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

523i E39 1996 to 1997

Type		M52 B25 DOHC 24V 125kW
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		_
Thermostat opening temperature	ºC	92
Radiator cap pressure	bar	_

Fuel system

523i 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	≤200
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		_Bosch
Type / ref		DME Motronic MS 41.0
Main jet / needle		_
Injection pressure	bar	_
Pump pressure	bar	3.5
Octane rating	RON	95[U]

Ignition system

523i E39 1996 to 1997

Type		Direct electronic
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

523i 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

523i 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

523i E39 1996 to 1997

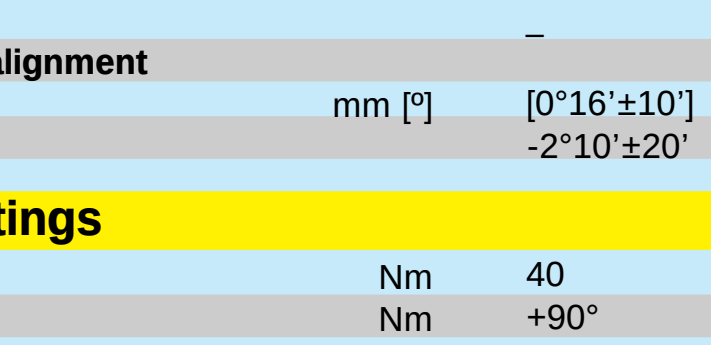
Cylinder head - stage 1	Nm	40
- stage 2	Nm	+90°
Cylinder head - stage 3	Nm	+90°
- stage 4	Nm	_
Big-end bearings	Nm	5, 20+70°
Main bearings	Nm	20+70°
Clutch cover	Nm	24
Flywheel [driveplate]	Nm	105
Front hubs	Nm	_
Rear hubs	Nm	300
Wheel nuts / bolts	Nm	100±10
Spark plugs	Nm	_

Capacities

523i 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



2494 cm³ 24V