

Engine & Cooling	Fuel	Ignition	Electrical	Running gear	Torque settings	Capacities	Notes & Illustrations
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Automotive Technical DATA BOOK

Click on one of the buttons above to view data for this car. To return to this screen and make another choice, click anywhere on the data screen.

MENU

HELP

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 Transporter/Caravelle 2.5i CAT 1991 to 1994

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
CO ₂ @ idle speed [3000 rpm] - see page VI	%	—
O ₂ @ 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 Transporter/Caravelle 2.5i CAT 1991 to 1994

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 Transporter/Caravelle 2.5i CAT 1991 to 1994

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	—
- locked	A / V	—

Running gear Transporter/Caravelle 2.5i CAT 1991 to 1994

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	—
- Estate / Van	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 Transporter/Caravelle 2.5i CAT 1991 to 1994

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 Transporter/Caravelle 2.5i CAT 1991 to 1994

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'

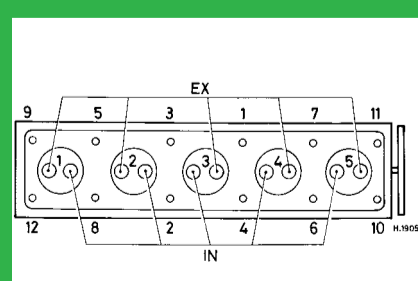
⁵Group 2: +6'±20'. Group 4: +24'±20'

⁶4x4: 1.0

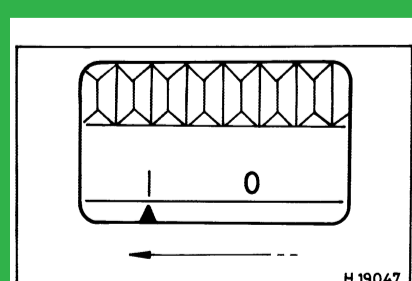
⁶Group 2: 0±30'. Group 4: -40'±30'

⁷Replace with fully threaded shank bolts: 65 + 90°

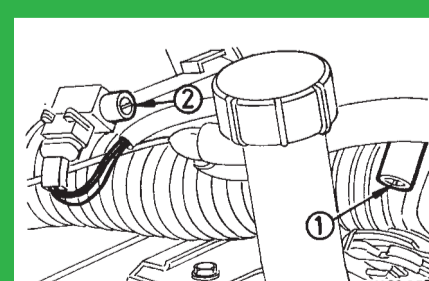
1: Idle speed 2: CO / Mixture



2461 cm³



2461 cm³



Digifant, AAF