



A LIVING LEGEND

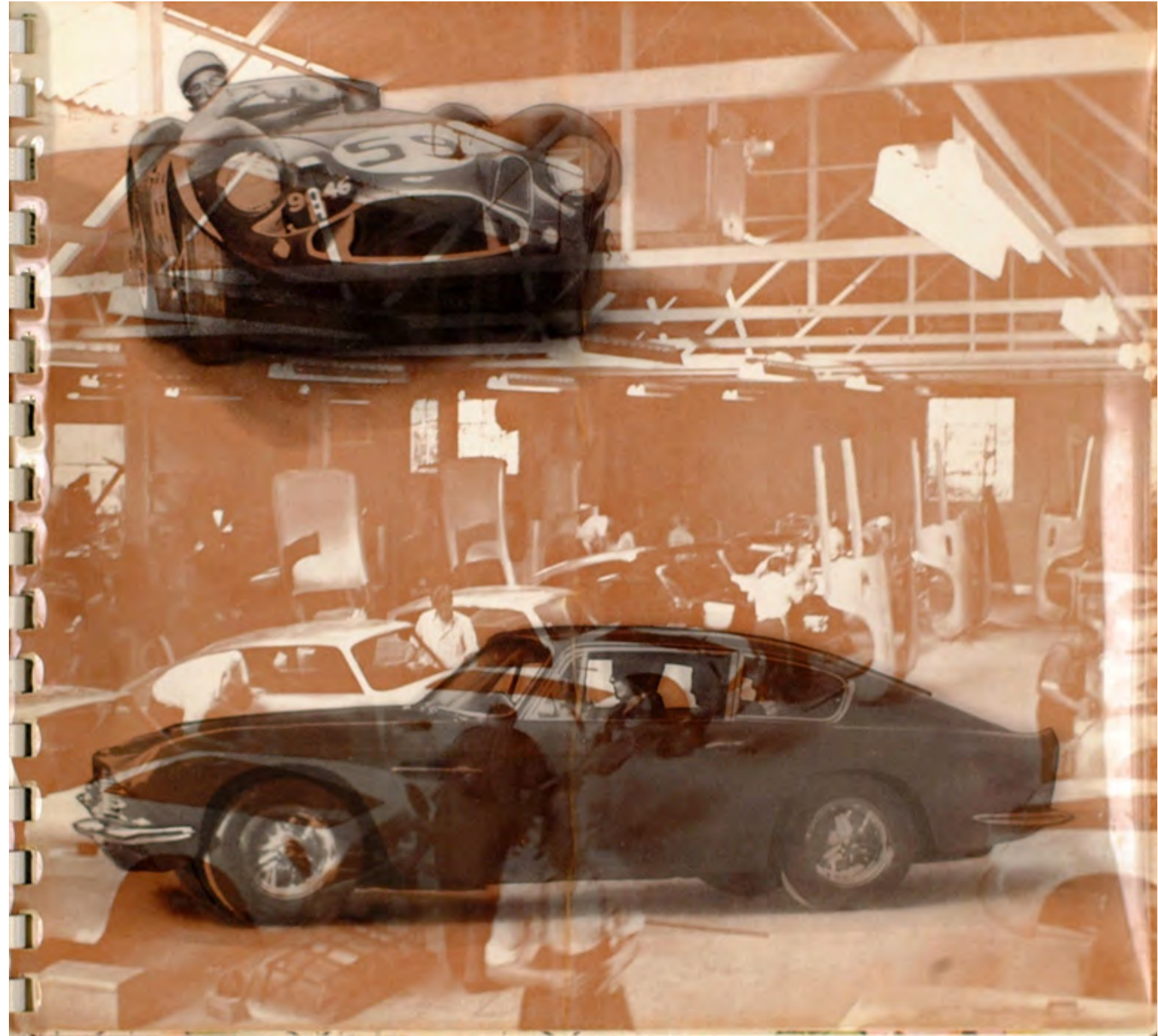
Whether it is a David Brown racing  
Aston Martin storming to victory at Le Mans  
and Nurburgring (3 consecutive years)  
or the current DB6, the Aston Martin leads  
the World in performance and quality.

## A LIVING LEGEND

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The Aston Martin is not a car for the masses – we make no apology for that. It is built for aficionados of the finest in automotive engineering and design, styled in the modern image of a great tradition, and appointed to the highest standards of discreetly luxurious good taste. Everyone who plays a part in the production of an Aston Martin shares a common bond of pride in the meticulous attention to detail and the unstinting care devoted to as close an attainment of perfection at every stage as is humanly possible. Each car is an individual achievement of dedicated men; hand-built with imagination, skill, and superlative craftsmanship. The Aston Martin is a living legend – and the legend will continue as long as pride in workmanship, awareness of real distinction in design, and appreciation of truly beautiful things persist.





# NEWPORT PAGNELL

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As markets increase and the principles of mass production are applied to meet the enormous and growing demands of the buying public, there remain small and highly prized pockets of resistance to the lowering of standards such methods inevitably entail; places where



the values of individual integrity, craftsmanship and superb quality are the real considerations. One such place is Newport Pagnell, where at the indicative rate of only four cars a day, the Aston Martin is crafted.

Newport Pagnell is in the heart of Buckinghamshire – a small pleasant town first reliably mentioned in the Domesday Book where it is recorded that, at the time of Edward the Confessor, the manor belonged to Ulf, the Thane. The Newport lands subsequently passed to Fulc Paganell from whose family the town acquired its suffix, and who founded Tickford Priory. Nothing remains of the original church, which was probably a simple wooden structure with a nave and chancel. The present church dates from the 16th century. Newport Pagnell has never played a large part in the affairs of the realm, but crops up in official records from time to time with visits from King John in 1204,

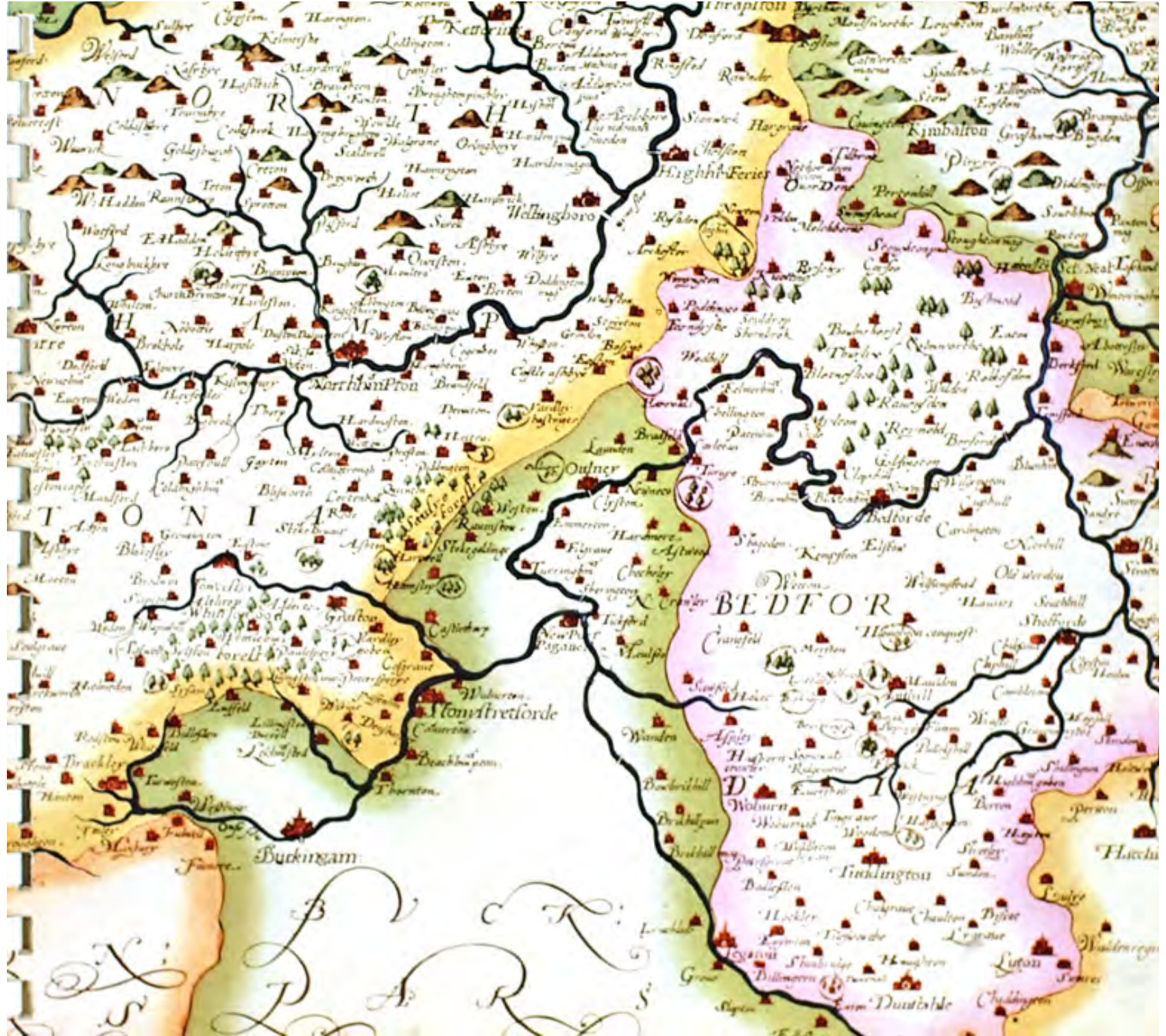
Henry III on his way to besiege Bedford, Edward I in 1280. Mrs. Siddons, the famous Regency actress, was here in 1796.

This unpretentious English town, at the junction of two rivers, is the setting for the Aston Martin Factory. And the traditions of integrity and craftsmanship are still carried on by Aston Martin people, many of them descended from old Newport Pagnell families.

Unlike other townships of its kind, Newport Pagnell, as the home of the Aston Martin, now has a place in the international scene. All over the world, the skill and dedication of its men have found concrete expression in the superbly crafted, hand built, unique Aston Martin.

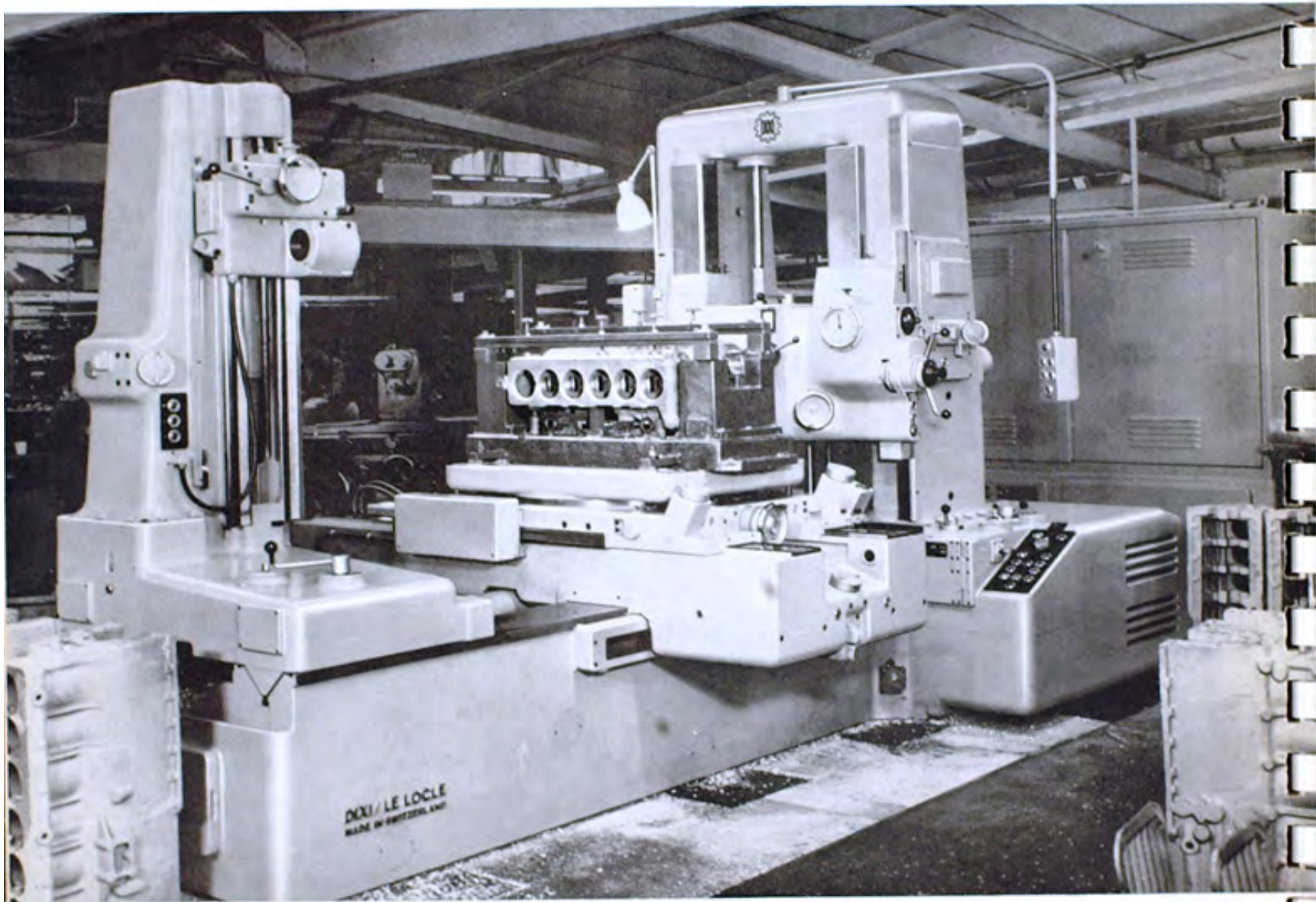
In this brochure, we shall take you step by step through the process of manufacture, the careful building and assembly of the finest sports car in the world, the living legend that is **ASTON MARTIN.**







This jig borer is capable of doing virtually any boring, drilling, milling and facing operation on the Aston Martin cylinder head or block. It works to such fine tolerances that it can maintain parallels during boring to .0004"





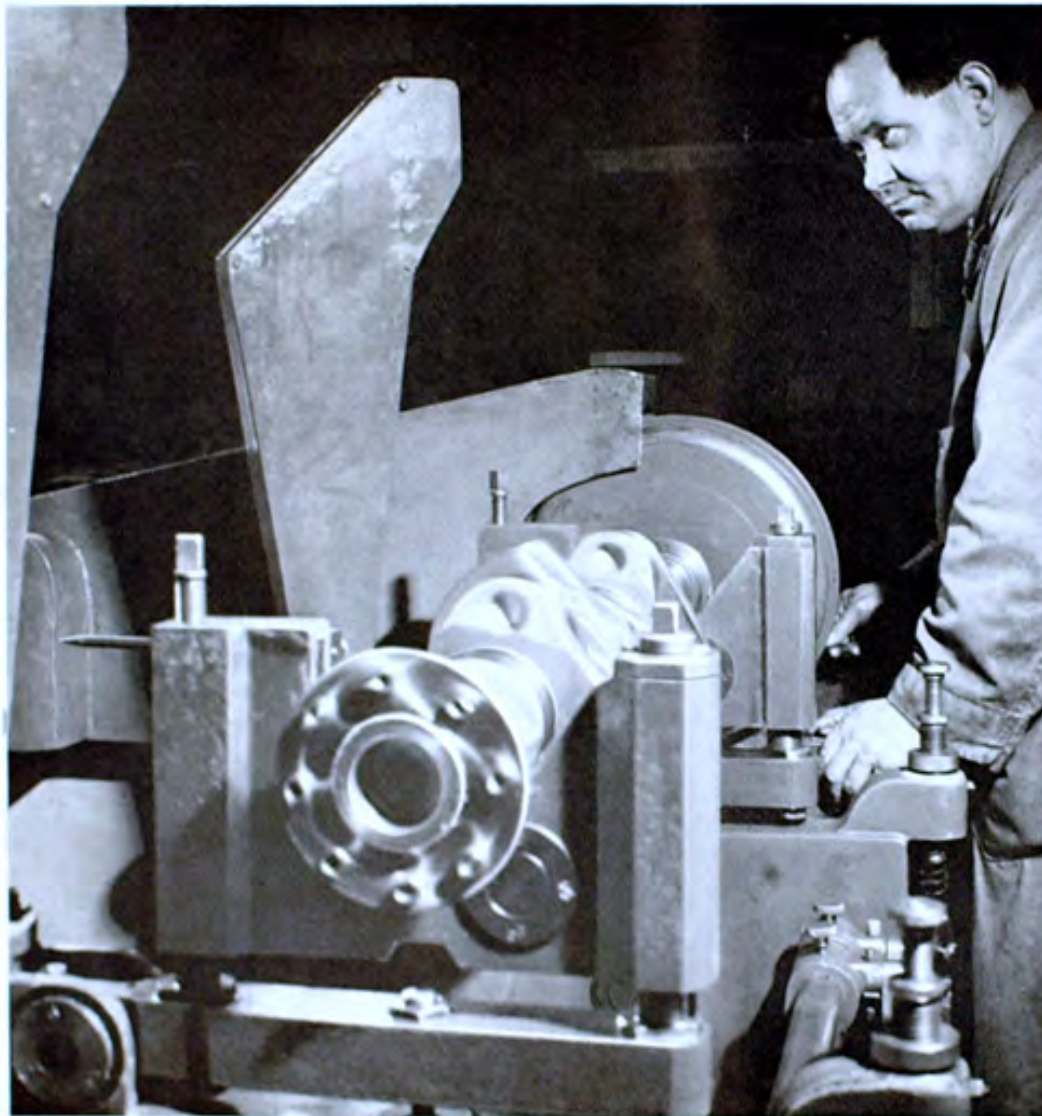
## THE ENGINE

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All major parts of the Aston Martin engine and suspension are brought in as castings, machined to the limits required, crack tested when necessary, and searchingly inspected before being passed for fitting. Valve seats are ground in by hand and finished with engineer's blue. The main bearing bore is finished to a tolerance of 6/10,000ths of an inch. Con rods are carefully selected and weighed to make up a perfectly matched set of six, which once selected, remain together. If at any time, for any reason, a replacement is

Checking the bore line on a Solex air gauge. The gauge is passed through each main bearing, with bearing shells tightened to 55 lbs. in place. The clearance in each is recorded. Permissible tolerances must lie between .00125 and .00175. This allows the crankshaft a running clearance of .0005 or  $\frac{1}{2}$  of one thousandth of an inch.





Every crankshaft is balanced both statically and dynamically : first on its own, then with the flywheel attached and, lastly, with the flywheel and clutch assembly in position. In this way, a perfect balance for the whole unit is achieved.

necessary, the whole set is removed and another matched set installed. Each set is initialled by the engineer who makes the selection. The flywheel is balanced on a master crankshaft, a perfect balance being obtained and checked by a highly sensitive dial. Necessary adjustments are made almost intuitively by the mechanic. Racks of jigs, carefully recorded to correspond with each part, are kept for several years should replacement parts be required. No part of an Aston Martin engine is mass produced – each is absolutely individual.



Perfect balance is essential in a high performance engine. On an Aston Martin this means that every set of Piston assemblies must be carefully matched. Each assembly of piston, con rod and small end bearing is weighed and a variation of no more than 1/16th of an ounce is permissible in a set of six.

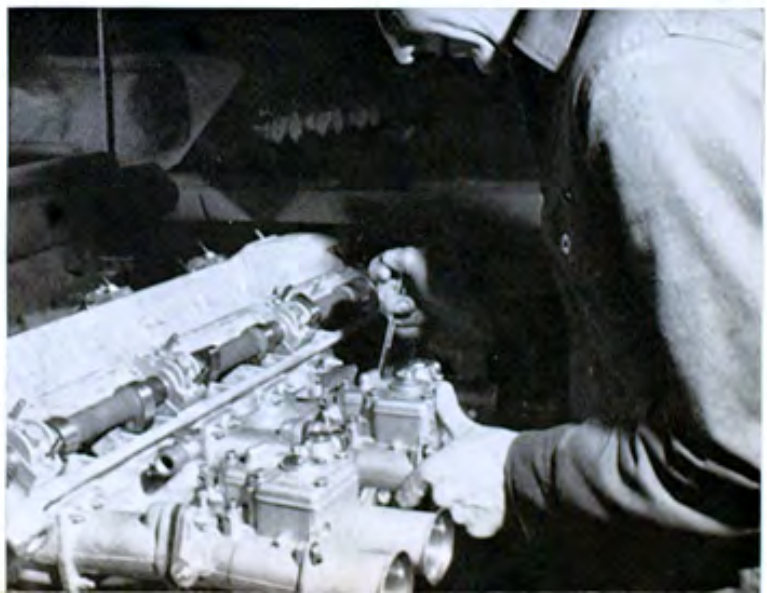
To ensure that there is a perfect seal between valve and seat, all the valves are ground in by hand.



A clock indicator, graduated in thousandths of an inch, is used to set the valve timing. With No. 6 piston at T.D.C. the No. 6 exhaust valve is set. The inlet valves are then set in the same way.



Fitting the three twin-choke Weber carburetors to the 325 bhp Vantage engine. The linkage for the carburetors is made in the factory.

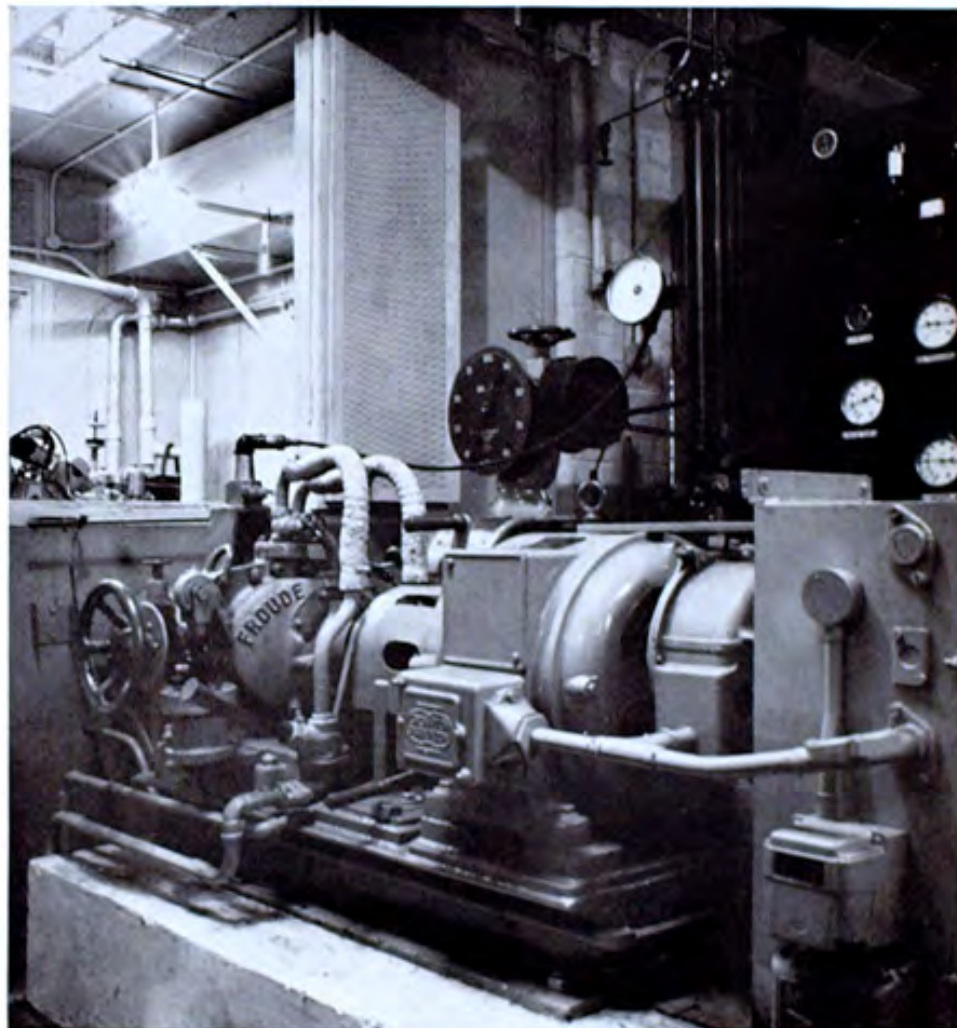




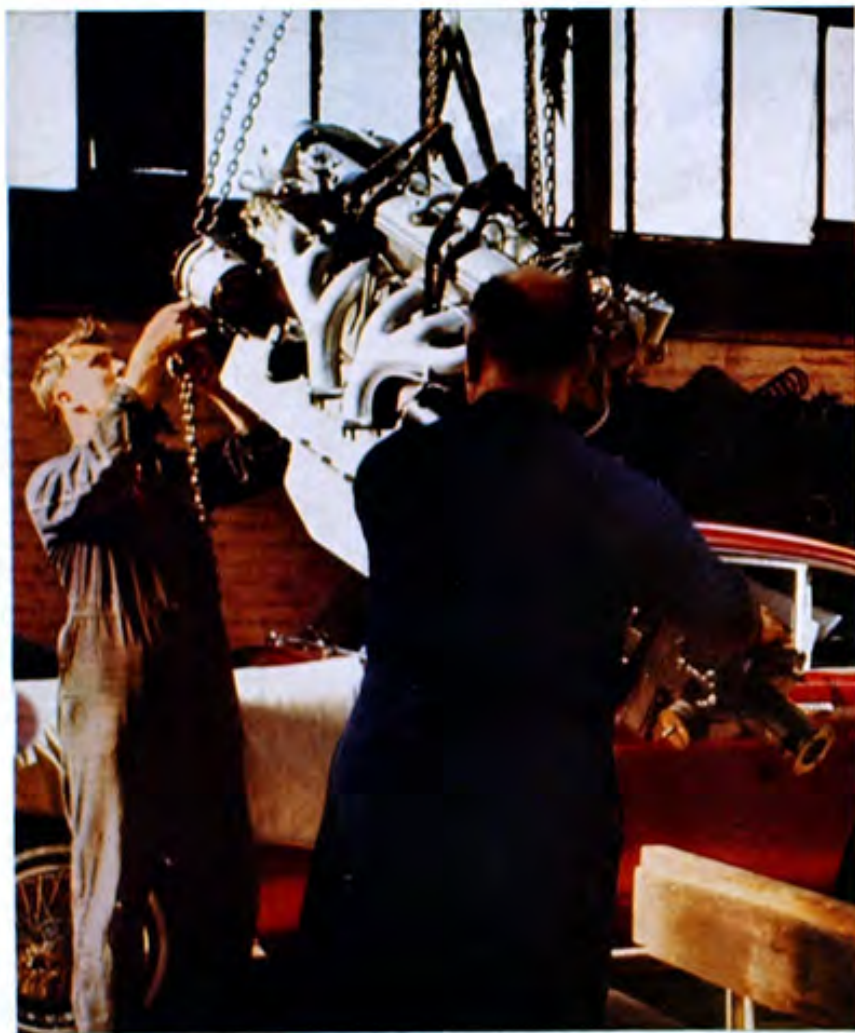
A completed Vantage engine and gearbox,  
perfect in every detail, ready to be fitted in a car.



Every engine is run, under load, on a test bed for 5 hours,  
up to 5,500 rpm. This is followed by a power test carried out by the  
engine Inspector. Only when the engine has been passed  
100 per cent is an identification number stamped on it.



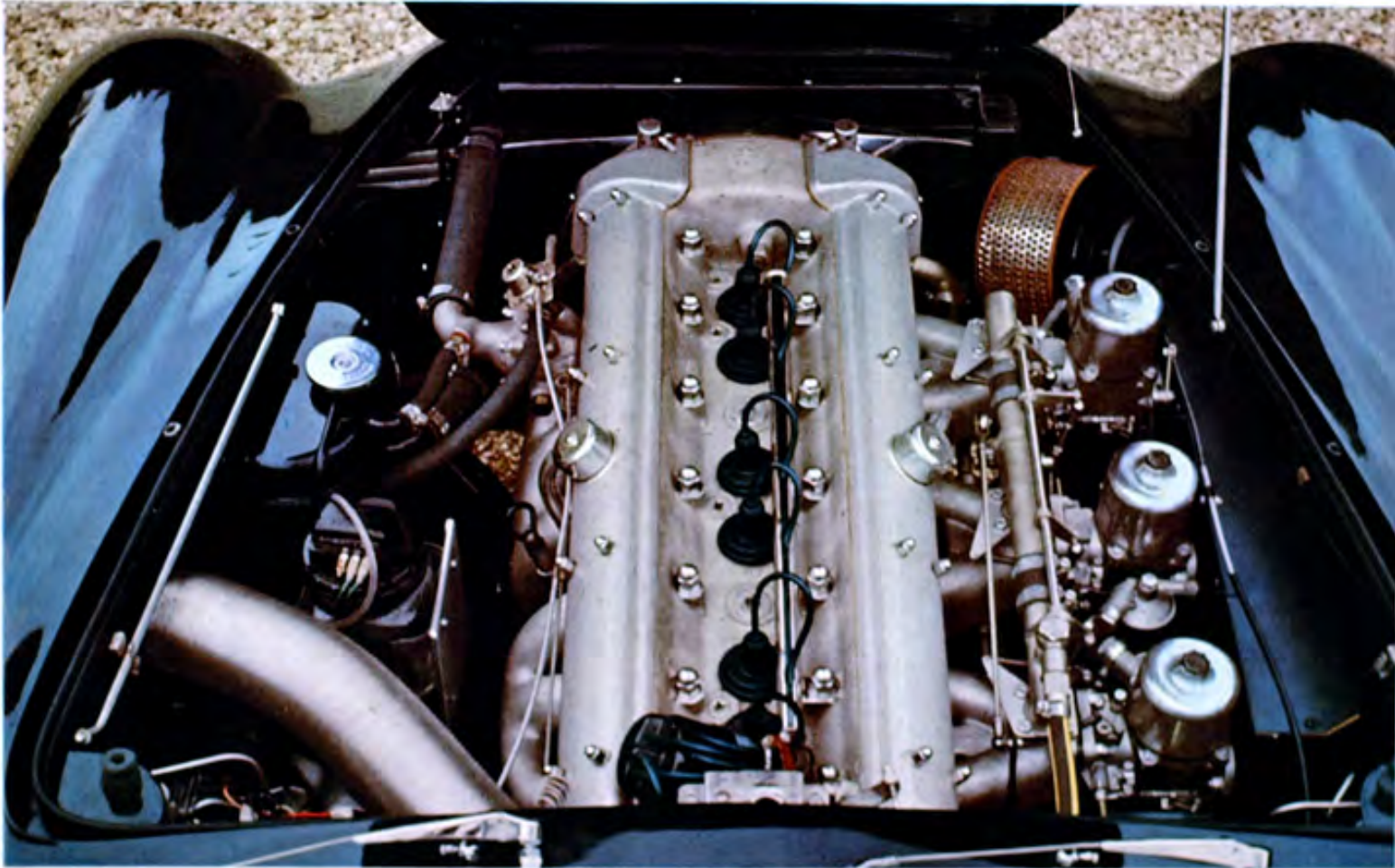
The engine is then passed to the production line, carefully sealed to prevent the ingress of dust, for fitting in a car.



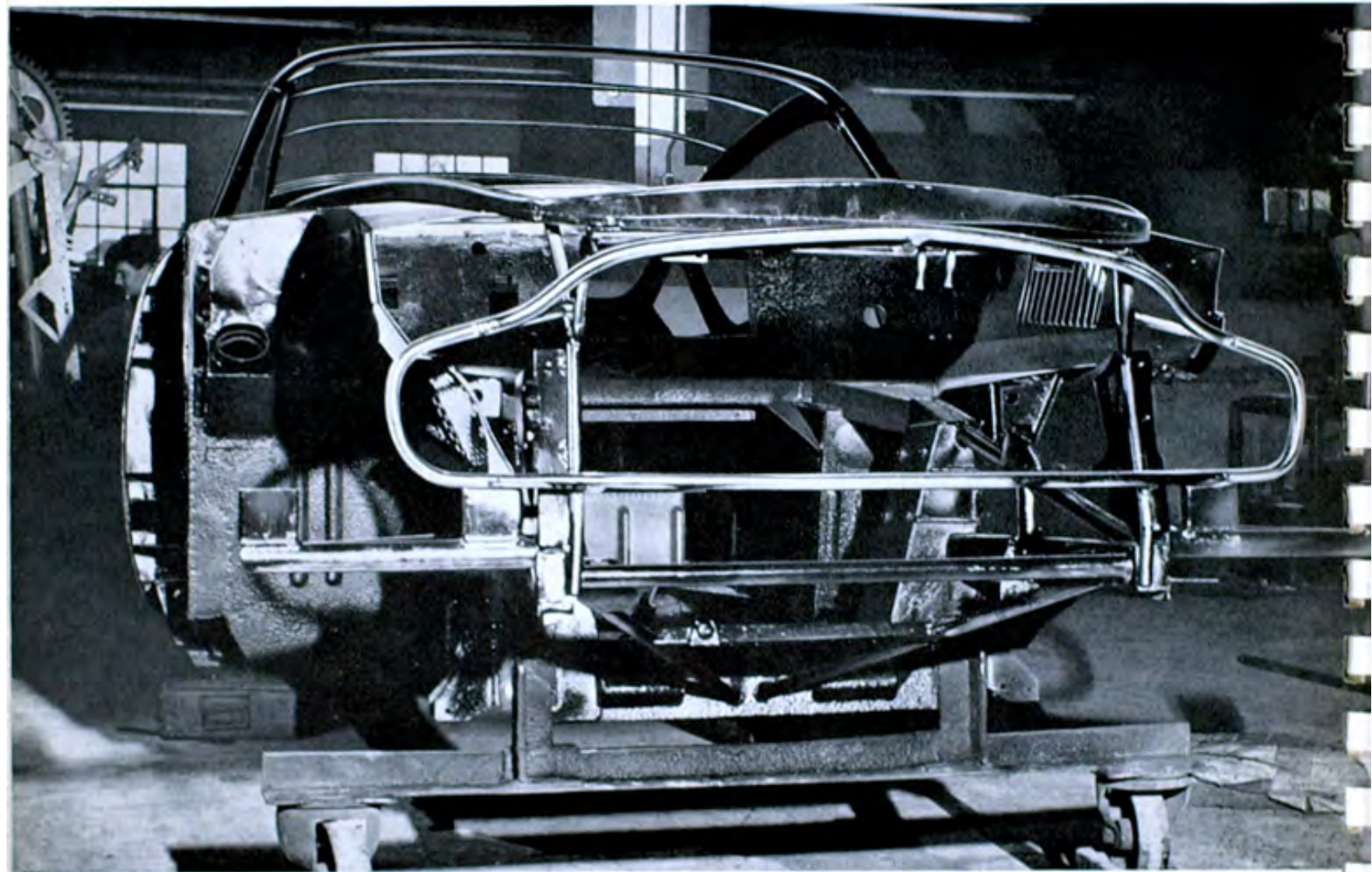
The firm rule is, one man to one engine. One fitter alone builds up a complete engine – he is solely responsible for it. The degree of strictly personal attention is so great and the tester so experienced that he can tell which man has built a particular engine by its individual performance – each has a personal characteristic which is reflected in his work. All engines are subjected to the most stringent and comprehensive tests before installation. The completed engine is run at varying speeds up to 5,500 revs against a water brake for 4½ to 5½ hours. A final test is then carried out with maximum loading. The Vantage engine running at 3,500 revs stays so cool that a hand can be comfortably placed on the rocker boxes. A complete history of each engine is kept from the commencement of the assembly until its final delivery.



The Aston Martin DB6 twin camshaft engine in situ.



Driver's lives depend on the strength of the materials that are used in their cars. Safety, in the form of an enormously strong steel platform chassis, is the basis of every Aston Martin car. The platform includes steel bulkheads, front and rear, to protect the passenger compartment. A tubular steel super structure is added onto which the aluminium skin is fitted.





## THE BODY

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The steel chassis platform arrives at Newport Pagnell by road from the Huddersfield works of David Brown Industries. The body skin is of aluminium alloy construction – the front of the steel chassis is enormously strong with a completely rigid structure that permits no flexing. Strengthening sections are added on a main chassis jig. Panel sections will later be attached to these to form the basic shape of

the car. A black anti-corrosive spray is used on the completed frame before it is panelled. There are approximately 34 welded 16-gauge alloy panels to each shell. Initially, the main panels are stretched on a concrete-filled former to give the beater a basic workable shape. Each is then hand beaten on a glass fibre, wood or steel mould. The shaped panels are welded together in two main parts – the

The aluminium body skin is made up in two parts—the front and rear ends. Here, the rear end is being hand beaten on a jig



The section of the front end which will house the radiator grille being shaped on rollers.



To give additional rigidity to the aluminium skin, steel wire is folded in round the edges.



front end (finishing at the door pillars) and the rear section, which includes the main roof panel. The doors are panelled and fitted separately. A steel wire surround is lipped into the lower edges of both sections to give added strength. All dents and ripples are painstakingly beaten out. The body is meticulously inspected, then roughed with sand paper before being passed to the paint shop.

The body sections are fitted to the chassis unit by lipping them over ledges on the tubular structure.





Ready for the paint booth. The completed body shell has been brought to a blemish-free surface finish in preparation for painting.





Between each of its 22 hand sprayed coats of primer and paint, the body is rubbed down to give a progressively finer finish.





All spraying and rubbing down is done by hand. Between 20 and 22 coats of primer and final colour are applied to each car. The body is rigorously rubbed down between each coat to ensure an immaculate finish. The smallest blemishes are noted and rectified. Electricians then fit the looming, head and side lights. Carpenters cut and fit the wooden internal door flushers and arm rests, numbered to accord with the chassis. Before the final coat of paint is applied, the body progresses down the chassis line where the front and rear suspensions are fitted, the rear axle and all major components, until the engine, radiator, oil cooler and exhaust systems are integrated. Then on for the fascia, windscreen and side windows. All glass is of the tinted type and, for the majority of cars destined for overseas, air-conditioning is fitted. The engine breathing pipes are also coupled and fed into the carburettor box to comply with the regulations of certain American states. Only the highest quality hides and carpeting are selected for the interior of each Aston Martin. Five complete hides are used for the trim of each car – one is used for each of the front seats. The hide is protected from the slightest

Aside from the main assembly line, sub-assembly operations are carried out. Skilled operators install the wiring of the fascia.



A luxury car must offer the highest standards of comfort. To ensure that these standards are maintained, the seats are all hand made. Factory trained carpenters construct the basic framework for each seat.



blemish by a template during the softening up process. Only the most supple section adjacent to the backbone is used for the larger areas, the remainder for piping. One of the highly skilled tradesmen in this section has been in the trade for over fifty years. Nine yards of fine Wilton

carpet cover the floor, with a specially reinforced section immediately beneath the driver's heel. The quality of the materials used and the expertness of cut and finish give the interior of every Aston Martin car a truly elegant appearance and luxurious comfort.

The seats are passed to trimming specialists who produce the finished units.





Five hides, amounting to 270 square feet of leather, are used in each car. The initial cutting is done by men who have spent their lives working with fine leather.



Only after a car has passed 100% in all its tests is it given its final coat of paint and has the fenders (bumpers) and hub caps fitted. The tests are tough – as one driver put it “We try to expose even the smallest faults when we put it through its paces.” If the tester is dissatisfied with any part of the performance, if there is the slightest rattle or unwarranted noise, he sends it back for adjustment. It is driven for at least

a hundred miles of solid, slogging work out. After the fitting of the fenders and caps, and the final glossy coat of paint, it is given a thorough clean, and a further five-mile run. Only then is it passed to Sales for distribution. Suave, elegant, powerful and perfect in every detail.

No other car in the world has as much care and attention lavished on it during manufacture – and every second spent shows. The

Aston Martin is unique. Splendid. As beautiful to look at as it is exquisite to drive.

We are proud of the Aston Martin. And so are owners throughout the world.

Before it reaches the customer, every Aston Martin is given an exhaustive road test covering at least 75 miles. Experienced testers, whose job it is to find fault, check every aspect of the car.











Three months, or 1200 working hours, after the steel platform arrived at the factory, a car is passed to the Sales Department for delivery.

After Sales Service is, of course, of paramount importance to car owners. In addition to a world wide network of factory trained distribution points, the Company offers unique facilities for direct customer sales. Owners are

welcome to bring their cars to the service department at Newport Pagnell where personal attention is given to the same high Aston Martin standards of workmanship.



# ASTON MARTIN DB6 & VOLANTE

## SPECIFICATION

**Engine** Six-cylinder twin overhead camshaft. Bore 96 mm (3.78 in.). Stroke 92 mm (3.62 in.). Capacity 3995 cc (244 cu. in.). Three S.U. carburetors fed through large micronic air filter and efficient air distribution box. Compression ratio 8.9:1, develops 282 b.h.p. at 5,500 r.p.m.

**Alternative Engine** The "Vantage" engine with three TWINCHOKE WEBER CARBURETTORS and flow-tuned manifolds develops 325 b.h.p. at 5,750 r.p.m.

**Cylinder Block** Cast in aluminium alloy. Centrifugally-cast chrome vanadium iron top seating wet liners.

**Crankshaft** Forged in chrome molybdenum steel, statically and dynamically balanced. The shaft is carried in seven 2½ in. diameter (63.85 mm) steel-backed, lead bronze bearings.

**Cylinder Head and Valve Operation** Cast in aluminium alloy and incorporating fully-machined hemispherical combustion chambers. Large diameter valves inclined to 80° included angle, with exhaust valve guides in direct contact with water. Twin overhead camshafts operate the valves direct through hardened nickel molybdenum steel tappets. Camshaft driven by two-stage Duplex roller chains with manual adjustment tensioners.

**Pistons and Connecting Rods** Die-cast aluminium alloy. Three compression rings. One spring-steel oil control ring, large diameter guidepin located by circlips. Forged connecting rods in nickel-chrome molybdenum steel, weight-graded and balanced.

**Lubrication System** By front-mounted chain-driven oil pump and full-flow cartridge filter. Oil cooler standard equipment.

**Cooling System** Cooling by pump and mechanical fan. Cross-flow radiator with separate header tank. (Fan expels hot air from engine compartment through improved ventilating apertures).

**Ignition** High-efficiency oil filled coil with ballast resistor. Distributor incorporating automatic advance and vernier adjustment.

**Clutch** Hydraulically-operated diaphragm spring clutch.

**Gearbox** Five-speed all-synchromesh on which top speed is overdrive.

Ratios:  
top 0-834 1 4th 1-00 1 3rd 1-23 1  
2nd 1-76 1 1st 2-73 1 reverse 3-31 1

**Alternative Transmission** Borg Warner No. 8 Three-speed epicyclic automatic transmission incorporating a dual-drive range and manual overriding control of 1st and 2nd gears. Centre, floor mounted stickshift. Ratios: Top (3-73 - 7-42), Intermediate (5-47 - 10-38), Low (8-95 - 17.81) 1.

**Propeller Shaft** Needle roller bearings, dynamically balanced. Sealed for life lubrication.

**Final Drive** Hypoid Rear Axle Ratio 3.73:1

**Alternative Axles** (a) with limited slip differential. (b) for higher speeds with automatic transmission 3.54:1 R.A. ratio available (3.73:1 normally fitted).

**Suspension** Front: Independent, incorporating transverse wishbones and ball-jointed king pin. Co-axial coil springs and large diameter telescopic shock absorbers.

Rear: Live axle mounted on parallel trailing links and located transversely by Watt linkage. Helical coil springs mounted behind axle. Large double-acting piston-type shock absorbers. Adjustable ride control - choice of four "rates", selected at instrument panel.

**Steering** Rack and pinion 16 in. diameter (40.64 cm) wood-rimmed steering wheel. Wheel position and column angle adjustable to fixed positions.

**Brakes** Girling disc, tandem master cylinder, power-assisted by separate suspended vacuum servos for front and rear brake systems. Floor-mounted hand-brake warning light. With Vantage engine vacuum reservoir preserves power assistance.

**Fuel System DB6** Tank capacities 19 Imperial galls. (86.4 litres, 22.8 U.S. galls.). Electrically-operated reserve 3 Imperial galls. (13.6 litres, 3.6 U.S. galls.). With air-conditioning, twin tanks total capacity 16 Imperial galls. (72.7 litres, 19.2 U.S. galls.). Twin S.U. high-pressure electric fuel pumps. A magnetic sealed filter flap opens to quick release caps on each side of the car.

**VOLANTE** Twin tanks total capacity 16 Imperial galls. (72.7 litres, 19.2 U.S. galls.). Twin S.U. high-pressure electric fuel pumps. Twin filters operated from interior.

**Exhaust System** Twin-pipe systems with four high efficiency silencers.

**Wheel and Tyres** Centre-lock wire wheels with 5½ in. (13.9 cm) wide rims 6-70 in. x 15 in. high speed tyres. ALTERNATIVES: chrome wheels, Whitewall tyres.

**Electrical Equipment** 12-volt system with new "plug-in" harness. 60-amp-hour battery with master switch. Heavy duty ventilated A.C. alternator. Starter motor, distributor and oil filled coil. Aston Martin electric window lifts with manual emergency control, two-speed windscreen wipers and electric windscreen washer with water bottle heat-insulated, operated by a single control knob. Twin wind tone horns. Steering column fingertip lever for operating self-cancelling flashing direction indicators headlamp high and low beams and for flashing headlights. Instrument panel illumination controlled by rheostat switch. Map reading and interior courtesy lights. Doors fitted with red safety lights in the rear edges. Cigar lighter. Under bonnet lamp. Large built-in headlamps with separate front parking lamps and flashing direction indicators incorporating day/night intensity relay. Reversing lamp.

**Instruments** New large clear reading V-bezel speedometer and impulse tachometer. Oil pressure gauge, oil temperature gauge, water temperature gauge, fuel gauge with reserve warning light, ammeter and electric clock.

**Heating and Ventilation** Comprehensive heating and ventilation system providing fresh air to driver or passenger's side at choice. Controls arranged for the whole heater output to be used for windscreen defrosting if required. Air conditioning optional.

**Body DB6** Four-seater, panelled in aluminium alloy over a steel superstructure integral with a steel safety-platform chassis. Body chassis unit completely rust-proofed, polystyrene-foam insulated, undersealed. Newly styled fully adjustable "body-hugging" front seats upholstered in bold stitched leather. Infinitely adjustable reclining seat backs with new safety locks. Finest quality hide and Wilton pile carpet used throughout. Lockable glovebox. Sun visors. Passenger's grab handle. Wrap-around laminated safety glass windscreen. Framed door windows, front and rear opening quarter lights. Tinted glass throughout. Ample luggage accommodation is provided in the rear boot with lockable lid and separate key. Heavy duty, wrap-around bumpers. Attachment points for seat belts. Heated rear screen an available alternative.

**VOLANTE** Four-seater, panelled in aluminium alloy over a steel superstructure integral with a steel safety-platform chassis. Body chassis unit completely rust-proofed, sound insulated and undersealed. Newly styled, fully adjustable "body-hugging" front seats upholstered in bold stitched leather. Infinitely adjustable reclining seat backs with new safety locks. Finest quality hide and Wilton pile carpet used throughout. Lockable glovebox. Sun visors. Passenger's grab handle. Wrap-around laminated safety glass windscreen. Front opening quarter lights. Tinted glass throughout. Ample luggage accommodation is provided in the rear boot with lockable lid and separate key. Heavy duty, wrap-around bumpers. Attachment points for seat belts. Easily erected leather cloth hood with clear view backlight. Hood secured at waist by Nylon self lock strip eliminating press studs.

**Spare Wheel and Tools** The spare wheel is carried in a separate waterproof compartment underneath the boot floor. The tools are contained in a roll accommodated in the boot.

**Jacking** By hydraulic jack engaging sockets adjacent to each wheel.

**Fire Extinguisher** Mounted below the instrument panel on the passenger's side.

### GENERAL DIMENSIONS

	DB6	Volante
Wheelbase	8' 5½"	8' 2"
Track Front	4' 6"	4' 6"
Rear	4' 5½"	4' 5½"
Overall length	15' 2"	15' 0"
Overall width	5' 6"	5' 6"
Overall height	4' 5½"	4' 5"
Ground clearance	6½"	6½"
Turning circle	34' 0"	34' 0"
Kerb weight	3,250 lb.	3,250 lb.





The Aston Martin DB6 Saloon  
The "Volante" Convertible  
The DB6 Saloon with left-hand drive.







By Appointment to  
Her Royal Highness the Duke of Edinburgh  
Master Car Manufacturer  
Aston Martin Lagonda Limited



A DAVID BROWN  
COMPANY

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# ASTON MARTIN LAGONDA LIMITED

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