

Engine & Cooling

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Automotive Technical
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Engine and cooling system

Samara 1500 (2108) & CAT

1988 to 1997

Type		21083 SOHC 8V 56kW
Capacity (cm ³) / number of cylinders		1499 / 4
Compression ratio / pressure	bar	9.9 / –
Oil pressure	bar	0.79 [4.5]
Oil temperature	°C	–
Valve clearance - inlet	mm	0.20±0.05
Valve clearance - exhaust	mm	0.35±0.05
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	85 to 90
Radiator cap pressure	bar	1.0

Fuel system

Samara 1500 (2108) & CAT

1988 to 1997

Idle speed - manual [auto]	rpm	750 to 800. CAT: 875 to 925
Fast idle speed - manual [auto]	rpm	2500
CO @ idle speed [3000 rpm] - see page VI	%	0.4 to 0.8
HC @ idle speed [3000 rpm] - see page VI	ppm	≤300
CO2 @ idle speed [3000 rpm] - see page VI	%	CAT: ≥13.0
O2 @ idle speed [3000 rpm] - see page VI	%	CAT: ≤1.0
Carburettor / fuel injection		Lada
Type / ref		2V: 21083-1107010
Main jet / needle		95, 97.5. CAT: 80, 100
Injection pressure	bar	–
Pump pressure	bar	0.21 to 0.30
Octane rating	RON	93[E 95 RON] ¹

Ignition system

Samara 1500 (2108) & CAT

1988 to 1997

Type		Electronic - Hall effect
Ignition coil		USSR
Primary resistance	ohms	0.45 to 0.60 or 0.8 to 1.0
Ballast resistor	ohms	–
Voltage - Tmnl 15(+) to earth	V	Battery
Distributor		² –
Points gap (air gap)	mm	–
Dwell angle	° (%)	–
Condenser capacity	µF	–
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	4±1 BTDC @ 850
V = Vacuum NV = No Vacuum		V
Total ignition advance	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
Centrifugal check.	° Crankshaft @ rpm	0 @ 800 to 1200
	° Crankshaft @ rpm	11 to 15 @ 2500
	° Crankshaft @ rpm	22 to 26 @ 5600
Vacuum range check	mbar	120 to 240
Maximum vacuum advance	° Crankshaft	12 to 16
Spark plugs		NGK/Champion
Type		BP5ES or BPR5ES / RN9YCC
Electrode gap	mm	0.70 to 0.80

Electrical system

Samara 1500 (2108) & CAT

1988 to 1997

Battery	V / CC / RC	12 / 55Ah
Alternator voltage / full load current / engine rpm		13.5 to 14.5 / 55 / 2000
Starter motor current / voltage - cranking	A / V	140 / 9.6
- locked	A / V	500 / 7.0

Running gear

Samara 1500 (2108) & CAT

1988 to 1997

Brakes -		
Front (min. friction material thickness)	mm	1.5
Rear (min. friction material thickness)	mm	1.5

Tyres		
Saloon	Size	165/70x13
Estate / Van	Size	–
Pressure - front / rear - Saloon	bar	1.9 / 1.9
- Estate / Van	bar	–

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	+3.0
Camber		+30'±30'
Castor		+1°30'±30'
King pin inclination		+12° to 13°

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

Torque wrench settings

Samara 1500 (2108) & CAT

1988 to 1997

Cylinder head - stage 1	Nm	20
- stage 2	Nm	70 to 85
Cylinder head - stage 3	Nm	+ 90°
- stage 4	Nm	+ 90°
Big-end bearings	Nm	60
Main bearings	Nm	69 to 84
Clutch cover	Nm	20 to 31
Flywheel [driveplate]	Nm	84
Front hubs	Nm	WSM
Rear hubs	Nm	–
Wheel nuts / bolts	Nm	58 to 72
Spark plugs	Nm	31 to 39

Capacities

Samara 1500 (2108) & CAT

1988 to 1997

Engine oil & filter	litres	3.5
Gearbox - 4-speed [5-speed]	litres	3.0
Automatic transmission - refill	litres	–
Final drive	litres	WT
Cooling system	litres	7.8
Fuel tank	litres	43

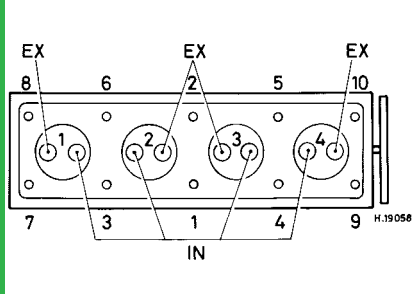
Notes and Illustrations

¹CAT: 95 [U]

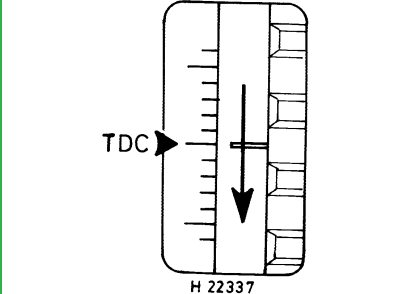
²Distributor type: 40.3706 or 40.3706-01

1: Idle speed

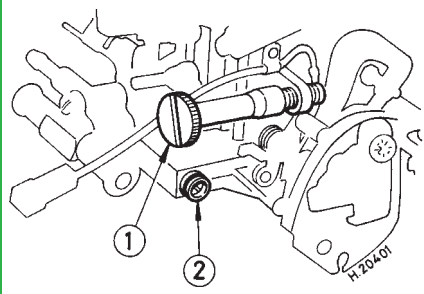
2: CO / Mixture



1499 cm³



1499 cm³



21083-1107010