

Engine & Cooling

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Automotive Technical
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Engine and cooling system33, 1.7IE, S’wagon, 4x4 CAT1993 to 1995

Type		307.37 SOHC 80kW
Capacity (cm³) / number of cylinders		1712 / 4
Compression ratio / pressure	bar	9.5 / 10.3
Oil pressure	bar	2.0 [4.4]
Oil temperature	°C	90
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-3-2-4
No 1 cylinder position		FR
Thermostat opening temperature	°C	84 to 88
Radiator cap pressure	bar	0.90 to 1.10

Fuel system33, 1.7IE, S’wagon, 4x4 CAT1993 to 1995

Idle speed - manual [auto]	rpm	900 to 1050
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	≤0.5
HC @ idle speed [3000 rpm] - see page VI	ppm	≤300
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		—Bosch
Type / ref		Motronic MP 3.1
Main jet / needle		—
Injection pressure	bar	2.8 to 3.2
Pump pressure	bar	4.0
Octane rating	RON	95[U]

Ignition system33, 1.7IE, S’wagon, 4x4 CAT1993 to 1995

Type		Motronic
Ignition coil		Bosch
Primary resistance	ohms	0.7 to 1.0
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	12.0
Distributor		Bosch
Points gap (air gap)	mm	[0.40 to 0.50]
Dwell angle	° (%)	Computer control
Condenser capacity	µF	—
Rotation		—
Ignition timing - basic [static	° Crankshaft @ rpm	4 to 10 BTDC @ idle N/A
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		Lodge/Champion
Type		25HL / N6YCC
Electrode gap	mm	Champion: 0.80

Electrical system33, 1.7IE, S’wagon, 4x4 CAT1993 to 1995

Battery	V / CC / RC	12 / 225 / 50, 255 / 55Ah
Alternator voltage / full load current / engine rpm		13.8 to 14.4 / 65 / 4000
Starter motor current / voltage - cranking	A / V	200 to 230 / 9.8 to 10.0
- locked	A / V	380 to 400 / 8.0

Running gear33, 1.7IE, S’wagon, 4x4 CAT1993 to 1995

Brakes -		
Front (min. friction material thickness)	mm	7.0 with backing
Rear (min. friction material thickness)	mm	0.5

Tyres		
Saloon	Size	185/60x14
Estate / Van	Size	185/60x14
Pressure - front / rear - Saloon	bar	2.0 / 1.8
- Estate / Van	bar	2.2 / 1.8

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	-4.0±2.0
Camber		-1°14'±30'
Castor		+2°±30'
King pin inclination		—

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	[0±25']
Camber		0±25'

Torque wrench settings33, 1.7IE, S’wagon, 4x4 CAT1993 to 1995

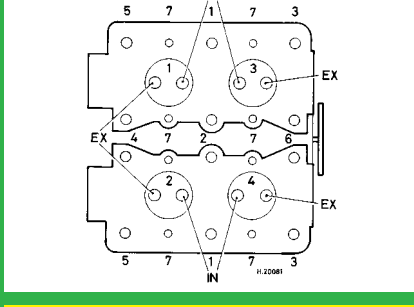
Cylinder head - stage 1	Nm	29 oiled
- stage 2	Nm	58
Cylinder head - stage 3	Nm	81 to 87, warm up, cool
- stage 4	Nm	Slacken, then 81 to 87 ¹
Big-end bearings	Nm	43 to 48
Main bearings	Nm	66 to 73. Side: 40 to 49
Clutch cover	Nm	15 to 23
Flywheel [driveplate]	Nm	94 to 105, oiled
Front hubs	Nm	427 to 472
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	88 to 108
Spark plugs	Nm	25 to 34

Capacities33, 1.7IE, S’wagon, 4x4 CAT1993 to 1995

Engine oil & filter	litres	4.0
Gearbox - 4-speed [5-speed]	litres	2.6
Automatic transmission - refill	litres	—
Final drive	litres	WT
Cooling system	litres	7.8
Fuel tank	litres	50

Notes and Illustrations

¹No. 7: 20 to 24



1712 cm³, 8V