

VAUXHALL/OPEL

Kadett/Astra/Belmont 1.6 CAT¹

1987 to 1993

Engine & Cooling

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Automotive Technical
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Engine and cooling system

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Type		C16NZ SOHC. 55kW. US83
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	95
Radiator cap pressure	bar	1.2 to 1.5

Fuel system

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Idle speed - manual [auto]	rpm	720 to 880
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		Multec-ZE CFI
Main jet / needle		_
Injection pressure	bar	0.75
Pump pressure	bar	_
Octane rating	RON	95[U]

Ignition system

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Type		Multec-MSTS-i
Ignition coil		Delco. Bosch
Primary resistance	ohms	0.6 to 0.9
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
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		WR7DC / RN7YC
Electrode gap	mm	1.10

Electrical system

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Battery	V / CC / RC	12 / 175 / 130
Alternator voltage / full load current / engine rpm		14.5±0.25 / _ / 3500
Starter motor current / voltage - cranking	A / V	_
- locked	A / V	475 to 600 / 12

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	175/70x13: 185/60x14
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	1.8 / 1.6 ²
- Estate / Van	bar	_

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	-2.0 to 0 L
Camber		-1°15' to +15'
Castor		+45' to 2°45'
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	25 + 30° to 45° ⁴
Main bearings	Nm	50 + 45° to 60°
Clutch cover	Nm	15
Flywheel [driveplate]	Nm	35 + 30° to 45°
Front hubs	Nm	WSM
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	90
Spark plugs	Nm	25

Capacities

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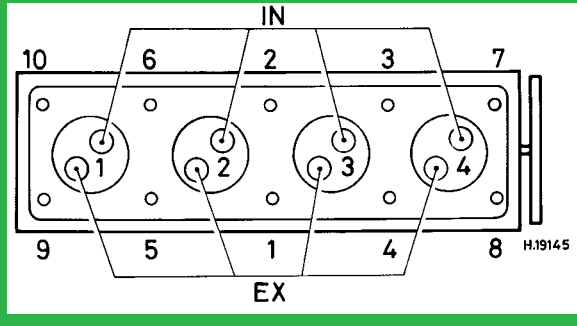
Engine oil & filter	litres	3.5
Gearbox - 4-speed [5-speed]	litres	1.8
Automatic transmission - refill	litres	2.0
Final drive	litres	WT
Cooling system	litres	6.4 [AT: 6.2]
Fuel tank	litres	52

Notes and Illustrations

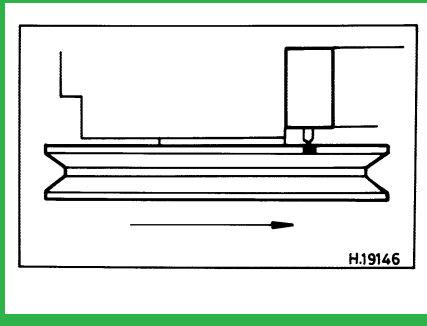
¹92 ►: Convertible only

²185/60x14: 1.7 / 1.7

⁴40mm bolt: 25 + 30°



1598 cm³, 8V



1598 cm³