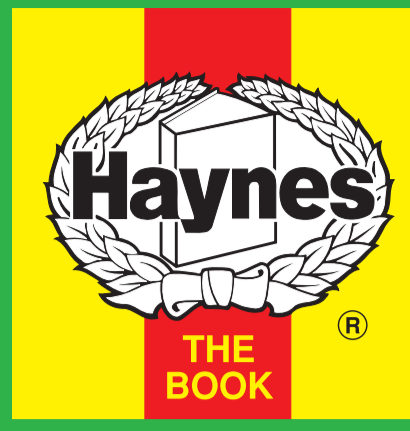


Engine & Cooling	Fuel	Ignition	Electrical	Running gear	Torque settings	Capacities	Notes & Illustrations
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Automotive Technical DATA BOOK

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HELP

Engine and cooling system Transporter/Caravelle 2.8 1996 to 1997

Type	AES VR6 103kW EGR	
Capacity (cm ³) / number of cylinders	2792 / 6	
Compression ratio / pressure	bar	10.0 / ≥7.5
Oil pressure	bar	[2.0]
Oil temperature	°C	80
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order	1-5-3-6-2-4	
No 1 cylinder position	TCE	
Thermostat opening temperature	°C	80
Radiator cap pressure	bar	1.2 to 1.5

Fuel system Transporter/Caravelle 2.8 1996 to 1997

Idle speed - manual [auto]	rpm	650 to 750 N/A
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	0.4 to 0.8 N/A
HC @ idle speed [3000 rpm] - see page VI	ppm	≤120
CO ₂ @ idle speed [3000 rpm] - see page VI	%	—
O ₂ @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection	Bosch	
Type / ref	Motronic	
Main jet / needle	—	
Injection pressure	bar	—
Pump pressure	bar	3.0
Octane rating	RON	95[U]

Ignition system Transporter/Caravelle 2.8 1996 to 1997

Type	Motronic	
Ignition coil	—	
Primary resistance	ohms	—
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	—
V = Vacuum NV = No Vacuum	—	
Total ignition advance	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Vacuum range check	mbar	Computer control
Maximum vacuum advance	° Crankshaft	—
Spark plugs	NGK	
Type	BKR5EKUR	
Electrode gap	mm	0.7

Electrical system Transporter/Caravelle 2.8 1996 to 1997

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

Running gear Transporter/Caravelle 2.8 1996 to 1997

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

Tyres		
Saloon	Size	—
Estate / Van	Size	185x14:195/70x15:205/65x15
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	3.2:2.6:2.6 / 3.0:3.4:2.6

Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	Group 1 & 2: [+20'±20']
Camber	Group 1 & 2: +15'±20'	
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']
Camber	Group 1 & 3: -30'±30'	

Torque wrench settings Transporter/Caravelle 2.8 1996 to 1997

Cylinder head - stage 1	Nm	40 N
- stage 2	Nm	60
Cylinder head - stage 3	Nm	+ 90°
- stage 4	Nm	+ 90°
Big-end bearings	Nm	30 + 90° N
Main bearings	Nm	30 + 180° N
Clutch cover	Nm	20
Flywheel [driveplate]	Nm	60 + 90° N
Front hubs	Nm	150 + 90°
Rear hubs	Nm	150 + 90° N
Wheel nuts / bolts	Nm	160
Spark plugs	Nm	25

Capacities Transporter/Caravelle 2.8 1996 to 1997

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
Cooling system	litres	9.0
Fuel tank	litres	80

Notes and Illustrations

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