

VOLKSWAGEN

Passat 1.8 & CAT

1988 to 1991

Engine & Cooling

Fuel

Ignition

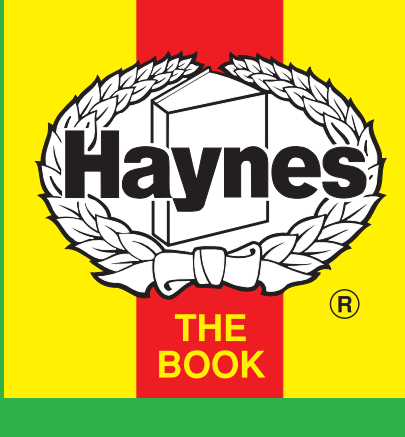
Electrical

Running gear

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Automotive Technical  
DATA BOOK

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Engine and cooling system

Passat 1.8 & CAT

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Type		RP. 66kW
Capacity (cm <sup>3</sup> ) / 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: 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

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Idle speed - manual [auto]	rpm	750 to 1000 N/A
Fast idle speed - manual [auto]	rpm	–
CO @ idle speed [3000 rpm] - see page VI	%	0.2 to 1.2 N/A
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		Mono-Jetronic
Main jet / needle		–
Injection pressure	bar	–
Pump pressure	bar	0.8 to 1.2
Octane rating	RON	91[E 91 RON] <sup>1</sup>

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		–
Ignition timing - basic [static	° Crankshaft @ rpm	6±1 BTDC @ 750 to 1000
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
Centrifugal check.	° Crankshaft @ rpm	0 @ 950 to 1200
	° Crankshaft @ rpm	11 to 15 @ 2600
	° Crankshaft @ rpm	27 to 31 @ 6000
Vacuum range check	mbar	100 to 260
Maximum vacuum advance	° Crankshaft	10 to 14
Spark plugs		NGK
Type		BUR6ET
Electrode gap	mm	0.70 to 0.90

Electrical system

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Battery	V / CC / RC	12 / 220 / 75
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	2.5

Tyres		
Saloon	Size	185/65x14: 195/60x14:195/55x15
Estate / Van	Size	185/65x14: 195/60x14:205/50x15
Pressure - front / rear - Saloon	bar	2.1 / 2.1
- Estate / Van	bar	2.1 / 2.1

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'] <sup>2</sup>
Camber		-1°40'±20 <sup>3</sup>

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 <sup>4</sup>
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

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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

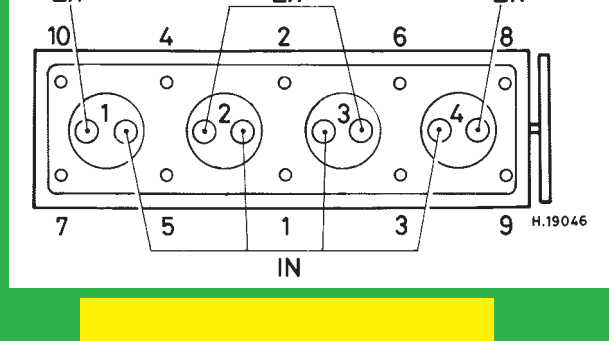
Notes and Illustrations

<sup>1</sup>CAT: [U]

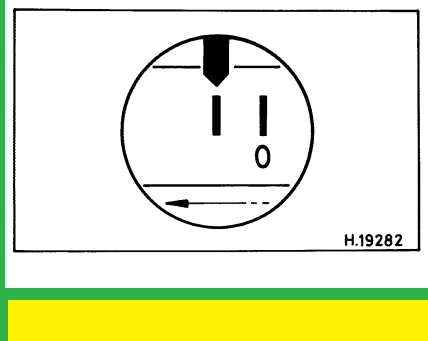
<sup>2</sup>Chassis no. 31LE222 111 or 31LB108 393 ►: [+20'±10']

<sup>3</sup>Chassis no. 31LE222 111 or 31LB108 393 ►: -1°30'±10'

<sup>4</sup>Replace with fully threaded shank bolts: 65+90°



1781 cm<sup>3</sup>, 8V



1781 cm<sup>3</sup>, RP