

VOLKSWAGEN

Polo 1.3i CAT

1987 to 1993

Engine & Cooling

Fuel

Ignition

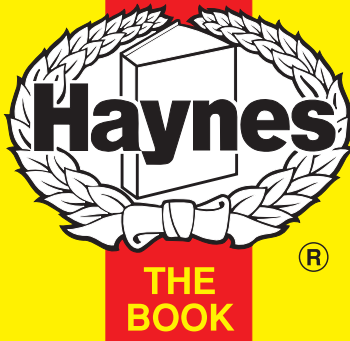
Electrical

Running gear

Torque settings

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Notes & Illustrations



Automotive Technical
DATA BOOK

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HELP

Engine and cooling system

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Type		NZ. 40kW US83
Capacity (cm ³) / number of cylinders		1272 / 4
Compression ratio / pressure	bar	9.5 / ≥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	87
Radiator cap pressure	bar	1.2 to 1.5

Fuel system

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Idle speed - manual [auto]	rpm	800±50. 7.89 ►: 980-50
Fast idle speed - manual [auto]	rpm	–
CO @ idle speed [3000 rpm] - see page VI	%	0.7±0.4. 7.89 ►: 0.3 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		Volkswagen
Type / ref		Digijet
Main jet / needle		–
Injection pressure	bar	2.5
Pump pressure	bar	3.0
Octane rating	RON	91[U]

Ignition system

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Type		TCI-H
Ignition coil		Bosch
Primary resistance	ohms	Green sticker: 0.5 to 0.8 ¹
Ballast resistor	ohms	–
Voltage - Tmnl 15(+) to earth	V	–
Distributor		Bosch
Points gap (air gap)	mm	–
Dwell angle	° (%)	–
Condenser capacity	µF	–
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	5±1 BTDC @ 750 to 850 ²
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
Centrifugal check.	° Crankshaft @ rpm	6 to 10 @ 2100 ³
	° Crankshaft @ rpm	13 to 17 @ 3000 ³
	° Crankshaft @ rpm	18 to 20 @ 5000 ³
Vacuum range check	mbar	120 to 290 ³
Maximum vacuum advance	° Crankshaft	11 to 15 ³
Spark plugs		Bosch/Champion
Type		W7DTC / N7BYC ³
Electrode gap	mm	0.70 to 0.90 ⁴

Electrical system

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Battery	V / CC / RC	12 / 175 / 60
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	145x13: 155/70x13: 165/65x13
Estate / Van	Size	–
Pressure - front / rear - Saloon	bar	1.7 / 1.7
- Estate / Van	bar	–

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	[0±10']
Camber		0±30'
Castor		+2°20'±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 ⁵
Clutch cover	Nm	25
Flywheel [driveplate]	Nm	60 + 90° N
Front hubs	Nm	210
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	90
Spark plugs	Nm	20

Capacities

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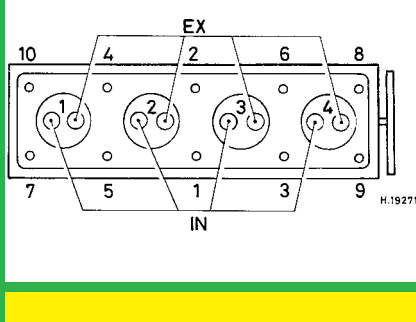
Engine oil & filter	litres	3.5
Gearbox - 4-speed [5-speed]	litres	2.2 [3.1]
Automatic transmission - refill	litres	–
Final drive	litres	WT
Cooling system	litres	5.6
Fuel tank	litres	42

Notes and Illustrations

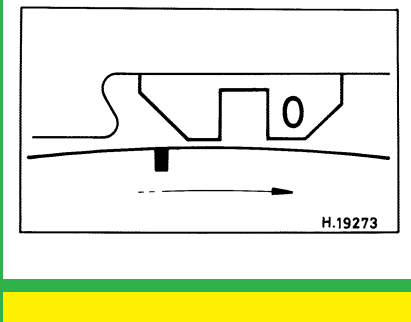
- ¹Grey sticker: 0.6 to 0.8
- ²7.89 ►: 900 to 1000
- ³7.89 ►: Computer control
- ⁴Coil with grey sticker: W7DCO / N7YCX, gap: 0.70 to 0.80
- ⁵Replace with fully threaded shank bolts: 65 + 90°

1: Idle speed

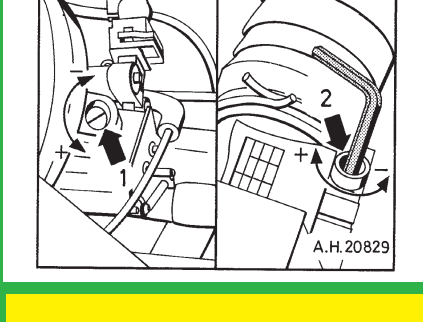
2: CO / Mixture



1272 cm³



1272 cm³



Digijet