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Automotive Technical DATA BOOK

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Engine and cooling system — 525i & Touring 24V (E34) — 1993 to 1996

Type		M50 2.5 Vanos 141kW
Capacity (cm³) / number of cylinders		2494 / 6
Compression ratio / pressure	bar	10.5 / ≥10.0
Oil pressure	bar	≥0.5 [4.0]
Oil temperature	ºC	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	ºC	88
Radiator cap pressure	bar	2.0±0.15

Fuel system — 525i & 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 — 525i & 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	º (%)	_
Condenser capacity	µF	_
Rotation		Clockwise
Ignition timing - basic [static	º Crankshaft @ rpm	Computer control N/A
V = Vacuum NV = No Vacuum		_
Total ignition advance	º Crankshaft @ rpm	Computer control
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Centrifugal check.	º Crankshaft @ rpm	Computer control
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Vacuum range check	mbar	Computer control
Maximum vacuum advance	º Crankshaft	_
Spark plugs		NGK/Bosch
Type		BKR6EK / F7LDCR
Electrode gap	mm	0.70+0.10

Electrical system — 525i & 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 — 525i & 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	230/55x390: 225/60x15
Estate / Van	Size	225/60x15:230/55x390:225/55x16
Pressure - front / rear - Saloon	bar	2.0 / 2.3
- Estate / Van	bar	2.1 / 2.4
Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	[+18'±5']
Camber		-13'±30'. Sport: -30'±30'[1]
Castor		+8°8'±30'. Sport: +8°26'±30'[2]
King pin inclination		+12°4'±30'. Sport: +12°38'[3]
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	[+25'±7']. Sport: [+28'±7'][4]
Camber		-2°20'±30'. Sport: -2°35'[5]

Torque wrench settings — 525i & Touring 24V (E34) — 1993 to 1996

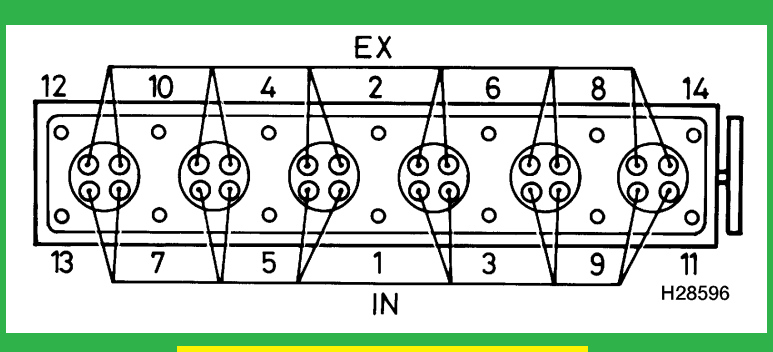
Cylinder head - stage 1	Nm	30 N
- stage 2	Nm	+ 90°
Cylinder head - stage 3	Nm	+ 90°
- stage 4	Nm	_
Big-end bearings	Nm	20 + 70° N
Main bearings	Nm	20 + 50° N
Clutch cover	Nm	24. 10.9 hex: 35
Flywheel [driveplate]	Nm	105 N
Front hubs	Nm	290
Rear hubs	Nm	247.6 ±5%
Wheel nuts / bolts	Nm	100±10
Spark plugs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

Capacities — 525i & Touring 24V (E34) — 1993 to 1996

Engine oil & filter	litres	5.75
Gearbox - 4-speed [5-speed]	litres	1.25. S5D: 1.0. 4x4: 1.2
Automatic transmission - refill	litres	3.0. A5S: 3.3
Final drive	litres	4x4 Front: 0.7. Rear: 1.7
Cooling system	litres	10.5. A/C: 11.0
Fuel tank	litres	81

Notes and Illustrations

[1]**4x4: -1°±30'. 4x4 Sport: -1°20'±30'**
[2]**4x4: +4°19'±30'. 4x4 Sport: +4°27'±30'**
[3]**4x4: +15°19'±30'. 4x4 Sport: +15°44'±30'**
[4]**Touring Sport: [+29'±7']. 4x4 [+25'±7']**
[5]**Touring Sport: -2°45'±30'**



2494 cm³, M50