEK, 2001

"The auto business needs a gold standard, and Bentley is it." - Business Week, May 2001





HOME FROM HOME



LE MANS. ONE OF THE LONGEST-ESTABLISHED MOTOR RACES IN THE WORLD, A GRUELLING 24-HOUR TEST OF SPEED, ENDURANCE AND TEAMWORK. BENTLEY MADE LE MANS ITS OWN KINGDOM IN THE 1920S, WITH FIVE OUTRIGHT VICTORIES BETWEEN 1924 AND 1930. RACING - WHETHER AT LE MANS, BROOKLANDS OR EVEN INDIANAPOLIS - HELPED FORGE THE ORIGINAL BENTLEY LEGEND. TODAY, WITH TEAM BENTLEY, THE FLAME IS KINDLED ANEW.

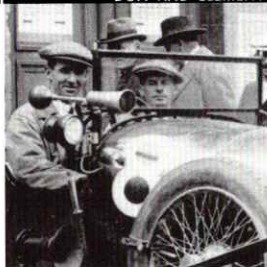
BENTLEY AT LE MANS - THE YEARS OF GLORY

1923-24

1923
4th - Duff/Clement
Bentley 3 Litre

1924
1st - Duff/Clement
Bentley 3 Litre

DUFF AND CLEMENT



1925

DNF - Duff/Clement
Bentley 3 Litre

DNF - Moir/Benjafeld
Bentley 3 Litre

CLEMENT



1926

6th - Davis/Benjafeld
Bentley 3 Litre

DNF - Duller/Clement
Bentley 3 Litre

DNF - Gallop/Thistlethwayte
Bentley 3 Litre

GALLOP



1927

1st - Davis/Benjafeld
Bentley 3 Litre

DNF - Clement/Callingham
Bentley 4½ Litre

DNF - d'Erlanger/Duller
Bentley 3 Litre

DAVIS



1928

1st - Barnato/Rubin
Bentley 4½ Litre

5th - Birkin/Chassagne
Bentley 4½ Litre

DNF - Clement/Benjafiel
Bentley 4½ Litre

BARNATO



1929

1st - Barnato/Birkin
Bentley Speed Six

2nd - Kidston/Dunfee
Bentley 4½ Litre

3rd - Benjafiel/d'Erlanger
Bentley 4½ Litre

4th - Clement/Chassagne
Bentley 4½ Litre

DNF - Lord Howe/Rubin
Bentley 4½ Litre

BIRKIN



1930

1st - Barnato/Kidston
Bentley Speed Six

2nd - Clement/Watney
Bentley Speed Six

DNF - Birkin/Chassagne
Bentley 4½ Litre
Supercharged

DNF - Benjafiel/Ramponi
Bentley 4½ Litre
Supercharged

KIDSON AND BARNATO



2001

3rd overall, 1st in LM-GTP
class - Wallace, van de Poele
and Leitzinger
EXP Speed 8

DNF - Brundle, Ortelli and Smith
EXP Speed 8

WALLACE, VAN DE POELE
AND LEITZINGER



THE FIRST LE MANS

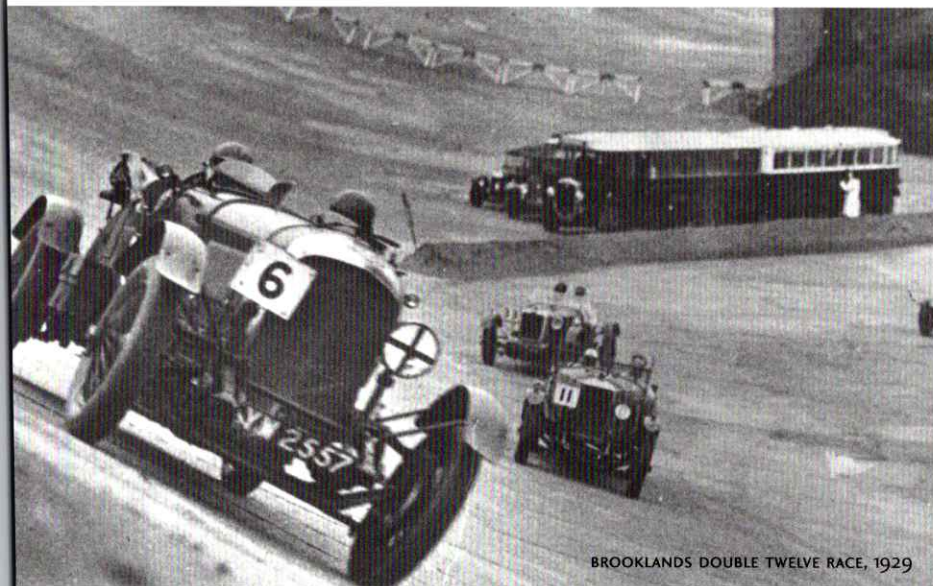
In 1923 Duff decided to enter his private 3 Litre for a new race to be held in Northern France around the town of Le Mans. Having studied the regulations, W.O. Bentley decided the whole race was madness and that no-one would finish. Duff nonetheless persuaded him to come over and watch the race, where the Duff/Clement Bentley finished fourth, despite running out of petrol, after setting the fastest lap several times over. By that time the race had got into Bentley's blood - and a new era for the marque was about to begin.

EARLY DAYS

Le Mans in the 1920s was a test of speed and endurance for road cars. Early versions of the race called for the cars to be driven with their hoods up for the first twenty laps. There were strict regulations about maintenance and assistance from anyone other than the driver or his team-mate. W.O. was meticulous about saving time in the pits as well as on the track; the 1924 winning Bentley also took the record for hood raising time!

BENTLEY AT INDIANAPOLIS

Bentley's racing legend is founded upon its victories at Le Mans and Brooklands. But the company did venture further afield. In 1922, a works 3 Litre, driven by Hawkes, tackled the Indianapolis 500 Miles Race, despite being completely unsuitable for this specialised race. The American competitors were reportedly astonished by the way the Bentley was simply uncanted before immediately lapping at high speed. It finished thirteenth, the last car to complete the full 200 laps.



BROOKLANDS DOUBLE TWELVE RACE, 1929

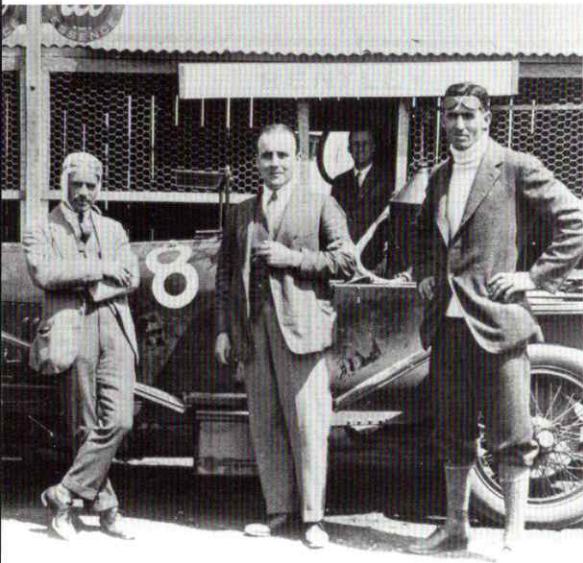
THE CRADLE OF BRITISH MOTOR RACING

The banked circuit at Brooklands, near Weybridge in Surrey, was the scene of innumerable Bentley victories in club racing. Its steep banking allowed drivers of the faster machinery to circulate high on the banking at speed, passing smaller cars beneath them.

In the British Racing Drivers Club 500 Miles race of 1929, a 4½ Litre Bentley won on handicap at an average speed of 107.32 mph, whilst a Speed Six set the fastest lap at 126.09 mph.

RETIREMENT - AND FIRST PLACE

After taking fourth place at the 1923 Le Mans, Duff tackled the Spanish Grand Prix at Guipuscoa the same year. He was leading easily until a flying stone hit his goggles, causing him to lose control and crash. The organisers were so impressed with his performance they still awarded him first place in class!



DUFF, W.O. BENTLEY AND CLEMENT, 1924

BACK TO WIN

In 1924 Bentley returned. Unlike Duff's private 1923 entry it was a 'works' team. One by one the opposition fell behind or broke - the sole Bentley, driven by Duff and Clement, won at an average speed of 53.76 mph.

THE BLOWER BENTLEY VERSUS MERCEDES

"Birkin made his great effort on the Mulsanne straight on the third lap, averaging 88 mph. Grimly he closed on the white dust cloud through which he could now see the white Mercedes thundering along, its supercharger emitting that famous high-pitched wailing which meant that Caracciola was on full bore. Then, as Birkin pulled over to pass, there was a bang, a rear tread stripped, mangling its mudguard, but he pressed on. Caracciola, somewhat oblivious of the challenge, was in the middle of the road. Birkin passed with two wheels on the grass at 125 mph, and both drivers changed down, slammed on the brakes for the Mulsanne corner, juddering and snaking." - Motor magazine's description of 1930 Le Mans

“OLD NO. 7”

After Bentley's first Le Mans victory in 1924, the marque suffered two years of failure before returning to the 1927 race with a team of three cars; a prototype 4½ Litre, and two 3 Litre cars, with Sammy Davis of *The Autocar* and Harley Street consultant Benjafield sharing the wheel of 'Old No. 7'.

The three Bentleys soon took the lead, circulating comfortably at the head of the field. Then disaster; the leading Bentley 4½ Litre arrived in the darkness at White House corner to find a back-marker had crashed and was blocking the track. All three Bentleys piled into the wreckage, one after the other, and only one was in any way drivable; 'Old No. 7', with Davis at the wheel, managed to limp back to the pits and continue, minus offside headlamp, with buckled bodywork, damaged front axle and a crack in a steering arm ball joint.

The crippled Bentley held doggedly on to second place throughout the night and all the next day, until with less than an hour of the race to run, the leading Aries retired with a broken camshaft. Davis and Benjafield took the lead and the victory.

RUNNING DRY

In 1928, after a long dice with the American Stutz, the leading 4½ Litre of Barnato and Rubin hit trouble. The chassis frame had cracked due to the hard pounding of the rough track, causing the car to sag in the middle and - even more disastrously - the radiator hose to part company from the radiator. With no water remaining, Barnato nursed his car home, timing his last lap so that he wouldn't pass the finish line before 4pm, which would have meant another circuit and almost certain engine failure.



OLD NO.7, 1927

A SPECIAL DINNER

After the 1927 Le Mans, Sir Edward Iliffe, proprietor of *The Autocar*, held a celebratory dinner for members of the victorious team at the Savoy. He proposed a toast to 'a lady who should be here'. The double doors then opened and 'Old No. 7' made its entrance. The tables were arranged in a horseshoe shape so that the winning Bentley, still dusty and scarred from the race, could sit in the middle as the guest of honour for the remainder of the dinner.



BENTLEY WINNING TEAM, 1929

CRUISING TO VICTORY - 1929

By 1929, nothing was left to chance. Bentley filled the first four places after 24 hours of racing, and W.O. - ever mindful of the publicity value of another victory - urged his drivers to go no faster than necessary in order to win.

A FITTING SWANSONG

1930 became the marque's swansong at Le Mans, with one final victory - Bentley's fifth and Barnato's third. To date, no marque has a higher win to entry ratio; Bentley entered as a works team eight times, winning five. Barnato's record, too, of three wins in three attempts will probably stand for all time.

“I AM NOT A BLOODY FOOL”

The Blower Bentley's finest hour - with Birkin at the wheel - came in the French Grand Prix of 1930. It was the sole Bentley entered against hordes of Bugattis, and wasn't at all suitable for a sprint 'Formula Libre' event for out-and-out racing cars. Even in stripped down form, the Blower Bentley weighed 2 tons and stood head and shoulders above the lighter, more agile Bugattis.

Birkin, driving the race of his life, brought the Blower Bentley in second, to the tumultuous applause of the knowledgeable crowd. Veteran motor racing correspondent Charles Faroux said; "I have seen the Bentleys at Le Mans and I know. I am Faroux. I am not a bloody fool."

THE MENU CARD COST MORE THAN THE ORIGINAL MEAL

A menu card signed by Bentley drivers shortly after the team's second Le Mans win in 1927 was sold at auction in February 2000 for £1,600.



BIRKIN AT THE FRENCH GRAND PRIX, 1930

IMPROVING THE BREED

"It is inevitable that participation in races should stamp the Bentley in the eyes of a certain section of the public as a racing car. Nothing is further from the truth. On the contrary as our racing successes have increased our cars have become more silent, more docile, more refined."

- Bentley publicity release, 1930



REKINDLING THE RACING FLAME

17
After a 71 year retirement from the Le Mans race, Bentley Motors returned on June 16-17 2001 to the famous Sarthe circuit with EXP Speed 8, the marque's first official racing design since the Speed Six.

EXP Speed 8 competed in the LM-GTP category. Its fully enclosed cockpit allowed better aerodynamic performance than the open cockpit class, but this advantage was neutralised by the regulations demanding the fitment of narrower tyres. To the delight of the huge and highly partisan crowd, the Bentley EXP Speed 8 took a maiden victory in class, despite never having raced before, with third overall testifying to the huge potential of both the design and the team. "The remaining Bentley crossed the line, driven brilliantly, safely and quickly to an outstanding third on its race debut" wrote *Autosport* magazine.



200 - 0 MPH

EXP Speed 8's 3.6 Litre V8 engine, mounted amidships just behind the driver, is twin-turbocharged and produces 600 bhp and over 650 Nm of torque, driving the rear wheels through a six-speed sequential gearbox. Le Mans has always been known for the Hunaudières straight, where speeds in excess of 200 mph are reached lap after lap for the full 24 hours. Stopping EXP Speed 8 from those speeds in time for the Mulsanne corner is the responsibility of the ventilated carbon fibre discs, 14.8 inches at the front and 14.0 inches at the rear, which are gripped by six-piston racing callipers. A far cry from the first Le Mans racing Bentley, which had no brakes at all on the front wheels!

FROM CRICKLEWOOD TO LE MANS - AND BACK

Unthinkable now, but Bentley's Le Mans entries in the early days were driven to the race from the Racing Shop at Kingsbury, raced for twenty-four hours, then - all being well - driven back again. Bentleys were fast grand tourers for the road, so powerful and well-made that they could outlast more specialised machinery over 24 hours.



THE BENTLEY BOYS

The success of Bentley at Le Mans and at Brooklands made it the ultimate supercar for the post-war generation seeking high-speed thrills. Bentley became the car of choice for the fast set; the Brooklands racers whose motto was 'the right crowd - and no crowding'. Ex-fighter pilot Birkin, diamond heir Barnato, adventurer Kidston, Harley Street consultant Benjafield and ex-jockey George Duller all identified with the promise of the winged 'B'. Bentley was more than a car - it was a way of doing things, with spirit and flair.



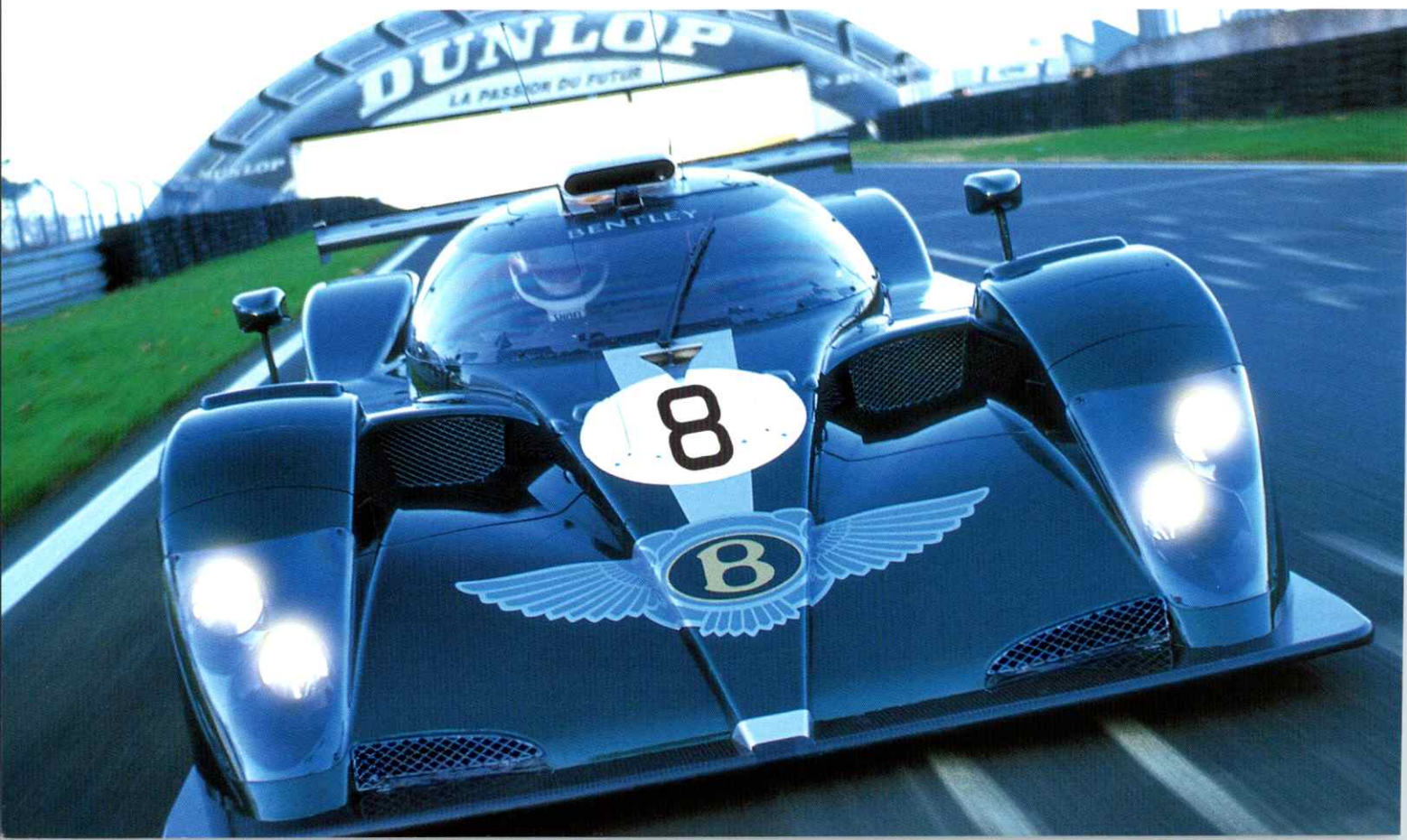
TEAM BENTLEY 2001

Appropriately, Team Bentley, the racing team which took Bentley back to Le Mans in 2001, was a very British effort. Bentley commissioned Race Technology Norfolk (RTN) to design EXP Speed 8, with Peter Elleray heading the design team. Apex Motorsport ran the team, under the experienced command of former Le Mans racer Richard Lloyd. It's rare for an all-new car and team even to finish the gruelling 24 hours; Team Bentley, despite some of the worst racing conditions in memory, took first in class, a good portent for the future.

THE NEW BENTLEY BOYS

The six drivers who crewed the two Team Bentley EXP Speed 8s at Le Mans 2001 were all highly experienced endurance racers. Andy Wallace, Eric van de Poele and Butch Leitzinger crewed car No.8, which eventually finished third overall and first in the LM-GTP class, whilst Martin Brundle, Stephane Ortelli and Guy Smith shared the driving of car No.7, which retired after the gearbox jammed due to torrential rain, having for some time led the race overall.

Between them the six drivers have won Le Mans outright three times, the Daytona 24 Hours five times, the Sebring 12 Hours four times and the Spa 24 Hours twice.



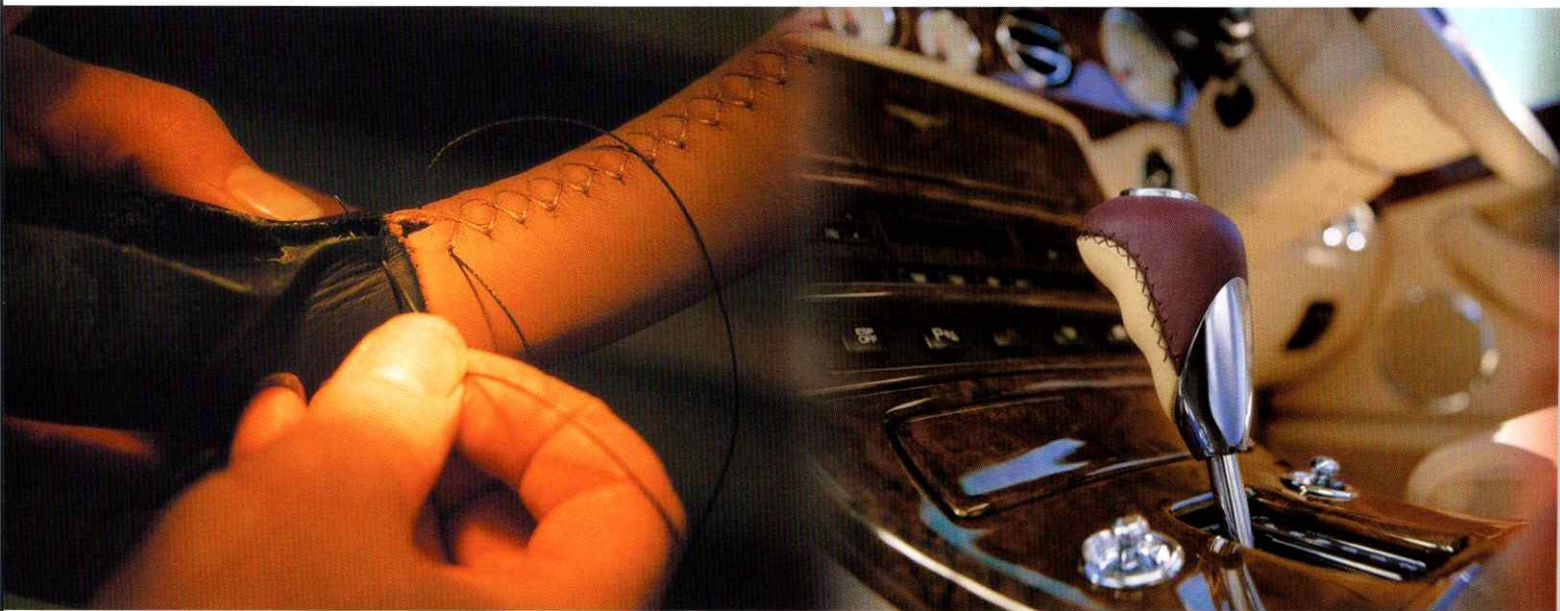
LEARNING LESSONS

"And now the reasons for this extensive racing programme - is it for the honour of winning? - for the very great publicity attached to victory? We can assure readers that this alone would not warrant the very great expense, the lengthy preparations and the detailed organisation necessary to enter these competitions. Of paramount importance are the lessons learned from racing, and these have been of the utmost value to the Company."

- Extract from Resumé of Policy, Bentley Motors 1930.

A WELL-DRILLED TEAM

Bentley thought about the details, as well as building faster and stronger cars. Details like the external oil filler so that the driver didn't need to raise the bonnet, the 'treacle tap' for oil fill-ups that automatically allowed the right amount of oil into the engine and no more, the 'T-bar' on the radiator cap that could be swiftly opened even when the water was extremely hot. Throughout the 1920s the Bentley team became the elite outfit, with the best cars, the best drivers and the best organisation. Of such supremacy are legends made.



MADE IN CREWE



THERE ARE OVER 1,000 PEOPLE IN CREWE ASSOCIATED WITH THE BUSINESS OF HAND-CRAFTING BENTLEYS. UNIQUE SKILLS, HANDED DOWN THROUGH GENERATIONS, FLOURISH THERE, AND THE LEVEL OF PERSONAL CHOICE OFFERED TO OWNERS IS SO GREAT THAT NO TWO BENTLEYS ARE THE SAME.



1 CHOOSING YOUR VENEER

Burr walnut is the most popular choice of veneer to make the dashboard and waistrails of a Bentley's interior. English oak, the increasingly rare elm, straight-grained walnut, birds-eye maple, madrona and yavona are also offered. Bentley does not use endangered species such as mahogany.



2 A BEAUTIFUL FUNGUS

The distinctive pattern of burr walnut comes from a fungus in the root ball of a walnut tree. The trees are long past producing fruit when they are felled for their potential as veneer, and are often over one hundred years old. Each tree felled is, however, replaced by another. Once extracted the root ball is turned on a huge lathe, and fine leaves - around 0.6mm thick - are shaved off the outside to be turned into sheets suitable for veneering.



SURROUNDED BY FINE WOOD

Each wafer thin leaf of veneer that makes up a Bentley fascia or waistrail can be traced back to the tree it came from. It takes sixteen leaves to make the twenty-six main components of a Bentley interior, with another eight for the waistrails along the tops of the doors. With options, such as picnic tables, the total amount of wood used in the interior of one Bentley is as much as 6.5m² (21.3 sq.ft).

UNBLEACHED - AND PROUD OF IT

Most car manufacturers who offer real wood veneers use presses which generate extremely high pressures. As a result of this process, the wood loses its natural colour and has to be bleached and stained. In contrast, the Bentley wood shop uses no bleaching techniques. Although the process takes longer, the result is clear for owners to see in the depth of rich colour that the finished interior displays.



A QUESTION OF TIME

It takes over eighty years for nature to create the burr walnut root ball and a further two weeks to turn the raw material into a full set of polished veneers for a Bentley; thirteen days in total from receiving the cured leaves to a finished set, more if intricate marquetry or cross-banding is required.

RECURRING PATTERNS

As the root ball is turned, the leaves of veneers that are peeled off have a recurring pattern. Bentley's wood shop uses this effect, placing four leaves end to end to form a symmetrical pattern across the centreline of the fascia. The waistrails also mirror each other from side to side.



THE FINAL POLISH

After five coats of lacquer and three days of curing time, the complete set of wood veneers for a Bentley are given a final sand and polish; five grades of sandpaper - each finer than the last - are used to achieve a flawless surface before a coat of wax is buffed by a cotton mop polisher to bring out a glass-clear shine.



HIDDEN BRIGHTWARE

The brightware team at Bentley also produces parts that are not designed to be seen or admired; components such as tappets, pushrods and brake castings. The 'Clean Room' team works in dust-free conditions, preventing impurities from getting into oilways or hydraulic circuits. The tappets are given a natural finish of 16-millionths of an inch.



PUTTING A FINGER ON COLOUR

Nothing much surprises the upholsterers of the hide shop in Crewe. Although there are nineteen standard colours, it's their proud boast that they can match almost any colour. In the past they have matched an entire set of Bentley upholstery to the colour of a nail varnish.



ONE SET AT A TIME

A full set of leather for a Bentley is selected and cut at the same time, so that there is as little variation in texture as possible. Skilled coach trimmers lay out the 'knives' - sharp edged metal frames which cut out the trim shapes using the judgement of hand and eye, achieving 60% hide usage - the best in the industry.

TOO COMPLEX FOR A MACHINE

Some of the upholstery tasks undertaken in the trim shop are too intricate for a machine to ever undertake. A Bentley steering wheel, for instance, needs to be double-stitched by hand from a bewildering array of pieces of hide. Any imperfections would swiftly show up in a lumpy or uneven wheel rim. For this reason, it takes up to 15 hours of handwork to create one steering wheel.

LIMITED EDITION, SIGNED BY THE ARTIST

A full set of trim for one Bentley consists of four hundred separate pieces of leather, each marked with the chassis number of the car it is intended for and boxed ready to be worked on. Every machinist who creates a finished piece of upholstery signs the back of it with his/her initials.



REJECTED FOR A GNAT'S BITE?

Each hide used in Bentley's upholstery department is inspected minutely for scarring or imperfections. The team uses only premium Grade 'A' hides, and needs around fifteen hides per interior - around 14m² (46 sq.ft) of leather. Even insect bites can affect the quality of the finished hide, and so premium Grade 'A' usually comes from Northern European climates where insects are fewer.



BRINGING OUT THE GLEAM

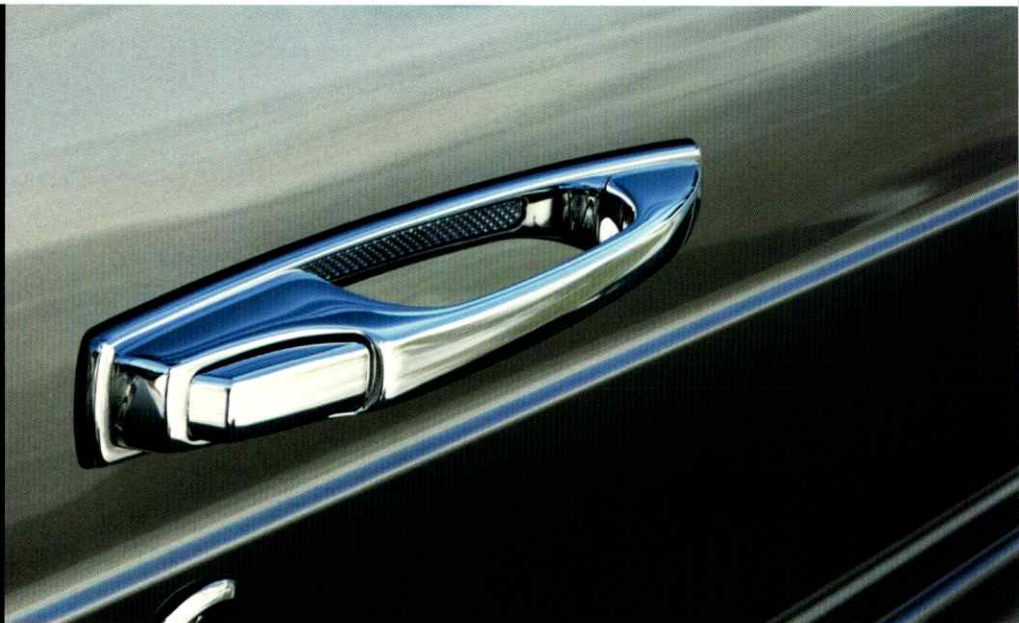
Bentley's brightware - including items like the radiator grille, door handles, badges and wheels - is finished in a process that takes over ten hours, with around 85% of the polishing done by hand. Wheels, for example, are buffed first by hand, then by machine. The casting is polished, then coppered, then the copper coating itself is polished before chroming to ensure that the highest-quality lustre is achieved.

SURVIVING THE MONSOON

Every Bentley has been through a monsoon before it even leaves the factory. 1,820 litres of water containing a trace dye are sprayed at each completed car. In a darkened drying area, the car is then checked for leaks under ultraviolet light.

CHROMIUM VERSUS NICKEL

Chrome plating was introduced by Bentley in 1929, in place of nickel, as it is easier to clean and to preserve its lustre. Today's Bentley brightware has to stand up to the harshest of weather and road conditions - road wheels are regularly subjected to 2,000 hours salt-spray testing, equivalent to many lifetimes' use.





FROM HOT TO COLD

Bentley bodyshells are now assembled using plasma-brazing 'cold-weld' technology, which leaves a pristine finish ready for painting, without any of the panel distortion that can occur when metal is heated in standard 'hot-weld' techniques.

6,500 SPOT WELDS

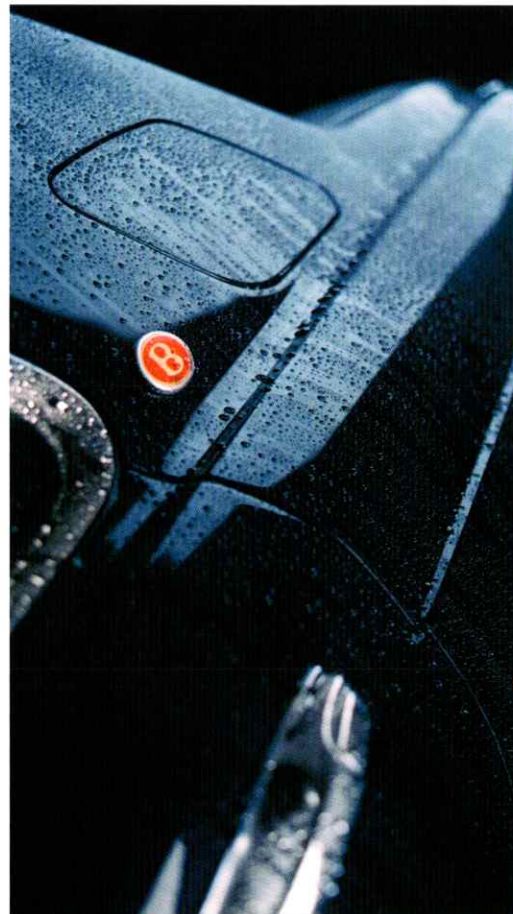
There are 6,500 spot welds in every Bentley Arnage bodyshell. No other manufacturer uses as many. The resultant stiffness of the body's monocoque structure pays dividends in handling, ride and refinement.

120 STEPS TO A BENTLEY SHINE

The paintwork of a Bentley goes through 120 different processes from bare metal to finished car. Although many of the processes are automated, there is still a need for human judgement at key stages - seam-sealing, dry sanding to eliminate any tiny surface imperfections and the selective application of a 'high-build' primer still calls for a craftsman's touch.

ANY COLOUR YOU LIKE...

Although there are twenty-one 'standard' colours in the Bentley range, Bentley owners have a habit of showing their individuality through their choice of colour. In the first eighteen months after the launch of the Bentley Arnage, the paint shop team individually matched 111 different colours.



INDIVIDUALLY TESTED

Every Bentley engine is run on a test bed at between 1500 and 3000 rpm for up to ninety minutes. Once installed in the car, engine and transmission are again checked out on a rolling road which can simulate all kinds of road surfaces, from motorway to Belgian pavé.

THE 10-HOUR POLISHING MARATHON

After a Bentley's paintwork has passed its final inspection, it is then sanded and polished by hand to achieve a mirror finish. This stage alone takes ten man-hours. From start to finish, a Bentley's finish takes eight days to create.

OPTICAL QUALITY

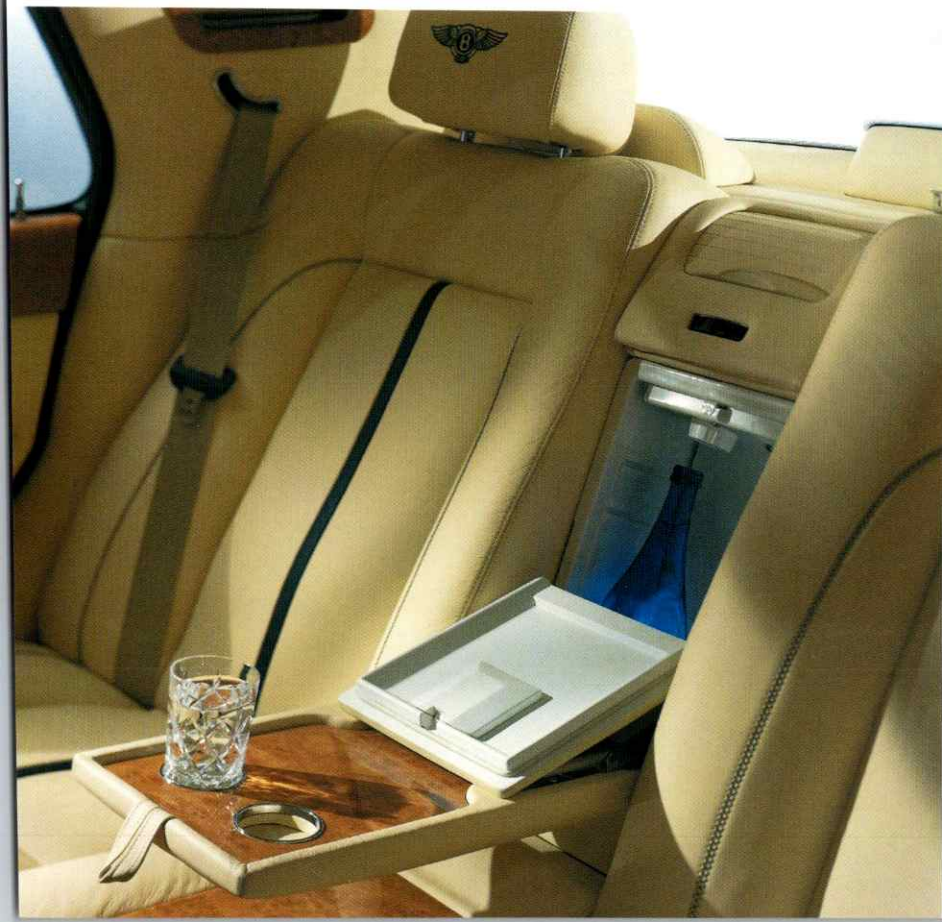
Every piece of glass in a Bentley is given its final polish with finely powdered pumice, normally used to polish optical lenses.

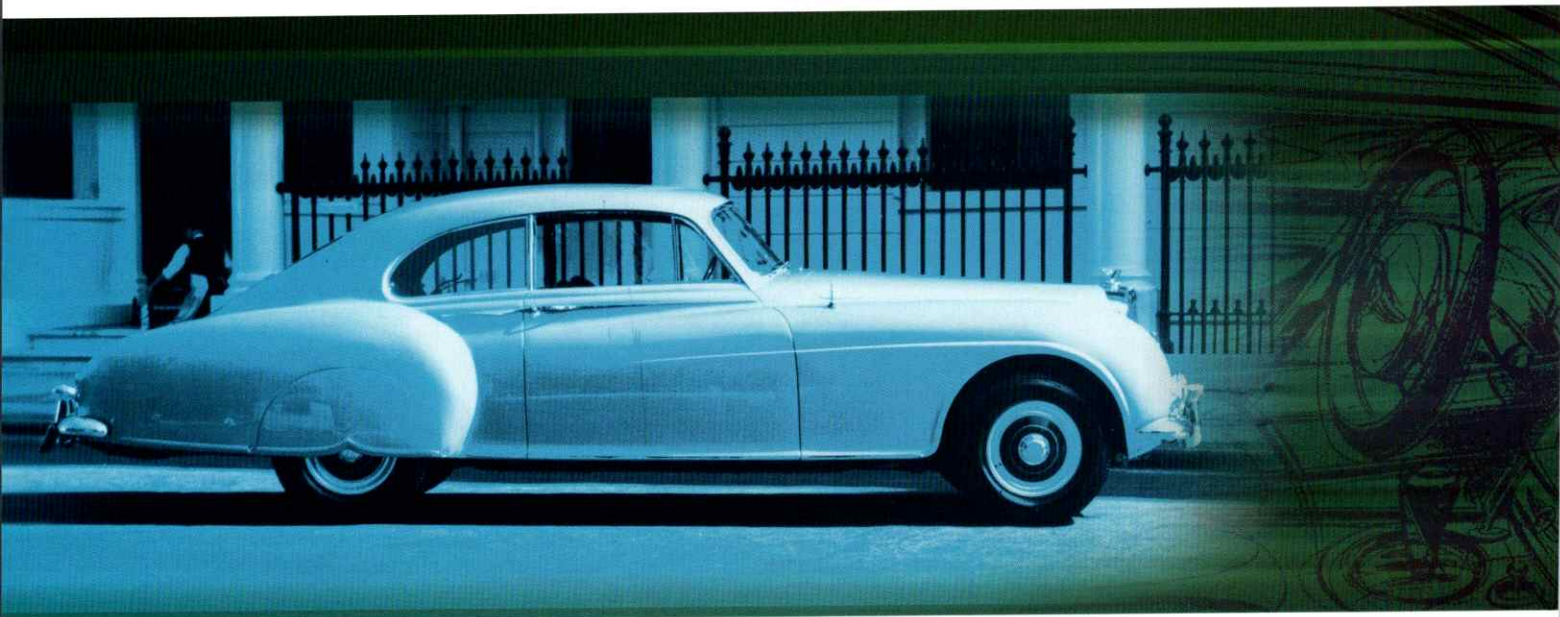


BENTLEY MULLINER

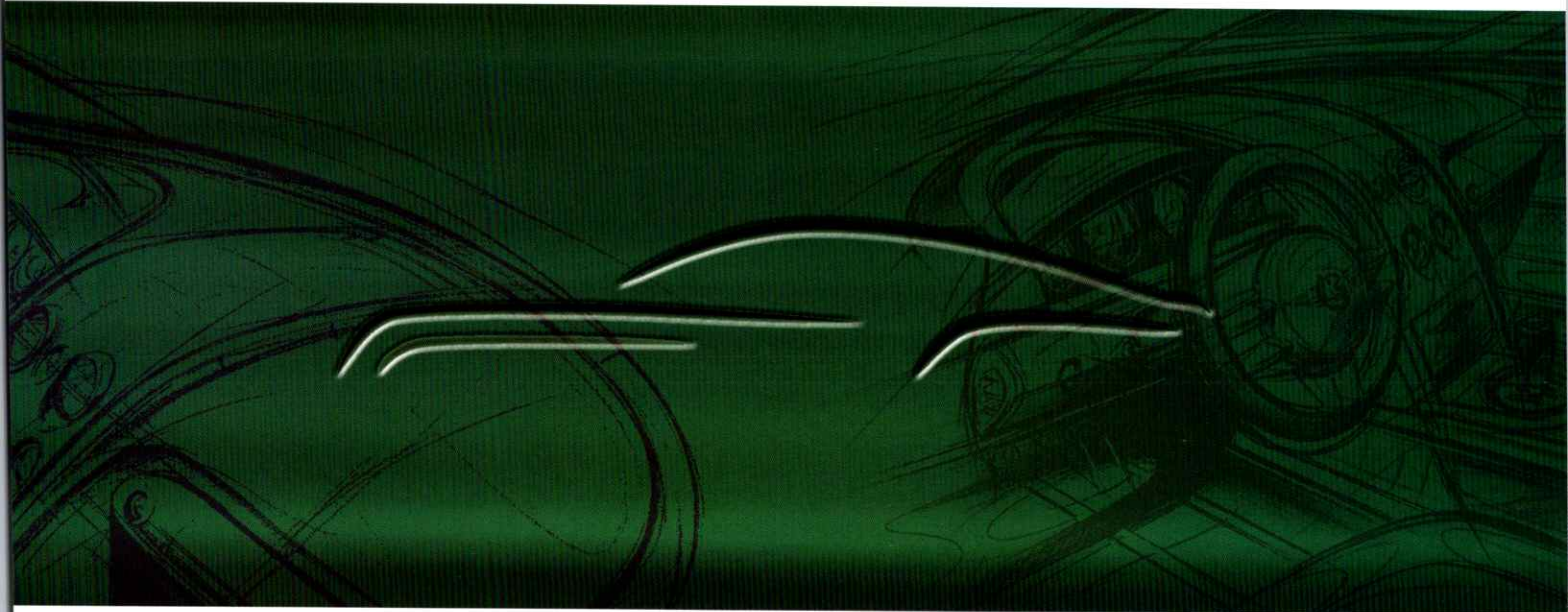
24

Whilst every Bentley is rare, some are absolutely unique. The specialist division, Bentley Mulliner, enables individual owners to specify a Bentley made to their exact requirements. From the installation of mobile office equipment and entertainment systems or a complete bespoke interior to revised bodywork and performance and handling enhancements, Bentley Mulliner provides access to Crewe's stylists, designers, engineers and craftsmen in order to create limited editions of one.





TRACING THE BLOODLINE



HOW DO YOU CAPTURE THE DNA OF BENTLEY? ENTHUSIASTS AND BENTLEY DRIVERS WOULD AGREE THAT IT IS INSTANTLY RECOGNISABLE, YET DIFFICULT TO DEFINE. BENTLEY IS A MIXTURE OF TRADITION, CLASSIC DESIGN SIGNATURES, LEGENDS AND A VERY BRITISH SENSE OF SELF-ASSURED UNDERSTATEMENT. ONCE EXPERIENCED, IT IS NEVER FORGOTTEN.



BENTLEY DNA

1 Dirk van Braeckel, Head of Design at Bentley Motors, identifies certain design traits that set a Bentley apart from other makes; "Twin round headlights; an imposing bonnet, hinting that there's something very big and powerful underneath; the famous mesh grille and above all, a certain animal muscularity, like a giant predator waiting to spring." His 21st century interpretation of the Bentley is eagerly awaited.

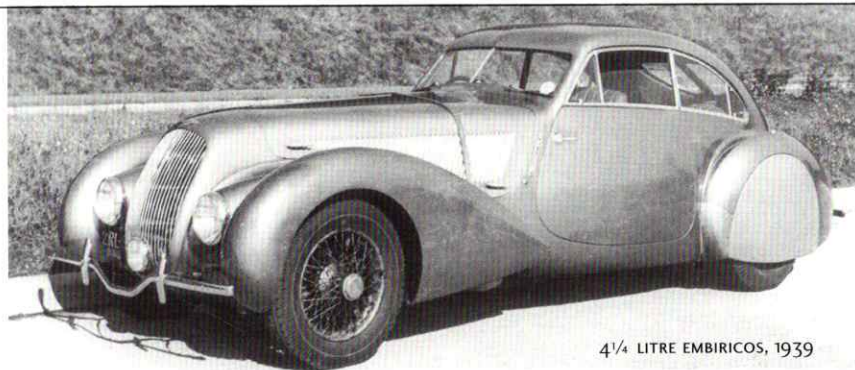
AN UNOFFICIAL PROJECT

2 The R-Type Continental of 1952 started out as an unofficial project within Bentley, to regain some of the lustre of Bentley's pre-war years with a definitive statement of performance. In order to achieve the desired performance and accommodation, the lightweight bodywork and interior had to be built to the lowest weight without compromising Bentley's reputation as a maker of unimpeachable quality. Its designers, J.P. Blatchley and Ivan Evernden, subtly raked the famous grille and paid careful attention to aerodynamics - then a fledgling science - to achieve the 120 mph top speed.



THE 1952 R-TYPE CONTINENTAL

By common consent, the R-Type Continental of 1952 is one of the most beautiful and significant Bentleys ever made. The body was made by specialist coachbuilders H.J. Mulliner, and the sleek and elegant coupé was capable of cruising at 100 mph, with a top speed of 120 mph. Both were world firsts for the era. Some 193 were built, and they remain highly sought-after today.



4 1/4 LITRE EMBIRICOS, 1939

KEEPING THE FLAME ALIVE

4 From 1930 until 2001, no official works Bentley took part in the Le Mans race. But a one-off, privately owned 4 1/4 litre 1939 Bentley managed to finish sixth at Le Mans in 1949. It was designed by Georges Paulin and built in Paris by coachbuilders Pourtout for the Greek driver A.M. Embiricos. Today it is simply known as the 'Embiricos Bentley'.



A WORK OF ART

5 The winged 'B' emblem was originally designed by the famous racing illustrator and artist W. Gordon Crosby.

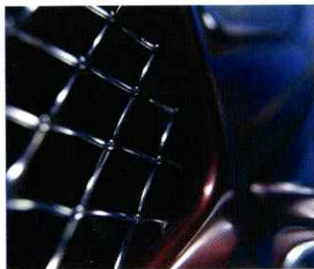


A COACHBUILDING TRADITION

Up until the 1940s, it was usual for prestige carmakers such as Bentley to supply only the chassis and engine. Customers then chose their own coachbuilder and specified a body style according to their needs and tastes. Today, the bodyshell is an integral part of the vehicle design - but it is still possible to create your own, coachbuilt Bentley, through the services of Bentley Mulliner.

A PLACE OF HONOUR

Birkin's No. 2 Team Car - the very one he was driving when he overtook Caracciola in the 1930 Le Mans - is now owned by Bentley Motors and is displayed at the company's headquarters in Crewe, England. It takes pride of place alongside EXP2 - the oldest surviving Bentley.



HISTORIC MATRIX

The distinctive Bentley matrix grille, today made in laser-cut stainless steel, echoes the wire mesh stone guards that the early Le Mans racers carried to protect radiator, lights and petrol tank from the numerous flying stones encountered during the race. Fortunately for Team Bentley's EXP Speed 8, today's surface is considerably smoother.



HEAD TURNING INTERIORS

The distinctive overlapping circles of engine-turned aluminium were for many decades the mark of a stripped and functional racing car cockpit. Bentley's design team revived the finish in 1996 as an alternative to wood veneer in the Continental T, a Bentley of uncompromising performance. It is now an option on the Arnage T.



AN INDIVIDUAL COMMISSION

Every Bentley is special, but some are totally unique. Such Bentleys are called 'individual commissions'. Customers discuss their ideas and specifications with the designers and engineers who will make their dreams become a reality. From the ultimate in one-off interiors to remodelled exterior bodywork, it is the proud boast of the Bentley Mulliner team that nothing is impossible.



T440

The T440 - a special one-off 440bhp Continental T with numerous unique design features - was designed for the international Motor Show arena as a demonstration of Bentley Mulliner capabilities. Within days of going on show it had been bought by a Bentley enthusiast. Features such as the knurled grip for handles and controls, the silver contrast stitched upholstery and the deeper front and rear bumpers were later developed for a production model, the 450bhp Arnage T four-door saloon.



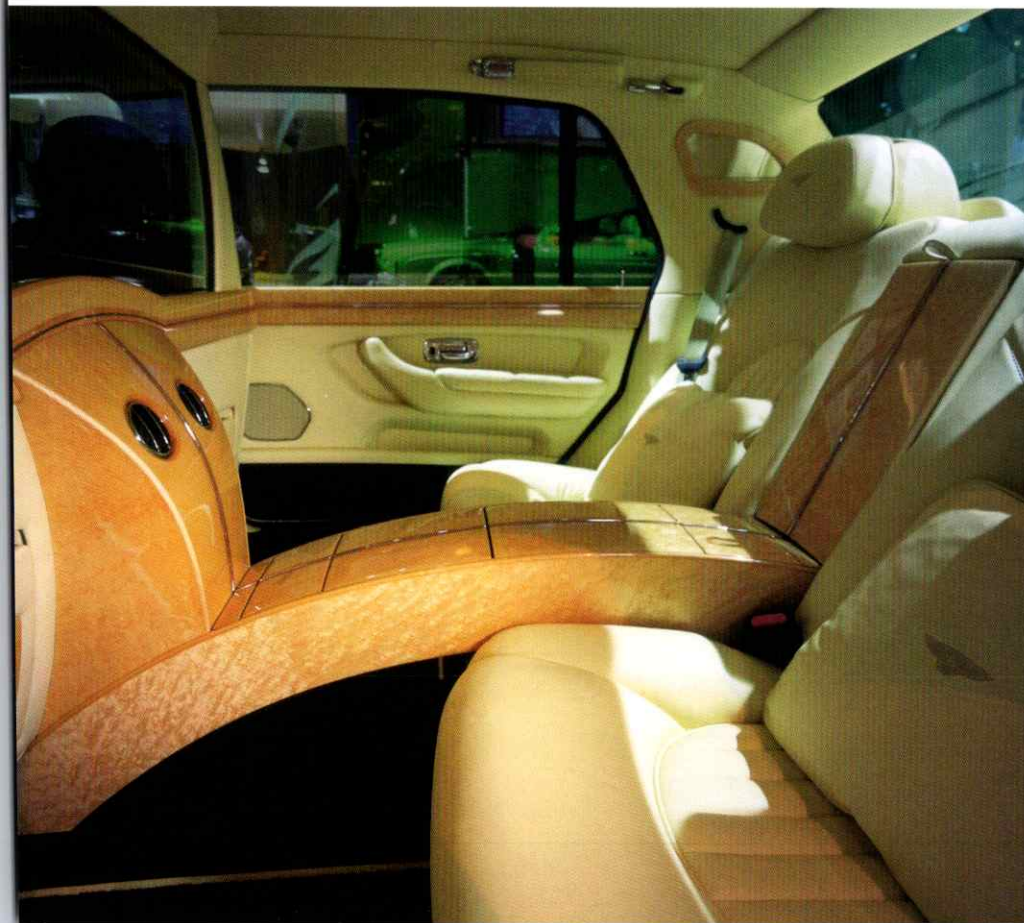
1991 - REBIRTH OF GRAND TOURING, BENTLEY STYLE

For many years during the 60s, 70s and 80s Bentley differed only in detail from their Rolls-Royce counterparts, made at the same Crewe factory. In 1991 the Bentley renaissance came of age, with the Continental R. This sleek, aerodynamic sports coupe accommodates four adults and can reach 150mph thanks to its turbocharged 6.75 litre engine. It was, and is, a true thoroughbred Bentley grand tourer, worthy of its winged 'B' badge.



THE BDC

The Bentley Drivers Club unites owners of Bentleys old and new, and with over 3,000 members, it is one of the longest standing single-make clubs in the world. Priceless vintage Bentleys are still raced and driven with gusto and the emphasis is strongly upon driving and competing, rather than concours d'elegance.



A SHOWCASE OF DESIGN AND CRAFTSMANSHIP

A specially commissioned Arnage Red Label Long Wheelbase was created as a one-off example of the ultimate in touring luxury. It featured a rear compartment divided by a complex, curved central console of birds-eye maple veneer with chromed brass inlays, a unique special commission designed and crafted at Crewe.



THE INIMITABLE BULLS-EYE

The famous bulls-eye air vent, a characteristic of Bentley interiors for many years, is made as a single casting for precision. The vent can be moved with a fingertip's pressure, yet holds its position exactly until moved again.

STAYING COOL

The cooling capacity of a Bentley's air-conditioning system is equal to that of thirty domestic refrigerators. It has been said that it is possible to drive from the Arctic Circle to the Equator in a Bentley with the interior at a constant temperature, without altering the heating controls once.

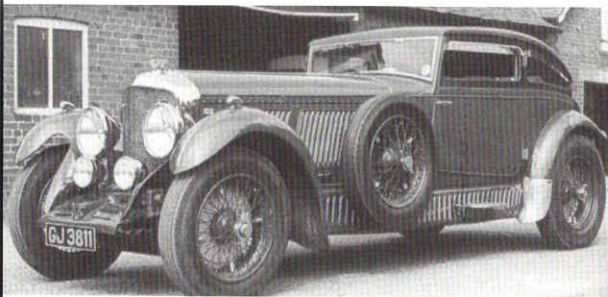
ALWAYS READ THE LABEL

The enamel background on a Bentley badge - called the label in Bentley terminology - is a key to the car's character, a tradition dating back to the Cricklewood Bentleys of the 1920s. Over the years the Green Label, Red Label and Black Label badges have come to represent an ascending order of power and outright performance, from the grand touring Green Label to the high performance Black Label. A recent addition is the Blue Label for Azure, the convertible Bentley grand tourer.



A VERY SPECIAL COMMISSION

18 In the 83 years of the marque's existence, Bentleys have been the choice of entrepreneurs, sportsmen and women, entertainers, princes and heads of state. Crewe's latest commission is a special limousine for Her Majesty Queen Elizabeth II, to celebrate the occasion of her Golden Jubilee.



THE BLUE TRAIN

When Bentley Chairman and multiple Le Mans winner Woolf Barnato was at a dinner in Cannes in 1930, he accepted a bet to race the famous Blue Train from the Cote d'Azur to Calais in his Bentley Speed Six coupé. But Barnato raised the stakes; he argued that he could be at his club in London, before the train reached Calais. He won the bet, whereupon the French authorities promptly fined him a sum far greater than his winnings - for racing on public roads!

MISSION STATEMENT

In 1919, when Walter Owen Bentley set out to make cars bearing his name, he had a clear vision for his company. It was, simply, to make *"a good car, a fast car, the best in its class"*.

SPECIAL DELIVERY

W.O. Bentley's philosophy of making cars that were powerful, unstressed and durable meant that Bentleys were substantially built. Ettore Bugatti once remarked; *"My friend Mr Bentley builds the fastest lorries in the world."* Fast enough to win Le Mans five times.

EXHAUSTIVE TESTING

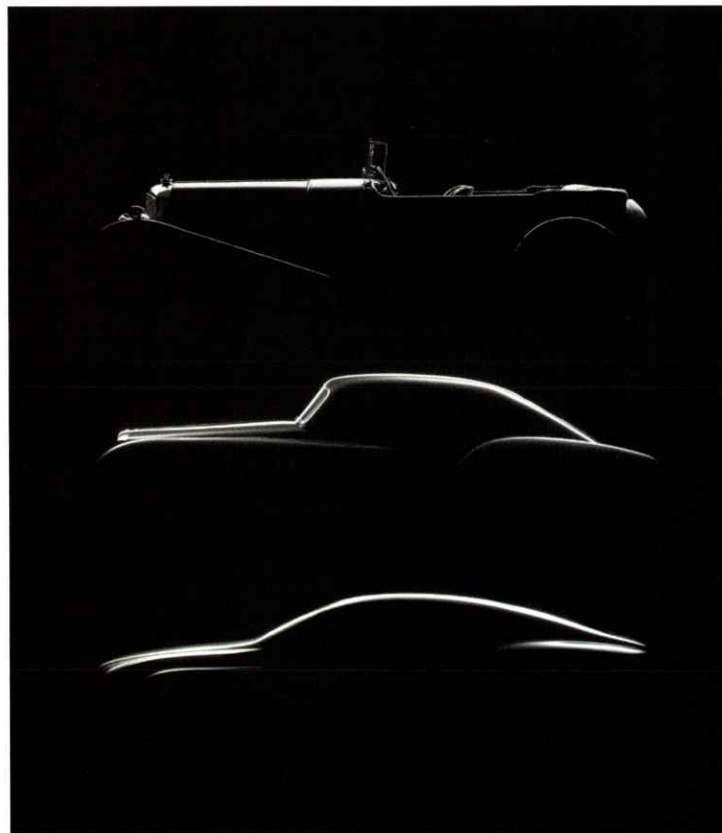
W.O. Bentley used to personally drive his latest designs from London to Scotland and back - a distance of some 600 miles, in pre-motorway days - pausing as little as possible. It was illuminating to drive a car when tired, he claimed, as *'all its faults will leap out at you.'* Hardly surprising that Bentley cars dominated the endurance racing events of the day and became known as fast, dependable grand tourers.

BENTLEY DESIGN

The design Department at Crewe, headed by Dirk van Braeckel, consists of 35 people; 11 designers, 2 colour and trim designers, 17 clay modellers, 3 engineering packaging designers, 1 CAD modeller and one administrator. For a company currently making around 2,000 cars a year this represents a major investment in the future of the Bentley design 'DNA'.

BLOODLINE CARS

Every new design produced by the Bentley Design team is viewed in the context of two classic Bentley cars - the Speed Six and the 1952 R-Type Continental. These are regarded as the purest examples of the Bentley 'bloodline'. The new GT coupé will continue this unique bloodline and maintain the tradition of powerful grand tourers into the 21st century.



FOR MORE INFORMATION ON BENTLEY PLEASE CALL THE CUSTOMER RELATIONSHIP TEAM,
ON TEL +44 (0) 1270 653653, MAIL TO: RELATIONSHIP.TEAM@BENTLEY.CO.UK OR
VISIT OUR WEBSITE AT WWW.BENTLEYMOTORS.COM

ALL BENTLEY CARS ARE SUBJECT TO CONTINUOUS DEVELOPMENT AND THEIR
SPECIFICATION MAY CHANGE AND MAY DIFFER FROM THOSE OUTLINED IN THIS
PUBLICATION. YOUR BENTLEY DEALER WILL ALWAYS HAVE THE LATEST INFORMATION.
THE NAMES "BENTLEY", "ARNAGE", "MULLINER", THE "B-IN-WINGS" DEVICE AND
PRODUCT NAMES ARE REGISTERED TRADEMARKS.



