Automotive Technical DATA BOOK

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MENU HELP

Engine and cooling system

730i & CAT (E32) 1987 to 1994

Type		M30/B30M 30 6KA 145kW. CAT:135
Capacity (cm³) / number of cylinders		2986 / 6
Compression ratio / pressure	bar	9.2 (CAT: 9.0) / ≥10.0
Oil pressure	bar	0.5 [4.0]
Oil temperature	ºC	80
Valve clearance - inlet	mm	0.30
Valve clearance - exhaust	mm	0.30
Firing order		1-5-3-6-2-4
No 1 cylinder position		TCE
Thermostat opening temperature	ºC	80
Radiator cap pressure	bar	1.4±0.2

Fuel system

730i & CAT (E32) 1987 to 1994

Idle speed - manual [auto]	rpm	800±50
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	1.0±0.5. CAT: N/A
HC @ idle speed [3000 rpm] - see page VI	ppm	≤300
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		Bosch
Type / ref		M1.1 or M1.3-Motronic
Main jet / needle		_
Injection pressure	bar	2.8 to 3.2
Pump pressure	bar	3.0±0.06
Octane rating	RON	98[E 95 RON]¹

Ignition system

730i & CAT (E32) 1987 to 1994

Type		DME Motronic
Ignition coil		Bosch 0 221 118 335
Primary resistance	ohms	a: 0.50. b: 0.37
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	≥10.8
Distributor		Bosch
Points gap (air gap)	mm	[0.30 to 0.70]
Dwell angle	º (%)	_
Condenser capacity	µF	_
Rotation		Clockwise
Ignition timing - basic [static	º Crankshaft @ rpm	Computer control N/A
V = Vacuum NV = No Vacuum		NV
Total ignition advance	º Crankshaft @ rpm	Computer control
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Centrifugal check.	º Crankshaft @ rpm	Computer control
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Vacuum range check	mbar	Computer control
Maximum vacuum advance	º Crankshaft	_
Spark plugs		Bosch/Champion
Type		W8LCR / N9YCX
Electrode gap	mm	0.70 to 0.80

Electrical system

730i & CAT (E32) 1987 to 1994

Battery	V / CC / RC	12 / 65 or 75Ah
Alternator voltage / full load current / engine rpm		13.5 to 14.2 / _ / 3000
Starter motor current / voltage - cranking	A / V	200 / 9
- locked	A / V	_

Running gear

730i & CAT (E32) 1987 to 1994

Brakes -		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	2.0
Tyres		
Saloon	Size	205/65x15: 225/60x15
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.2 / 2.1
- Estate / Van	bar	_
Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	[+18'±5']
Camber		-13'±30'
Castor		+7°59'±30'
King pin inclination		+12°4'±30'
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	[+18'±7']
Camber		-2°20'±30'

Torque wrench settings

730i & CAT (E32) 1987 to 1994

Cylinder head - stage 1	Nm	60±2, wait 20 min.
- stage 2	Nm	80±2
Cylinder head - stage 3	Nm	Warm engine for 25 min.
- stage 4	Nm	+ 35±5°
Big-end bearings	Nm	52 to 57 N
Main bearings	Nm	58 to 63
Clutch cover	Nm	24. 10.9 hex: 35
Flywheel [driveplate]	Nm	113 to 130 N
Front hubs	Nm	290
Rear hubs	Nm	247.6 ±5%
Wheel nuts / bolts	Nm	100±10
Spark plugs	Nm	30 to 33

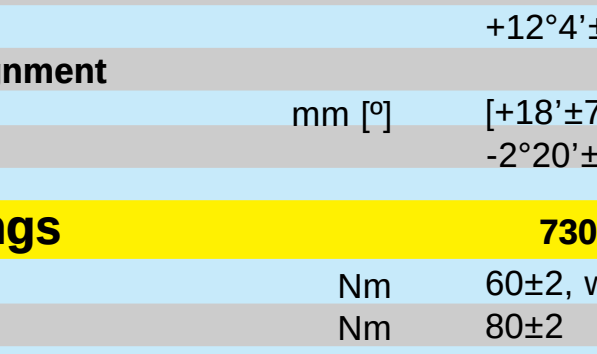
Capacities

730i & CAT (E32) 1987 to 1994

Engine oil & filter	litres	5.75
Gearbox - 4-speed [5-speed]	litres	1.25
Automatic transmission - refill	litres	3.0
Final drive	litres	M: 1.7. G: 1.9
Cooling system	litres	12.0
Fuel tank	litres	90 or 102

Notes and Illustrations

¹**CAT: [U]**



2986 cm³, M30