Haynes THE BOOK

Automotive Technical

DATA BOOK

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Engine and cooling system

		535i E39 1996 to 1997
Type		M62 B35 V8 173kW
Capacity (cm³) / number of cylinders		3498 / 8
Compression ratio / pressure	bar	10.0 / ≥12.0
Oil pressure	bar	≥0.5 / 4.5
Oil temperature	ºC	80
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-5-4-8-6-3-7-2
No 1 cylinder position		_
Thermostat opening temperature	ºC	85
Radiator cap pressure	bar	_

Fuel system

		535i 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 M5.2-Motronic
Main jet / needle		_
Injection pressure	bar	_
Pump pressure	bar	3.5
Octane rating	RON	95[U]

Ignition system

		535i E39 1996 to 1997
Type		DME Motronic
Ignition coil		_
Primary resistance	ohms	_
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

		535i E39 1996 to 1997
Battery	V / CC / RC	12 / 90Ah
Alternator voltage / full load current / engine rpm		_ / 140 / _
Starter motor current / voltage - cranking	A / V	_
- locked	A / V	_

Running gear

		535i E39 1996 to 1997
Brakes -		
Front (min. friction material thickness)	mm	3.0
Rear (min. friction material thickness)	mm	3.0
Tyres		
Saloon	Size	225/60x15
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°14'±10']
Camber		-0°13'±30'
Castor		6°36'±30'
King pin inclination		_
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	[0°16'±10']
Camber		-2°10'±20'

Torque wrench settings

		535i E39 1996 to 1997
Cylinder head - stage 1	Nm	30
- stage 2	Nm	+80°
Cylinder head - stage 3	Nm	+80°
- stage 4	Nm	_
Big-end bearings	Nm	5, 20+80°
Main bearings	Nm	WSM
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

		535i E39 1996 to 1997
Engine oil & filter	litres	7.5
Gearbox - 4-speed [5-speed]	litres	1.2
Automatic transmission - refill	litres	3.3
Final drive	litres	1.0
Cooling system	litres	12.0
Fuel tank	litres	70

Notes and Illustrations

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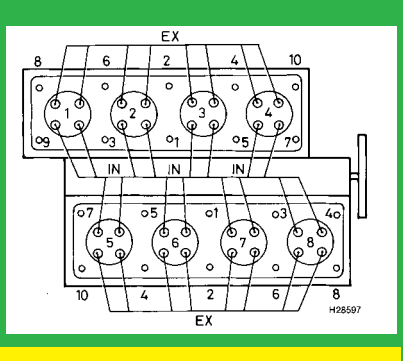

3498 cm³ 32V