

Engine & Cooling

Fuel

Ignition

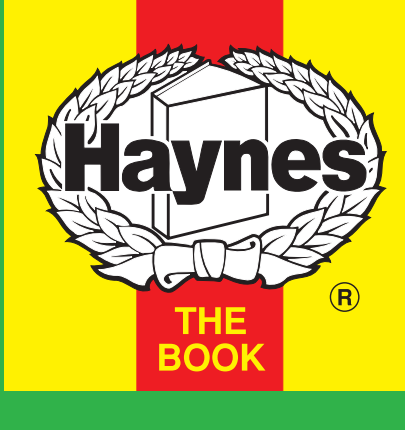
Electrical

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 system

520i & Touring 24V (E34)

1993 to 1996

Type		M50 2.0 Vanos 110kW
Capacity (cm ³) / number of cylinders		1990 / 6
Compression ratio / pressure	bar	11.0 / ≥10.0
Oil pressure	bar	≥0.5 [4.0]
Oil temperature	°C	80
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-5-3-6-2-4
No 1 cylinder position		TCE
Thermostat opening temperature	°C	88
Radiator cap pressure	bar	2.0±0.15

Fuel system

520i & Touring 24V (E34)

1993 to 1996

Idle speed - manual [auto]	rpm	700±40 N/A
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	0.5±0.3 N/A
HC @ idle speed [3000 rpm] - see page VI	ppm	≤200
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Bosch
Type / ref		M3.1-Motronic
Main jet / needle		—
Injection pressure	bar	3.0±0.06
Pump pressure	bar	3.5 to 4.0
Octane rating	RON	95[U]

Ignition system

520i & Touring 24V (E34)

1993 to 1996

Type		Direct electronic
Ignition coil		Bosch
Primary resistance	ohms	0.8±0.1
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Bosch
Points gap (air gap)	mm	[0.30 to 0.70]
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	Computer control
V = Vacuum NV = No Vacuum		—
Total ignition advance	° Crankshaft @ rpm	Computer control
	° 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/Bosch
Type		BKR6EK / F7LDCR
Electrode gap	mm	0.70+0.10

Electrical system

520i & Touring 24V (E34)

1993 to 1996

Battery	V / CC / RC	12 / 65, 75Ah
Alternator voltage / full load current / engine rpm		13.5 to 14.2 / 80,140 / 1500
Starter motor current / voltage - cranking	A / V	160 / 9.0
- locked	A / V	—

Running gear

520i & Touring 24V (E34)

1993 to 1996

Brakes -		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	2.0

Tyres		
Saloon	Size	205/65x15: 225/60x15
Estate / Van	Size	205/65x15: 225/60x15
Pressure - front / rear - Saloon	bar	2.0 / 2.1
- Estate / Van	bar	2.1 / 2.4

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	[+18'±5']
Camber		-13'±30'. Sport: -30'±30'
Castor		+8°8'±30'. Sport: +8°26'±30'
King pin inclination		+12°4'±30'. Sport: +12°38'±30'

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	[+25'±7']. Sport: [+28'±7'] ¹
Camber		-2°20'±30'. Sport: -2°35' ²

Torque wrench settings

520i & Touring 24V (E34)

1993 to 1996

Cylinder head - stage 1	Nm	30 N
- stage 2	Nm	+ 90°
Cylinder head - stage 3	Nm	+ 90°
- stage 4	Nm	—
Big-end bearings	Nm	20 + 70° N
Main bearings	Nm	20 + 50° N
Clutch cover	Nm	24. 10.9 hex: 35
Flywheel [driveplate]	Nm	105 N
Front hubs	Nm	290
Rear hubs	Nm	247.6 ±5%
Wheel nuts / bolts	Nm	100±10
Spark plugs	Nm	30 to 33

Capacities

520i & Touring 24V (E34)

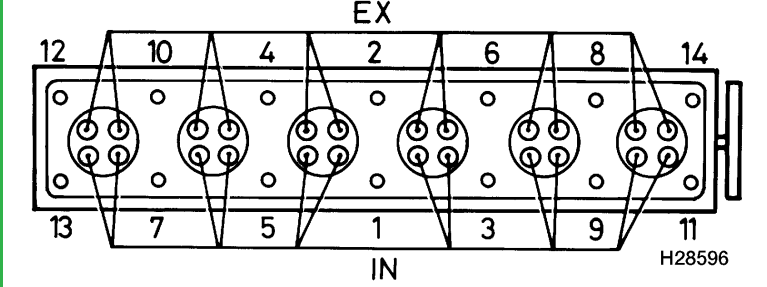
1993 to 1996

Engine oil & filter	litres	5.75
Gearbox - 4-speed [5-speed]	litres	1.25. S5D: 1.00
Automatic transmission - refill	litres	3.0. A5S: 3.3
Final drive	litres	1.7
Cooling system	litres	10.5. A/C: 11.0
Fuel tank	litres	81

Notes and Illustrations

¹Touring Sport: [+29'±7']

²Touring Sport: -2°45'±30'



1990 cm³, 24V