

Notes			Specified value	Measured value
<b>Vehicle identification</b>				
	No. of cylinders	Type	4/OHC	
	Capacity	cc	1868	
	Compression ratio	:1	23,0	
<b>Injection system</b>				
	Fuel/injection pump assembly	Make	Lucas/Delphi	
	Fuel/injection pump assembly	Type	DCN 2.2	
	Fuel/injection pump assembly	Part No.	DWLP 12	
	Pump type		Rotary	
	Injection sequence		1-3-4-2	
	Injector nozzle	Make	Lucas/Delphi	
	Nozzle opening pressure - new/used	bar	130,5-135,5	
<b>Tuning and emissions</b>				
37	Plunger travel (pump)	mm ABDC		
	Crankshaft position (n = ATDC)	°BTDC	0	
	Adjusting method	Engine/Pump	Special Tool/ Dial gauge/ Special Tool	
	Idle speed	rpm	875±25	
	Rated no load speed	rpm	5350±125	
	Oil temperature	°C	80	
	Idle speed - for smoke test	rpm	850-900	
	Governed speed range - for smoke test	rpm	5225-5475	
	Maximum time at governed speed	secs	1,0	
	Test mode	A/B	B	
	Probe type	1/2	1	
	Smoke opacity - EU limit	m-1 (%)	2,50 (66)	
<b>Starting and charging</b>				
	Battery	V/RC(Ah)	12/95 (62)	
	Maximum cranking amps	A	167-205	
	Alternator output	A/V/rpm	62/13,5/3000	
<b>Glow plugs</b>				
	Glow plug nominal rating	V/A	11	
	Glow plug - part no.	Beru	0 100 226 371	
	Glow plug - part no.	Champion	CH185	
<b>Service checks and adjustments</b>				
	Valve clearance - INLET	mm	0,15±0,08 cold	
	Valve clearance - EXHAUST	mm	0,30±0,08 cold	
	Oil pressure	bar/rpm	4,3/3000	
	Radiator cap	bar	1,4	
	Thermostat (primary/secondary) open	°C	83	
<b>Lubricants and capacities</b>				
	Engine oil grade - cold climate	SAE	5W/30 Semi-synthetic	
	Engine oil grade - moderate climate	SAE	10W/40 Semi-synthetic	
	Engine oil grade - hot climate	SAE	Semi-synthetic	
	Engine oil classification	API/ACEA	CF/B3-98	
	Engine oil grade - alternative - moderate climate	SAE	15W/40 Semi-synthetic	
	Engine oil classification - alternative - moderate climate	API/ACEA	CF/B3-98	
	Engine with filter(s)	litres	4,75 AC=4,5	
	Manual gearbox oil grade	SAE	75W/80	
	Manual gearbox 4/5 speed	litres	1,8	
	Cooling system	litres	9,0	
	Brake fluid	Type	9979.06	
	Brake fluid	litres	0,5	
	Power steering fluid	Type	ATX	
	Power steering fluid	litres	1,0	
<b>Tightening torques</b>				
89	Cylinder head instructions			
<b>Cylinder head</b>				
		Maximum bolt length	125,5 mm	
	Stage 1	Tighten	20 Nm	
	Stage 2	Tighten	60 Nm	
	Stage 3	Tighten	180°±5°	
<b>Other tightening torques</b>				

	Main bearings	Renew bolts/nuts	No	
	Main bearings	Stage 1	35 Nm	
	Main bearings	Stage 2	70 Nm	
	Big end bearings	Renew bolts/nuts	Yes	
	Big end bearings	Stage 1	20 Nm	
	Big end bearings	Stage 2	70°	
	Oil pump to cylinder block		20 Nm	
	Sump bolts		20 Nm	
	Sump drain bolt		30 Nm	
51	Flywheel/driveplate		48 Nm	
	Clutch to flywheel		20 Nm	
	Crankshaft pulley/damper centre bolt		40 Nm+60°	
61	Camshaft sprocket/gear			
	Camshaft carrier/cap		20 Nm	
	Camshaft/rocker cover		5 Nm	
	Inlet manifold to cylinder head		20 Nm	
	Exhaust manifold to cylinder head		30 Nm	
	Water pump		15 Nm	
	Injector/clamp		90 Nm	
	Injector pipe unions		25 Nm	
	Fuel/injection pump sprocket/gear		23 Nm	
	Fuel/injection pump flange		25 Nm	
	Fuel/injection pump mounting		20 Nm	
	Glow plugs		15-22 Nm	
50	Front hub			
43	Rear hub		185 Nm	
	Steering wheel		33 Nm	
	Steering rack/box mounting		50 Nm	
	Steering track rod end		45 Nm	
	Brake disc to hub	Front	10 Nm	
	Brake caliper to carrier	Front	27 Nm	
	Brake caliper carrier to hub	Front	105 Nm	
	ABS sensor	Front	8 Nm	
	ABS sensor	Rear	8 Nm	
	Road wheels		90 Nm	
<b>Brake disc and drum dimensions</b>				
	Minimum disc thickness - ventilated	Front	20 mm	
	Disc thickness variation	Front	0,010 mm	
	Disc runout	Front	0,05 mm	
109	Maximum drum diameter	Rear	205 mm	
	Minimum pad thickness	Front	2 mm	
	Parking brake travel	No. of notches	3	
<b>Air conditioning</b>				
	Air conditioning refrigerant	Type	R134a	
	Air conditioning refrigerant quantity	grams	565±25	
	Air conditioning oil	Type	SP10	
	Air conditioning oil quantity	cmi	135	
	Air conditioning oil viscosity	ISO	46	