

Engine & Cooling

Fuel

Ignition

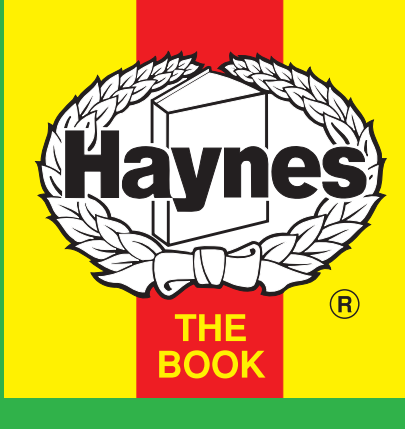
Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical
DATA BOOK

Click on one of the buttons above to view data for this car. To return to this screen and make another choice, click anywhere on the data screen.

MENU

HELP

Engine and cooling systemSierra & Sapphire 1.81988 to 1992

Type		R2A (CVH) 66kW 15.04
Capacity (cm³) / number of cylinders		1769 / 4
Compression ratio / pressure	bar	9.3 / 11 to 13
Oil pressure	bar	1.0 [2.5]
Oil temperature	°C	80
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	88
Radiator cap pressure	bar	1.00 to 1.25

Fuel systemSierra & Sapphire 1.81988 to 1992

Idle speed - manual [auto]	rpm	850±50 [800±25]
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	1.0±0.25
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Pierburg
Type / ref		2V (2E3)
Main jet / needle		100, 105 [AT: 97.5, 105]
Injection pressure	bar	—
Pump pressure	bar	0.24 to 0.38
Octane rating	RON	97[E 95 RON]

Ignition systemSierra & Sapphire 1.81988 to 1992

Type		ESC II
Ignition coil		Bosch, Femsa, Polmot
Primary resistance	ohms	0.72 to 0.88
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Motorcraft
Points gap (air gap)	mm	—
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	20 BTDC @ idle
V = Vacuum NV = No Vacuum		V
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Vacuum range check	mbar	Computer control
Maximum vacuum advance	° Crankshaft	—
Spark plugs		Motorcraft/Champion
Type		AGPR32C1 / RC7YC
Electrode gap	mm	1.00

Electrical systemSierra & Sapphire 1.81988 to 1992

Battery	V / CC / RC	12 / 200 / 70 or 250 / 80
Alternator voltage / full load current / engine rpm		13.5 / _ / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gearSierra & Sapphire 1.81988 to 1992

Brakes -		
Front (min. friction material thickness)	mm	1.5
Rear (min. friction material thickness)	mm	1.0

Tyres		
Saloon	Size	165x13: 195/65x14: 185/65x14
Estate / Van	Size	185/70x13:195/65x14: 185/65x14
Pressure - front / rear - Saloon	bar	1.8 / 1.8
- Estate / Van	bar	1.8 / 1.8

Front suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	+2.0±1.0
Camber		-21'±1°. Est: -19'±1°
Castor		+1°52'.Est: +1°50' (+1°30'-1°)
King pin inclination		—

Rear suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	—
Camber		—

Torque wrench settingsSierra & Sapphire 1.81988 to 1992

Cylinder head - stage 1	Nm	40 to 60 N
- stage 2	Nm	- 180°
Cylinder head - stage 3	Nm	40 to 60 + 90°
- stage 4	Nm	+ 90°
Big-end bearings	Nm	35 to 41
Main bearings	Nm	90 to 108
Clutch cover	Nm	20 to 25
Flywheel [driveplate]	Nm	73 to 91
Front hubs	Nm	310 to 350
Rear hubs	Nm	250 to 290
Wheel nuts / bolts	Nm	70 to 100
Spark plugs	Nm	17 to 33

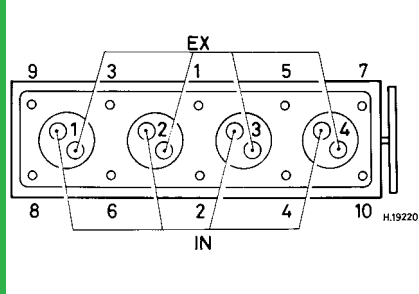
CapacitiesSierra & Sapphire 1.81988 to 1992

Engine oil & filter	litres	4.0
Gearbox - 4-speed [5-speed]	litres	1.25
Automatic transmission - refill	litres	8.5
Final drive	litres	0.9
Cooling system	litres	8.7
Fuel tank	litres	60

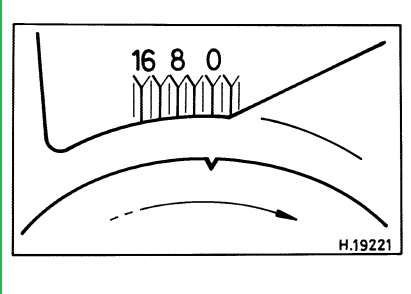
Notes and Illustrations



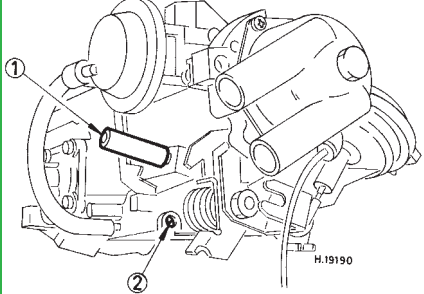
1: Idle speed 2: CO / Mixture



1769 cm³



1769 cm³, not DIS



Pierburg 2E3