

SERVICE MANUAL

MODEL
A10 & A12
ENGINE

SECTION EG

EG

ENGINE GENERAL

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NISSAN MOTOR CO., LTD.
TOKYO, JAPAN

EXTERNAL VIEWS OF ENGINES



Fig. EG-1 A12 engine for F10 series model



Fig. EG-2 A12 engine for B210 series model

Engine General

MAIN SPECIFICATIONS

Engine model			A10	A12		
Car model			F10		B210	B120
Number of cylinders, in line			4			
Valve arrangement			O.H.V.			
Bore x stroke	mm (in)	73.0 x 59.0 (2.87 x 2.32)		73.0 x 70.0 (2.87 x 2.76)		
Compression ratio			9.0 : 1			
Displacement	cc (cu in)	988 (60.3)		1,171 (71.5)		
Firing order			1-3-4-2			
Number of main bearings			3		5	
Capacities liters (U.S. qts., Imper. qts.)	Oil pan	Maximum (H level)	3.2 (3 $\frac{3}{8}$, 2 $\frac{3}{8}$)			
		Minimum (L level)	2.2 (2 $\frac{3}{8}$, 1 $\frac{1}{8}$)			
	Cooling system	With heater	5.4 (5 $\frac{3}{8}$, 4 $\frac{3}{4}$) *1		5.1 (5 $\frac{3}{8}$, 4 $\frac{1}{2}$) *3	4.9 (5 $\frac{3}{16}$, 4 $\frac{3}{8}$) *5
		Without heater	4.8 (5 $\frac{1}{8}$, 4 $\frac{1}{4}$) *2		4.4 (4 $\frac{5}{8}$, 3 $\frac{3}{8}$) *4	4.3 (4 $\frac{1}{2}$, 3 $\frac{3}{4}$) *6

Note: On models equipped with radiators designed for use in tropical areas, cooling system capacities are as follows:

*1	5.8 (5 $\frac{1}{8}$, 5 $\frac{3}{8}$)	*3	5.5 (5 $\frac{3}{8}$, 4 $\frac{7}{8}$)	*5	5.4 (5 $\frac{3}{8}$, 4 $\frac{3}{4}$)
*2	5.2 (5 $\frac{1}{2}$, 4 $\frac{5}{8}$)	*4	4.8 (5 $\frac{1}{8}$, 4 $\frac{1}{4}$)	*6	4.8 (5 $\frac{1}{8}$, 4 $\frac{1}{4}$)

VEHICLE REFERENCE

This section covers engines and the various models in which they are installed.

For complete details on vehicles, also refer to the Service Manuals separately prepared for the "Chassis

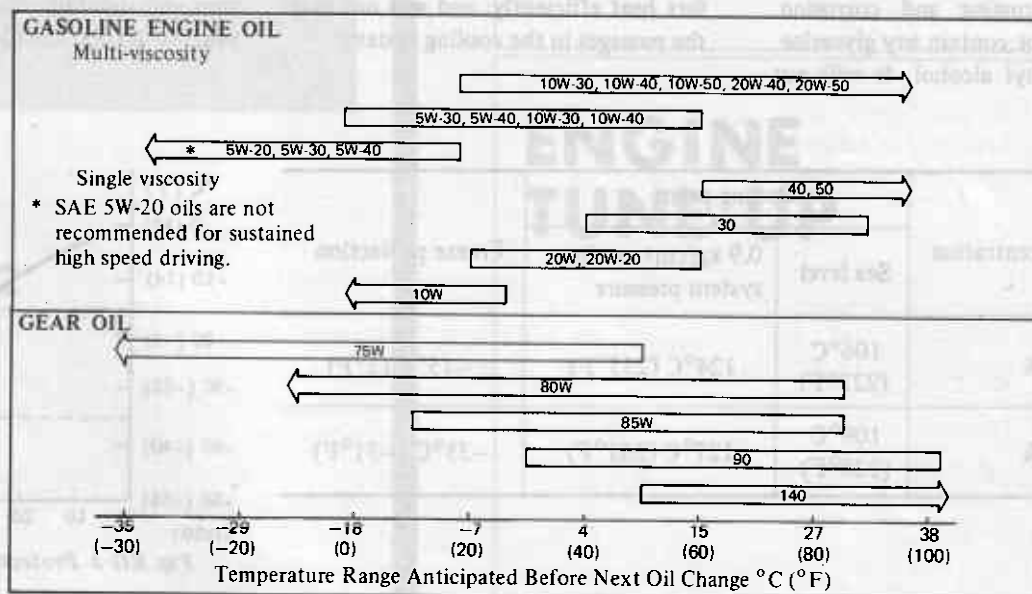
and Body". The table that follows lists the vehicles in which the A10 or A12 engine is installed.

Engine model	Class	Car name	Car model			
			R.H. drive		L.H. drive	
			Common countries	Europe	Common countries	Europe
A10	Sedan	DATSUN 100A F-II	BF10SRU	BF10SRY	BLF10SR	BLF10SRY
			BF10SU	BF10RY	BLF10S	BLF10RY
			BF10U	BF10Y	BLF10	BLF10Y
	Station Wagon		WBF10SU	WBF10Y	WBLF10S	WBLF10Y
	Sedan	DATSUN 120A F-II	—	F10RY	—	LF10RY
			F10U	F10Y	LF10	LF10Y
	Coupe		KF10U	KF10Y	KLF10	KLF10Y
	Pick-up	DATSUN PICK-UP 1200	B120STU	—	LB120ST	—
A12	Sedan	DATSUN 120Y	B210SRU	—	—	—
			B210STRU	*B210STRX	LB210STR	LB210STRY
			B210RU	—	—	—
			B210TRU	—	LB210TR	LB210TRY
			B210ARU	—	LB210AR	LB210ARY
			B210SU	—	—	—
			B210STU	—	LB210ST	LB210STY
			B210U	—	—	—
			B210TU	*B210TX	LB210T	LB210TY
			B210AU	*B210AX	LB210A	LB210AY
	Coupe		KB210U	*KB210X	KLB210	KLB210Y
			KB210AU	*KB210AX	KLB210A	KLB210AY
	Van		VB210STRU	—	VLB210STR	VLB210STRY
			—	—	VLB210TR	VLB210TRY
			VB210SU	—	—	—
			VB210STU	VLB210STX	VLB210ST	VLB210STY
			VB210U	—	—	—
			VB210TU	—	VLB210T	VLB210TY

*Australia only

RECOMMENDED LUBRICANTS, PETROL (FUEL) AND COOLANT

RECOMMENDED SAE VISCOSITY NUMBER



RECOMMENDED LUBRICANTS

Item		Specifications	Remarks
Engine oil	Gasoline	SAE Classification SD or SE (MIL-L-2104B)	Refer to Recommended SAE Viscosity Chart
	Transmission and Steering	API GL-4 (MIL-L-2105)	
Multi-purpose grease		N.L.G.I. 2	Lithium soap base
Brake and Clutch fluid		DOT 3 (F.M.V.S.S. No. 116)	F.M.V.S.S.: Federal Motor Vehicle Safety Standard
Antifreeze		—	Permanent antifreeze (Ethylene glycol base)

PETROL (FUEL)

Engine model	Compression ratio	Octane No. of petrol
A10	9.0 : 1	More than 88
A12		

NISSAN LONG LIFE COOLANT (L.L.C.)

This L.L.C. is an ethylene glycol based product containing chemical inhibitors to protect the cooling system against rusting and corrosion. L.L.C. does not contain any glycerine, ethyl or methyl alcohol. It will not

evaporate or boil away and can be used with either high or low temperature thermostat. It flows freely, transfers heat efficiently, and will not clog the passages in the cooling system.

L.L.C. must not be mixed with any other product. This coolant can be used throughout the seasons of the year and should be changed every two years or 40,000 km (24,000 miles).

Percent concentration	Boiling point		Freeze protection
	Sea level	0.9 kg/cm ² cooling system pressure	
30%	106°C (223°F)	124°C (255°F)	-15°C (5°F)
50%	109°C (228°F)	127°C (261°F)	-35°C (-31°F)

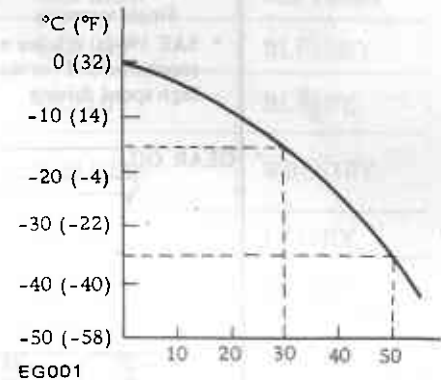
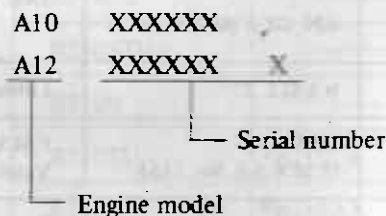


Fig. EG-3 Protection concentration

UNIT SERIAL NUMBER LOCATION

There are two serial numbers for unit identification: engine number and chassis number. These numbers are indicated on the car identification plate located in an easy-to-read position.



ENGINE SERIAL NUMBER

The engine serial number is stamped on the right rear side of cylinder block, at cylinder head contact surface.

The number is preceded by engine model designation, A10 or A12.

Note: The letter following the A12-engine Serial Number is used only for administration purposes of the engine at assembly plant.

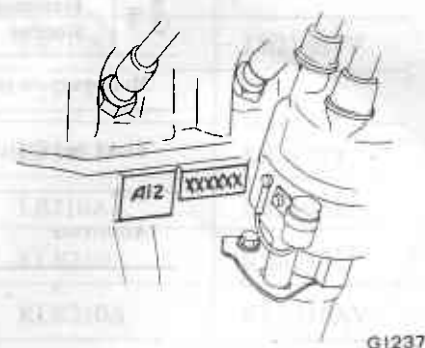


Fig. EG-4 Engine serial number location