

VAUXHALL/OPEL

Cavalier/Vectra-A 2000 16V

1989 to 1991

Engine & Cooling

Fuel

Ignition

Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical
DATA BOOK

Click on one of the buttons above to view data for this car. To return to this screen and make another choice, click anywhere on the data screen.

MENU

HELP

Engine and cooling system

Cavalier/Vectra-A 2000 16V

1989 to 1991

Type		20XEJ DOHC 16V. 110kW. 15.04
Capacity (cm ³) / number of cylinders		1998 / 4
Compression ratio / pressure	bar	10.5 / _
Oil pressure	bar	2.5
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	91 to 107
Radiator cap pressure	bar	1.20 to 1.35

Fuel system

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1989 to 1991

Idle speed - manual [auto]	rpm	860 to 1020
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	0.7 to 1.2
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		Bosch
Type / ref		Motronic M2.5, knock control
Main jet / needle		_
Injection pressure	bar	2.0 to 2.2
Pump pressure	bar	2.3 to 2.7
Octane rating	RON	98[E 95 RON]

Ignition system

Cavalier/Vectra-A 2000 16V

1989 to 1991

Type		DME Motronic
Ignition coil		Bosch
Primary resistance	ohms	0.2 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 @ idle N/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
Type		FR7DC / RC6YC
Electrode gap	mm	0.70 to 0.80

Electrical system

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1989 to 1991

Battery	V / CC / RC	12 / 210 / 65
Alternator voltage / full load current / engine rpm		14.5±0.25 / 70, 90 / 3500
Starter motor current / voltage - cranking	A / V	35 to 80 / 10.6 to 11.5
- locked	A / V	350 to 820 / 4.5 to 8.6

Running gear

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1989 to 1991

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

Tyres		
Saloon	Size	195/60x15: 205/55x15
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.4 / 2.2
- Estate / Van	bar	_

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[-15'±10']
Camber		-40'±45' L
Castor		+2°±1° L
King pin inclination		_

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[-25'+30'-20']
Camber		-2°10'±40'

Torque wrench settings

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1989 to 1991

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 + 45° +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

Cavalier/Vectra-A 2000 16V

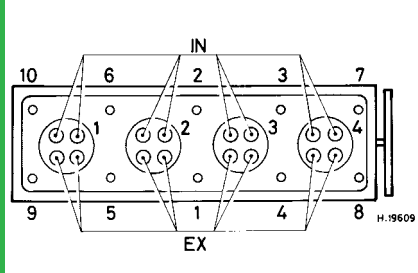
1989 to 1991

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	7.2
Fuel tank	litres	65

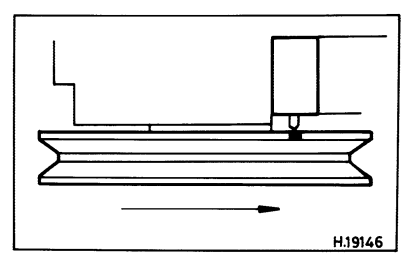
Notes and Illustrations

1: Idle speed

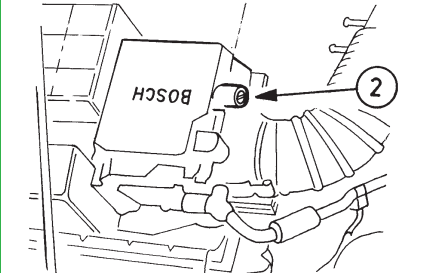
2: CO / Mixture



1998 cm³, 16V



1998 cm³, 20XEJ



M2.5-Motronic