

ASTON MARTIN

A PRODUCT OVERVIEW

PART I



David Brown
and
Feltham Foundations

Bibliography

With thanks to

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Aston Heritage	Journal of the Aston Martin Heritage Trust	Aston Martin Trust
Power, Beauty and Soul	David Dowsey	Peleus Press

www.astonmartin.com

I have been working in the world of Aston Martin for the past 25 years. I came upon the marque in my general course of business in the motor trade and have become as enthusiastic as my customers about Aston Martin and their products.



My son Matthew and I with my first Aston Martin

There is an aura about Aston Martin, a heritage far beyond simple statistics. Winning at Le Mans, victory in the World Sportscar Championship, the Zagatos and Royal patronage would be enough for any car manufacturer. Aston Martin goes beyond that – every car has its character and every owner, real pride in his or her car.

Any market place has pitfalls for the unwary and opportunities for the unscrupulous. What I have tried to produce is an overview of Aston Martin cars that can act as an introduction to the marque. It is my view, coloured by my experiences and the use of my library of Aston Martin books as a reference. Most of the Aston Martin photos are from my own archive and I have been fortunate enough to enjoy handling each of these glorious cars.

This may represent your first foray into the world of Aston Martin; it may supplement your own knowledge. Whatever your point of reference, I hope this overview adds to your enjoyment.

Philip Jones
Byron International

Prologue

Whether at the Newmarket Sales considering the merits of a thoroughbred racehorse or judging a potential champion dog in the parade ring at Crufts, the lineage or pedigree of the animal is a measure of its quality and performance. So it is with Aston Martin. When the industrialist, David Brown, acquired the assets of Lagonda from the Receiver in 1948, it was in appreciation of existing engineering expertise in the marque as well as the immediate availability of a suitable 6 cylinder engine for his planned new “Grand Tourer”.

The Lagonda badge had a renaissance in the 1970's with the 4 door V8 and then the glamour of the William Towns' V8. I have had the pleasure in becoming involved with both ends of the Lagonda story – the great pre-war cars as well as the later cars. Here is just a taste of some of those wonderful cars that helped in my understanding of the passion for both marques.



The 2-litre Lagonda first appeared in 1925 known as the 14/60, which was designed by Arthur Davidson. This was a major step for the company moving from production of the noted 11.9 HP “light car” models of the early 1920's. The 2 litre was rated at 12.8 HP with 4 cylinders 72x120mm (1,954cc). The aim was to focus production on superior upmarket touring cars. The engine with its twin high camshafts provided new levels of performance along side superior quality engineering, reflecting in reliability. This concept of design was the heart of Lagonda production through to the 1930's. By 1927 various modifications had been made relating to camshaft design, lubrication, connecting rods, brakes and chassis design and strengthening. This became the two-litre high chassis speed model. By 1929, the new body styling creating a lower sleeker profile brought the announcement of the low chassis model, with new front axel design, lower cast bulkhead plate, resulting with lower bonnet line and windscreen. By 1930 with further development to find more power from this engine, car number 9711 (PI 1240) was fitted with a powerplus rotary vane supercharger. PL 1240 was the actual development car and became the demonstrator as tested by “The Motor” and “Autocar” of the time.

The 10HP, 1100cc, 4-cylinder twin overhead camshaft Lagonda Rapier first appeared at the motor show in the October of 1933. The model boasted many quality refinements that were normally only associated with larger engine cars of the time. The car has a 2-seater special open boat tailed body with tonneau cover. The transmission is via an ENV 75 pre-selector gearbox. In November 1958, ownership passed to a Mr John Ashton Sutcliffe. "This owner came across a Wolseley Hornet open 4 seater at a Pub in Sheppton Mallet. The Wolseley was owned by Flight Lieutenant V.R. Reginald Ferriss, who was a commanding officer in the Air Training Corps and on an annual A.T.C. training camp. Sutcliffe asked Ferris if he would be prepared to swap vehicles. After driving both cars they agreed to a straight swap!" "Mr Ferris was a teacher and used the Lagonda to go to his school at Grays, about 14 miles each way." In March 1968 the car was purchased by a Mr Michael R. Shelley, of Billericay, Essex. He decided that the Abbott d.h.c. body was beyond redemption and decided to a complete rebuild of the mechanics, and designed and built the present open two-seater sports tourer body.

1934 Lagonda Rapier



1939 Lagonda V-12
Le Mans style

Chassis Number 16051

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THE LE MANS 24 - 17th - 18th June 1939

Two cars were entered. From the outset W. O. Bentley made it clear that no attempt would be made for a Lagonda win that year, finishing was the name of the game, this was meant to be just to a proving run in preparation of a serious attempt in 1940. The cars came home 3rd and 4th overall and 1st and 2nd in their class. A result that most motor manufacturer's could only dream of today. Both cars had covered at least 2,000 miles at an average speed of just over 83 m.p.h. This particular car is from the stable of the well known and renowned Lagonda V12 expert. It has been prepared to a very high standard and restored in the style of the Le Mans, race car's and comes complete with F.I.A. approval documentation. The V12 engine has been rebuilt with the four carburettor conversion and to unleaded petrol specification. The Aluminium body, fuel tank, dash and instruments are faithful to the Le Mans Team Car specification, with an additional speedometer fitted to the transmission tunnel, so as not to spoil the dash board.

THE TWO LITRE SPORTS

Known in retrospect as

THE ASTON MARTIN DBI

Production dates:	1948 September to 1950 May.	
Top Speed:		
Acceleration:	0 – 60 mph:	0 – 100 mph:
Chassis numbers:	AMC/48/1 to AMC/50/15	
Team Car chassis number:	LMA/48/1	
Length:	14'8" (447 cm)	
Width:	5'7.5" (171 cm)	
Height:	4'7.5" (141 cm)	
Ground clearance:	6" (17 cm)	
Track:	Front: 4'6" (137 cm)	
	Rear: 4'6" (137 cm)	
Wheelbase:	9'0" (274 cm)	
Turning circle:	35' (1067 cm)	
Dry Weight:	2,520 lbs (1143 kg)	
Engine:	4-cylinder in-line	
Capacity:	1,970 cc	
Cylinder bore:	82.55 mm	
Stroke:	92 mm	
Compression ratio:	7.25:1	
Power output:	90 b.h.p. @ 4,750 r.p.m.	
Carburettors:	Twin SU	
Chassis:	Rectangular tubing, stiffened by square section bracing tubes with twin-tubes for the side members, whilst smaller tubing made up the scuttle.	
Transmission:	David Brown 4-speed gearbox	
Clutch:	Borg & Beck single-plate clutch, hypoid bevel final drive.	
Suspension:	Front: Coil springs, short trailing arms, Armstrong shock absorbers, with a torsion bar in an oil filled transverse tube. Rear: Coil springs with the live axle located transversely by a Panhard rod, and fore and aft by parallel linkages.	
Brakes:	Girling 12" Drum brakes front and rear.	
Fuel tank capacity:	14 ½ gallons.	

David (later Sir David) Brown, purchased Aston Martin the company, in February 1947, for £20,500 (the asking price was £30,000). Two Directors, Gordon Sutherland and Claude Hill, both of whom had been with the company prior to the war, were retained.

Sutherland and Hill had built a prototype chassis and body in 1939, which became known as the "Atom" saloon. Although not announced until 1946, by the end of 1944, the 2.0 litre, 4-cylinder engine, designed by Claude Hill, was fitted in the wartime prototype "Atom". In the winter of 1946, prior to buying the company, David Brown, visited the Aston Martin factory, then located in Feltham, Middlesex. Driving the Atom may have influenced his decision, as he thought the handling was superb, although the engine a little gutless. Thus arrived a most compelling era in the history of Aston Martin. In his stewardship for nearly quarter of a century, the company produced fine road and racing machines that would propel the Aston Martin marque into the province of the all-time greats.

Announced in 1948 at the London Motors Show, Earls Court, the TWO-LITRE SPORTS did not become known as the DB1 until after the DB2 had been introduced. In production from September 1948 to May 1950, only 15 were built. Whilst the "Atom" in appearance is an acquired taste, the chassis designed by Hill has since been considered to have set new standards and been one of the best in the world at the time. However, David Brown envisaged the new car as an open sports car, not a saloon. Without a roof, Hill, sought to strengthen the structure by duplicating the main longitudinal members. The chassis was built out of square or rectangular section steel tubes, 13 gauge for lower members, and 18 gauge for the superstructure. A bulkhead was arranged in the scuttle position to act as a main cross member and the superstructure was made wide enough for three abreast seating. The body panels were carried on out-riggers. With a 9' wheelbase, its rigid frame set new standards in road holding. The suspension was considered a complete break through from the normal pre-war practice. The trailing-link independent front suspension was an improved version of that fitted to the Atom saloon. The 7" links were pivoted on substantial needle roller and ball bearings mounted in a light alloy tubular chassis cross-member filled with oil. This was to lubricate the Marles steering box's bell crank and the suspension bearings. An anti roll bar was fitted, and coil springs that locate at the top on a cast alloy upright. Lever arm hydraulic dampers from Armstrong, formed an upper arm to the suspension parallelogram. With some similarities, for the rear suspension, coil springs and an anti-roll bar were fitted in conjunction with trailing radius arms and a Panhard rod to locate the live rear axle. Hill preferred coil springs as they are neater and needed less maintenance than leaf springs. Also, coil springs countered brake reaction better. Armstrong lever arm shock absorbers were fitted and for ultimate handling, hub level roll centres were arranged at the rear and ground level at the front. Girling hydraulic twelve inch drum brakes with a two leading shoe pattern are fitted.

Following discussions early in 1948 with the Receiver acting for the Lagonda Motor Co., David Brown, purchased the goodwill, current assets, plant and the Lagonda name, for £52,500. David Brown had already decided that the six cylinder engine designed by Claude Hill would prove to expensive to produce from scratch and recognised the 100bhp on offer from the Lagonda cast iron 2580cc six-cylinder units better satisfied his performance criteria and well suited David Browns ambition 'to make the worlds best sporting Grand Tourer'. The DB2 was on its way and the 2-litre sports became better known as the DB1.

THE ASTON MARTIN DB2

Production dates:	May 1950 to April 1953
Top Speed:	110 mph (177 km/h)
Acceleration:	0 to 60 mph (96 km/h) 12.4 seconds 0 to 100 mph (161 km/h) 38.8 seconds
Chassis numbers:	LMA/49/1 – LML/50/406 AND LML/50X1-/x5* No one knows why the last 5X cars were numbered so possible answers include these last five cars were additional to the production sanction or perhaps there were enough spare parts left over to make a further five cars?
Team car chassis no:	LMA/49/1 to 4 - Three early team cars and one development car
Length	13' 6.5" (4.13 m)
Width	5' 5" (1.65 m)
Height	4' 5.5" (1.36 m)
Ground clearance	6.5" (16.5 cm)
Track	4' 6" (137 cm) (front and rear)
Wheelbase	8' 3" (2.51 m)
Turning circle	35' (1,067 cm)
Dry weight	2,450 lb (1111 kg)
Engine	Standard LB6/B in line 6-cylinder iron block
Capacity	2580 cc Valves twin ohc
Cylinder bore	bore and stroke 78 x 90 mm
Compression ratio	6.5:1
Power output	105 bhp at 5,000 rpm
Carburettors	Two 1.5 in SUs
Chassis	Square section tube frame, aluminium body. Shortened version of DB1 (Claude Hill's 1939 Atom work). Mainly square tube construction with 8' 3" (2.5m) Z-section steel reinforced by narrow-gauge tubing, a serious piece of engineering
Transmission	Four-speed manual David Brown gearbox with synchromesh on all gears. Final drive 3.77:1 (standard) 3.5:1, 3.67:1 and 4.1:1 optional
Front suspension	Trailing arm, live rear axle on coil springs.
Rear suspension	Trailing links Live rear axle with parallel arms, supported by a Panhard rod
Steering	Worm and roller
Brakes	4 wheel hydraulic drum brakes 12" inch drums



1952 Aston Martin DB2
Chassis No:LML/50/179

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The acquisition of Lagonda was one of the building blocks of the development of the DB2. In 1949, David Brown entered three cars at Le Mans – all the cars had a new Frank Feeley designed streamlined body on a shortened tubular Mark I chassis. Frank Feeley had come from Lagonda, as had the new Willie Watson designed 6 cylinder engine. Two of the cars retained the 2 litre engine from the Mark I while the third, UMC 66, had the new 2.6 litre twin overhead camshaft engine. Known as the Bentley engine as W O Bentley had been Chief Engineer at Lagonda during its development, it was a pointer for the future although it retired from the race with an early water pump failure. Aston Martin released details of their new model, the DB2 to the media on 12th April 1950, showing the cars themselves at the New York Motor Show on 15/23 April. Nine inches shorter on the wheelbase, the 2.6 litre engine delivered 105bhp and a tested top speed of 110 miles per hour. The car's design was a departure from previous Aston Martin as well as general car design. It had a simplicity of line with the whole of the front bodywork hingeing forward. Carried forward in design from the DB 1, at least for the first 49 examples, was the three part grille but this was replaced by simple horizontal bars in later models. A divided windscreen and small aperture rear window belied the generous interior space. At the DB2's UK launch at Earls Court, the cars were described as 2/3 seaters and this is reflected in the lack of lateral support offered by the seating. Sat on what was effectively a split bench seat, the driver and passenger did not have the support needed for a car whose acceleration – recorded as 0 – 60 in 12.4 seconds – and matching cornering capacity deserved.

The reception for the car was amazing on both sides of the Atlantic with demand extraordinarily strong. Performance had been the foundation of its development and, whilst rationed fuel quality at the time meant a low compression ratio of 6.5:1 on the standard car, a Vantage engine option was quickly introduced with a compression ratio of 8.2:1 and delivering 125 bhp. This focus on performance was mirrored in racing development with the appointment of John Wyrer as team manager, heralding another three car entry to Le Mans. In spite of public demand for the DB2, three cars were taken off the production line and prepared for the 24 hour challenge. One of the entries was unfortunately involved in a traffic accident en route to Le Sarthe but its absence was made up for by VMF 64 and VMF 63 achieving 5th and 6th overall and 1st and 2nd in class respectively. The team competed successfully at Silverstone, Dundrod, in the Mille Miglia and the Alpine Rally. However, whilst the team's success continued with VMF 64 getting third overall in the 1951 Le Mans race, David Brown recognised that outright victory would require something more than just taking cars from the production line. He recruited Robert Eberan-Eberhorst, a former Auto Union designer to focus on a pure racer – a project that realised the DB 3.

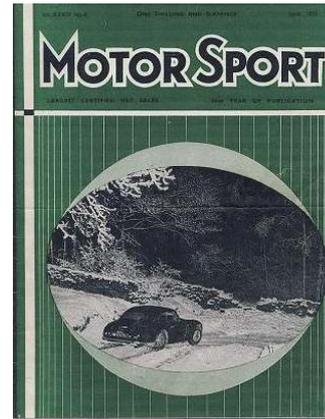
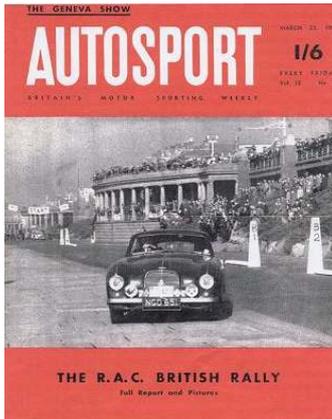
Road car development on the DB2 continued with the announcement, in late 1950, of a Drophead. The first example inevitably went to David Brown and at least a further 101 were built with five sold as just chassis that were bodied elsewhere – three of those Dropheads by Graber.

A contemporary road test would enthuse current owners or potential investors alike – John Bolster wrote for Autosport: “This should still be a young car when its contemporaries are senile and decrepit.” He continued “This is an expensive car, and one would not expect it to be otherwise. Nevertheless, having regard to current prices, I consider that for sheer intrinsic value, this is one of the cheapest cars on the market.”



Aston Martin DB2
Chassis No: LML/50/X1

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Aston Martin DB2
Chassis No: LML/50/X2

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Aston Martin DB2
Chassis No: LML/50/161
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THE ASTON MARTIN DB2-4

Production dates:	October 1953 to October 1955
Top Speed:	117 mph (188 kp/h)
Acceleration:	0 to 60 mph (97 kp/h) 11 seconds
Chassis numbers:	LML/501- LML/1065
Team car chassis no:	
Length	14' 1.5" (4.36 m)
Width	5' 5" (1.65 m)
Height	4' 5.5" (1.36 m)
Ground clearance	
Track	
Wheelbase	8' 3" (2.51 m)
Turning circle	
Dry weight	241 cwt (1226 kg)
Engine	Standard VB6/J in-line six-cylinder, iron block 6 cylinder dohc 2580 cc
Capacity	2580 cc
Cylinder bore	bore and stroke 83 x 90 mm
Compression ratio	8.16:1
Power output	140 bhp at 5,000 rpm 125 bhp at 5,000 rpm?
Carburettors	Two 1.75 in SUs
Chassis	Square section tube frame, aluminium body.
Transmission	Four-speed manual David Brown gearbox with synchromesh on all gears.
Front suspension	Trailing arm, live rear axle on coil springs. Coil springs all round. Trailing links
Rear suspension	Live rear axle with parallel arms, supported by a Panhard rod
Steering	Worm and roller
Brakes	4 wheel hydraulic drum brakes 12" inch drums



1953 Aston Martin DB2/4 Vantage 2.6

Chassis LML/959

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**Aintree in the wet
circa 1954**

**1954 Aston Martin DB2/4
Chassis No: LML/644
© BYRON INTERNATIONAL**

**Leicester in the sun
circa 2007**



**1955 Aston Martin DB2/4 Drophead
Chassis No: LML/894
© BYRON INTERNATIONAL**



You have to start somewhere!

1954 Aston Martin DB2/4

Chassis No: LML/685

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Launched at the London Motor Show in October 1953, the Aston Martin DB2/4 gained its name from the addition of two occasional rear seats. Removal of cross bracing over the rear axle had allowed the space to fit the seats while a raised roofline gave rear passenger headroom. A further departure from the DB2 saw a large rear screen and the introduction of a something car buyers are all too familiar with in the present day, a hatchback. For more luggage space, the fuel tank had been reduced from 19 to 17 gallons with the tank set lower and the spare wheel accommodated in a hinged carrier below the fuel tank. The dashboard was simplified with the speedometer and rev counter in the centre of the display while the pedals were moved forward two inches (50mm) to provide more interior space. So effective was this new design that one contemporary commentator termed the Aston Martin DB2/4, as the fastest shooting brake in the world.

The car was launched in both saloon and drophead form and whilst the drophead missed out on the hatchback, it shared other design changes with the saloon. A new one-piece windscreen changed the view from the inside and outside of the car while new bumpers with over riders protected the bodywork. Safety was also the rationale behind the newly raised headlamps. At launch, power came from the 2.6 litre twin overhead camshaft engine of the DB2 "Vantage" tune delivering 125 bhp an additional 50 kilos in the weight negating any potential performance advantage over the DB2 it replaced. In mid 1954, this engine was updated to a 2.9 litre (2922cc) format offering a power output of 140 bhp and a top speed of 120 mph. With Robert Eberan-Eberhorst designing the DB3, the Race Team was not interested in the DB2/4 for circuit racing but the Works Racing Department were commissioned to prepare 3 privately owned examples for the 1955 Monte Carlo Rally. Fitment of the newly developed DB 3 cylinder heads delivered an updated 170 bhp and the honour of the marque was upheld when 3rd, 4th and 7th place finishes delivered the Team Prize to Aston Martin.

Records show that at least 73 Dropheads were built in a two-year production run that saw developments in vehicle production as well as changes in design. Chassis and engine production was based in Yorkshire while body production moved to Mulliners in Birmingham. As a result, Feltham moved to become a point of final assembly as well as the focus of some of the industrial disputes. Whilst not proven, it is thought that one consequence of these new arrangements was an early glitch in production leading to there being more engine/chassis than bodies – a number of these were supplied as rolling chassis to other coachbuilders delivering some masterpieces of automotive art. In 1954, Stanley Harold "Wacky" Arnolt, an American industrialist commissioned Italian coachbuilder Bertone to produce a Spyder on a DB2/4 chassis. A total of 8 rolling chassis were delivered to Bertone who produced dropheads, fixed head coupes and Spyderys. Some of these wonderful developments of the Aston Martin DB2/4 survive today, others, like chassis 810 a specially commissioned Disco Volante, based on the Alfa Romeo of the same name, have been "lost", something that will always enliven a market place with debates over the provenance of "finds".

Aston Martin now progressed in two ways – the Works Racing Department had advanced with the DB3 concurrent with the development of the DB2 and the DB2/4 that Robert Eberan-Eberhorst development continued with the DB2/4 Mark II.

THE ASTON MARTIN DB3

Developed for competition, only 10 cars produced in total, of which only 8 survive

Production dates:	September 1951 to May 1953
Top Speed:	
Acceleration:	
Chassis numbers:	DB3/1 – DB3/10
Team car chassis no:	DB3/1 – DB3/5
Length	13'.2.5"
Width	5'.1.5"
Height	3'. 4"
Ground clearance	5"
Track	4'.3"
Wheelbase	7' 9"
Turning circle	32'
Dry weight	18 cwt with 9 gallons of fuel
Engine	2.6 Vantage Unit
Capacity	2580 cc
Cylinder bore	78mm – stroke 90mm
Compression ratio	8.16:1
Power output	140 bhp @ 5000 rpm
Carburettors	35mm triple dual choke Webers
Chassis	Chromium molybdenum round steel tube
Transmission	All new 5 speed gearbox through 9 inch Borg & Beck
clutch	
Front suspension	Trailing arm with transverse torsion bars
Rear suspension	De Dion with Panhard rod and trailing arm
Steering	Rack and pinion
Brakes	Drums all round – 13 inch front, inboard 11 inch at rear



When Robert Eberan von Eberhorst joined Aston Martin, he was given four key design parameters for a new race car; the weight must be reduced compared with the DB2, the frontal area reduced, a chassis to support open bodywork and yet have enhanced roadholding to the DB2.

The chassis moved away from the square and rectangular tubes of the DB2 chassis and used round tubing in chromium molybdenum steel. Created in ladder form, it gained beam strength from the tubes themselves rather than having to use vertical girders. The wheelbase was six inches (15cm) shorter than the DB2 but shared with its predecessor a pair of trailing arms for the front suspension. It differs in choice of torsion bars as the springing medium rather than coil springs, these were placed in the front tubular chassis member. Torsion bars were again the spring medium of the rear suspension although the design for the rear was totally new in using the De Dion principle with the final drive mounted on the chassis and part of the sprung weight. With the wheel hubs welded to an axle beam to keep them parallel, axle control is by trailing arms with a Panhard rod for lateral location. The lower trailing arms were arranged to twist with relative movement of the De Dion tube, thus delivering roll resistance. Steering improvements came from the introduction of rack and pinion steering with the steering column having a universal joint at the pinion end. The brake drums were light alloy with steel liners – the rear drums being mounted inboard – and the braking was further enhanced with a split system with separate master cylinders for front and rear and a simple adjustment for bias.

The body was a light structure using 18 gauge alloy panels that did not contribute to the overall strength of the car. It was designed to be lifted off the chassis quickly – in about 20 minutes – and for ease of access came away with the scuttle and wiring harness. The design called for a clean airflow under the bonnet so the structure of the body is two part – an underpan as one unit with the exhaust exiting under the driver's door in a recess within the underpan. The body then attached to the underpan using just 10 bolts.

The engine was the Vantage engine from the DB2 but with the twin SU carburettors replaced with triple dual choke Webers increasing the power output to 140 bhp. An oil cooler was added to the radiator and the sump redesigned by Elektron. With a 32 gallon fuel tank mounted on the chassis, its stated weight in race trim was 18 cwt (914Kg) delivering a bhp per tonne figure of 152, well above the 104 of the DB2. The DB3 made its debut in the Tourist Trophy in September 1951 alongside two DB2's but 1952 saw a better start with motorcycle ace, Geoff Duke, coming third in his car racing debut at the BARC meeting at Goodwood in DB3/1. Of four cars entered in the BRDC meeting at Silverstone and three came in second to fourth behind Stirling Moss in a C type and that was enough for Aston Martin to claim the team prize. After less successful outings at the Monaco Grand Prix and Le Mans, the season finished on a high with victory at the Goodwood 9 hours in August.

Only belatedly did Aston Martin turn its attention to selling the car and in June of that year the first adverts appeared in the motoring press. It announced that 25 units would be produced although in the event, only ten were produced and only 5 of these found their way to private buyers. The prices quoted at the time for the car were £3,700 inclusive of taxes compared with £2,728 and £2,879 for the DB2 salon and drophead respectively. During the winter of 1952/53, development and testing continued with the car setting a new outright sports car lap record at Monza,. Nevertheless, Team Manager, Wyer, was disappointed to note that the dry weight of the car with the 2.9 litre engine was now only 45 kg lighter than the previous year's lightweight DB2 and he was therefore receptive to suggestions of a redesign – a redesign that brought about the DB3S

THE ASTON MARTIN DB3S

Production dates:	May 1953 to December 1956
Top Speed:	146 mph (235h)
Acceleration:	
Chassis numbers:	DB3S/101-DB3S/120 except DB3S/109
Team car chassis no:	DB3S/1 – DB3S/11
Length	12'.10" (391 cm)
Width	4'.11" (150 cm)
Height	3'.5" (104 cm)
Ground clearance	6" (15 cm)
Track	4'.1" (124.5 cm) rear
Wheelbase	7' 3" (221 cm)
Turning circle	30' (914 cm)
Dry weight	17.5 cwt (890 kg)
Engine	6 cylinder dohc
Capacity	2922cc
Cylinder bore	83mm
Compression ratio	8.16:1
Power output	182 @ 5,500 rpm up to 225 bhp @ 6,000 rpm
Carburettors	35 DCO
Chassis	Twin tube ladder, smaller tubes support, aluminium
body	
Transmission	Four-speed manual David Brown gearbox with synchromesh on all gears.
Front suspension	Trailing arm with torsion bar springing
Rear suspension	De Dion axle with Tufnol sliding block and torsion bars
Steering	Rack and pinion
Brakes	Hydraulic drum 4 wheel disc



1964 Aston Martin DB4GT & DB3S

Chassis No: DB4GT/0136/R

Chassis No: DB3S – 12

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When the redesign of the DB3 was conceived, the first priority was to reduce the overall weight. To start with, the wheelbase was reduced by a further 6 inches to 87 inches with the chassis tubes reduced in thickness, the sidemembers from 14 to 16 gauge and the crossmembers from 12 to 14 gauge. These changes reduced the weight by 76kg. Other chassis changes included the deletion of the Panhard rod to locate the De Dion axle in favour of a Tufnol block sliding in guide plates bolted to the final drive casing.

The final drive changed from a hypoid to a spiral bevel to stop an overheating problem and improve the speed of ratio changes. Improvements to the 2.9 litre engine included new cam shafts and inlet valves which accounted for a rise in power output of 22 bhp while brakes are uprated and the balance adjustment is replaced by Girling automatic adjusters. The steering gained another universal joint. The most instantly recognisable change for the DB3S over its predecessor was the bodywork. Again the work of Frank Feeley, it was memorably elegant with the cutaway behind the wheels. Far from being a styling whim, this was a significant development in the car. With the DB3, there had been problems getting rid of the hot air from the radiators and vents had been cut in the bodywork. Wind tunnel work at Vickers had delivered the solution that was both effective and visually stunning. The development timetable for the DB3S was such that the Aston Martin Race team had to start the 1953 season with the old DB3.

The early season saw disappointments that continued on to the DB3S debut at Le Mans, however, from those early disappointments, fortune smiled and the DB3S won every remaining race that it was entered for in 1953. The British Empire Trophy on the Isle of Man, the BRDC meeting at Silverstone, the Goodwood 9 hours and finally the Tourist Trophy at Dundrod. At that year's Motor Show in London, the DB3S took pride of place, although with no price tag and that reflected the pressure on Wyer's department which was responsible for all production development and were heavily involved in the development of the new Lagonda V12. The results suffered throughout 1954 – after a bad start at Argentina, a third place finish did not compensate for one entry involved in a fatal crash and another retirement. Both cars entered into the Mille Miglia crashed.

However, development saw higher compression ratios delivering significant improvements to power outputs to 194 bhp and disc brakes introduced at the Silverstone meeting in May. Also at that meeting, two new chassis appeared with fixed head coupe bodies. Wind tunnel tests had suggested handling improvements that were not evident on the track and when at Le Mans, where the newly developed Lagonda V12 was also entered, the two coupes crashed there was no move to replace them. However, 1954 did see the car on the London Motor Show stand with an eye watering price tag of £3,684 – drum brakes, lower compression ratios and an iron head engine but a promise of a “maximum speed approaching 150mph.” The 1955 race season contrasted with the previous year. Improvements in the car included a ZF limited slip differential with an uprated final drive, disc brakes all round and a 12 plug engine and delivered wins at Silverstone, Spa, Goodwood, Aintree and Oulton Park as well as a class win at Le Mans. The car was also back at the Motor Show with an unchanged price tag but an uprating of the power output and early in 1956 Autosport published a full road test on the car.

In May 1956, Aston Martin announced a new body style, a fixed head coupe with a fastback tail – said to be initially laid down by David Brown himself, it had a detachable roof panel that fitted in the luggage space behind the seats. It was the end of the line for the DB3S – racing continued in 1956 but development was focussed on the future and the DBRI, a race car that would never be offered to the public.

THE ASTON MARTIN DB2/4 Mark II

Production dates:	October 1955 – August 1957
Top Speed:	118.4 mph
Acceleration:	0 – 60 in 10 seconds, 0 – 100 in 28 seconds
Chassis numbers:	AM300/1101 – AM300/1299
Team car chassis no:	
Length	14 feet 3.5 inches (435.6 cm)
Width	5' 5" (1.65 m)
Height	4 feet 6.25 inches (138 cm)
Ground clearance	
Track	54 inches (1372mm)
Wheelbase	99 inches (2515mm)
Turning circle	35 feet (10.7m)
Dry weight	2362 pounds
Engine	2.9 VB6j engine
Capacity	2,922 cc
Cylinder bore	83mm (stroke 90mm)
Compression ratio	8.16:1
Power output	140 bhp @ 5000 rpm
Carburettors	Twin SU 1¾inch HV6
Chassis	Square section tube frame, aluminium body.
Transmission	David Brown 4 speed
Front suspension	Independent with coil springs
Rear suspension	Live axle with coil springs
Steering	Marles worm and roller
Brakes	Girling 2LS 12 inch hydraulic drums



1957 Aston Martin DB2/4 Mark II

Chassis AM300/1120

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The DB2/4 Mark II was introduced at the London Motor Show, it shared the chassis and mechanical specification with its predecessor. The key changes were in the bodywork and reflected the fact that the body was built at Tickfords, the first Aston Martin to be built by the Newport Pagnell concern since its acquisition by David Brown in 1953. Although little changed in general appearance, the new car was longer, higher and heavier than the DB2/4. The differences were in the detail. A welcome raise in the roofline delivered more passenger headroom in the rear, however, the requirement to retain the same windscreen saw the gap filled by a wide chrome strip above the screen. The production process for the casting of the sills and door posts were changed and the bonnet/wing assembly simplified to allow the side panels behind the front wheel arches to remain fixed. It made the bonnet lighter but with no loss of engine access and allowed permanent ventilation to be added. As was the vogue at the time, rear fins were blended into the design and repeater indicators replaced the old semaphore units and the petrol filler was hidden behind a flap opened from inside the car. The changes in the indicators left a space that was disguised with a chrome strip with the Tickford badge proudly displayed below it. Interior changes were mostly about comfort – more lateral support in the seats, more headroom and courtesy switches for the interior lights. On the controls, Aston Martin had responded to the badgering of the media by replacing the umbrella style handbrake with a more sporting fly-off type. The standard engine specification was the 140 bhp version of the 2922 cc engine but with the option of having an uprated version which, through larger valves and a high lift cam delivered 165 bhp. Although the Works Race Department were focussed on the DB3S, sporting customers could order a plethora of extras for competition purposes. Customers could specify twin exhausts, close ratio gearbox, high compression pistons, 40 DCO Weber carburettors and Alfin brake drums.



**1957 Aston Martin
DB2/4 Mark II
Fixed Head Coupe
Chassis
AM300/1290**
© BYRON INTERNATIONAL



On the show stand at launch, joining the saloon and drophead models was a fixed head coupe – the product of a special brief to Mulliners, the fixed head was designed to reflect the shape of the drop head's hood and was finished in a contrasting colour to the main body. Early in 1956, Aston Martin began an association with a new Italian coachbuilder that would have long term design impact on the marque. Initially Touring built a limited run of three Spyder designs using the company's patented "Superleggera" system of lightweight support for alloy body panels. Originally intended as export market products, the three Spydres were used extensively in marketing activities – at the Paris and London Motor Shows and even as a competition prize in the Daily Mail. The Suez crisis at this time and its impact of petrol rationing undoubtedly had a significant impact of sales – only 199 were sold in the two years of its life. While the car was losing ground in performance to some of its rivals, John Bolster summarised his test for Autosport by calling the DB2/4 Mark II " a very sporting car that you can drive in a dinner jacket." Then in 1957 Aston Martin announced a price cut on the DB2/4 Mark II – at the time, they stated that the right hand drive sales had been adversely affected by the petrol crisis and this was an effort to bring sales in line with left hand drive models. Perhaps it was solid decision making by John Wyer, formerly the Race Manager and now General Manager of the Automotive Division, perhaps it was to clear the decks for the launch of the DB Mark III that was launched at Geneva and in the United States in March of that year.

THE ASTON MARTIN DB Mark III

Production dates:	March 1957 – July 1959
Top Speed:	120 mph
Acceleration:	0 – 60 in 9.3 seconds, 0 – 100 in 31 seconds
Chassis numbers:	AM300/3A/1300 – AM300/3/1850
Team car chassis no:	
Length	14 feet 3.5 inches (435.6 cm)
Width	5' 5" (1.65 m)
Height	4 feet 6.25 inches (138 cm)
Ground clearance	
Track	54 inches (1372mm)
Wheelbase	99 inches (2515mm)
Turning circle	35 feet (10.7m)
Dry weight	2800 pounds
Engine	2.9 DBA engine
Capacity	2,922 cc
Cylinder bore	83mm (stroke 90mm)
Compression ratio	8.16:1
Power output	162 bhp @ 5500 rpm
Carburettors	3 Weber 35 DCO twin choke (or 3 SU HV6)
Chassis	Square section tube frame, aluminium body.
Transmission	David Brown 4 speed
Front suspension	Independent with coil springs
Rear suspension	Live axle with coil springs
Steering	Marles worm and roller
Brakes	Girling Hydraulic, 12 inch disc front 12 inch Alfin drum rear



1958 Aston Martin DB 2/4 Mark III
Chassis AM300/3/1769

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The need to close the performance gap to their competitors guided the priorities of a newcomer to Aston Martin, Von Eberhorst returned to Auto Union in 1953 and his place was taken by Polish engineer Tadek Marek from Austin. Marek's immediate focus was a redesign of the 2.9 litre engine starting with the stiffening of both the crankcase and the crankshaft. He changed the design of the cylinder liners, changing to top seating process with O-rings providing the seal at the bottom. Revisions to the cylinder head and manifolds and higher lift camshafts accommodated increased power while the water pump went from chain to belt drive. Manual timing chain adjustment overcame existing problems and a new oil pump avoided the wear issues on the old design. The flywheel was lightened and, for the first time, the clutch is a self-adjusting hydraulic design.

The power impact on these changes was the production of 162 bhp at 5500 rpm while adding twin exhausts pushed this up further to 178 bhp. To counter this performance increase, Alfin rear drums were supplemented by front disc brakes, (an option on the first 100 cars). A sporting orientation came with a key styling change, the introduction of the radiator grille of the DB3S – destined to influence the look of Aston Martins for many years to come. The chrome strip above the windscreen disappeared, the bonnet lowered to accommodate the new grille and opening rear quarter lights aided ventilation.

The famous “refrigerator” door handles that had been in place since the DB2 were replaced and, as another pointer to the future, the instrument panel changed with the dials clustered around the steering column. By the time the car was launched in London, the pricing turned out to be exactly that of the pre-price drop DB2/4 Mark II's, the disc brakes had become a standard fitment and the option of a Laycock overdrive unit was introduced.

This optional extra proved to be heaven sent for the sales department. Bolting onto the back of the gearbox and only operating in top gear, this option helped Aston Martin sell their entire 1958 allocation of stock by the end of the Show. During 1958 further engine modifications were derived from the ongoing race programme in addition to the standard DBA engine with its optional twin exhausts, the new DBB series was announced with triple Weber carburettors and a higher compression ratio and modified camshafts. In conjunction with the twin exhausts that were standard on the DBB, the option added just £70 to the cost of the car and increased the power to 195 bhp. However, only around 10 cars had the DBB engine and another configuration, the DBD with SU carburettors with 180 bhp was fitted to a total of 47 cars.

Late in 1958, the Aston Martin DB4 was announced and the public focus began to swing away from the DB Mark III but not before more modifications could be added. First came a Baldwin hydraulic booster in the braking system to counter a long term media criticism of pedal pressures for braking.

Then early in 1959 came an introduction that perhaps signalled a major change in the market place as the new Borg Warner automatic transmission marked a final transition of the DB2 from a circuit bred racer to a luxury express and, notwithstanding the public awareness of the forthcoming DB4, production continued to July 1959. That production reflected a demand that continued because of the car's competitiveness in the market place. In a road test, Roy Salvadori concluded that “the gradual elimination of small faults over the years has resulted in a sports car that fulfils its purpose to perfection. This had been reflected in sales of the Mark III, which totalled 551 units from launch.



1959 Aston Martin DB2/4 Drophead Mk III
Chassis No: AM300/3/1808
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1958 Aston Martin DB2/4 Mk III
Chassis No: AM300/3/1769
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