

Engine & Cooling

Fuel

Ignition

Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



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

740i (E38)

1996 to 1997

Type		M60 4.0 210kW DOHC 32V
Capacity (cm ³) / number of cylinders		4398 / 8
Compression ratio / pressure	bar	10.0 / ≥10.0
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		PER
Thermostat opening temperature	°C	85
Radiator cap pressure	bar	2.0±0.1

Fuel system

740i (E38)

1996 to 1997

Idle speed - manual [auto]	rpm	600±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		M5.2-Motronic
Main jet / needle		—
Injection pressure	bar	—
Pump pressure	bar	3.5±0.06
Octane rating	RON	95[U]

Ignition system

740i (E38)

1996 to 1997

Type		Direct electronic
Ignition coil		Bosch
Primary resistance	ohms	0.8±0.1
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	Computer control N/A
V = Vacuum NV = No Vacuum		
Total ignition advance	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Vacuum range check	mbar	Computer control
Maximum vacuum advance	° Crankshaft	—
Spark plugs		NGK/Bosch
Type		BKR6EK / F7LDCR
Electrode gap	mm	0.70+0.10

Electrical system

740i (E38)

1996 to 1997

Battery	V / CC / RC	12 / 90Ah
Alternator voltage / full load current / engine rpm		13.5 to 14.2 / 140 / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gear

740i (E38)

1996 to 1997

Brakes -		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	2.0

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 [°]	[+14'±5']
Camber		-13'±30'
Castor		+6°6'±30'
King pin inclination		—

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

Torque wrench settings

740i (E38)

1996 to 1997

Cylinder head - stage 1	Nm	30±2 N
- stage 2	Nm	+80±5°
Cylinder head - stage 3	Nm	+80±5°
- stage 4	Nm	—
Big-end bearings	Nm	5, 20±1 +80±5° N
Main bearings	Nm	20 + 70° N
Clutch cover	Nm	25
Flywheel [driveplate]	Nm	105±5
Front hubs	Nm	290
Rear hubs	Nm	247.6±5%
Wheel nuts / bolts	Nm	100±10
Spark plugs	Nm	30 to 33

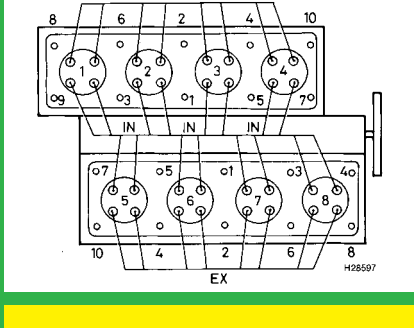
Capacities

740i (E38)

1996 to 1997

Engine oil & filter	litres	7.5
Gearbox - 4-speed [5-speed]	litres	1.9
Automatic transmission - refill	litres	3.3 Filled for life
Final drive	litres	1.6
Cooling system	litres	12.0
Fuel tank	litres	85. iL: 95

Notes and Illustrations



3982 cm³, M60