

Engine & Cooling	Fuel	Ignition	Electrical	Running gear	Torque settings	Capacities	Notes & Illustrations
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# Automotive Technical DATA BOOK

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HELP

## Engine and cooling system Cavalier/Ascona 1.3 1984 to 1988

Type		13S SOHC. 55kW. 15.04
Capacity (cm <sup>3</sup> ) / number of cylinders		1297 / 4
Compression ratio / pressure	bar	9.2 / _
Oil pressure	bar	1.5
Oil temperature	°C	60
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	1.30 to 1.35

## Fuel system Cavalier/Ascona 1.3 1984 to 1988

Idle speed - manual [auto]	rpm	900 to 950 [800 to 850]
Fast idle speed - manual [auto]	rpm	2300±200 [2600±200]
CO @ idle speed [3000 rpm] - see page VI	%	1.0 to 1.5. 88: 0.5 to 1.0
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	_
O <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		Pierburg
Type / ref		2E3
Main jet / needle		97.5, 112.5
Injection pressure	bar	_
Pump pressure	bar	0.25 to 0.36
Octane rating	RON	98[RA] <sup>1</sup>

## Ignition system Cavalier/Ascona 1.3 1984 to 1988

Type		HEI
Ignition coil		Delco-Remy 3 474 221
Primary resistance	ohms	0.3 to 0.6
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 BTDC @ idle
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	0 to 1 @ 1000
	° Crankshaft @ rpm	9 to 14 @ 1800
	° Crankshaft @ rpm	18 to 22 @ 4200
Vacuum range check	mbar	100 to 240 <sup>2</sup>
Maximum vacuum advance	° Crankshaft	12.5 to 16.5 <sup>2</sup>
Spark plugs		AC/Champion
Type		CR42CXLS / RN7YC
Electrode gap	mm	0.70 to 0.80

## Electrical system Cavalier/Ascona 1.3 1984 to 1988

Battery	V / CC / RC	12 / 175 / 60
Alternator voltage / full load current / engine rpm		13.6 to 14.5 / _ / 2000
Starter motor current / voltage - cranking	A / V	360 to 440 / 7.8 to 9.6 (AC)
- locked	A / V	380 to 460 / 8.0 (Bosch)

## Running gear Cavalier/Ascona 1.3 1984 to 1988

<b>Brakes -</b>		
Front (min. friction material thickness)	mm	7.0 with backing
Rear (min. friction material thickness)	mm	0.5 above rivets

<b>Tyres</b>		
Saloon	Size	155x13: 165x13
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.0 / 1.8 <sup>3</sup>
- Estate / Van	bar	_

<b>Front suspension / wheel alignment</b>		
Toe-in (+) / Toe-out (-)	mm [°]	+1.0 to 3.0
Camber		-1°15' to +15'
Castor		0 to +2°
King pin inclination		_

<b>Rear suspension / wheel alignment</b>		
Toe-in (+) / Toe-out (-)	mm [°]	+2.0 to 6.0
Camber		0 to -1°

## Torque wrench settings Cavalier/Ascona 1.3 1984 to 1988

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
Main bearings	Nm	65
Clutch cover	Nm	15
Flywheel [driveplate]	Nm	60
Front hubs	Nm	100 <sup>4</sup>
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	90
Spark plugs	Nm	25

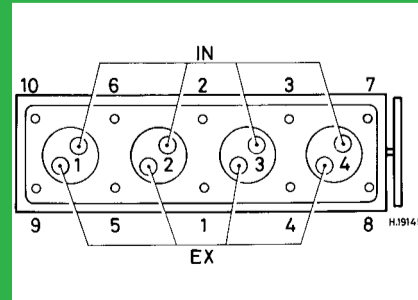
## Capacities Cavalier/Ascona 1.3 1984 to 1988

Engine oil & filter	litres	3.0
Gearbox - 4-speed [5-speed]	litres	2.0
Automatic transmission - refill	litres	7.0
Final drive	litres	WT
Cooling system	litres	6.3 [AT: 7.1] <sup>5</sup>
Fuel tank	litres	61

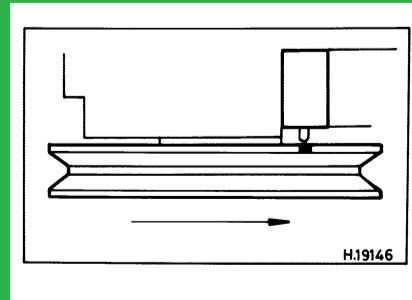
## Notes and Illustrations

- <sup>1</sup>Retard ignition by 3°
- <sup>2</sup>MT. AT: 120 to 200 @ 6° to 10°
- <sup>3</sup>165x13: 1.9 / 1.7
- <sup>4</sup>Slacken, then 20 + 90°
- <sup>5</sup>1987 ▶: 6.7

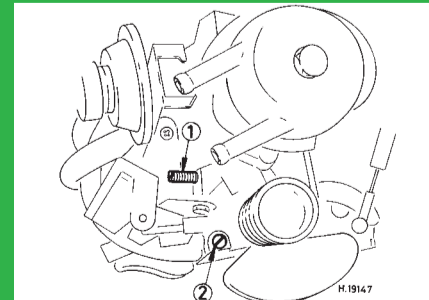
1: Idle speed      2: CO / Mixture



1297 cm<sup>3</sup>



1297 cm<sup>3</sup>



Pierburg 2E3