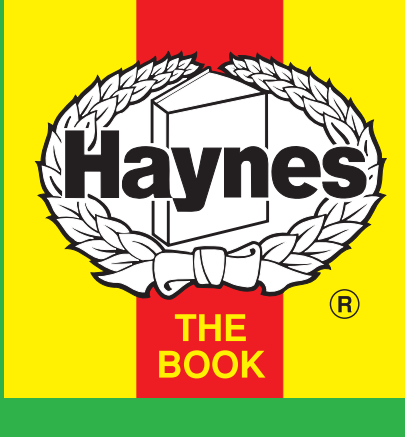


Engine & Cooling	Fuel	Ignition	Electrical	Running gear	Torque settings	Capacities	Notes & Illustrations
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Automotive Technical
DATA BOOK

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
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Engine and cooling system9000 2.3 Turbo CAT1993

Type		B234R DOHC 16V turbo 166kW
Capacity (cm³) / number of cylinders		2290 / 4
Compression ratio / pressure	bar	8.5 / _
Oil pressure	bar	[2.7]
Oil temperature	°C	80
Valve clearance - inlet	mm	0: Hyd.
- exhaust	mm	0: Hyd.
Firing order		1-3-4-2
No 1 cylinder position		TCE
Thermostat opening temperature	°C	89±2
Radiator cap pressure	bar	0.8 to 1.2

Fuel system9000 2.3 Turbo CAT1993

Idle speed - manual [auto]	rpm	875
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	1.0±0.5
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		Saab
Type / ref		Trionic
Main jet / needle		_
Injection pressure	bar	3.0
Pump pressure	bar	3.0
Octane rating	RON	91[U]

Ignition system9000 2.3 Turbo CAT1993

Type		Direct electronic
Ignition coil		Saab
Primary resistance	ohms	_
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		_
Points gap (air gap)	mm	_
Dwell angle	° (%)	_
Condenser capacity	µF	_
Rotation		_
Ignition timing - basic [static	° Crankshaft @ rpm	Computer control
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		NGK
Type		BCPR7ES
Electrode gap	mm	1.00+0.1-0.2

Electrical system9000 2.3 Turbo CAT1993

Battery	V / CC / RC	12 / 60Ah
Alternator voltage / full load current / engine rpm		13.9 to 14.8 / 80 / 2500
Starter motor current / voltage - cranking	A / V	_
- locked	A / V	_

Running gear9000 2.3 Turbo CAT1993

Brakes -		
Front (min. friction material thickness)	mm	4.0
Rear (min. friction material thickness)	mm	4.0

Tyres		
Saloon	Size	205/50x16
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	WSM
- Estate / Van	bar	_

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	+1.5±0.5
Camber		-0.65°±0.5°
Castor		+1.65°±0.5°
King pin inclination		+11.3°±0.5°

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	+2.5±1.5
Camber		-0.5°±0.25°

Torque wrench settings9000 2.3 Turbo CAT1993

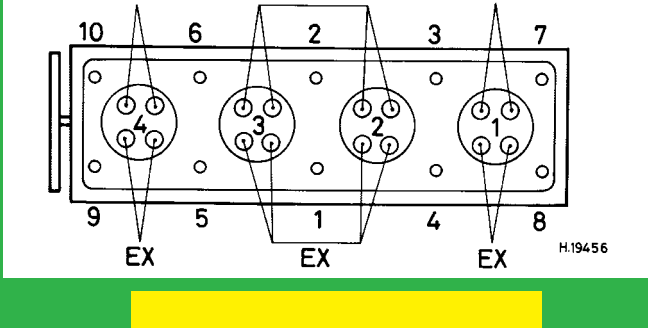
Cylinder head - stage 1	Nm	60
- stage 2	Nm	80
- stage 3	Nm	+90°
- stage 4	Nm	_
Big-end bearings	Nm	48
Main bearings	Nm	110
Clutch cover	Nm	22±2
Flywheel [driveplate]	Nm	60 ¹
Front hubs	Nm	280 to 300
Rear hubs	Nm	290±10
Wheel nuts / bolts	Nm	115±10
Spark plugs	Nm	28

Capacities9000 2.3 Turbo CAT1993

Engine oil & filter	litres	4.3
Gearbox - 4-speed [5-speed]	litres	2.5
Automatic transmission - refill	litres	3.0 to 3.5
Final drive	litres	WT
Cooling system	litres	9.0
Fuel tank	litres	66

Notes and Illustrations

¹19mm head bolts: 85



2290 cm³