

VOLKSWAGEN

Passat/Santana 1.8 CAT

1984 to 1988

Engine & Cooling

Fuel

Ignition

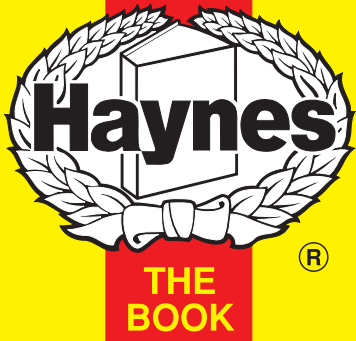
Electrical

Running gear

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Notes & Illustrations



Automotive Technical
DATA BOOK

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Engine and cooling system

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Type		JN. 66kW
Capacity (cm ³) / number of cylinders		1781 / 4
Compression ratio / pressure	bar	9.0 / ≥7.0
Oil pressure	bar	[2.0]
Oil temperature	°C	80
Valve clearance - inlet	mm	0.20 to 0.30'
Valve clearance - exhaust	mm	0.40 to 0.50'
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

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Idle speed - manual [auto]	rpm	900±30
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	0.3 to 1.2
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO ₂ @ idle speed [3000 rpm] - see page VI	%	—
O ₂ @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Bosch
Type / ref		KE-Jetronic
Main jet / needle		—
Injection pressure	bar	3.5 to 4.1
Pump pressure	bar	5.2 to 5.6
Octane rating	RON	91[U]

Ignition system

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Type		TCI-H
Ignition coil		Bosch
Primary resistance	ohms	0.52 to 0.76
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Bosch
Points gap (air gap)	mm	—
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	6±1 BTDC @ 900±30
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 @ 1050 to 1300
	° Crankshaft @ rpm	15 to 19 @ 2600
	° Crankshaft @ rpm	22 to 26 @ 4500
Vacuum range check	mbar	120 to 260
Maximum vacuum advance	° Crankshaft	10 to 14
Spark plugs		Bosch/Champion
Type		W7DTC / N7BYC
Electrode gap	mm	0.70 to 0.90

Electrical system

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Battery	V / CC / RC	12 / 175 / 60
Alternator voltage / full load current / engine rpm		—
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
Rear (min. friction material thickness)	mm	2.5

Tyres		
Saloon	Size	165x13: 185/70x13
Estate / Van	Size	165x13: 185/70x13
Pressure - front / rear - Saloon	bar	1.8 / 1.8
- Estate / Van	bar	1.8 / 1.8

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	[+10'±10']
Camber		-40'±30'
Castor		+30'[PAS 84 ►: +1°25']±30'
King pin inclination		—

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

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	65 ²
Clutch cover	Nm	25
Flywheel [driveplate]	Nm	30 + 90°
Front hubs	Nm	230
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	110
Spark plugs	Nm	30

Capacities

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Engine oil & filter	litres	3.0
Gearbox - 4-speed [5-speed]	litres	1.7 [2.0]
Automatic transmission - refill	litres	3.0
Final drive	litres	AT: 0.75
Cooling system	litres	7.0
Fuel tank	litres	68

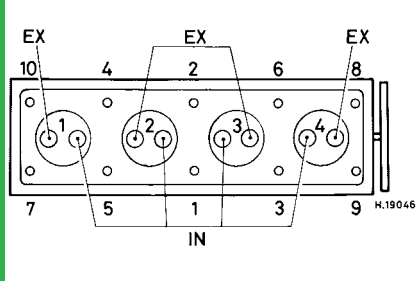
Notes and Illustrations

¹86 ►: 0: Hydraulic adjusters

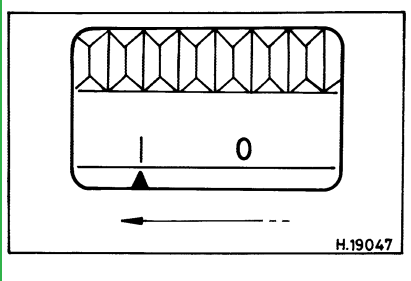
²Replace with fully threaded shank bolts: 65 + 90°

1: Idle speed

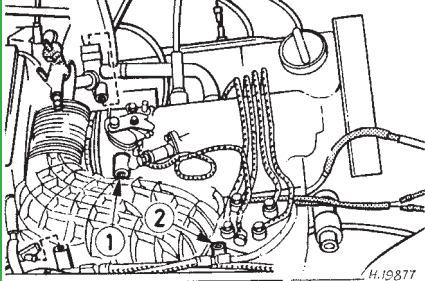
2: CO / Mixture



1781 cm³, 8V



1781 cm³, JN



KE-Jetronic, JN