

Engine & Cooling

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Automotive Technical
DATA BOOK

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Engine and cooling system

200, 2000

1989 to 1995

Type		20V E46
Capacity (cm ³) / number of cylinders		1994 / 4
Compression ratio / pressure	bar	8.0 / 10.3
Oil pressure	bar	[3.8 to 5.5]
Oil temperature	°C	—
Valve clearance - inlet	mm	0.30±0.03
Valve clearance - exhaust	mm	0.30±0.03
Firing order		1-3-4-2
No 1 cylinder position		F
Thermostat opening temperature	°C	82 to 84
Radiator cap pressure	bar	1.0

Fuel system

200, 2000

1989 to 1995

Idle speed - manual [auto]	rpm	750±50
Fast idle speed - manual [auto]	rpm	1300±50
CO @ idle speed [3000 rpm] - see page VI	%	0.5 to 2.5
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		SU
Type / ref		HIF44 FZX 1493
Main jet / needle		0.100 / BGN
Injection pressure	bar	—
Pump pressure	bar	—
Octane rating	RON	91[E 95 RON]

Ignition system

200, 2000

1989 to 1995

Type		Computerized
Ignition coil		Bosch
Primary resistance	ohms	—
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Lucas
Points gap (air gap)	mm	—
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		—
Ignition timing - basic [static	° Crankshaft @ rpm	Computer control
V = Vacuum NV = No Vacuum		—
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		NGK/Champion
Type		BP6ES / RN7YCC
Electrode gap	mm	0.90

Electrical system

200, 2000

1989 to 1995

Battery	V / CC / RC	12 / 40 or 55Ah
Alternator voltage / full load current / engine rpm		13.5 to 14.4 / _ / 3000
Starter motor current / voltage - cranking	A / V	260 / 8.0
- locked	A / V	460 / 7.0

Running gear

200, 2000

1989 to 1995

Brakes -		
Front (min. friction material thickness)	mm	3.0
Rear (min. friction material thickness)	mm	1.5

Tyres		
Saloon	Size	—
Estate / Van	Size	165x14: 185x14
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	WSM

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	0 to -1.6
Camber		+2°30'
Castor		+5°
King pin inclination		+8°30'

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	—
Camber		—

Torque wrench settings

200, 2000

1989 to 1995

Cylinder head - stage 1	Nm	47
- stage 2	Nm	81
Cylinder head - stage 3	Nm	+ 90°
- stage 4	Nm	—
Big-end bearings	Nm	52 to 58
Main bearings	Nm	95 to 115
Clutch cover	Nm	23
Flywheel [driveplate]	Nm	80 to 90
Front hubs	Nm	WSM
Rear hubs	Nm	203 to 217
Wheel nuts / bolts	Nm	68 to 92
Spark plugs	Nm	15 to 20

Capacities

200, 2000

1989 to 1995

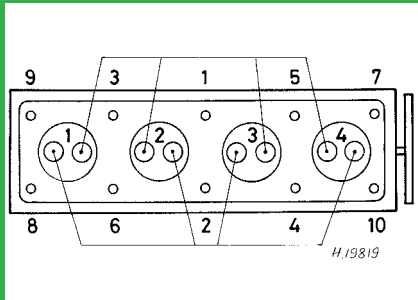
Engine oil & filter	litres	4.3
Gearbox - 4-speed [5-speed]	litres	2.0
Automatic transmission - refill	litres	—
Final drive	litres	1.9
Cooling system	litres	5.75
Fuel tank	litres	50. Ch' cab: 64

Notes and Illustrations

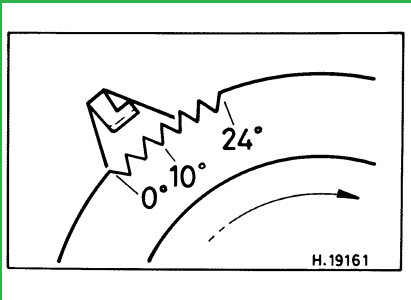


1: Idle speed

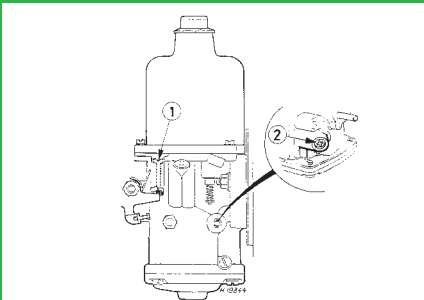
2: CO / Mixture



1994 cm³



1994 cm³



SU HIF44