

Telephone:
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 VAT Registration No.:

Notes			Specified value	Measured value
Vehicle identification				
	No. of cylinders	Type	4/OHV	
	Capacity (Fiscal)	cc	1289	
	Compression ratio	:1	9,5	
	Suitable for unleaded petrol		Yes	
	Minimum octane rating	RON	91	
	Ignition system	Make	Siemens	
	Ignition system	Type	Simos 2P	
	Ignition system	Description	Map-DIS	
	Trigger location		Crankshaft	
	Fuel system	Make	Siemens	
	Fuel system	Type	Simos 2P	
	Fuel system	Description	MFI-s	
	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				
6	Tuning conditions			
	Ignition timing - basic BTDC	°Engine/rpm	Not adjustable	
	Ignition advance checks	°Engine/rpm	ECM Controlled	
	Idle speed	rpm	760-820 Not adjustable	
	Oil temperature for CO test	°C	80	
	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	2500-2800	
	CO content at increased idle speed	Vol. %	0,3	
	Lambda at increased idle	λ	0,97-1,03	
Spark plugs				
	Spark plugs	Original equipment	Champion	
	Spark plug	Type	RC89PYC	
	Electrode gap	mm	0,8	
	Spark plugs	Make	NGK	
	Spark plug	Type	BKUR5ET	
	Electrode gap	mm	1,0	
Fuel system				
	System pressure	bar	3,0	
	Regulated pressure with vacuum	bar	2,5	
	Engine coolant temperature (ECT) sensor	Ohm/°C	275-375/80	
	Injector	Ohm	15-20	
	Injector opening duration (hot)	ms/rpm	1,02-3,06	
	Lambda sensor (Oxygen) heater	Ohm	2,7-3,0	

Manufacturer: Skoda

Model: Felicia/Van/Pick-up 1,3

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Engine code: 135M

Output: 50 (67) 4500

Valid forever. 2013.08.07.

Tuned for: R-Cat

Year: 1996-01

V8 500- /Autodata

Service checks and adjustments

49	Valve clearance -INLET	mm	0,20 cold
	Valve clearance -EXHAUST	mm	0,20 cold
	Compression pressure	bar	10-14
	Oil pressure	bar/rpm	3,8/3000
	Radiator cap	bar	0,9-1,1
	Thermostat opens	°C	88

Lubricants and capacities**Engine oil options**

	Ambient temperature range		All temperatures
	Engine oil grade	SAE	5W/30, 5W/40
	Engine oil classification	OEM	VW 500.00
	Ambient temperature range		-30°C → 15°C
	Engine oil grade	SAE	5W/30, 5W/40
	Engine oil classification	OEM	VW 501.01/502.00
	Ambient temperature range		All temperatures
	Engine oil grade	SAE	5W/50
	Engine oil classification	OEM	VW 501.01/502.00
	Ambient temperature range		All temperatures
	Engine oil grade	SAE	10W/30, 10W/40
	Engine oil classification	OEM	VW 500.00
	Ambient temperature range		-15°C → 15°C
	Engine oil grade	SAE	10W/30, 10W/40
	Engine oil classification	OEM	VW 501.01/502.00
	Ambient temperature range		All temperatures
	Engine oil grade	SAE	10W/50, 10W/60
	Engine oil classification	OEM	VW 501.01/502.00
	Ambient temperature range		-15°C → 40°C
	Engine oil grade	SAE	15W/40, 15W/50
	Engine oil classification	OEM	VW 501.01/502.00
	Ambient temperature range		-15°C → 40°C
	Engine oil grade	SAE	20W/40, 20W/50
	Engine oil classification	OEM	VW 501.01/502.00
	Engine with filter(s)	litres	4,5

Other lubricants and capacities

	Manual transmission oil grade	SAE	75W/90 Synthetic
	Manual transmission	litres	2,4
	Cooling system - total capacity	litres	6,0
	Brake fluid	Type	DOT 4
	Brake fluid	litres	0,6-1,0
	Power steering fluid	Type	G 002 000
	Power steering fluid	litres	0,8-0,9

Tightening torques

3	Cylinder head instructions		
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Cylinder head

		Renew bolts	No
	Stage 1	Tighten	20 Nm
	Stage 2	Tighten	90°
	Stage 3	Tighten	90°

Other engine tightening torques

	Main bearings	Renew bolts/nuts	No
	Main bearings	Stage 1	35 Nm
	Main bearings	Stage 2	75 Nm
	Big end bearings	Renew bolts/nuts	No
	Big end bearings	Stage 1	20 Nm
	Big end bearings	Stage 2	40 Nm
	Oil pump to cylinder block		8 Nm
	Sump bolts		10 Nm

	Sump drain bolt		65 Nm	
17	Flywheel/driveplate			
	Clutch pressure plate		25 Nm	
	Crankshaft pulley/damper centre bolt		120 Nm	
	Camshaft/rocker cover		3 Nm	
	Inlet manifold to cylinder head		20 Nm	
	Exhaust manifold to cylinder head		25 Nm	
	Exhaust downpipe to manifold		32 Nm	
	Spark plugs		30 Nm	
	Lambda sensor (Oxygen)		60 Nm	
	Knock sensor (KS)		20 Nm	
Chassis tightening torques				
	Front hub		290 Nm	
	Steering track rod end		52 Nm	
	Brake disc to hub	Front	8 Nm	
13	Brake caliper to carrier	Front	35 Nm	
32	Brake caliper carrier to hub	Front	56 Nm	
	Back plate to hub	Rear	38 Nm+90°	
	ABS sensor	Front	8 Nm	
	ABS sensor	Rear	8 Nm	
92	Road wheels		110 Nm	
Starting and charging				
	Battery	V/RC(Ah)	12	
Brake disc and drum dimensions				
	Minimum disc thickness - solid	Front	11,4 mm	
	Disc runout	Front	0,15 mm	
	Maximum drum diameter	Rear	201 mm	
	Minimum pad thickness	Front	2 mm	
	Minimum shoe thickness	Rear	2,5 mm	
	Parking brake travel	No. of notches	5-8	
Air conditioning				
	No. of AC service connectors		2	
	Air conditioning restrictor type		Expansion valve	
	Air conditioning refrigerant	Type	R134a	
	Air conditioning refrigerant quantity	grams	765±15	
	Air conditioning oil	Type	SP20	
	Air conditioning oil quantity	cm ³	135	
	Air conditioning oil viscosity	ISO	100	

Autodata Note 6

Tuning conditions

Use VAG 1551/2 or equivalent equipment as appropriate.

Autodata Note 49

Valve clearances

Aluminium push rods = 0,25 mm

Autodata Note 3

Cylinder head nuts

Tighten nuts 11-14 to 20-26 Nm.

Autodata Note 17

Flywheel/drive plate

Use new bolts with Loctite.

- 1) 30 Nm
- 2) 90°.

Autodata Note 13

Use new nuts/bolts.

Autodata Note 32

Brake caliper carrier to hub

Pick-up = 80 Nm.

Autodata Note 92

Road wheels

Do NOT lubricate bolts or mating surfaces.

