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

		316 (E30) 1983 to 1988
Type		M10/B18 66kW
Capacity (cm³) / number of cylinders		1766 / 4
Compression ratio / pressure	bar	9.5 / 10 to 11
Oil pressure	bar	0.5 [4.0]
Oil temperature	ºC	80
Valve clearance - inlet	mm	0.25 H
Valve clearance - exhaust	mm	0.25 H
Firing order		1-3-4-2
No 1 cylinder position		TCE
Thermostat opening temperature	ºC	80
Radiator cap pressure	bar	1.0±0.1

Fuel system

		316 (E30) 1983 to 1988
Idle speed - manual [auto]	rpm	850±50
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	≤3.5
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		Solex/Pierburg
Type / ref		2B4 or 2BE
Main jet / needle		2B4: 120, 90. 2BE: 120, 110
Injection pressure	bar	_
Pump pressure	bar	0.1 to 0.3
Octane rating	RON	98[R]

Ignition system

		316 (E30) 1983 to 1988
Type		Electronic
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		_
Ignition timing - basic [static	º Crankshaft @ rpm	25 BTDC @ 2500. 9.83 ▶: 2900
V = Vacuum NV = No Vacuum		NV
Total ignition advance	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Centrifugal check.	º Crankshaft @ rpm	10 to 17 @ 1000[1]
	º Crankshaft @ rpm	24 to 26 @ 2500[1]
	º Crankshaft @ rpm	35 to 42 @ 5500[1]
Vacuum range check	mbar	160 to 315[2]
Maximum vacuum advance	º Crankshaft	9 to 13[2]
Spark plugs		Bosch/Champion
Type		W8DC / N9YC
Electrode gap	mm	0.70+0.10

Electrical system

		316 (E30) 1983 to 1988
Battery	V / CC / RC	12 / 44Ah
Alternator voltage / full load current / engine rpm		13.5 to 14.2 / _ / 1500
Starter motor current / voltage - cranking	A / V	130 / 9.0 [9.83 ▶: 160 / 9]
- locked	A / V	_

Running gear

		316 (E30) 1983 to 1988
Brakes -		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	1.5
Tyres		
Saloon	Size	175/70x14
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	1.9 / 2.1
- Estate / Van	bar	_
Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	+2.0±0.6
Camber		-40'±30'
Castor		+8°30'±30'
King pin inclination		+13°52'±30'
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	+2.0±0.8
Camber		-1°50'±30'

Torque wrench settings

		316 (E30) 1983 to 1988
Cylinder head - stage 1	Nm	60±2, wait 15 mins.
- stage 2	Nm	+ 33±3°
Cylinder head - stage 3	Nm	Warm engine for 25 mins.
- stage 4	Nm	+ 25±5°
Big-end bearings	Nm	52 to 57
Main bearings	Nm	58 to 63
Clutch cover	Nm	22 to 24[3]
Flywheel [driveplate]	Nm	105±7 locked threads
Front hubs	Nm	WSM
Rear hubs	Nm	195 to 210
Wheel nuts / bolts	Nm	100±10
Spark plugs	Nm	20 to 30

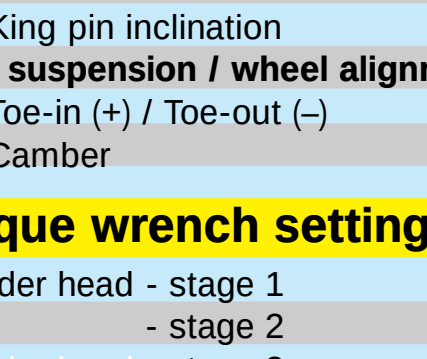
Capacities

		316 (E30) 1983 to 1988
Engine oil & filter	litres	4.0
Gearbox - 4-speed [5-speed]	litres	1.1
Automatic transmission - refill	litres	2.0 [4 speed: 3.0]
Final drive	litres	0.9
Cooling system	litres	7.0
Fuel tank	litres	55

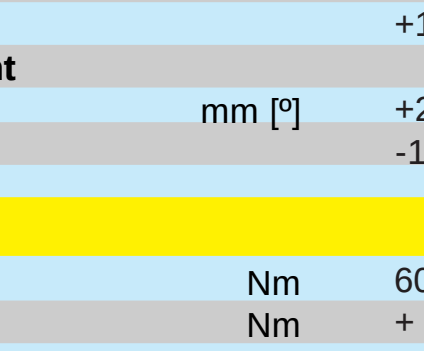
Notes and Illustrations

[1]**9.83 ▶: 2 to 9 @ 1000, 21 to 27 @ 2500, 30 to 36 @ 4500**
[2]**9.83 ▶: 100 to 420 @ 13 to 17°**
[3]**10.9 hex head bolt: 30 to 35**

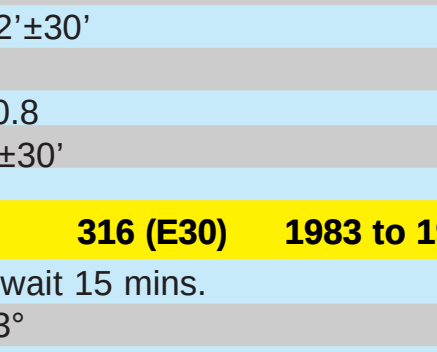
1: Idle speed 2: CO / Mixture



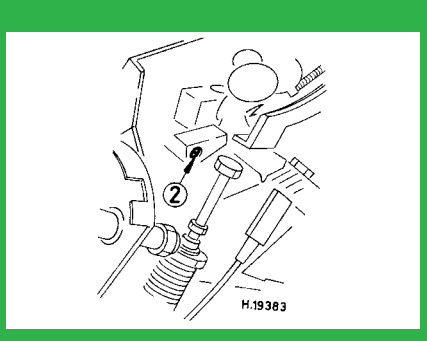
1766 cm³



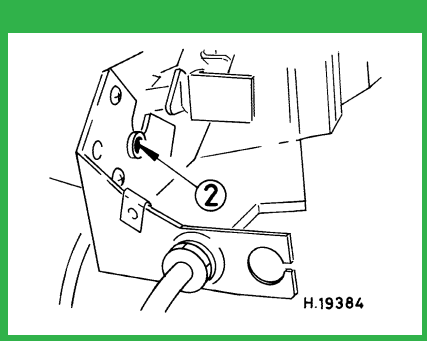
1766 cm³



Solex 2B4



Solex 2B4



Solex 2BE