

VOLKSWAGEN

Transporter 1.8

1991 to 1992

Engine & Cooling

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Automotive Technical
DATA BOOK

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Engine and cooling system

Transporter 1.8

1991 to 1992

Type		PD 49kW SOHC 8V
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: 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	1.3 to 1.5

Fuel system

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Idle speed - manual [auto]	rpm	850±50
Fast idle speed - manual [auto]	rpm	1700±100
CO @ idle speed [3000 rpm] - see page VI	%	≤0.5 [≤0.3] Ex
HC @ idle speed [3000 rpm] - see page VI	ppm	≤200
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Solex/Pierburg
Type / ref		2E3 044 129 015A
Main jet / needle		110, 105
Injection pressure	bar	—
Pump pressure	bar	0.35 to 0.40
Octane rating	RON	91[E 91 RON]

Ignition system

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Type		TCI-H
Ignition coil		—
Primary resistance	ohms	0.5 to 0.7
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		—
Points gap (air gap)	mm	—
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		—
Ignition timing - basic [static	° Crankshaft @ rpm	16±1 BTDC @ 850±50
V = Vacuum NV = No Vacuum		V
Total ignition advance	° Crankshaft @ rpm	14 to 18 BTDC @ 850±50
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 @ 1000 to 1300
	° Crankshaft @ rpm	8 to 12 @ 2200
	° Crankshaft @ rpm	22 to 26 @ 4800
Vacuum range check	mbar	240 to 420
Maximum vacuum advance	° Crankshaft	13 to 17
Spark plugs		Bosch/Champion
Type		W7DTC / N7BYC
Electrode gap	mm	0.7 to 0.9

Electrical system

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Battery	V / CC / RC	12 / 220 /45Ah
Alternator voltage / full load current / engine rpm		— / 65 / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gear

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Brakes -		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	1.0

Tyres		
Saloon	Size	—
Estate / Van	Size	185x14: 195/70x15
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	3.3 / 3.8 ¹

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	Group 1 & 2: [+20'±20'] ²
Camber		Group 1 & 2: +15'±20' ³
Castor		+1°40'±30'. Group 4: 1°50'±30'
King pin inclination		—

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	Group 1 & 3: [+20'±20'] ⁴
Camber		Group 1 & 3: -30'±30' ⁵

Torque wrench settings

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1991 to 1992

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 ⁶
Clutch cover	Nm	20
Flywheel [driveplate]	Nm	60+ 90° N
Front hubs	Nm	150 + 90° N
Rear hubs	Nm	200
Wheel nuts / bolts	Nm	160
Spark plugs	Nm	20

Capacities

Transporter 1.8

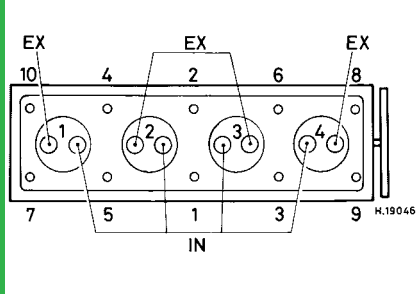
1991 to 1992

Engine oil & filter	litres	5.0
Gearbox - 4-speed [5-speed]	litres	2.5
Automatic transmission - refill	litres	—
Final drive	litres	WT
Cooling system	litres	9.0
Fuel tank	litres	80

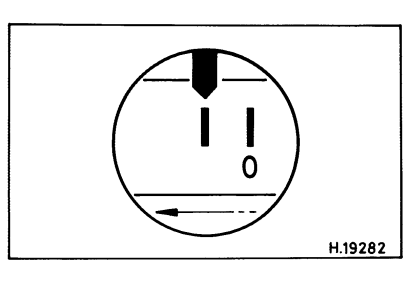
Notes and Illustrations

- ¹195/70x15: 2.6 / 3.4
- ²Group 3: [+10'±20']. Group 4: [0±20']
- ³Group 3: 0±20'. Group 4: -10'±20'
- ⁴Group 2: +6'±20'. Group 4: +24'±20'
- ⁵Group 2: 0±30'. Group 4: -40'±30'
- ⁶Replace with fully threaded shank bolts: 65 + 90°

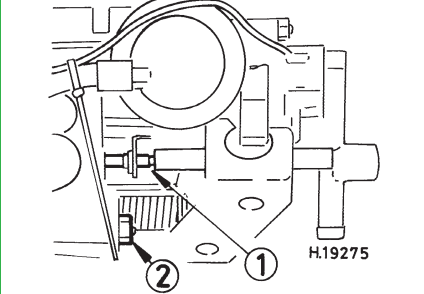
1: Idle speed 2: CO / Mixture



1781 cm³, 8V



1781 cm³, 8V



Solex / Pierburg 2E3