

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

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### Engine and cooling system      Transporter/Caravelle 2.1      1985 to 1992

Type		DJ. 82kW
Capacity (cm <sup>3</sup> ) / number of cylinders		2109 / 4
Compression ratio / pressure	bar	10.5 / 8.0
Oil pressure	bar	[2.0]
Oil temperature	°C	80
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-4-3-2
No 1 cylinder position		FER
Thermostat opening temperature	°C	85
Radiator cap pressure	bar	0.9 to 1.2

### Fuel system      Transporter/Caravelle 2.1      1985 to 1992

Idle speed - manual [auto]	rpm	800±50
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	2.0±0.5
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	—
O <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Volkswagen
Type / ref		Digijet
Main jet / needle		—
Injection pressure	bar	—
Pump pressure	bar	2.0
Octane rating	RON	98[E 98 RON] <sup>1</sup>

### Ignition system      Transporter/Caravelle 2.1      1985 to 1992

Type		Electronic - Hall effect
Ignition coil		Bosch
Primary resistance	ohms	0.5 to 0.8 <sup>2</sup>
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	10±1 BTDC @ 800±50 <sup>1</sup>
V = Vacuum    NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 @ 1050 to 1150
Vacuum range check	mbar	165 to 330
Maximum vacuum advance	° Crankshaft	12 to 16
Spark plugs		Bosch/Champion
Type		W5DTC / N6BYC <sup>3</sup>
Electrode gap	mm	0.70 to 0.90 <sup>3</sup>

### Electrical system      Transporter/Caravelle 2.1      1985 to 1992

Battery	V / CC / RC	12 / 45, 54 or 63Ah
Alternator voltage / full load current / engine rpm		—
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

### Running gear      Transporter/Caravelle 2.1      1985 to 1992

<b>Brakes -</b>		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	2.5
<b>Tyres</b>		
Saloon	Size	—
Estate / Van	Size	185x14: 205/70x14: 205x14
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	185: 3.0 / 3.7 <sup>4</sup>
<b>Front suspension / wheel alignment</b>		
Toe-in (+) / Toe-out (-)	mm [°]	+2.0±3.5 <sup>5</sup>
Camber		0±30'. 4x4: +20'±20'
Castor		+7°15'±15'. 4x4: +4°40'±15'
King pin inclination		—
<b>Rear suspension / wheel alignment</b>		
Toe-in (+) / Toe-out (-)	mm [°]	[0±20'. 4x4: +10'±20']
Camber		-30'±30'. 4x4: -15'+30'-10'

### Torque wrench settings      Transporter/Caravelle 2.1      1985 to 1992

Cylinder head - stage 1	Nm	10
- stage 2	Nm	50
Cylinder head - stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	30 + 180°
Main bearings	Nm	WSM
Clutch cover	Nm	20
Flywheel [driveplate]	Nm	30 + 90°
Front hubs	Nm	WSM <sup>6</sup>
Rear hubs	Nm	500
Wheel nuts / bolts	Nm	180
Spark plugs	Nm	20

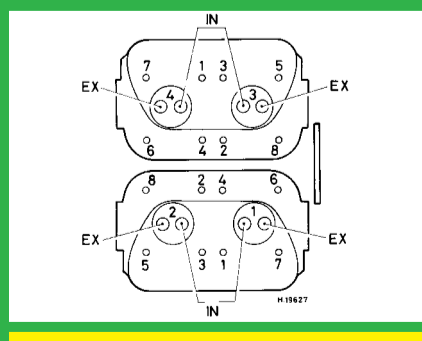
### Capacities      Transporter/Caravelle 2.1      1985 to 1992

Engine oil & filter	litres	4.5
Gearbox - 4-speed [5-speed]	litres	3.0
Automatic transmission - refill	litres	3.0
Final drive	litres	AT: 1.3 <sup>7</sup>
Cooling system	litres	17.5
Fuel tank	litres	60. 4x4: 70

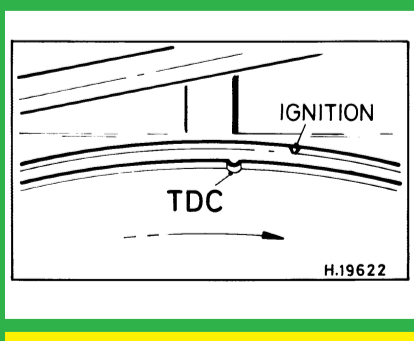
### Notes and Illustrations

- <sup>1</sup>[E 95 RON], 5-1 BTDC @ 800±50
- <sup>2</sup>Coil with green sticker only. Grey sticker: 0.6 to 0.8
- <sup>3</sup>Coil with grey sticker: W5DCO / N6YCX, gap: 0.70 to 0.80
- <sup>4</sup>205/70x14: 1300kg: 2.1 / 2.8. 1400kg: 2.5 / 2.8. 4x4: 185 3.0 / 3.3. 205/70: 2.5 / 2.8. 205x14: 2.5 / 3.0
- <sup>5</sup>4x4: WSM
- <sup>6</sup>4x4: 350
- <sup>7</sup>4x4, front: 1.5, rear: WT

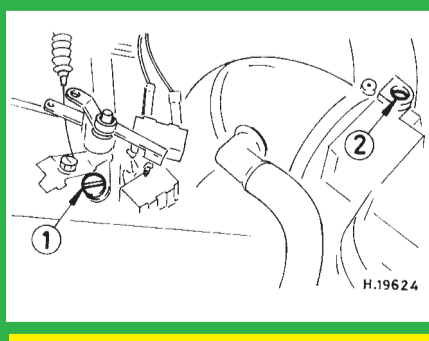
1: Idle speed      2: CO / Mixture



2109 cm<sup>3</sup>



2109 cm<sup>3</sup>



Digijet, DJ