



ASTON MARTIN

**VANTAGE
VEHICLE INFORMATION SHEET
ISSUE 3**





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V8 Engine

Type	All aluminium alloy 32-valve, quad cam, 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.....	3982 cc (243 cu. in.)
Bore	83 mm (3.3 in.)
Stroke	92 mm (3.6 in.)
Compression Ratio	10.5:1
Firing Order	1-5-4-2-6-3-7-8

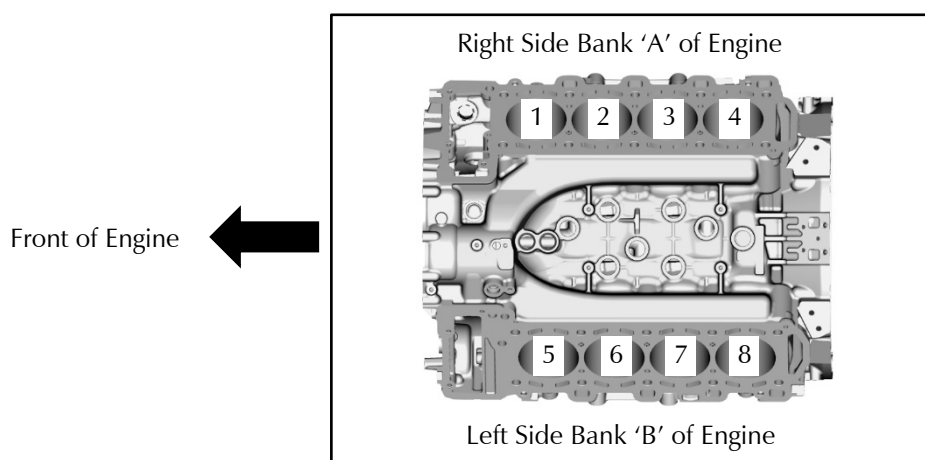


Figure 1 – Cylinder identification

Idle Speed.....	800 rpm
Engine Performance:	
Continuous Engine Speed Limit (Soft Fuel Cut)	7000 rpm
Maximum Engine Speed (Hard Fuel Cut)	7200 rpm
Maximum Torque	685 Nm (505 lbf ft) at 2000 rpm (Automatic)
.....	625 Nm (460 lbf ft) at 2000 rpm (Manual)
Maximum Power.....	503 bhp (375 kW/510 PS) at 6000 rpm
Vehicle Performance:	
Maximum Speed (where permitted)	195 mph (314 km/h) (Coupe)
.....	190 mph (306 km/h) Roadster (Roof Up)
.....	185 mph (298 km/h) Roadster (Roof Down)
Acceleration (0-62 mph/0-100 km/h).....	3.6 seconds (Automatic)
.....	3.9 seconds (Manual)
.....	3.8 seconds (Roadster)



Fuel

Fuel system Direct, multi-point sequential fuel injection
 Engine Management System Bosch MED 17.7.3

Ignition

Ignition System “Coil on Plug” Ignition

Lubrication

Lubrication System Wet sump pressurised system

Emission Control Systems

Emission Control Systems..... Four oxygen sensors (two per bank) with four catalytic converters (two per bank)
 Evaporative loss purge system
 Gasoline Particulate Filter (GPF) in applicable markets

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..... Electronically controlled limited-slip differential with integrated coolant jacket

Gear Ratios:

1st 4.714:1
 2nd 3.143:1
 3rd 2.106:1
 4th 1.667:1
 5th 1.285:1
 6th 1.000:1
 7th 0.839:1
 8th 0.667:1
 Reverse 3.317:1
 Final..... 2.93

Drive line Cast aluminium alloy torque tube with carbon fibre drive shaft



Manual Transmission

Transmission Dog-leg seven-speed Graziano transmission with integrated final drive and AMshift

Gear Ratios:

1 st	3.286
2 nd	2.158
3 rd	1.609
4 th	1.269
5 th	1.034
6 th	0.848
7 th	0.675
Reverse	3.286
Final	3.727
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	2.6 turns
Turning Circle.....	11.8 metres (38.7 feet)

Suspension Geometry

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



Brakes (Steel)

Front	2-piece steel ventilated disc 400 mm (15.7 inches) diameter with six piston calipers
Rear	Combination cast ventilated disc 360 mm (14.1 inches) diameter with four piston calipers

Brakes CCB (Carbon Ceramic) (Coupe Only)

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

Convertible Roof

Maximum speed for roof opening.....	50 km/h (31 mph)
Time to Open	6.7 seconds
Time to Close.....	6.8 seconds

Dimensions

Interior Dimensions

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

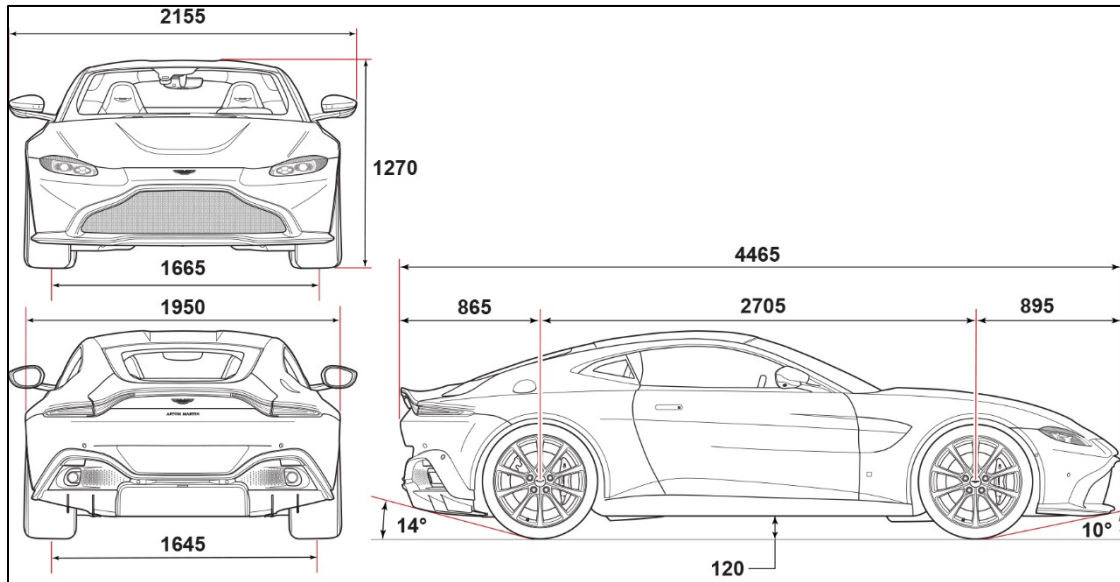


Figure 2 – Coupe Exterior Dimensions with standard front bumper (in millimetres)

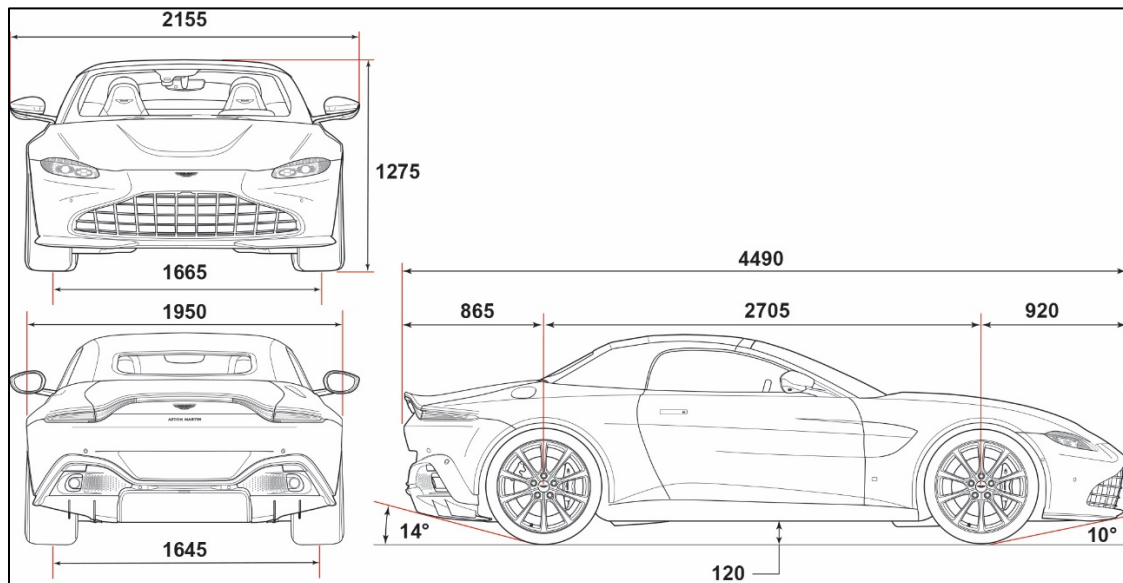


Figure 3–Roadster Exterior Dimensions shown with optional vaned front grill bumper (in millimetres)

Vehicle Weights	Automatic	Manual	Roadster
Kerb Weight (ROW)	1685 kg (3715 lbs)	1620 kg (3575 lbs)	1745 kg (3850 lbs)
Curb Weight (Federal)	1690 kg (3725 lbs)	1625 kg (3585 lbs)	1750 kg (3860 lbs)
Gross Vehicle Weight (GVW)	1995 kg (4400 lbs)	1930 kg (4255 lbs)	2075 kg (4575 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.

Lubricants, Fluids and Capacities

Use	Lubricant/Fluid	Quantity
A/C compressor oil	Sanden SP-A2 PAG	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
Clutch Fluid (Manual Transmission)	Castrol React Performance DOT 4	As required (Brake fluid reservoir)
Coolant:		
Engine Coolant – Automatic Transmission	50% BASF Glysantin® G40®/ 50% clean water *	High Temperature System (HTS) and Driveline Cooling System (DCS): 18.6 litres (4.1 Imperial gallons/19.7 US quarts)
		Low Temperature System (LTS): 6.7 litres (1.5 Imperial gallons/7.1 US quarts)
Engine Coolant – Manual Transmission	50% BASF Glysantin® G40®/ 50% clean water *	High Temperature System (HTS) 15.4 Litres (3.4 Imperial gallons/16.2 US quarts)
		Low Temperature System (LTS): 6.7 litres (1.5 Imperial gallons/7.1 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-40 which meets or is better than the requirements of specifications API SN or ILSAC GF-5	10.5 litres (11.1 US quarts) initial fill
		8.5 litres (9.0 US quarts) oil & filter change
		7.5 litres (7.9 US quarts) oil change
		1.5 litres (1.6 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. <i>Note: Use of fuel with more than 10% ethanol content is not permitted</i>	80 litres (17.6 Imperial gallons/21.1 US gallons) total capacity
Automatic Transmission	Shell ATF L12108 (alternative ZF Lifeguard Fluid 8)	8.5 litres/9 US quarts including cooler
Final Drive	Millers TRX1219M Synthetic 75W-90	1.1 litres/1.2 US quarts including cooler
Manual Transmission	Castrol BOT270A	3.2 Litres/3.4 US quarts
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)

Vehicle Battery

Type	Banner H8 Absorbent Glass Mat (AGM)
Rated Voltage	12 V
Capacity	92 Ah (K20)
Reserve Capacity	150 minutes
Cold Cranking Amps.....	520 (DIN), 850 (EN)



Wheels

	Front	Rear
Size	9J X 20"	11J X 20"
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.....	Pirelli P Zero 255/40 ZR20 101 Y
Rear.....	Pirelli P Zero 295/35 ZR20 105 Y

Note: Summer tyres installed on this vehicle shall have a maximum load rating not less than 825 kg (1819 lbs) front and 925 kg (2039 lbs) rear, or a load index of 101 (front) and 105 (rear).

Winter:

Front.....	Pirelli SottoZero 255/40 R20 97 W
Rear.....	Pirelli SottoZero 295/35 R20 101 W

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 tyres.....	2.5 Bar (36 psi)
Rear tyres (coupe)	2.5 Bar (36 psi)
Rear tyres (roadster).....	2.6 Bar (38 psi)

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