Haynes THE BOOK ®

Automotive Technical DATA BOOK

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MENU HELP

Engine and cooling system

525e (E28) 1983 to 1988

Type		M20/B27
Capacity (cm³) / number of cylinders		2693 / 6
Compression ratio / pressure	bar	11.0[1] / 10 to 11
Oil pressure	bar	0.5 to 2.0
Oil temperature	ºC	_
Valve clearance - inlet	mm	0.30 H
Valve clearance - exhaust	mm	0.30 H
Firing order		1-5-3-6-2-4
No 1 cylinder position		TBE
Thermostat opening temperature	ºC	80
Radiator cap pressure	bar	1.0±0.1

Fuel system

525e (E28) 1983 to 1988

Idle speed - manual [auto]	rpm	700±50
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	1.0±0.5
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		Bosch
Type / ref		DME-Motronic
Main jet / needle		_
Injection pressure	bar	2.5
Pump pressure	bar	2.5 to 3.0
Octane rating	RON	98[R]

Ignition system

525e (E28) 1983 to 1988

Type		DME Motronic
Ignition coil		Bosch 0 221 122 319
Primary resistance	ohms	0.82
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	9±3 BTDC @ 700±50
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		W8DC / N9YCX
Electrode gap	mm	0.70+0.10

Electrical system

525e (E28) 1983 to 1988

Battery	V / CC / RC	12 / 66Ah
Alternator voltage / full load current / engine rpm		13.5 to 14.2 / _ / 1500
Starter motor current / voltage - cranking	A / V	170 / 9.0
- locked	A / V	_

Running gear

525e (E28) 1983 to 1988

Brakes -		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	2.0
Tyres		
Saloon	Size	175x14: 195/70x14
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.0 / 2.0
- Estate / Van	bar	_
Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	+2.0±0.6
Camber		-20'±30'
Castor		+8°±30' (10° lock)
King pin inclination		+11°57'±30' (10° lock)
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	+2.0±0.8
Camber		WSM

Torque wrench settings

525e (E28) 1983 to 1988

Cylinder head - stage 1	Nm	TORX: 30 to 32 WSM
- stage 2	Nm	+ 90±3°
Cylinder head - stage 3	Nm	+ 90±3°
- stage 4	Nm	_
Big-end bearings	Nm	20 + 70°
Main bearings	Nm	58 to 63
Clutch cover	Nm	24. 10.9 hex: 35
Flywheel [driveplate]	Nm	105±7 locked threads
Front hubs	Nm	WSM
Rear hubs	Nm	175 to 210
Wheel nuts / bolts	Nm	100±10
Spark plugs	Nm	26±2

Capacities

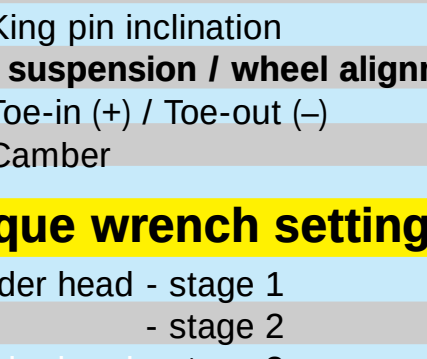
525e (E28) 1983 to 1988

Engine oil & filter	litres	4.3
Gearbox - 4-speed [5-speed]	litres	1.3
Automatic transmission - refill	litres	3.0
Final drive	litres	1.7
Cooling system	litres	11.0
Fuel tank	litres	70

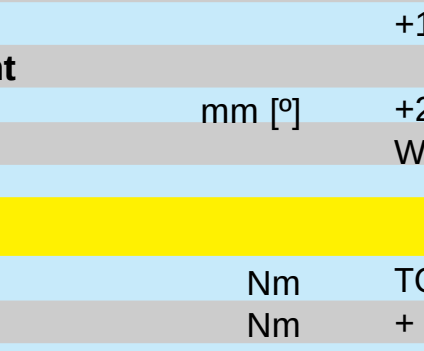
Notes and Illustrations

[1]**86 ▶: 10.2:1**

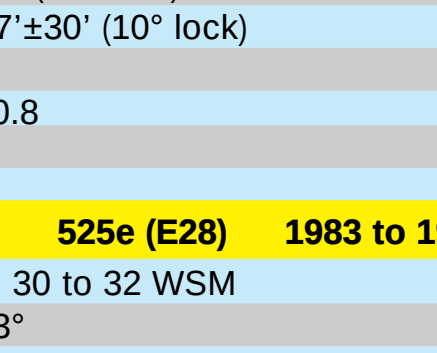
1: Idle speed 2: CO / Mixture



2693 cm³, M20



Motronic, 2693 cm³



Motronic, 2693 cm³