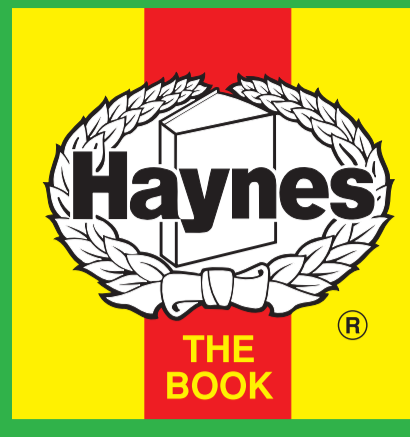


Engine & Cooling	Fuel	Ignition	Electrical	Running gear	Torque settings	Capacities	Notes & Illustrations
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Automotive Technical DATA BOOK

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 Defender 90, 110, 130 V8 1990 to 1994

Type	V8 OHV 100kW	
Capacity (cm ³) / number of cylinders	3528 / 8	
Compression ratio / pressure	bar	8.13 / ≥9.3
Oil pressure	bar	[2.1 to 2.8]
Oil temperature	°C	80
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order	1-8-4-3-6-5-7-2	
No 1 cylinder position	FL	
Thermostat opening temperature	°C	82
Radiator cap pressure	bar	1.0

Fuel system Defender 90, 110, 130 V8 1990 to 1994

Idle speed - manual [auto]	rpm	700 to 750
Fast idle speed - manual [auto]	rpm	1050 to 1150
CO @ idle speed [3000 rpm] - see page VI	%	1.5 to 3.0
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO ₂ @ idle speed [3000 rpm] - see page VI	%	—
O ₂ @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection	Zenith-Stromberg	
Type / ref	2x 175 CDSE	
Main jet / needle	_ / B1FK	
Injection pressure	bar	—
Pump pressure	bar	0.31
Octane rating	RON	90[E 91 RON]

Ignition system Defender 90, 110, 130 V8 1990 to 1994

Type	Electronic	
Ignition coil	AC Delco.	
Primary resistance	ohms	1.2 to 1.4
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	7.0
Distributor	Lucas	
Points gap (air gap)	mm	[0.20 to 0.35]
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation	Clockwise	
Ignition timing - basic [static	° Crankshaft @ rpm	6±1 BTDC @ 700
V = Vacuum NV = No Vacuum	V	
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	2 to 4 @ 750
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	12 to 14 @ 2300
Vacuum range check	mbar	339 to 677
Maximum vacuum advance	° Crankshaft	5 to 7
Spark plugs	Unipart/Champion	
Type	GSP131 / RN9YCC	
Electrode gap	mm	0.70 to 0.84

Electrical system Defender 90, 110, 130 V8 1990 to 1994

Battery	V / CC / RC	12 / 180 / 78, 12 / 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, 130 V8 1990 to 1994

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

Tyres		
Saloon	Size	—
Estate / Van	Size	205x16: 750x16
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	1.9 / 3.3

Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	+1.2 to 2.4 ¹
Camber		0
Castor		+3°
King pin inclination		+7°

Rear suspension / wheel alignment

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

Torque wrench settings Defender 90, 110, 130 V8 1990 to 1994

Cylinder head - stage 1	Nm	No 1 to 10: 88 to 95
- stage 2	Nm	No 11 to 14: 54 to 61
Cylinder head - stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	47 to 54
Main bearings	Nm	68 to 75 ²
Clutch cover	Nm	27
Flywheel [driveplate]	Nm	74 to 81
Front hubs	Nm	—
Rear hubs	Nm	—
Wheel nuts / bolts	Nm	108
Spark plugs	Nm	16

Capacities Defender 90, 110, 130 V8 1990 to 1994

Engine oil & filter	litres	5.7
Gearbox - 4-speed [5-speed]	litres	2.2 ³
Automatic transmission - refill	litres	—
Final drive	litres	1.7 ⁴
Cooling system	litres	12.8
Fuel tank	litres	54.5. 110/130: 80

Notes and Illustrations

¹Permanent 4 wheel drive: -1.2 to -2.4
²Rear bearing: 88 to 95
³Transfer box: 2.8
⁴Rear, 90: 1.7. 110: 2.3

1: Idle speed 2: CO / Mixture

3528 cm³

3528 cm³

Zenith-Stromberg

Zenith-Stromberg