

VAUXHALL/OPEL

Astra/Belmont 1.3S

1984 to 1990

Engine & Cooling

Fuel

Ignition

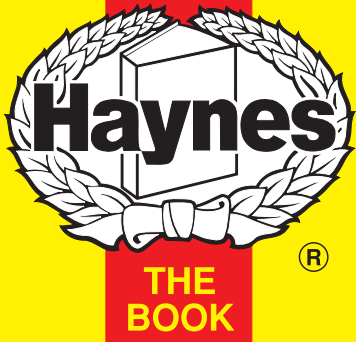
Electrical

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Capacities

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Automotive Technical
DATA BOOK

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Engine and cooling system

Astra/Belmont 1.3S

1984 to 1990

Type		13S(C) SOHC. 55kW. 15.04
Capacity (cm ³) / number of cylinders		1297 / 4
Compression ratio / pressure	bar	9.2 / _
Oil pressure	bar	1.5
Oil temperature	°C	80
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	92
Radiator cap pressure	bar	1.2 to 1.5

Fuel system

Astra/Belmont 1.3S

1984 to 1990

Idle speed - manual [auto]	rpm	900 to 950 [800 to 850]
Fast idle speed - manual [auto]	rpm	2100 to 2500 [2400 to 2800]
CO @ idle speed [3000 rpm] - see page VI	%	1.0 to 1.5. 88 ►: 0.5 to 1.0
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		Solex/Pierburg
Type / ref		2E3
Main jet / needle		97.5, 112.5
Injection pressure	bar	_
Pump pressure	bar	0.18 to 0.25
Octane rating	RON	98[RA] ¹

Ignition system

Astra/Belmont 1.3S

1984 to 1990

Type		HEI
Ignition coil		Delco Remy
Primary resistance	ohms	0.3 to 0.6
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		AC Delco
Points gap (air gap)	mm	_
Dwell angle	° (%)	Electronic control
Condenser capacity	µF	_
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	10±2 BTDC @ idle ¹
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	0 to 1 @ 1000
	° Crankshaft @ rpm	9 to 14 @ 1800
	° Crankshaft @ rpm	18 to 22 @ 4200
Vacuum range check	mbar	MT: 100 to 240 ²
Maximum vacuum advance	° Crankshaft	MT: 12.5 to 16.5 ²
Spark plugs		AC/Champion
Type		CR42CXLS / RN7YC
Electrode gap	mm	0.70 to 0.80

Electrical system

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Battery	V / CC / RC	12 / 175 / 130 or 210 / 150
Alternator voltage / full load current / engine rpm		14.5±0.25 / _ / 3500
Starter motor current / voltage - cranking	A / V	360 to 440 / 9 to 13
- locked	A / V	380 to 460 / 8 to 8.2

Running gear

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1984 to 1990

Brakes -		
Front (min. friction material thickness)	mm	7.0 with backing
Rear (min. friction material thickness)	mm	0.5 above rivets

Tyres		
Saloon	Size	155x13: 165x13: 175/70x13 ³
Estate / Van	Size	155x13: 165x13: 175/70x13
Pressure - front / rear - Saloon	bar	1.8 / 1.6
- Estate / Van	bar	1.8 / 1.8 ⁴

Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	-2.0 to 0 L
Camber		-1°15' to +15'
Castor		+45' to 2°45'. Est: 0 to +2°
King pin inclination		_

Rear suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	[-10' to +40']
Camber		-30'±30'

Torque wrench settings

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Cylinder head - stage 1	Nm	25 N
- stage 2	Nm	+ 60°
Cylinder head - stage 3	Nm	+ 60°
- stage 4	Nm	+60°
Big-end bearings	Nm	28 ⁶
Main bearings	Nm	50 + 45° to 60°
Clutch cover	Nm	15
Flywheel [driveplate]	Nm	60 LkC
Front hubs	Nm	WSM
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	90
Spark plugs	Nm	25

Capacities

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Engine oil & filter	litres	3.0
Gearbox - 4-speed [5-speed]	litres	1.7 [1.8]
Automatic transmission - refill	litres	6.3
Final drive	litres	WT
Cooling system	litres	7.0
Fuel tank	litres	42' Est/Van: 50

Notes and Illustrations

¹Retard ignition by 3°. 89 ►: [E 95 RON]

²AT: 120 to 200 @ 6 to 10°

³175/65x14

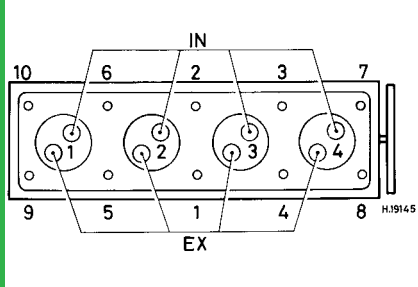
⁴Astramax: 1.8 / 2.2

⁶40mm bolt: 25 + 30°

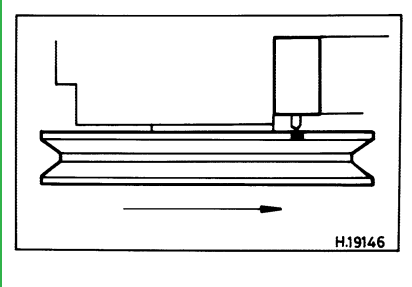
⁷86 ►: 52

1: Idle speed

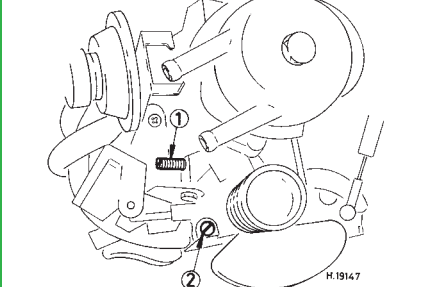
2: CO / Mixture



1297 cm³



1297 cm³



Solex / Pierburg 2E3