

VOLKSWAGEN

Transporter/Caravelle 2.5i CAT

1991 to 1994

Engine & Cooling

Fuel

Ignition

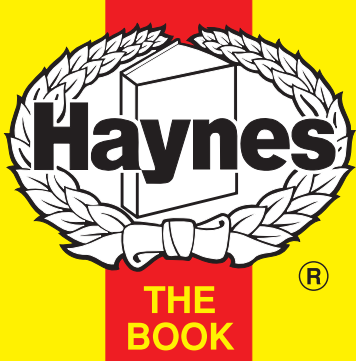
Electrical

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Automotive Technical
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Engine and cooling system

Transporter/Caravelle 2.5i CAT

1991 to 1994

Type	AAF SOHC 10V 81kW	
Capacity (cm ³) / number of cylinders	2461 / 5	
Compression ratio / pressure	bar	8.5 / ≥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	1-2-4-5-3	
No 1 cylinder position	TBE	
Thermostat opening temperature	°C	87 to 102
Radiator cap pressure	bar	1.3 to 1.5

Fuel system

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Idle speed - manual [auto]	rpm	800±25. 1.93 ►: 775 to 825N/A
Fast idle speed - manual [auto]	rpm	—
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	Volkswagen	
Type / ref	Digifant	
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	Digifant	
Ignition coil	N152	
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 V = Vacuum NV = No Vacuum	° Crankshaft @ rpm	6±1 BTDC @ 2000 to 2500 ¹
Total ignition advance	° Crankshaft @ rpm	4 to 8 BTDC @ 2000 to 2500
	° Crankshaft @ rpm	20 to 30 @ 2200 plug connected
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Vacuum range check	mbar	Computer control
Maximum vacuum advance	° Crankshaft	—
Spark plugs	Champion	
Type	N9BMC	
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	— / 70, 90, 120 / 3000	
Starter motor current / voltage - cranking	A / V	—
	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	195/70x15:205/65x15:215/65x15
Pressure - front / rear - Saloon	bar	—
	bar	2.6 / 3.4 ²

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	Group 1 & 2: [+20'±20'] ³
Camber	Group 1 & 2: +15'±20" ⁴	
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'] ⁵
Camber	Group 1 & 3: -30'±30" ⁶	

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 ⁷
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

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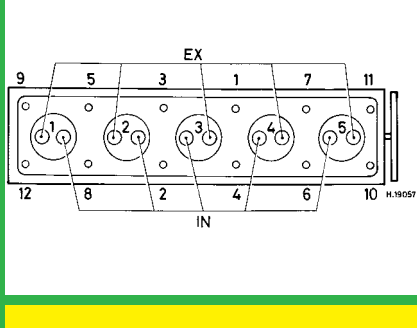
Engine oil & filter	litres	5.5
Gearbox - 4-speed [5-speed]	litres	3.0 02B: 2.5
Automatic transmission - refill	litres	3.5
Final drive	litres	WT. AT: 1.15 ⁶
Cooling system	litres	9.0
Fuel tank	litres	80

Notes and Illustrations

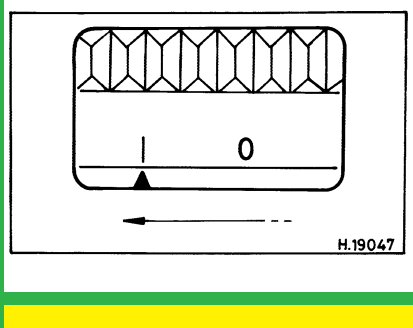
- ¹Coolant temperature sender plug blue 2 pin disconnected
- ²215/65x15: 2.4 / 3.0
- ³Group 3: [+10'±20"']. Group 4: [0±20"']
- ⁴Group 3: 0±20". Group 4: -10'±20'
- ⁵Group 2: +6'±20". Group 4: +24'±20'
- ⁶4x4: 1.0
- ⁶Group 2: 0±30'. Group 4: -40'±30'
- ⁷Replace with fully threaded shank bolts: 65 + 90°

1: Idle speed

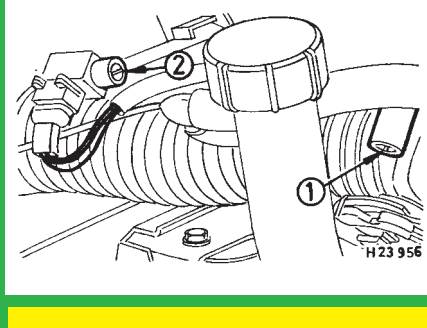
2: CO / Mixture



2461 cm³



2461 cm³



Digifant, AAF