

Notes			Specified value	Measured value
Vehicle identification				
	No. of cylinders	Type	4/DOHC	
	Capacity (Fiscal)	cc	1998	
	Compression ratio	:1	10,4	
	Suitable for unleaded petrol		Yes	
	Minimum octane rating	RON	95	
	Ignition system	Make	Magneti-Marelli	
	Ignition system	Type	1AP	
	Ignition system	Description	Map-DI	
	Trigger location		Crankshaft	
	Fuel system	Make	Magneti-Marelli	
	Fuel System	Type	1AP	
	Fuel System	Description	MFI-i	
	Air metering	Type	MAP	
	Combined ignition and fuel ECM		Yes	
	Diagnostic socket		Yes	
Ignition system				
	Ignition coil supply voltage	+ with ballast V	12,0	
	Firing order		1-3-4-2	
Tuning and emissions				
	Ignition timing - basic BTDC	°Engine/rpm	Not adjustable	
	Ignition advance checks	°Engine/rpm	ECM Controlled	
	Idle speed	rpm	850±50 Not adjustable	
	Oil temperature for CO test	°C	70	
	CO level at idle speed - tailpipe	Vol. % CO	0,5 Max Not adjustable	
	HC level at idle speed	ppm	100	
	CO2 level at idle speed	Vol. % CO2	14,5-16	
	O2 level at idle speed	Vol. % O2	0,1-0,5	
	Increased idle speed for CO test	rpm	2200-3000	
	CO content at increased idle speed	Vol. %	0,3	
	Lambda at increased idle	λ	0,97-1,03	
Spark plugs				
	Spark plugs	Original equipment	Bosch	
	Spark plug	Type	F6DCOR	
	Electrode gap	mm	0,8	
	Spark plugs	Make	Bosch	
	Spark plug	Type	F6DCOR	
	Electrode gap	mm	0,8	
	Spark plugs	Make	Champion	
	Spark plug	Type	RC10DMC 10.99-RC8YCL	
	Electrode gap	mm	10.99-0,9	
	Spark plugs	Make	NGK	
	Spark plug	Type	BKR6EK	
	Electrode gap	mm	0,8	
Fuel system				
	Fuel pump delivery pressure	bar	3,0	

	System pressure	bar	2,8-3,2	
	Regulated pressure with vacuum	bar	2,7-3,3	
	Injector	Ohm	14-18	
	Idle air control (IAC) valve/idle speed control (ISC) actuator	Ohm	50-58	
Service checks and adjustments				
	Valve clearance -INLET	mm	Hydraulic	
	Valve clearance -EXHAUST	mm	Hydraulic	
	Oil pressure	bar/rpm	5,5/4000	
	Radiator cap	bar	1,4	
	Thermostat opens	°C	83	
Lubricants and capacities				
	Engine oil grade - cold climate	SAE	5W/40 Semi-synthetic	
	Engine oil grade - moderate climate	SAE	15W/40 Semi-synthetic	
	Engine oil grade - hot climate	SAE	20W/40 Semi-synthetic	
	Engine oil classification	API/ACEA	SJ/A3-96	
	Engine oil grade - alternative - moderate climate	SAE	10W/40 Semi-synthetic	
	Engine oil classification - alternative - moderate climate	API/ACEA	SJ/A3-96	
	Engine with filter(s)	litres	4,25	
	Manual gearbox oil grade	SAE	75W/80	
	Manual gearbox 4/5 speed	litres	2,0	
	Cooling system	litres	7,6	
	Brake fluid	Type	DOT 4	
	Power steering fluid	Type	Dexron II	
	Power steering fluid	litres	1,0	
Tightening torques				
	Cylinder head instructions			
Cylinder head				
		Maximum bolt length	112 mm	
	Stage 1	Tighten	35 Nm	
	Stage 2	Tighten	70 Nm	
	Stage 3	Tighten	160°	
Other tightening torques				
	Main bearings	Renew bolts/nuts	No	
	Main bearings	Stage 1	35 Nm	
	Main bearings	Stage 2	70 Nm	
	Big end bearings	Renew bolts/nuts	No	
4	Big end bearings	Stage 1		
	Oil pump to cylinder block		20 Nm	
	Sump bolts		20 Nm	
	Sump drain bolt		30 Nm	
	Flywheel/driveplate		50 Nm	
	Clutch to flywheel		20 Nm	
	Crankshaft pulley/damper centre bolt		40±2 Nm	
	Camshaft sprocket/gear		130±10 Nm	
	Camshaft carrier/cap		10 Nm	
	Camshaft/rocker cover		10 Nm	
	Inlet manifold to cylinder head		20 Nm	
	Exhaust manifold to cylinder head		35 Nm	
	Engine oil pressure switch		35 Nm	
58	Front hub			
	Rear hub		190 Nm	
	Steering track rod end		35 Nm	
	Brake caliper to carrier	Front	30 Nm	
	Brake caliper carrier to hub	Front	110 Nm	
	Brake caliper carrier to hub	Rear	120 Nm	
	ABS sensor	Front	10 Nm	
	ABS sensor	Rear	10 Nm	
	Road wheels		85 Nm	

Starting and charging

Battery	V/RC(Ah)	12/65 (45)	
Maximum cranking amps	A	122-149	
Alternator output at engine speed	A/V/rpm	47/13,5/3000	

Brake disc and drum dimensions

Minimum disc thickness - ventilated	Front	20 mm	
Minimum disc thickness	Rear	6 mm	
Disc thickness variation	Front	0,010 mm	
Disc thickness variation	Rear	0,010 mm	
Disc runout	Front	0,05 mm	
Disc runout	Rear	0,05 mm	
Minimum pad thickness	Front	2 mm	
Minimum pad thickness	Rear	2 mm	
Parking brake travel	No. of notches	5-6	

Air conditioning

Air conditioning refrigerant	Type	R134a	
Air conditioning refrigerant quantity	grams	725±25	
Air conditioning oil	Type	SP10	
Air conditioning oil quantity	cm³	135±15	
Air conditioning oil viscosity	ISO	46	

Autodata Note 4

Big end bearings

Tighten in the following stages:

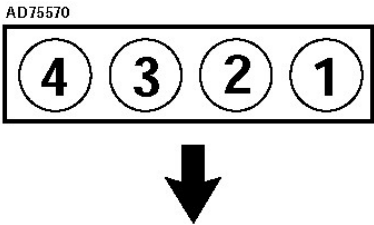
- 1) 40 Nm
- 2) Slacken off
- 3) 20 Nm + 70°.

Autodata Note 58

Front hub

M20 → VIN 808980 = 265 Nm
M20 VIN 808981→ = 245 Nm
M24 = 320 Nm.

Cylinder layout



Tightening sequence

