

Telephone:
Fax:
Sales tax registration no.:

Notes			Specified value	Measured value
Vehicle identification				
No. of cylinders	Type		4/OHC	
Capacity (Fiscal)	cc		1186 (1178)	
Compression ratio	:1		8,8	
Suitable for unleaded petrol			No	
Minimum octane rating	RON		98	
Ignition system	Make		Bosch	
Ignition system	Type		SZ	
Ignition system	Description		CB	
Fuel system	Make		Solex/Dellorto	
Fuel System	Type		32 DIS/FRDA32	
Fuel System	Description		Carb-2V	
Ignition system				
Ignition coil	Make		Bosch	
Ignition coil	Type		0 221 119 008	
Ignition coil supply voltage	+ with ballast V		11,0	
Primary resistance	Ohm		2,9-3,4	
Secondary resistance	Ohm		9500-13500	
Firing order			1-3-2-4	
Distributor (ECM)	Make		Bosch	
Distributor (ECM)	No.		0 231 168 014	
Contact breaker gap/trigger air gap	mm		0,4	
Dwell angle	°(%)		60-64 (67-71)	
Tuning and emissions				
Ignition timing	o = without + = with vacuum		o	
Ignition timing - basic BTDC	°Engine/rpm		8±1/900	
Ignition advance			Without vacuum and basic timing	
Ignition advance checks	°Engine/rpm		21-23/2000	
Ignition advance checks	°Engine/rpm		20-24/3000	
Ignition advance checks	°Engine/rpm		24-28/3500	
Vacuum check	+ = advance o = retard		+	
Vacuum range	°Engine		11-15	
Vacuum starts	mbar		53-87	
Vacuum ends	mbar		375	
Idle speed	rpm		900-1000	
Oil temperature for CO test	°C		70	
CO level at idle speed - tailpipe	Vol. % CO		3,5 Max	
HC level at idle speed	ppm		500	
CO2 level at idle speed	Vol. % CO2		13-16	
O2 level at idle speed	Vol. % O2		0,5-2,0	
Spark plugs				

Manufacturer: Alfa Romeo
Engine code: 301.02
Tuned for:

Model: Alfasud 1,2
Output: 46 (63) 6000
Year: 1973-80

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	Spark plugs	Original equipment	Lodge	25HL
	Spark plug		Type	25HL
	Electrode gap	mm		0,6
	Spark plugs	Make		Bosch
	Spark plug	Type		W7DC
	Electrode gap	mm		0,7
	Spark plugs	Make		Champion
	Spark plug	Type		RN6YC
	Electrode gap	mm		0,6
	Spark plugs	Make		NGK
	Spark plug	Type		B7ES
	Electrode gap	mm		0,6

Fuel system

	Fuel pump delivery pressure	bar		0,4
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Service checks and adjustments

	Valve clearance -INLET	mm		0,40 cold
	Valve clearance -EXHAUST	mm		0,50 cold
	Oil pressure	bar/rpm		4,5 Max
	Thermostat opens	°C		82
	Drive belt size - alternator	mm		9,5x888
	Drive belt tension - alternator/PAS/AC	mm		15

Lubricants and capacities

	Engine oil grade - moderate climate	SAE		10W/50
	Engine oil classification	API/ACEA		SE
	Engine oil grade - alternative - moderate climate	SAE		15W/50
	Engine with filter	litres		4,0
	Gearbox oil grade	SAE		80W/90
	Gearbox 4/5 speed	litres		3,5
	Cooling system	litres		7,3

Tightening torques

10	Cylinder head instructions			
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Other tightening torques

	Big end bearings	Stage 1		22-24 Nm
	Big end bearings	Stage 2		44-49 Nm
	Flywheel/driveplate			96-107 Nm
	Spark plugs			25-35 Nm
	Road wheels			65-80 Nm

Starting and charging

	Battery	V/RC(Ah)		12/60 (36)
	Starter motor	Make		Bosch
	Starter motor	Type		0 001 211 215
	Minimum starting voltage	V		10,0
	Maximum cranking amps	A		97-119
	Alternator/Regulator	Make		Bosch
	Alternator/Regulator	Type		0 120 489 720
	Alternator output at engine speed	A/V/rpm		45/14/2000
	Voltage regulator	Type		0 190 601 006
	Regulated voltage	V		13,9-14,8

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Cylinder head bolts

Tighten bolts in the following stages:

1) 40-60 Nm

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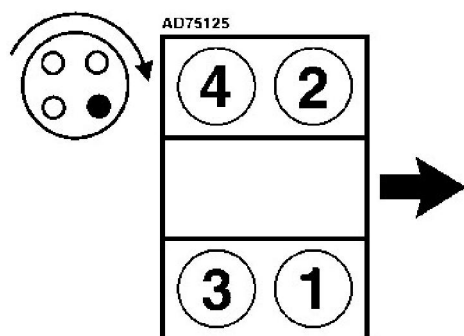
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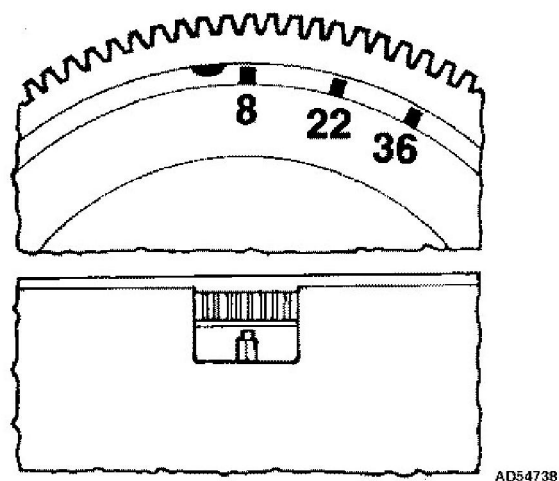
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- 2) 81-87 Nm
- 3) Run engine for 15 minutes
- 4) Wait 2 hours
- 5) Individually slacken off each bolt in turn and retighten to 81-87 Nm.

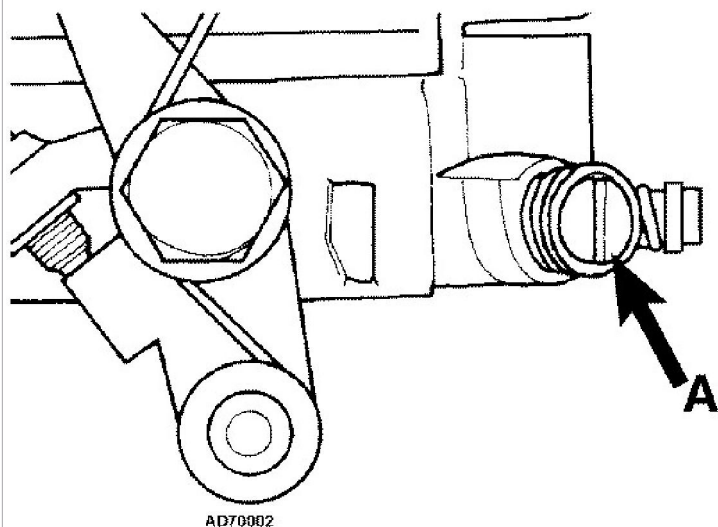
Cylinder layout



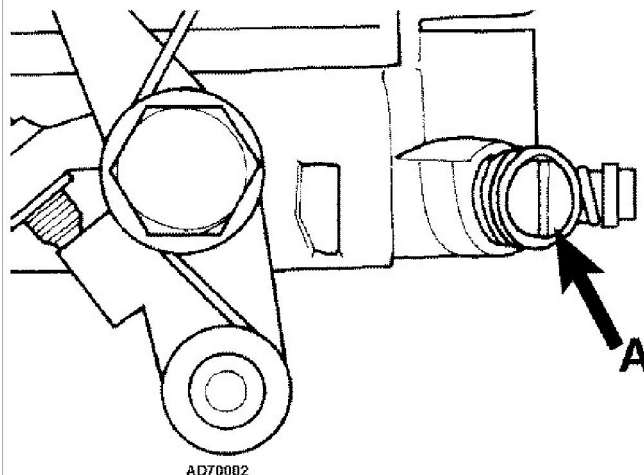
Timing mark



Idle speed adjustment (A)

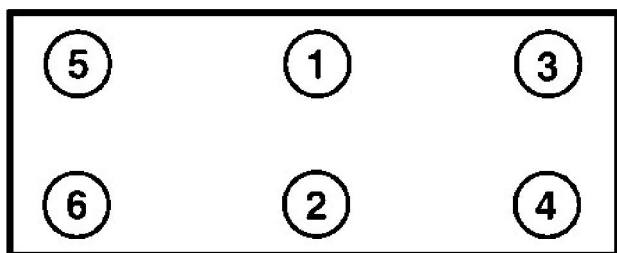


CO level adjustment (B)



Tightening sequence

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AD75211

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