

VAUXHALL/OPEL

Cavalier/Vectra-A 1.6i

1993 to 1995

Engine & Cooling

Fuel

Ignition

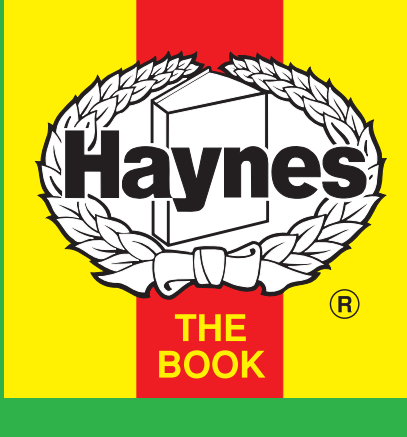
Electrical

Running gear

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Capacities

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Automotive Technical
DATA BOOK

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Engine and cooling system		Cavalier/Vectra-A 1.6i	1993 to 1995
Type		X16SZ SOHC. 52kW 94/12/EC	
Capacity (cm ³) / number of cylinders		1598 / 4	
Compression ratio / pressure	bar	10.0 / _	
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	91 to 107	
Radiator cap pressure	bar	1.20 to 1.35	

Fuel system		Cavalier/Vectra-A 1.6i	1993 to 1995
Idle speed - manual [auto]	rpm	770 to 930	
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		GM	
Type / ref		Rochester Multec-ZE CFI	
Main jet / needle		_	
Injection pressure	bar	0.76	
Pump pressure	bar	_	
Octane rating	RON	95[U]	

Ignition system		Cavalier/Vectra-A 1.6i	1993 to 1995
Type		Multec-DIS	
Ignition coil		Dual spark	
Primary resistance	ohms	0.56±0.05	
Ballast resistor	ohms	_	
Voltage - Tmnl 15(+) to earth	V	_	
Distributor		_	
Points gap (air gap)	mm	_	
Dwell angle	° (%)	Electronic control	
Condenser capacity	µF	_	
Rotation		_	
Ignition timing - basic [static	° Crankshaft @ rpm	N/A	
V = Vacuum NV = No Vacuum		_	
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		WR7DC / RN7YC	
Electrode gap	mm	0.70 to 0.80	

Electrical system		Cavalier/Vectra-A 1.6i	1993 to 1995
Battery	V / CC / RC	12 / 210 / 65	
Alternator voltage / full load current / engine rpm		14.1 to 14.9 / 70 / 4000	
Starter motor current / voltage - cranking	A / V	75 / 11.5 no load	
- locked	A / V	430 to 600 / 3.5	

Running gear		Cavalier/Vectra-A 1.6i	1993 to 1995
Brakes -			
Front (min. friction material thickness)	mm	7.0 with backing	
Rear (min. friction material thickness)	mm	0.5 above rivets	

Tyres			
Saloon	Size	175/70x14: 195/60x14:195/60x14	
Estate / Van	Size	_	
Pressure - front / rear - Saloon	bar	2.0 / 1.8	
- 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		_	

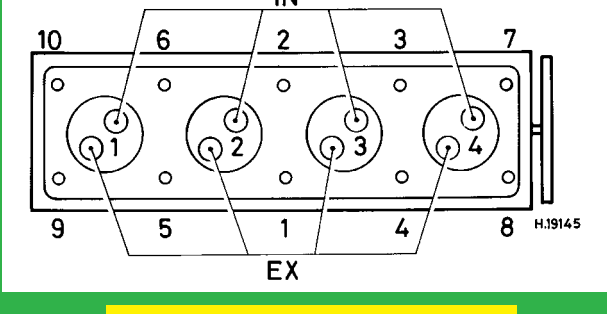
Rear suspension / wheel alignment			
Toe-in (+) / Toe-out (-)	mm [°]	[-10'+30'-20']	
Camber		-1°40'±30'	

Torque wrench settings		Cavalier/Vectra-A 1.6i	1993 to 1995
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 ¹	
Main bearings	Nm	50 + 45° +15° N	
Clutch cover	Nm	15	
Flywheel [driveplate]	Nm	35 + 30° +15° N [60]	
Front hubs	Nm	WSM	
Rear hubs	Nm	WSM	
Wheel nuts / bolts	Nm	110	
Spark plugs	Nm	25	

Capacities		Cavalier/Vectra-A 1.6i	1993 to 1995
Engine oil & filter	litres	3.5	
Gearbox - 4-speed [5-speed]	litres	1.6	
Automatic transmission - refill	litres	_	
Final drive	litres	WT	
Cooling system	litres	5.8 [AT: 5.6]	
Fuel tank	litres	61	

Notes and Illustrations

140mm bolt: 28 +30° N



1598 cm³, 8V