

VAUXHALL/OPEL

Cavalier/Vectra-A 1.6i & CAT

1988 to 1995

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 1.6i & CAT

1988 to 1995

Type		E16NZ SOHC. 55kW. 15.05 ¹
Capacity (cm ³) / number of cylinders		1598 / 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	91 to 107
Radiator cap pressure	bar	1.20 to 1.35

Fuel system

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Idle speed - manual [auto]	rpm	720 to 880. C16NZ2: 800 to 960
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	1.0 to 1.5. CAT: ≤0.4
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		GM
Type / ref		Multec-ZE CFI
Main jet / needle		_
Injection pressure	bar	0.76
Pump pressure	bar	_
Octane rating	RON	95[E 95 RON] ²

Ignition system

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Type		Multec-MSTS-i
Ignition coil		Bosch
Primary resistance	ohms	_
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Bosch
Points gap (air gap)	mm	_
Dwell angle	° (%)	Electronic control
Condenser capacity	µF	_
Rotation		_
Ignition timing - basic [static	° Crankshaft @ rpm	10 BTDC @ idle. C16: 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		AC/Champion
Type		CR42CXLS / RN7YC
Electrode gap	mm	0.70 to 0.80

Electrical system

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Battery	V / CC / RC	12 / 210 / 65
Alternator voltage / full load current / engine rpm		13.6 to 14.0 / 55-100 / 3000
Starter motor current / voltage - cranking	A / V	40 to 65 / 10.6
- locked	A / V	400 to 500 / 7.0 to 8.2

Running gear

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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: 195/60x14:195/60x15
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	89: 1.9 / 1.9 91: 1.8 / 1.6
- 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

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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 ³
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

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1988 to 1995

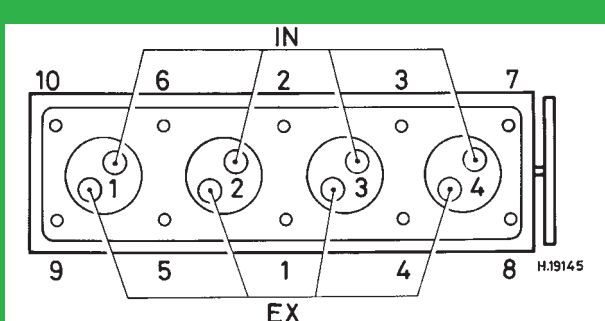
Engine oil & filter	litres	3.5
Gearbox - 4-speed [5-speed]	litres	1.6
Automatic transmission - refill	litres	3.0 to 3.5
Final drive	litres	WT
Cooling system	litres	5.8 [AT: 5.6]
Fuel tank	litres	61

Notes and Illustrations

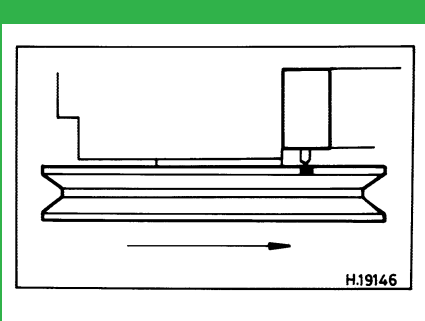
¹E16NZ: ►90 only. CAT: C16NZ, US83. 93 ►, Vauxhall only C16NZ2, US83

²CAT: 95 [U]

³40mm bolt: 28 +30° N



1598 cm³, 8V



1598 cm³, 8V, not DIS