BRITAIN'S FIRST "SUPER-CAR"

The ASTON MARTIN V8

Vantage

This second and final installment of the Vantage story follows the development of the Britain's first "Super-Car" into production. It details the many improvements and refinements made to the model over the ensuing 12 years before production ceased in 1989. A new book by Kean Rogers due this year sheds further light on Vantage history and details Britain's first real "Super-Car" the V8 Vantage. Available exclusively through Aston Martin Lagonda, the AMOC and online at V8VANTAGE.COM

First of the breed:
V8/11687/RCAV, one of only four cars
fitted with 5" driving lights, perspex headlamp
covers and a larger diameter anti-roll bar.

PRODUCTION BEGINS

Once production had begun in early 1977 on the first V540 V8 Vantages a dedicated Vantage build area was created where cars were hand finished to the uprated specification.

Partially complete vehicles were transferred from the production line and received extra attention and fettling to bring them up to Vantage specification. On the engine side carbs specially modified by hand with the choke removed and altered throttle plates were fitted to special manifolds, distributors rebuilt with revised timing and higher lift camshafts were set with more overlap.

Aerodynamic aids were bolted on (only the first 16 cars) and the suspension tuned and reset. The cars were then tested on a rolling road with 300-bhp output at the rear wheels being the goal. Only then were they released to a few select customers.

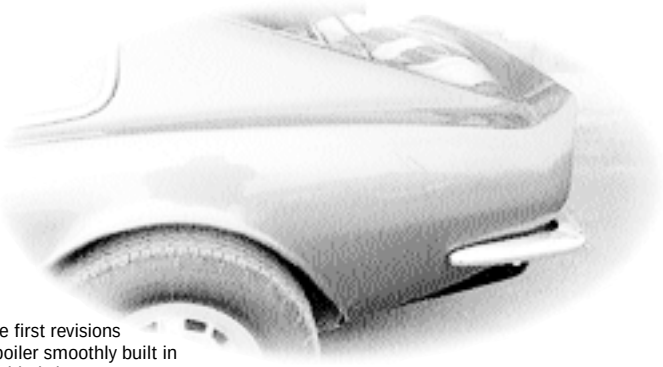
While all the features fitted to the prototype did not make it to production, the final cars performed to all expectations. Interestingly a number of the first cars returned with damage to the front. As it transpired, the aerodynamics were so effective the drivers, used to the noise and lower power of the standard V8, did not realize how fast they were traveling. The Vantage was so much quieter and more powerful it arrived at corners quicker than usual and a few surprised drivers could not stop in time!

Initially four cars (11687,11688, 11703 & 11704) were fitted with smaller 5" driving lamps, perspex headlamp covers and a larger diameter anti-roll bar. From chassis V8/11705/RCAV all cars were standardised with larger driving lamps, the same anti-roll bar as the normal V8 and no headlamp covers.

SMOOTHING THINGS OUT

After the first 16 cars the aerodynamic additions were built smoothly into the bodywork. From chassis number V8/11815/LCAV the rear flip tail spoiler was smoothly integrated into the alloy body with the bonnet bulge opening welded closed during production. Optional electrically adjustable door mirrors were also offered. The overall effect was a much smoother and aesthetically pleasing car. In total 23 of these "flip tail" Vantages were built between December 1977 and September 1978.

In January 1978 the first V8 Vantage for the US market was introduced. While externally these cars looked like normal Vantages, under the bonnet a US-spec. low compression engine was fitted. Chassis # V8/11841/LCAV was the first of 11 "Cosmetic Vantages" built.



V8/11866/RCAV with the first revisions
to Vantage bodywork, the tail spoiler smoothly built in
and bonnet scoop welded shut.

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OSCAR INDIA IS GO

At the AMOC's St. John Horsfall race meeting in July 1978 a visually altered Vantage appeared. It was known within the factory as "Oscar India", in deference to chairman Alan Curtis's affection for aviation with "OI" referring to the proposed October 1 1978 introduction date. The prototype "OI" V8 Vantage, chassis # V8/11870/RCAV, made its world debut in club racing. Once again competition was used to prove the Vantage's ability and it also served to tempt potential customers. The revised car retained the V540 V8 Vantage engine but the bodywork had been smoothed out and standardized with the normal V8 Saloon along with shock absorbers and the exhaust.

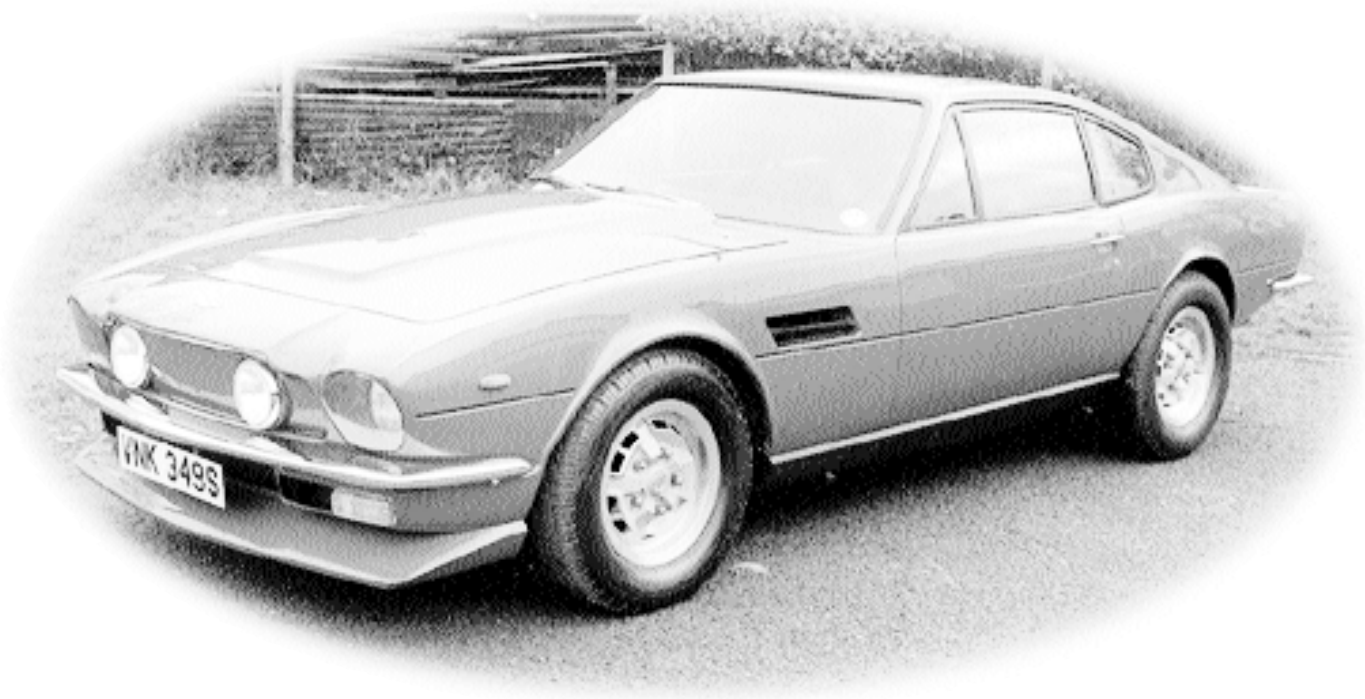
A rear "tea-tray" spoiler incorporating raised wing lines blended into the top lip of the boot. The bonnet bulge was also smoother, lower and wider than previous. Now only the deep chin spoiler, blanked grill with auxiliary driving lights, and wider tyres distinguished the Vantage externally from lesser cars.

The interior was also revised with leather replacing vinyl on the dash, leather headlining instead of fabric, a longer center console, uprated AC and the option of wood trim on the dash and door cappings. Vantages were not fitted with wood because the engineers considered the stray reflections from the burr walnut too distracting for serious performance driving.

The first production car bore the chassis number V8VOR12040, a revised numbering system having been adopted for all Astons, and was finished on October 6 1978.

As with previous Vantages the car was only offered with a manual gearbox. Subtle pressure by AML board member Dennis Flather resulted in an single automatic version (chassis # V8VOR12076). The factory was reluctant to build customer models as the Chrysler automatic box was considered too weak to reliably handle the Vantage's horsepower output.

In all 44 V540 "OI" V8 Vantages were built up to March 1980. The last car was a special all black version with no chrome anywhere on the car.



The prototype V8/11870/RCAV, featured a radical front airdam and blacked out chrome. Designer William Townes wanted to distinguish the Vantage from lesser models but the concept was rejected by management. Production models featured the standard Vantage airdam and classic chrome embellishments.

BRITAIN'S FIRST "SUPER-CAR"

THE V580 V8 VANTAGE

From March 1980 a revised engine specification was introduced for the V8 Vantage. Designated the V580 series it resulted from a desire to standardise engine parts wherever possible.

Using the Lagonda head for the basis of the 1980 type, all engines would use the same larger 2.1" valves as the Vantage with the smaller 1.35" inlet ports of the Lagonda. This required only minor changes to the build procedure and a swap of camshafts to become Vantage specification heads.

A new inlet camshaft was developed to improve overall output throughout the range and reduce noise levels. The exhaust camshaft was the stage 1 inlet camshaft fitted to the standard V8 from 1977. Both camshafts featured polynomial profiles for quieter operation and valves were now tuftrided with dished heads for a better seal and reduced emissions.

A new piston was standardized for all engines, reducing noise levels especially during warm up when the old one was prone to piston knock. Compression ratios were set at 9.3:1.

The overall result was a much quieter engine with improved mid range torque and better economy. Drivability improved with the car more eager at lower revs than previously.

Aston's demonstrator V8 Vantage of 1979, V8VOR12052, was the first car to receive the V580 engine. The first production car bore the chassis number V8VOR12248, finished on March 14 1980. 42 of these cars were built up until December 1982.

RE-TIRING THE VANTAGE

Come 1983 substantial wheel and chassis revisions were introduced, necessitated by the desire to find a suitable tyre to handle the Vantage's prodigious performance.

The early V540 Vantages were fitted with Pirelli's excellent CN12 tyre in the 255/60 VR15 size. It suited the chassis perfectly and possessed very controllable and progressive handling when close to the limit and even over. It combined this with a good ride and low road noise levels.

However, Pirelli's quality control was not what it should have been and the tyre was withdrawn in late 1978 to be replaced by the P7 in the same size. Handling suffered as a result, the tyre's tread design and square shoulders not to the Vantage's liking.

Larger 275/55 VR15 P7's were fitted to improve grip in May 1981 from chassis number V8VOR12307 onwards. Unfortunately on Aston's narrow 7" rims the tyres had to be inflated up to 40-50 lb. to stay on the wheels. Ride and handling suffered, needless to say, and it wasn't until a wider 8" BBS rim was became available did the problem get resolved and pressures reduced. Fitting the tyres also required spacers on the hubs and flared wheel arches.

From chassis number V8VOR12360 (including V8VOR12353) 8" BBS rims on new hubs with 275/55 VR15 tyres became standard. Flared arches accommodated the tyres in the wheel wells continuing from the front wheel arch onto the lip of the spoiler/air dam.

Suspension settings were also revised with an increase in castor to 4 degrees and a camber change to negative 1 degree. A new Constant Energy ignition system was also fitted for better spark throughout the rev range. 94 of these cars were produced up till the end of 1985.

DP 2000

In late 1982 Aston's South African distributor had approached the factory about an uprated Vantage. It appeared one of his customers was tyred of being blown off by Porsche Turbo's and the like in Johannesburg, where the altitude was around 5000 feet and normally aspirated engines were at a disadvantage.

The factory responded by developing a special South African specification engine, essentially the forerunner to the V580X engine introduced in 1986 on the V8 Vantage Zagato. Designated Design Project (DP) 2000 the engineering changes required to effect a substantial increase in horsepower were significant. Eventually the S.A. spec. engine pumped out 437 bhp at 6250 rpm, versus 370 bhp at 5800 rpm.

The changes that enabled this 20% increase in power included new forged Cosworth pistons and an compression ratio of 10.2:1, larger 1 9/16" inlet ports, higher lift camshafts derived from Aston's racing engines of the 1960s, a new distributor with a revised ignition curve, larger 1 3/4" exhaust manifolds/down pipes, big bore exhaust and 4" trunking to the airbox with air injection deleted, and larger hand finished 50mm Weber IDF carbs.

V8VOR12361, finished in April 1983, was the initial car to receive the S.A. specification. A Volante, V8COR15307, also received the uprated engine in late April. The modifications were to become available through the service department as no certification had been obtained to allow the uprated specification on the normal production line.

For reasons of political correctness the name South African spec. was used unofficially within the factory. Come 1985, when the Zagato was being readied for production, the engine received the designation V580X with the X meaning extra performance.

WORLD'S FASTEST VANTAGE

An uprated S.A. spec. engine was also fitted to the factory demonstrator (chassis number V8VOR12403) and went on to record the fastest time ever for a V8 Vantage. The car participated in Road & Track magazine's world fastest cars test. At Volkswagen's test track in Germany the Vantage recorded a top speed of 175 mph with Phil Hill driving. His comments best sum up the performance: "Well, the Aston Martin really was a tremendous surprise. To think of a car of this size and shape--not to say there's anything wrong with the shape--but it's such a big car and to imagine what it must take to go 175 mph is almost unthinkable. It just has a tremendous feeling of power and quality. The most startling and rather alarming thing was to be in a great big production car like this with a speedometer that goes to 170 mph and a rev counter that goes to 7000 rpm, and see both the speedometer and tachometer needles slowly but surely crawl right off the dial ... it was astonishing!" After this test Aston Martin wisely fitted rev limiters to cars fitted with these engines.

BRITAIN'S FIRST "SUPER-CAR"

World's fastest Vantage on full song. At 175 mph only the lighter more aerodynamic Vantage Zagato can come close

ZAGATO MULE

The next evolution in the V8 Vantage species was the Vantage Zagato variant, essentially a rebodied Vantage with the uprated S.A. spec. engine. Capitalising on the market for limited edition ultra high performance cars of the mid eighties, Aston Martin launched the V8 Vantage Zagato at the Geneva show in March 1985.

Reestablishing their successful partnership with Zagato from the 1960s, the result was an interesting looking 2 seater with a projected top speed of 300kmh.

To prove the initial concept and establish the performance envelope, a 1978 V8 Vantage, chassis V8/11967/RCAV, was used as a development mule.

Weight was pared out of the car to bring it in line with the Zagato's aim of 3600 lbs. Air conditioning and all ancillaries were removed, perspex windows fitted, the interior gutted of all trim and carpets, a smaller fuel tank of five gallons fitted, rear under valences and spare wheel well cut out. Special Zagato seats were fitted and the brake servos re-positioned to the back seats where they would be on the Zagato. One of the uprated S.A. specs. engines was installed along with a modified air box for the carburetors. Revisions to the suspension included variable rate springs all round and re-calibrated Koni shocks with new 16" wheels and tyres. Suspension geometry was again altered to accommodate these changes.

BUILDING THE BEAST

Having confirmed the feasibility of the concept with the Zagato mule the first chassis were built up in Newport Pagnell and shipped to Zagato in Italy. These were essentially V8 Vantages with no aluminium body work, revised suspension and uprated engines. Once in Italy, Zagato removed the rear foot of chassis and clothed the body in light weight alloy panels designed primarily within the aerodynamic constraints of reaching 300 kmh. Later aerodynamic testing would prove it to be around 0.29 before a small front air dam and rear spoiler were fitted to reduce lift.

Aston Martin finally proved the performance of the prototype Zagato, chassis number V8ZGR20010, on the autoroute near Paris on July 8. They had been promised a closed section of road to perform their testing, yet upon arrival at the designated site the local gendarme explained they could test during lunch while they turned a blind eye. On July 8 at 21.30 a mean speed of 298.75 kmh was timed amid the French traffic on a car with a failing clutch.

It is doubtful production Zagatos could match this speed as the prototype was fitted with a higher final axle ratio of 3.058:1 and a highly tuned engine pumping out around 430-440 bhp. Standard cars received a lower ratio of 3.54:1 and engines putting out around 410-420 bhp with twin air pumps fitted to meet EEC clean air regulations.

In all 51 Zagato coupes were built by the end of 1988, chassis numbers V8ZHR20011 to V8ZHR20061. A further five Vantage engined Zagato Volantes were built with full specification engines fitted by the service department and reworked noses similar to the coupe version.

V8/11967/RCAV, the Zagato mule, a lightened 1978 Vantage, used for chassis and engine development.

Scale model of the V8 Vantage Zagato used in wind tunnel testing.

The first Vantage Zagato chassis, number 20010, on display at Newport Pagnell before shipment to Italy.

The finished item, a production Zagato used for demo and press releases before delivery to its first owner.

BRITAIN'S FIRST "SUPER-CAR"

V580X V8 VANTAGE

Once the Zagato was in full limited production in 1986 attention was turned back to the standard Vantage. Lessons learned on the Zagato were transferred across.

The Vantage received the uprated suspension, larger wheels/tyres, and the 580X engine putting out around 410-420 bhp. A big bore conversion was available boosting power to around 430 bhp.

The first car to receive the engine was chassis number V8VGL12507, a left hand drive automatic Middle East specification Vantage, with engine number V/580/2507/XA (A denotes automatic).

Chassis number V8VHR12528 was the first car fitted with larger 16" wheels and variable rate springs with re-calibrated Koni shocks. It appeared on the stand at 1986 NEC Motorshow.

The first 16" wheels were 3 piece Compomotives that had an unfortunate habit of separating under impact with kerbs. The factory soon recalled them and replaced them with either OZ Ceres or MSW 16" rims.

Once production of these ran out a switch was made to Ronal wheels. Rubber was now Goodyear 255/50 ZR16 Eagles, restoring the handling to the feel and balance exhibited by the first Vantages back in 1977.

FURTHER REVISIONS

Further revisions occurred for Model Year 1987 when the car obtained twin electric fans, replacing the single engine driven one, and a full flow oil system with a much larger oil radiator.

A new steering column and housing with revised switchgear and tilt adjustment also became standard. For the first time an automatic was available fully certified for the V8Vantage.

The first car to bear all these goodies was a development car, chassis number V8VOR12466. In production cars became available in late 1986 from chassis number V8VHR12585 onwards.

In all 137 V580X Vantages were built up to 1989 when V8VKR12701, the final coupe, was completed.

From production start to finish a total of 369 V8 Vantages were built.

VANTAGE VOLANTE

Since the Vantage's introduction in 1977 customers had requested an open version. Aston had officially refused to build such a car due to concerns with safety at high speeds.

Unofficially 6 cars did make it off the assembly line and into the hands of select owners in the Middle East, South Africa, Brunei and Monaco.

It was to be 1986 before the Vantage Volante came to fruition. Its' shape was inspired by a car built for the Brunei Royal family. After much discussion between engineering and marketing the final shape was derived. No wind tunnel testing was involved so engineering made calculations and added 15% for an extra safety margin.

Hence the overly be-spoilered and fendered Vantage Volante was born. It used the same mechanicals as the V8 Vantage and benefited from lessons learnt in Zagato development.

By the time production ceased 167 Vantage Volantes were built, the first in 1986, the last in 1989, begining at chassis number V8CHR15506 and ending at V8VKL15847.

World's fastest convertible, the V8 Vantage Volante. Pre-production car

P.O.W. specification Vantage Volante, based on a car built for H.R.H. Prince Charles.

BRITAIN'S FIRST "SUPER-CAR"

P.O.W. VOLANTE

During the build run of Vantage Volantes 27 rather special cars appeared. Based on styling requests submitted by His Royal Highness, Prince Charles, they became known as Prince Of Wales (P.O.W.) specification Vantage Volantes.

Visually they were more subtle in appearance, but not in performance. The Volante's elegant lines re-appeared without the front air dam, side sill extensions and flip tail (although a few did receive the flip tail) of the somewhat over endowed Vantage Volante. Prince Charles' car bore the chassis number V8CHR15581, the last copy built was V8CKR15849.

END OF THE LINE

The V8 Vantage will go down in history as one of the all time great performance cars. From its inception in 1977 until the last car rolled off the production line, the V8 Vantage, Volante and Zagato had been a testament to the tremendous skill and innovation that have always been a hallmark of Aston Martin.

Only 626 cars were built in that period and all are eagerly sought after by collectors and enthusiasts alike.

Pictured below is the last V8 Vantage engined car ever built, a P.O.W. spec. Volante, and many of the artisans who helped create it.

All the above information is derived from a new book on V8 Vantages by Kean Rogers, due out late 1999. Titled "Britain's First Super-Car: The Aston Martin V8 Vantage, including Zagato & Volante" it will be available exclusively through Aston Martin Lagonda, its dealers, the Aston Martin Owners Club and online at the V8 Vantage Website: WWW.V8VANTAGE.COM. For any questions regarding V8 Vantages email V8VANTAGE@WORLDNET.ATT.NET

ASTON MARTIN VANTAGE ENGINED CARS BUILT 1950 - 1989

Year	Model	Body	Built	RHD	LHD	Manual	Auto
1950	DB2 VANTAGE LB6V	Saloon	17	3	14	17	-
		Convertible	4	2	2	4	-
1951	VB6B	Saloon	134	16	118	134	-
		Convertible	47	3	44	47	-
1952	VB6E	Saloon	13	-	13	13	-
		Convertible	15	7	8	15	-
1962	DB4 VANTAGE SERIES IV	Saloon	45	31	14	45	-
1963	DB4 VANTAGE SERIES V	Saloon	104	79	25	104	-
		Convertible	32	19	13	32	-
1963	DB4 VANTAGE GT	Saloon	6	3	3	6	-
		Convertible	1	1	-	1	-
1965	DB5 VANTAGE	Saloon	57	40	17	55	2
		Convertible	7	2	5	7	-
		Estate	1	1	-	1	-
1965	DB5 VANTAGE GT	Saloon	1	-	1	1	-
		Convertible	1	1	-	1	-
1965	VOLANTE	Short Chassis	3	3	-	3	-
1966	DB6 VANTAGE	Saloon	417	268	149	380	37
		Volante	29	24	5	28	1
		Estate	3	-	3	1	2
1969	DB6 MKII VANTAGE	Saloon	71	65	6	68	3
		Volante	12	9	3	9	3
1967	DBS VANTAGE	Saloon	296	224	72	271	25
1969	DBS V8 VANTAGE	Prototype	1	1	-	1	-
1972	AM VANTAGE	Saloon	70	68	2	34	36
1977	AM V8 VANTAGE	Saloon	50	30	20	48	2
		Prototype	1	1	-	1	-
1978	AM V8 VANTAGE OI	Saloon	44	35	9	43	1
		Prototype	1	1	-	1	-
1980	AM V8 VANTAGE 580	Saloon	42	27	15	41	1
		Volante	2	1	1	-	2
1983	AM V8 VANTAGE 580 BBS	Saloon	94	53	41	92	2
		Volante	4	3	1	2	2
1986	AM V8 VANTAGE 580X	Saloon	137	94	43	115	22
		Volante	167	78	89	90	77
		P.O.W.	27	22	5	25	2
1986	AM V8 VANTAGE ZAGATO	Saloon	51	31	20	43	8
		Volante	5	4	1	5	-
		Prototype	1	1	-	1	-

The last V8 Vantage engined car built nearing the end of the line. Chassis number V8CKR15849, a P.O.W. spec. Vantage Volante.