Automotive Technical DATA BOOK

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MENU HELP

Engine and cooling system — Celica 2.0 & CAT (ST182) 1990 to 1994

Type		3S-GE DOHC 16V 115kW
Capacity (cm³) / number of cylinders		1998 / 4
Compression ratio / pressure	bar	10.0 / ≥9.8
Oil pressure	bar	[2.5 to 4.9]
Oil temperature	ºC	80
Valve clearance - inlet	mm	0.15 to 0.25
- exhaust	mm	0.20 to 0.30
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	ºC	80 to 84
Radiator cap pressure	bar	0.74 to 1.03

Fuel system — Celica 2.0 & CAT (ST182) 1990 to 1994

Idle speed - manual [auto]	rpm	800±50 N/A
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	1.0±0.5. CAT: 0 to 0.5 N/A
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		Toyota
Type / ref		MPI Electronic TCCS
Main jet / needle		_
Injection pressure	bar	_
Pump pressure	bar	2.7 to 3.0
Octane rating	RON	95[E 95 RON][1]

Ignition system — Celica 2.0 & CAT (ST182) 1990 to 1994

Type		Computerized
Ignition coil		_
Primary resistance	ohms	0.4 to 0.5
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		_
Points gap (air gap)	mm	[0.20 to 0.40]
Dwell angle	º (%)	_
Condenser capacity	µF	_
Rotation		Clockwise
Ignition timing - basic [static	º Crankshaft @ rpm	10±2 BTDC @ 800±50[2]
V = Vacuum NV = No Vacuum		NV
Total ignition advance	º Crankshaft @ rpm	CAT: 7 to 21 BTDC @ 800±50
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Centrifugal check.	º Crankshaft @ rpm	Computer control
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Vacuum range check	mbar	Computer control
Maximum vacuum advance	º Crankshaft	_
Spark plugs		NGK/Champion
Type		BKR6EYA / RC7YCC[3]
Electrode gap	mm	0.80

Electrical system — Celica 2.0 & CAT (ST182) 1990 to 1994

Battery	V / CC / RC	12 / 32Ah
Alternator voltage / full load current / engine rpm		13.9 to 15.1 / 70 / 2000
Starter motor current / voltage - cranking	A / V	90 / 11.5 (no load)
- locked	A / V	_

Running gear — Celica 2.0 & CAT (ST182) 1990 to 1994

Brakes -		
Front (min. friction material thickness)	mm	1.0
Rear (min. friction material thickness)	mm	1.0
Tyres		
Saloon	Size	205/60x14: 205/55x15
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.1 / 2.1
- Estate / Van	bar	_
Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	0±1.0
Camber		-10'±45'
Castor		+1°±45'
King pin inclination		+14°10'±45'
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	+5.0±1.0
Camber		-45'±30'

Torque wrench settings — Celica 2.0 & CAT (ST182) 1990 to 1994

Cylinder head - stage 1	Nm	20
- stage 2	Nm	49
- stage 3	Nm	+ 90°
- stage 4	Nm	_
Big-end bearings	Nm	67
Main bearings	Nm	59
Clutch cover	Nm	19
Flywheel [driveplate]	Nm	108 [83]
Front hubs	Nm	186
Rear hubs	Nm	123
Wheel nuts / bolts	Nm	103
Spark plugs	Nm	18

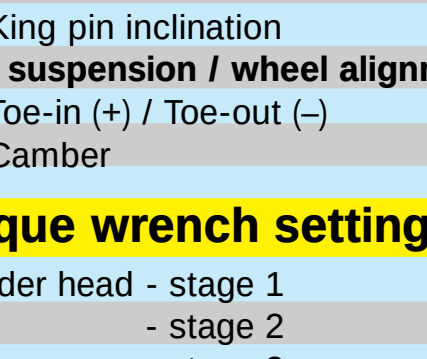
Capacities — Celica 2.0 & CAT (ST182) 1990 to 1994

Engine oil & filter	litres	3.9
Gearbox - 4-speed [5-speed]	litres	2.6
Automatic transmission - refill	litres	3.3
Final drive	litres	AT: 1.1
Cooling system	litres	6.0 [6.5]
Fuel tank	litres	60

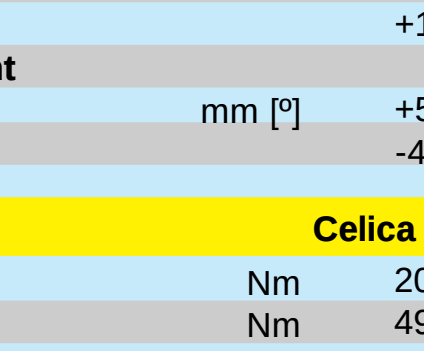
Notes and Illustrations

[1]**CAT: 95 [U]**
[2]**TE1 & E1 shorted. CAT: 10 BTDC @ 800±50**
[3]**CAT: NGK: BKR6EP8**

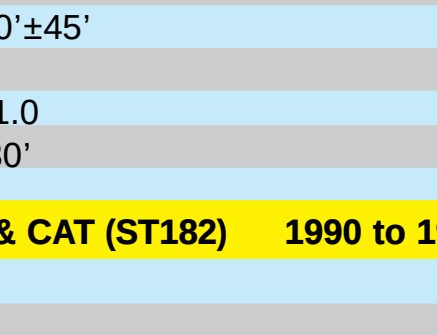
1: Idle speed 2: CO / Mixture



1998 cm³



1998 cm³, 3S-GE



EFi, 3S-GE, not CAT