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 E39 1996 to 1997
Type		M52 B20 110kW DOHC 24V
Capacity (cm³) / number of cylinders		1991 / 6
Compression ratio / pressure	bar	11.0 / ≥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		_
Thermostat opening temperature	ºC	92
Radiator cap pressure	bar	_

Fuel system

		520i E39 1996 to 1997
Idle speed - manual [auto]	rpm	750±50
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	0.5±0.3
HC @ idle speed [3000 rpm] - see page VI	ppm	_
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		_Bosch
Type / ref		MS 41.0
Main jet / needle		_
Injection pressure	bar	_
Pump pressure	bar	3.5
Octane rating	RON	95[U]

Ignition system

		520i E39 1996 to 1997
Type		DME Motronic
Ignition coil		_
Primary resistance	ohms	0.37 to 0.5
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		_
Points gap (air gap)	mm	_
Dwell angle	º (%)	_
Condenser capacity	µF	_
Rotation		_
Ignition timing - basic [static	º Crankshaft @ rpm	_
V = Vacuum NV = No Vacuum		_
Total ignition advance	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Centrifugal check.	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Vacuum range check	mbar	_
Maximum vacuum advance	º Crankshaft	_
Spark plugs		Bosch
Type		F7LDCR
Electrode gap	mm	0.7

Electrical system

		520i E39 1996 to 1997
Battery	V / CC / RC	12 / 70Ah
Alternator voltage / full load current / engine rpm		14.3 / 80 / _
Starter motor current / voltage - cranking	A / V	_
- locked	A / V	_

Running gear

		520i E39 1996 to 1997
Brakes -		
Front (min. friction material thickness)	mm	3.0
Rear (min. friction material thickness)	mm	3.0
Tyres		
Saloon	Size	205/65x15
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	Refer to vehicle
- Estate / Van	bar	_
Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	[0°5'±10']
Camber		-0°13'±30'
Castor		6°42'±30'
King pin inclination		_
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	[0°16'±10']
Camber		-2°10'±20'

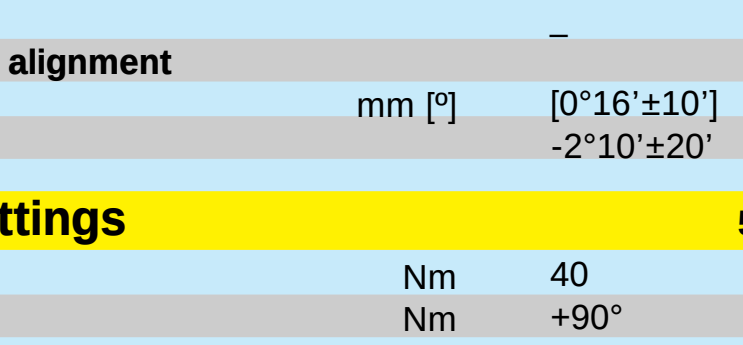
Torque wrench settings

		520i E39 1996 to 1997
Cylinder head - stage 1	Nm	40
- stage 2	Nm	+90°
Cylinder head - stage 3	Nm	+90°
- stage 4	Nm	_
Big-end bearings	Nm	5, 20 +70°
Main bearings	Nm	20 +70°
Clutch cover	Nm	24
Flywheel [driveplate]	Nm	105
Front hubs	Nm	_
Rear hubs	Nm	300
Wheel nuts / bolts	Nm	100±10
Spark plugs	Nm	_

Capacities

		520i E39 1996 to 1997
Engine oil & filter	litres	6.5
Gearbox - 4-speed [5-speed]	litres	1.1
Automatic transmission - refill	litres	3.3
Final drive	litres	1.0
Cooling system	litres	10.5
Fuel tank	litres	70

Notes and Illustrations



1991 cm³