



ASTON MARTIN

**V12 VANTAGE
VEHICLE INFORMATION SHEET
ISSUE 1**





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V12 Engine

Type	All aluminium alloy 48-valve quad cam V12, petrol, liquid-cooled, twin-turbocharged unit featuring:
.....	Variable camshaft timing
.....	Three driver-selectable powertrain calibrations
.....	Engine Stop/Start
.....	Twin Water-to-Air Charge Air Coolers
Capacity.....	5204 cc (318 cu. in.)
Bore	89.0 mm (3.5 in.)
Stroke	69.7 mm (2.7 in.)
Compression Ratio	9.3:1
Firing Order	1-7-5-11-3-9-6-12-2-8-4-10

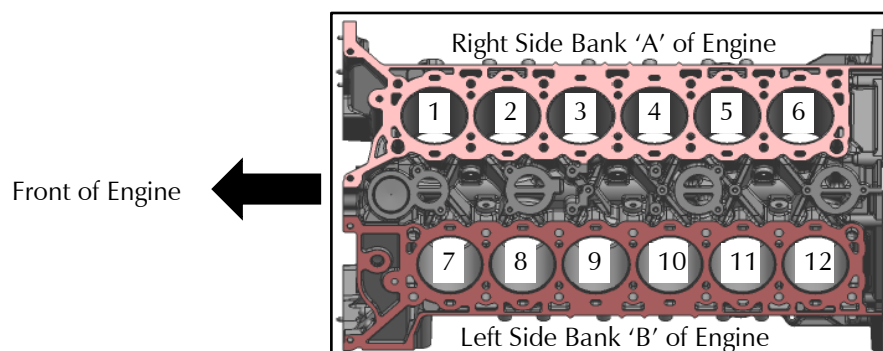


Figure 1 – Cylinder identification

Idle Speed:

Neutral	750 rpm
Idle-in-Drive	650 rpm

Maximum Engine Speed:

Continuous Engine Speed Limit (Soft Fuel Cut)	7000 rpm
Maximum Engine Speed (Hard Fuel Cut)	7200 rpm
Maximum Torque	753 Nm (553 lbf ft) at 5500 rpm
Maximum Power.....	690 bhp (515 kW/700 PS) at 6500 rpm
Maximum Speed (where permitted)	200 mph (322 km/h)
Acceleration (0-62 mph/0-100 km/h).....	3.5 seconds



Fuel

Fuel system	Multi-point sequential fuel injection
Engine Management System	Bosch ME 17.8.31

Ignition

Ignition System	“Coil on Plug” Ignition
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Lubrication

Lubrication System	Wet sump pressurised system
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Emission Control Systems

Emission Control Systems.....	Four oxygen sensors (two per bank) with four catalytic converters (two per bank)
.....	Evaporative loss purge system

Transmission

Automatic Transmission

Transmission	Touchtronic IV ZF 8HP70 eight-speed gearbox with “Shift by Wire” gear shift and Stop/Start ignition support
.....	Front mounted transmission radiator with transmission-mounted heat exchanger and pump
Final Drive	Limited-slip differential with integrated coolant jacket
Gear Ratios:	
1 st	4.714:1
2 nd	3.143:1
3 rd	2.106:1
4 th	1.667:1
5 th	1.285:1
6 th	1.000:1
7 th	0.839:1
8 th	0.667:1
Reverse	3.317:1
Final	2.93
Drive line	Cast aluminium alloy torque tube with carbon fibre drive shaft



Suspension

Front	Independent double aluminium alloy wishbone incorporating anti-dive geometry. Coil springs over aluminium alloy monotube adaptive dampers and anti-roll bar
Rear	Multi-link suspension with hollow-cast lower control arms and hot-forged aluminium alloy link arms. Coil springs over aluminium alloy monotube adaptive dampers and anti-roll bar

Chassis Features

.....	Adaptive Damping System (ADS) Three user-selectable adaptive damping settings:
.....	Sport
.....	Sport+
.....	Track
.....	Three-stage Electronic Stability Program (ESP)

Steering

Steering.....	Electrically-assisted, speed-sensitive rack and pinion power steering with 13:1 steering ratio. Electrical column adjustment for reach and tilt
Turns Lock to Lock	2.27 turns
Turning Circle.....	12 metres (39.3 feet)

Suspension Geometry

Refer to Workshop Manual procedure 04.00.AD - Check and Adjust the Four-Wheel Alignment (Check and Adjust).

Brakes CCB (Carbon Ceramic)

Front	Ventilated carbon ceramic disc 410 mm (16.1 inches) diameter with six piston calipers
Rear	Ventilated carbon ceramic disc 360 mm (14.1 inches) diameter with four piston calipers
Park Brake	Electrically-operated independent park brake calipers on each rear brake disc

Braking System Features

.....	Anti-Lock Braking System (ABS)
.....	Dynamic Stability Control (DSC)
.....	Dynamic Torque Vectoring (DTV)
.....	Electronic Brake Force Distribution (EBD)
.....	Emergency Brake Assist (EBA)
.....	Hydraulic Brake Assist (HBA)
.....	Positive Torque Control (PTC)
.....	Traction Control (TC)

Vehicle Body

Type	Two door coupe with 2+0 seating
.....	Extruded aluminium alloy bonded monocoque body structure
.....	All aluminium alloy door structures

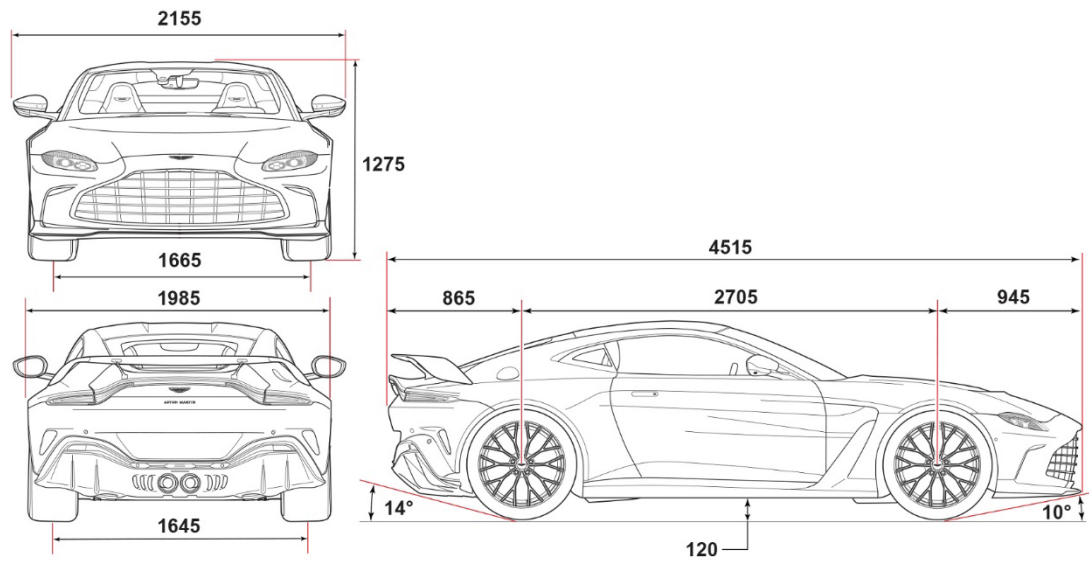


Dimensions

Interior Dimensions

Effective Headroom.....	920 mm
Effective Leg-room.....	1075 mm
Effective Shoulder-room	1345 mm

External Dimensions



Vehicle Weight

Unladen Mass	1795 kg (3960 lbs)
Gross Vehicle Weight (GVW)	2085 kg (4600 lbs)

Towing

This vehicle is not engineered to tow any form of caravan, boat or trailer. No towing devices are approved to install to this vehicle, other than a front towing eye to aid recovery and loading of this vehicle onto a transporter.

Vehicle Battery

Rated Voltage	12V
Capacity	70 Ah
Cold Cranking Amps.....	760A

Lubricants, Fluids and Capacities

Use	Lubricant/Fluid	Quantity
A/C compressor oil	Sanden SP-A2 PAG or meets the specifications of PAG oil ISO 46	80 cc
A/C Refrigerant *	HFC-134a/R-134a	0.85 ± 0.01 kg
	HFO-1234yf/R1234yf	0.77 ± 0.01 kg
* Note: Refer to the label in the engine compartment for information on the correct refrigerant used. You must use only the refrigerant specified on that label.		
Brake Fluid	Castrol React Performance DOT 4	As required
Engine Coolant	50% BASF Glysantin® G40®/ 50% clean water *	29.7 litres (7.8 US gallons/31.3 US quarts)
* Note: Clean water must be used. Demineralised or distilled water is recommended, but you can use tap water if it is not harder than 3.5 mmol/l. If you are not sure about the water quality, or if your tap water is very hard, we always recommend the use of demineralised or distilled water.		
Engine Oil	Premium-branded fully-synthetic high-performance engine oil of viscosity SAE 0W-20 which meets or is better than the requirements of specifications API SN or ILSAC GF-5	14.7 litres (15 US quarts) initial fill
		10.79 litres (11.4 US quarts) oil & filter change
		10.26 litres (10.8 US quarts) oil change
		2 litres (2 US quarts) approximately to top up (Minimum to Maximum marks on dipstick)
Fuel	Unleaded petrol, minimum octane rating 95 RON. 98 RON Super unleaded recommended for optimum performance. Note: Use of fuel with more than 10% ethanol content is not permitted.	73 litres (21.1 US gallons) total capacity
Automatic Transmission	Shell ATF L12108 (alternative ZF Lifeguard Fluid 8) or meets the specifications of this recommended fluid.	8.5 litres/9 US quarts including cooler
Final Drive	Millers TRX1219M Synthetic 75W-90 or meets the specifications of this recommended fluid.	1.1 litres/1.2 US quarts including cooler
Windscreen Washer Fluid	Solution of clean water and screenwash concentrate, mixed in proportions applicable to possible ambient temperatures. The concentrate must include an applicable antifreeze in winter.	4 litres (4.2 US quarts/0.9 Imperial gallons)



Wheels

	Front	Rear
Size	9.5J X 21"	11.5J X 21"
Offset.....	ET48	ET55
Pitch Circle Diameter (PCD)	5 X 128	5 X 128

Wheel Bolt Tightening

Refer to Workshop Manual procedure 04.04.EC – Wheel and Tyre (Remove and Install New Part).

Tyres

Summer:

	Front	Rear
Michelin Pilot Sport 4 S	275/35 ZR21 103 Y	315/30 ZR21 105 Y

Note: Summer tyres installed on this vehicle shall have a maximum load rating not less than 875 kg (1929lbs) front and 925 kg (2039 lbs) rear, or a load index of 103 (front) and 105 (rear).

Winter:

	Front	Rear
Pirelli SottoZero.....	265/35 R21	305/30 R21

Note: The recommended Winter tyres have a maximum load rating not less than 730 kg (1609 lbs) front and 825 kg (1819 lbs) rear, or a load index of 97 (front) and 101 (rear).

WARNING: THE RECOMMENDED WINTER TYRES HAVE LOWER MAXIMUM SPEED AND LOAD RATINGS THAN THOSE RECOMMENDED FOR SUMMER USE. WHEN YOU INSTALL WINTER TYRES, YOU MUST REDUCE THE MAXIMUM SPEED LIMIT OF THE VEHICLE.

Tyre Pressures (tyres cold)

	Front	Rear
Normal Road Use	2.2 Bar (32 psi)	2.2 Bar (32 psi)
High Speed Use (over 270 km/h/168 mph)	2.5-2.9 Bar (36-42 psi)	2.5-2.9 Bar (36-42 psi)
Winter.....	2.6 Bar (38 psi)	2.8 Bar (40 psi)

Diagnostic Trouble Codes (DTCs)

For DTCs please refer to the 5.21 V12T summary table.

OBD Port

.....	Supplies up to 4 amps.
.....	The OBD port is located under the driver's side dashboard.

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