

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 Defender 90, 110 2.5 1990 to 1994

Type		OHV 62kW
Capacity (cm <sup>3</sup> ) / number of cylinders		2495 / 4
Compression ratio / pressure	bar	8.0 / 11.0
Oil pressure	bar	[2.4 to 4.5]
Oil temperature	°C	80
Valve clearance - inlet	mm	0.25 H
Valve clearance - exhaust	mm	0.25 H
Firing order		1-3-4-2
No 1 cylinder position		F
Thermostat opening temperature	°C	82
Radiator cap pressure	bar	0.62

## Fuel system Defender 90, 110 2.5 1990 to 1994

Idle speed - manual [auto]	rpm	600 to 700
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	0.5 to 2.0
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		Weber
Type / ref		32-34 DMTL
Main jet / needle		112, 112
Injection pressure	bar	—
Pump pressure	bar	0.10 to 0.17
Octane rating	RON	92[E 95 RON]

## Ignition system Defender 90, 110 2.5 1990 to 1994

Type		Contact breaker - CIS
Ignition coil		Bosch 0 221 119 368
Primary resistance	ohms	2.9
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Lucas
Points gap (air gap)	mm	0.36 to 0.40
Dwell angle	° (%)	49 to 59
Condenser capacity	µF	0.2
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	[TDC]
V = Vacuum NV = No Vacuum		—
Total ignition advance	° Crankshaft @ rpm	16 BTDC @ 2000
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 @ 1000
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	36 to 42 @ 4500
Vacuum range check	mbar	119 to 846
Maximum vacuum advance	° Crankshaft	11 to 13
Spark plugs		Unipart/Champion
Type		GSP151 / RN9YCC
Electrode gap	mm	0.75 to 0.80

## Electrical system Defender 90, 110 2.5 1990 to 1994

Battery	V / CC / RC	12 / 180 / 78, 370 / 120
Alternator voltage / full load current / engine rpm		13.6 to 14.4 / 45 / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

## Running gear Defender 90, 110 2.5 1990 to 1994

<b>Brakes -</b>		
Front (min. friction material thickness)	mm	—
Rear (min. friction material thickness)	mm	—

<b>Tyres</b>		
Saloon	Size	—
Estate / Van	Size	205x16: 750x16
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	1.9 / 2.9

## Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	-1.2 to -2.4
Camber		0
Castor		+3°
King pin inclination		+7°

## Rear suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	—
Camber		—

## Torque wrench settings Defender 90, 110 2.5 1990 to 1994

Cylinder head - stage 1	Nm	91 to 113
- stage 2	Nm	—
Cylinder head - stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	34 to 46
Main bearings	Nm	130 to 136
Clutch cover	Nm	30 to 35
Flywheel [driveplate]	Nm	130 to 140
Front hubs	Nm	—
Rear hubs	Nm	—
Wheel nuts / bolts	Nm	108
Spark plugs	Nm	16

## Capacities Defender 90, 110 2.5 1990 to 1994

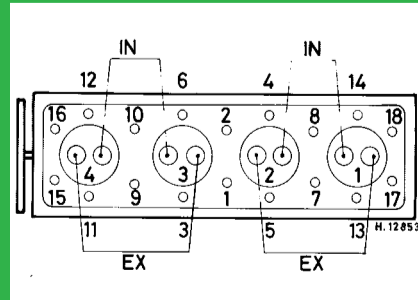
Engine oil & filter	litres	6.9
Gearbox - 4-speed [5-speed]	litres	2.2 <sup>1</sup>
Automatic transmission - refill	litres	—
Final drive	litres	1.7 <sup>2</sup>
Cooling system	litres	11.0
Fuel tank	litres	54.5. 110: 80

## Notes and Illustrations

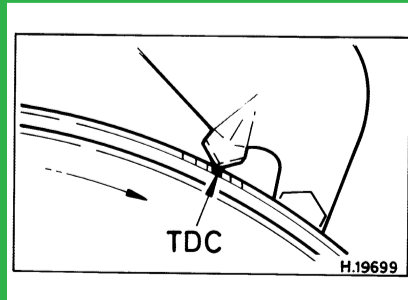
<sup>1</sup>Transfer box: 2.8

<sup>2</sup>Rear: 2.3

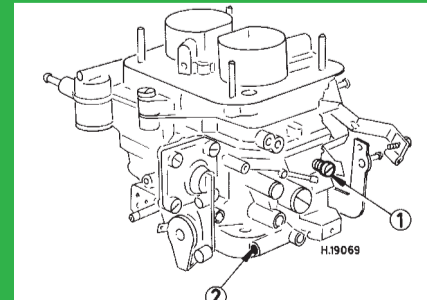
1: Idle speed 2: CO / Mixture



2495 cm<sup>3</sup>



2495 cm<sup>3</sup>



Weber 32-34 DMTL