

VOLKSWAGEN

Passat 16V CAT

1988 to 1993

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

Passat 16V CAT

1988 to 1993

Type		9A. DOHC. 100kW
Capacity (cm ³) / number of cylinders		1984 / 4
Compression ratio / pressure	bar	10.5 / ≥7.5
Oil pressure	bar	[2.0]
Oil temperature	°C	80
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	85
Radiator cap pressure	bar	1.2 to 1.5

Fuel system

Passat 16V CAT

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Idle speed - manual [auto]	rpm	700 to 900 N/A¹
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	0.2 to 1.2
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		KE-Motronic
Main jet / needle		—
Injection pressure	bar	3.7 to 4.8
Pump pressure	bar	6.1 to 6.6
Octane rating	RON	95[U]

Ignition system

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Type		Motronic
Ignition coil		—
Primary resistance	ohms	0.6 to 0.8
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Bosch
Points gap (air gap)	mm	—
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		—
Ignition timing - basic [static	° Crankshaft @ rpm	6±1 BTDC @ idle
V = Vacuum NV = No Vacuum		V
Total ignition advance	° Crankshaft @ rpm	—
	° 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
Type		BKUR7ET
Electrode gap	mm	0.70 to 0.90

Electrical system

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1988 to 1993

Battery	V / CC / RC	12 / 265 / 80, 280 / 60Ah
Alternator voltage / full load current / engine rpm		12.5 to 14.5 / _ / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gear

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Brakes -		
Front (min. friction material thickness)	mm	7.0 with backing
Rear (min. friction material thickness)	mm	7.0 with backing

Tyres		
Saloon	Size	195/60x14: 195/55x15:205/50x15
Estate / Van	Size	195/60x14:195/55x15:205/50x15
Pressure - front / rear - Saloon	bar	2.4 / 2.4
- Estate / Van	bar	2.4 / 2.4

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	[0±10°]
Camber		-1°20'±20'
Castor		+1°40'±30' N/A
King pin inclination		—

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	[+25'±15']²
Camber		-1°40'±20'³

Torque wrench settings

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Cylinder head - stage 1	Nm	40
- stage 2	Nm	60
Cylinder head - stage 3	Nm	+ 90°
- stage 4	Nm	+ 90°
Big-end bearings	Nm	30 + 90°
Main bearings	Nm	65⁴
Clutch cover	Nm	20
Flywheel [driveplate]	Nm	60 + 90° N
Front hubs	Nm	265
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	110
Spark plugs	Nm	25

Capacities

Passat 16V CAT

1988 to 1993

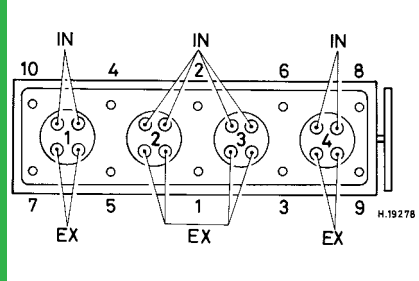
Engine oil & filter	litres	4.0
Gearbox - 4-speed [5-speed]	litres	2.0
Automatic transmission - refill	litres	3.0
Final drive	litres	AT: 0.75
Cooling system	litres	6.5
Fuel tank	litres	70

Notes and Illustrations

- ¹10.90 ►: 800 to 1000 N/A
- ²Chassis no. 31LE222 111 or 31LB108 393 ►: [+20'±10']
- ³Chassis no. 31LE222 111 or 31LB108 393 ►: -1°30'±10'
- ⁴Replace with fully threaded shank bolts: 65+90°

1: Idle speed

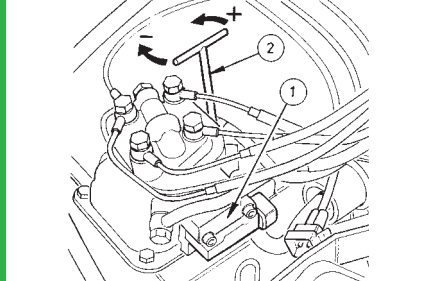
2: CO / Mixture



1984 cm³, 16V



1984 cm³



KE-Motronic