

VAUXHALL/OPEL

Astra-F 2.0i 16V CAT

1991 to 1997

Engine & Cooling

Fuel

Ignition

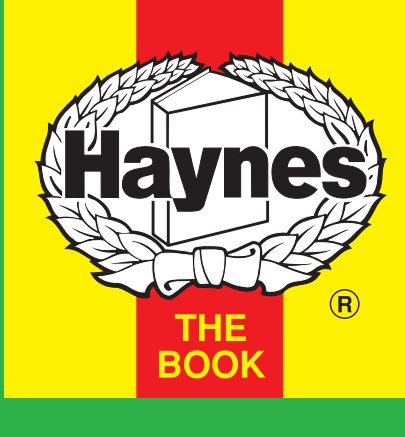
Electrical

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Automotive Technical
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Engine and cooling system

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Type		C20XE 16V 110kW 91/441/EC
Capacity (cm³) / number of cylinders		1998 / 4
Compression ratio / pressure	bar	10.5 / _
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

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Idle speed - manual [auto]	rpm	860 to 1020
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	1.5±0.5 WSM
HC @ idle speed [3000 rpm] - see page VI	ppm	≤200
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		Bosch
Type / ref		M2.5-Motronic. 93 ►: M2.8
Main jet / needle		_
Injection pressure	bar	_
Pump pressure	bar	3.0
Octane rating	RON	95[U]

Ignition system

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Type		DME Motronic ¹
Ignition coil		Bosch 90 241 775 ¹
Primary resistance	ohms	0.20 to 0.34
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Bosch
Points gap (air gap)	mm	_
Dwell angle	° (%)	Electronic control
Condenser capacity	µF	_
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	14 to 18 BTDC @ 860 to 1020N/A
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Vacuum range check	mbar	Computer control
Maximum vacuum advance	° Crankshaft	_
Spark plugs		Bosch/Champion ²
Type		FR8LDC / RC9MCC
Electrode gap	mm	0.70 to 0.80

Electrical system

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Battery	V / CC / RC	12 / 44Ah
Alternator voltage / full load current / engine rpm		14.1 to 14.9 / 70, 100 / 3000
Starter motor current / voltage - cranking	A / V	75 / 11.5
- locked	A / V	430 to 550 / 3.2

Running gear

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

Tyres		
Saloon	Size	205/50x15: 195/60x14 ³
Estate / Van	Size	195/60x14: 195/55x15
Pressure - front / rear - Saloon	bar	2.4 / 2.1
- Estate / Van	bar	2.2 / 2.0

Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	-2.5 to -0.5 L
Camber		-1°5'±45' N/A
Castor		+2°15'±1°N/A
King pin inclination		_

Rear suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	-1.0 to +4.0
Camber		-1°40'±30' N/A

Torque wrench settings

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Cylinder head - stage 1	Nm	25 N
- stage 2	Nm	+90°
Cylinder head - stage 3	Nm	+90°
- stage 4	Nm	+90°
Big-end bearings	Nm	35 + 45° +15° N
Main bearings	Nm	50 + 40° +15° N
Clutch cover	Nm	15
Flywheel [driveplate]	Nm	65 + 30° +15° N
Front hubs	Nm	WSM
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	110
Spark plugs	Nm	25

Capacities

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Engine oil & filter	litres	4.5
Gearbox - 4-speed [5-speed]	litres	1.9
Automatic transmission - refill	litres	_
Final drive	litres	WT
Cooling system	litres	6.9
Fuel tank	litres	52

Notes and Illustrations

¹93 ►: Static DIS, with twin coils

²93 ►: Bosch FR8LDC

³185/55x15: 195/55x15

