

TOYOTA

Celica 2.0 & CAT (ST182)

1990 to 1994

Engine & Cooling

Fuel

Ignition

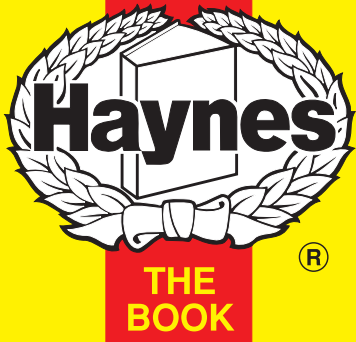
Electrical

Running gear

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Capacities

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Automotive Technical
DATA BOOK

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Engine and cooling system			Celica 2.0 & CAT (ST182)	1990 to 1994
Type			3S-GE DOHC 16V 115kW	
Capacity (cm ³) / number of cylinders			1998 / 4	
Compression ratio / pressure	bar		10.0 / ≥9.8	
Oil pressure	bar		[2.5 to 4.9]	
Oil temperature	°C		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	°C		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	° (%)		—	
Condenser capacity	µF		—	
Rotation			Clockwise	
Ignition timing - basic [static	° Crankshaft @ rpm		10±2 BTDC @ 800±50 ²	
V = Vacuum NV = No Vacuum			NV	
Total ignition advance	° Crankshaft @ rpm		CAT: 7 to 21 BTDC @ 800±50	
	° 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/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 [°]		0±1.0	
Camber			-10'±45'	
Castor			+1°±45'	
King pin inclination			+14°10'±45'	

Rear suspension / wheel alignment				
Toe-in (+) / Toe-out (–)	mm [°]		+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	

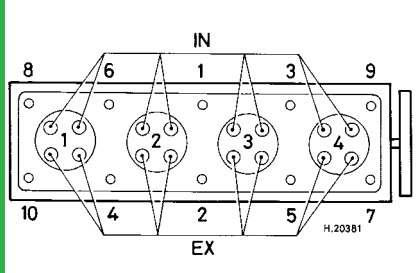
Capacities			Celica 2.0 & CAT (ST182)	1990 to 1994
Engine oil & filter	litres		3.9	
Gearbox - 4-speed [5-speed]	litres		2.6	
Automatic transmission - refill	litres		3.3	
Final drive	litres		AT: 1.1	
Cooling system	litres		6.0 [6.5]	
Fuel tank	litres		60	

Notes and Illustrations

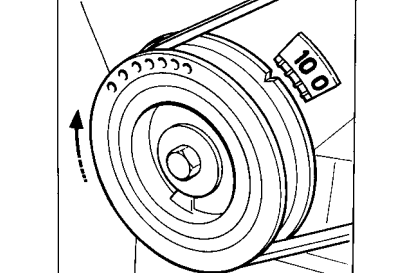
¹CAT: 95 [U]
²TE1 & E1 shorted. CAT: 10 BTDC @ 800±50
³CAT: NGK: BKR6EP8

1: Idle speed

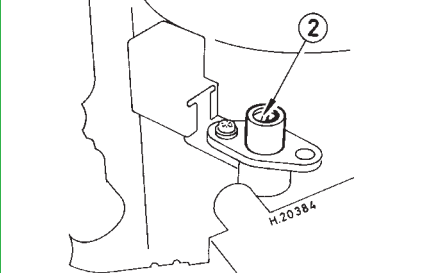
2: CO / Mixture



1998 cm³



1998 cm³, 3S-GE



EFi, 3S-GE, not CAT