

Engine & Cooling

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Automotive Technical
DATA BOOK

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Engine and cooling system735i E381996 to 1997

Type		M62 B35 V8 173kW
Capacity (cm ³) / number of cylinders		3498 / 8
Compression ratio / pressure	bar	10.0 / ≥12.0
Oil pressure	bar	≥0.5 / 4.5
Oil temperature	°C	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	°C	85
Radiator cap pressure	bar	—

Fuel system735i E381996 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 system735i E381996 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	° (%)	—
Condenser capacity	µF	—
Rotation		—
Ignition timing - basic [static	° Crankshaft @ rpm	—
V = Vacuum NV = No Vacuum		—
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Vacuum range check	mbar	—
Maximum vacuum advance	° Crankshaft	—
Spark plugs		Bosch
Type		F7LDCR
Electrode gap	mm	0.7

Electrical system735i E381996 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 gear735i E381996 to 1997

Brakes -		
Front (min. friction material thickness)	mm	3.0
Rear (min. friction material thickness)	mm	3.0

Tyres		
Saloon	Size	235/60x16
Estate / Van	Size	—
Pressure - front / rear - Saloon	bar	Refer to vehicle
- Estate / Van	bar	—

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	[0°14'±10']
Camber		-0°13'±30'
Castor		6°06'±30'
King pin inclination		—

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	[0°18'±10']
Camber		-1°30'±20'

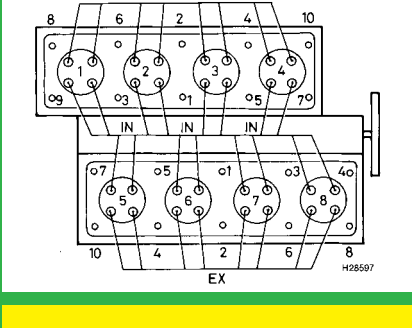
Torque wrench settings735i E381996 to 1997

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	—

Capacities735i E381996 to 1997

Engine oil & filter	litres	7.5
Gearbox - 4-speed [5-speed]	litres	1.25
Automatic transmission - refill	litres	3.3
Final drive	litres	1.4
Cooling system	litres	12.0
Fuel tank	litres	85. iL: 95

Notes and Illustrations



3498 cm³ 32V