

SERVICE MANUAL

MODEL
L13, L16 & L20
ENGINE



NISSAN MOTOR CO., LTD.

TOKYO, JAPAN

SERVICE MANUAL

MODEL
L13, L16 & L20
ENGINES



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FOREWORD

This service manual has been prepared for the purpose of assisting service personnel of our distributors and dealers for effective service and maintenance of model L series engines.

Since proper maintenance and service are most essential to satisfy our customers by keeping their cars in the best condition, this manual should be carefully studied. The followings should be noted for effective utilization of this manual.

1. Since only the informations concerning the engine are described herein, please refer to both this and the DATSUN 510 SERVICE MANUAL and DATSUN 2000 SERVICE MANUAL for complete details of the car.
2. All the parts names in this manual conform to both DATSUN 510 PARTS CATALOG and DATSUN 2000 PARTS CATALOG, and only the genuine service parts listed in these parts catalogs should be used as replacements.
3. All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication approval.
4. It is emphasised that those who use this manual revise the contents according to the SERVICE JOURNAL issued by the factory, which carries the latest factory approved servicing method.
5. Rights for alternation in specifications and others at any time are reserved.

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SERVICE MANUAL

MODEL L SERIES
ENGINE



SECTION EG

ENGINE GENERAL

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EXTERNAL VIEW OF ENGINE

External view of model L13, L16 engine

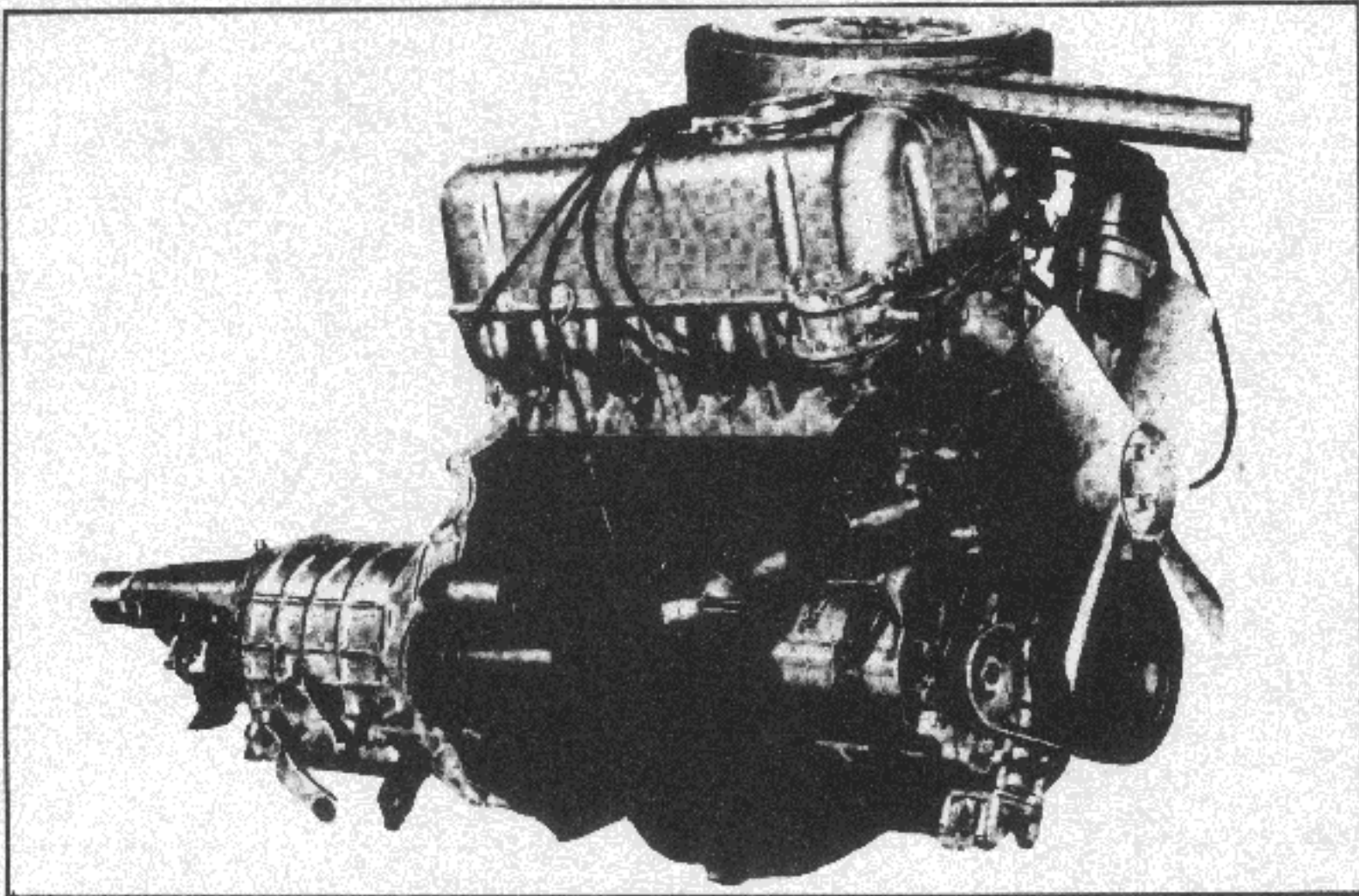


Fig. EG-1 Right hand side

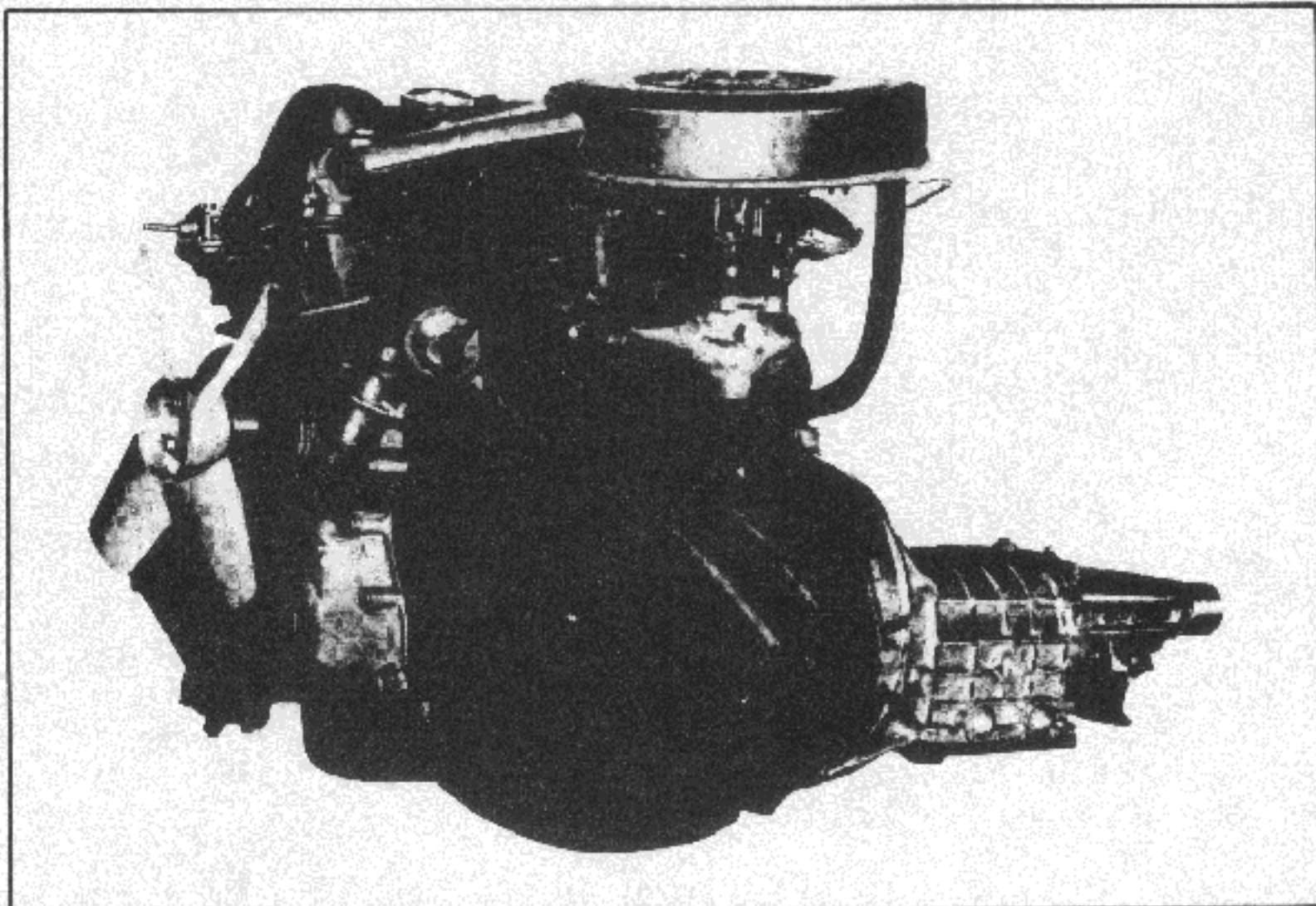


Fig. EG-2 Left hand side

ENGINE

External view of model L16 engine
(SU carburetor)

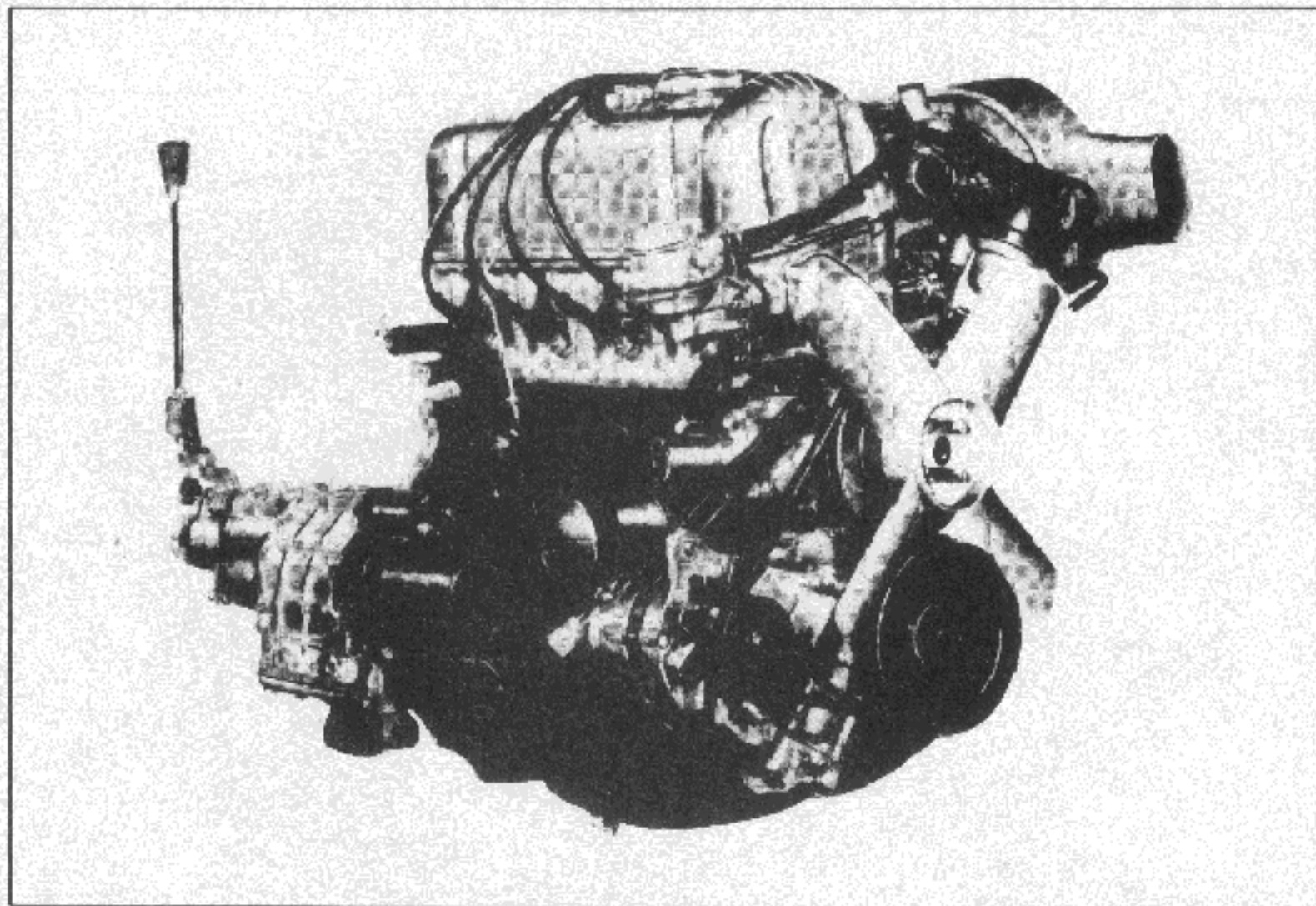


Fig. EG-3 Right hand side

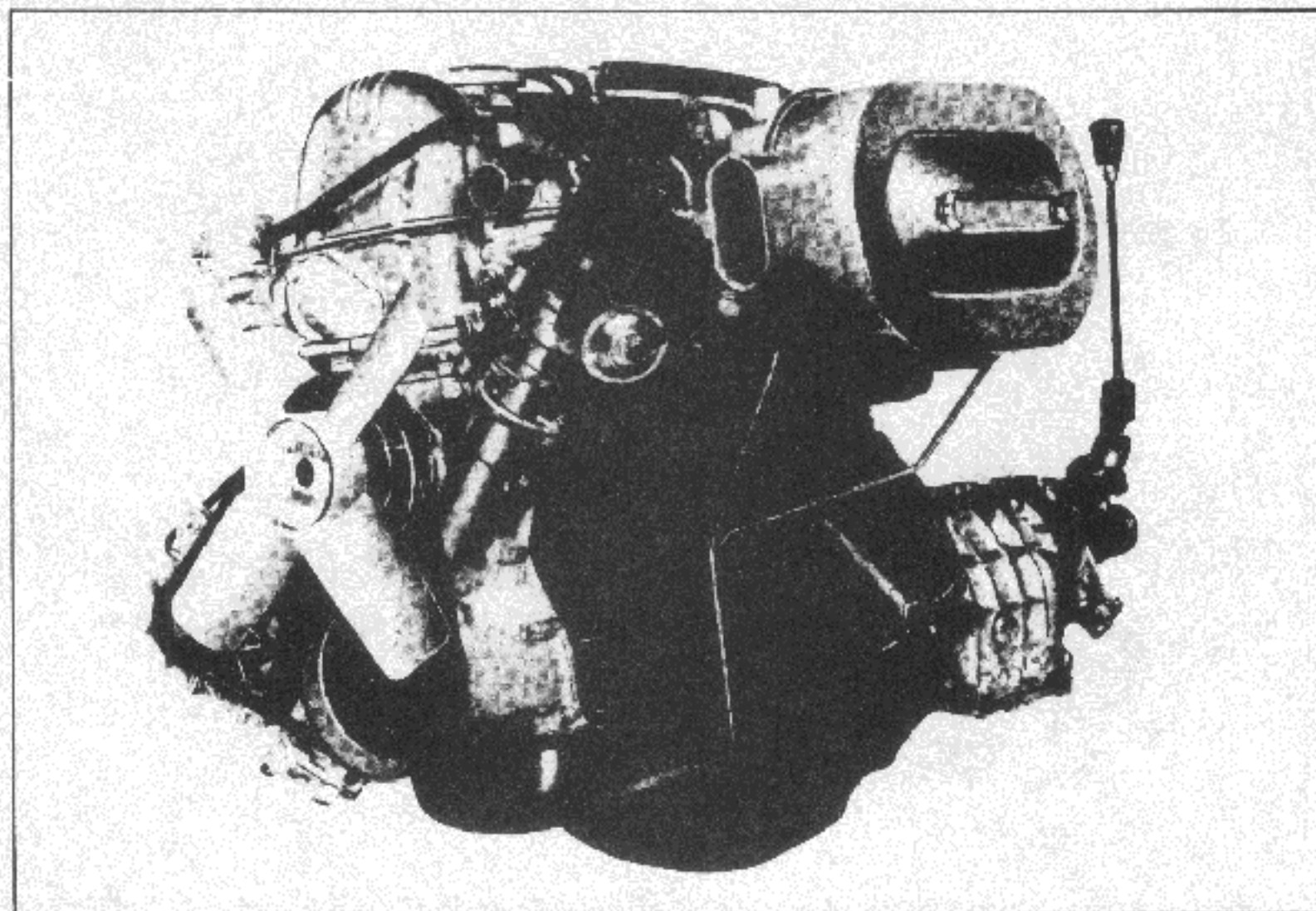


Fig. EG-4 Left hand side

ENGINE GENERAL

External view of model L20 engine

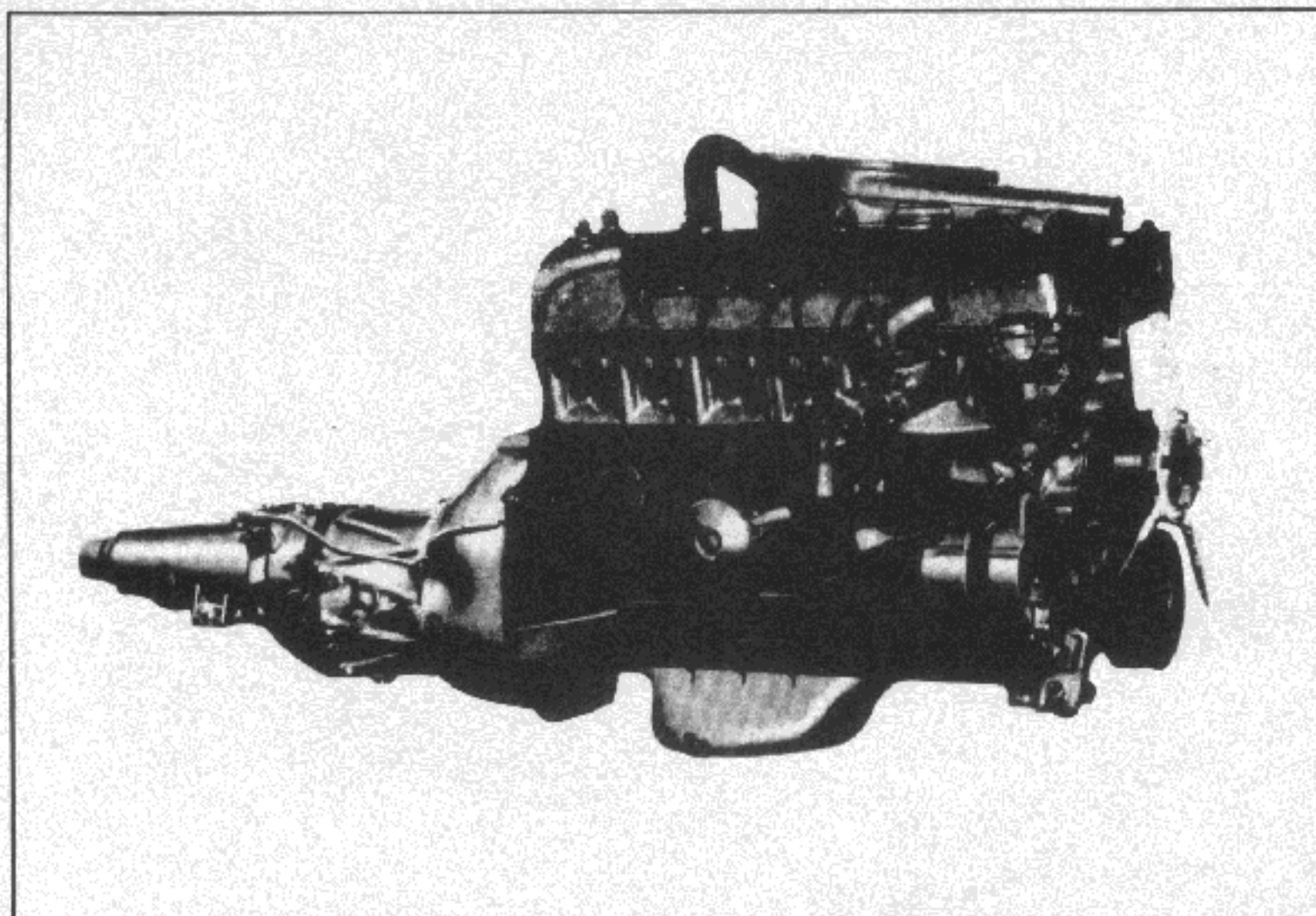


Fig. EG-5 Right hand side

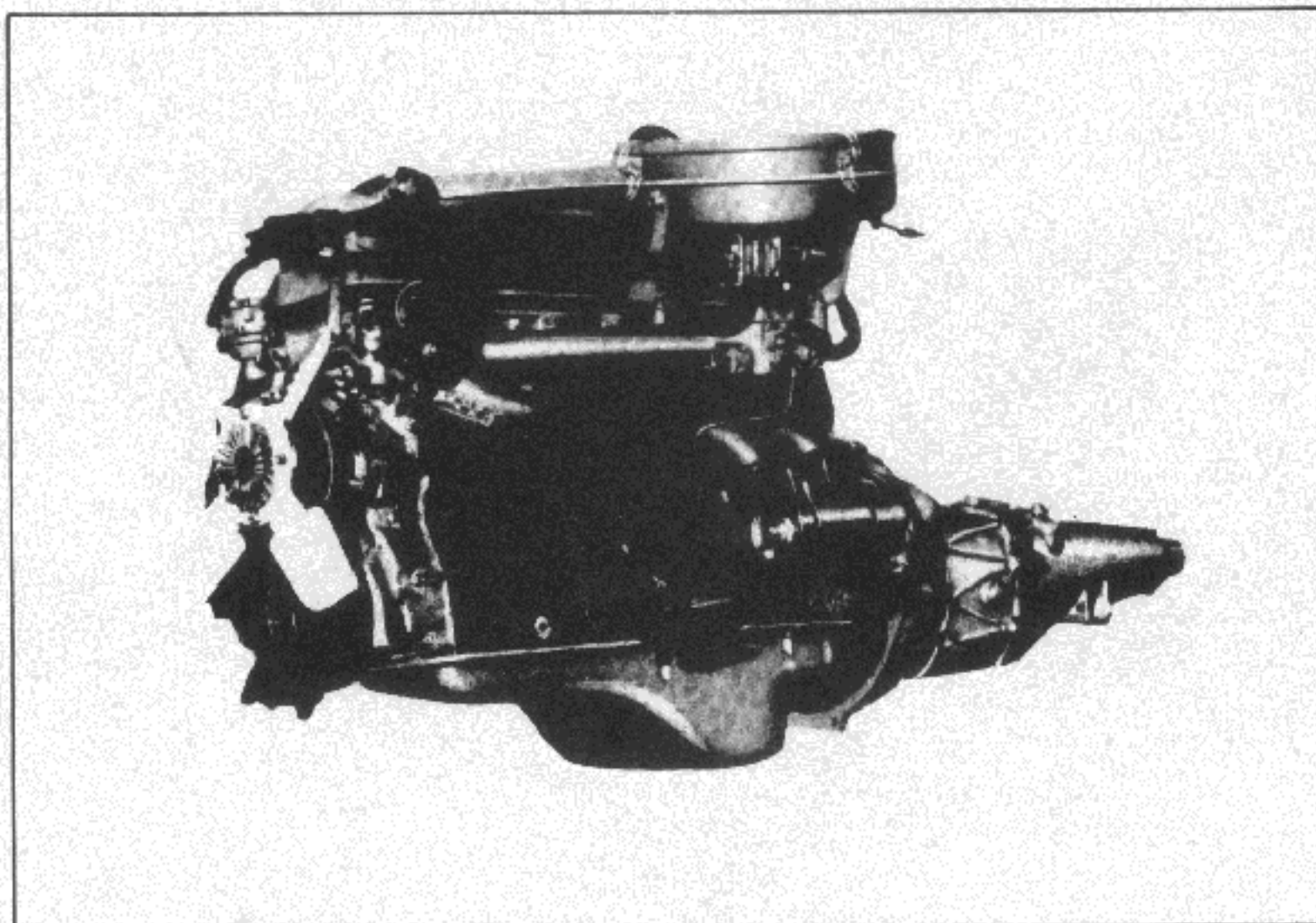


Fig. EG-6 Left hand side

ENGINE

External view of model L20 engine
(SU carburetor)

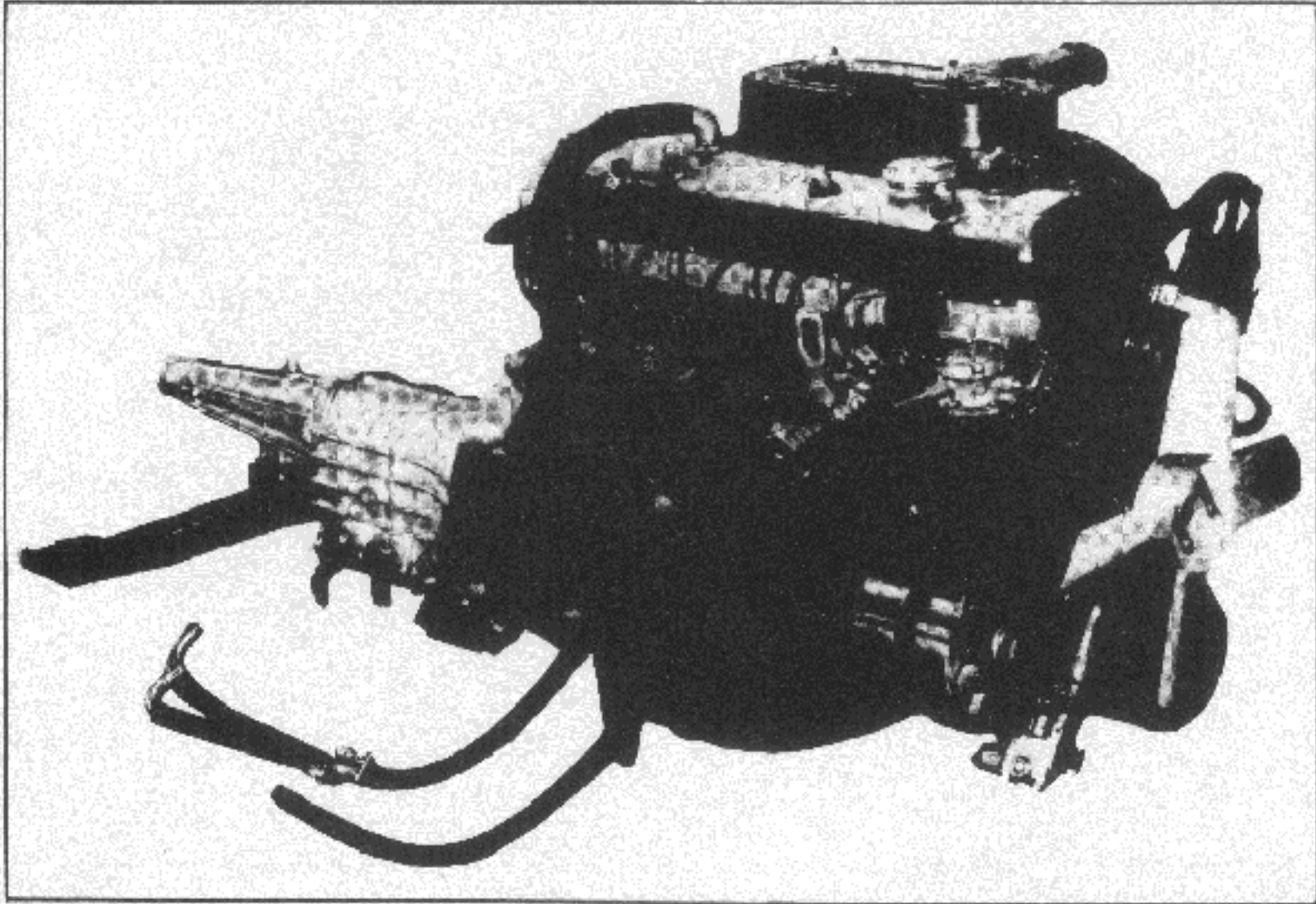


Fig. EG-7 Right hand side

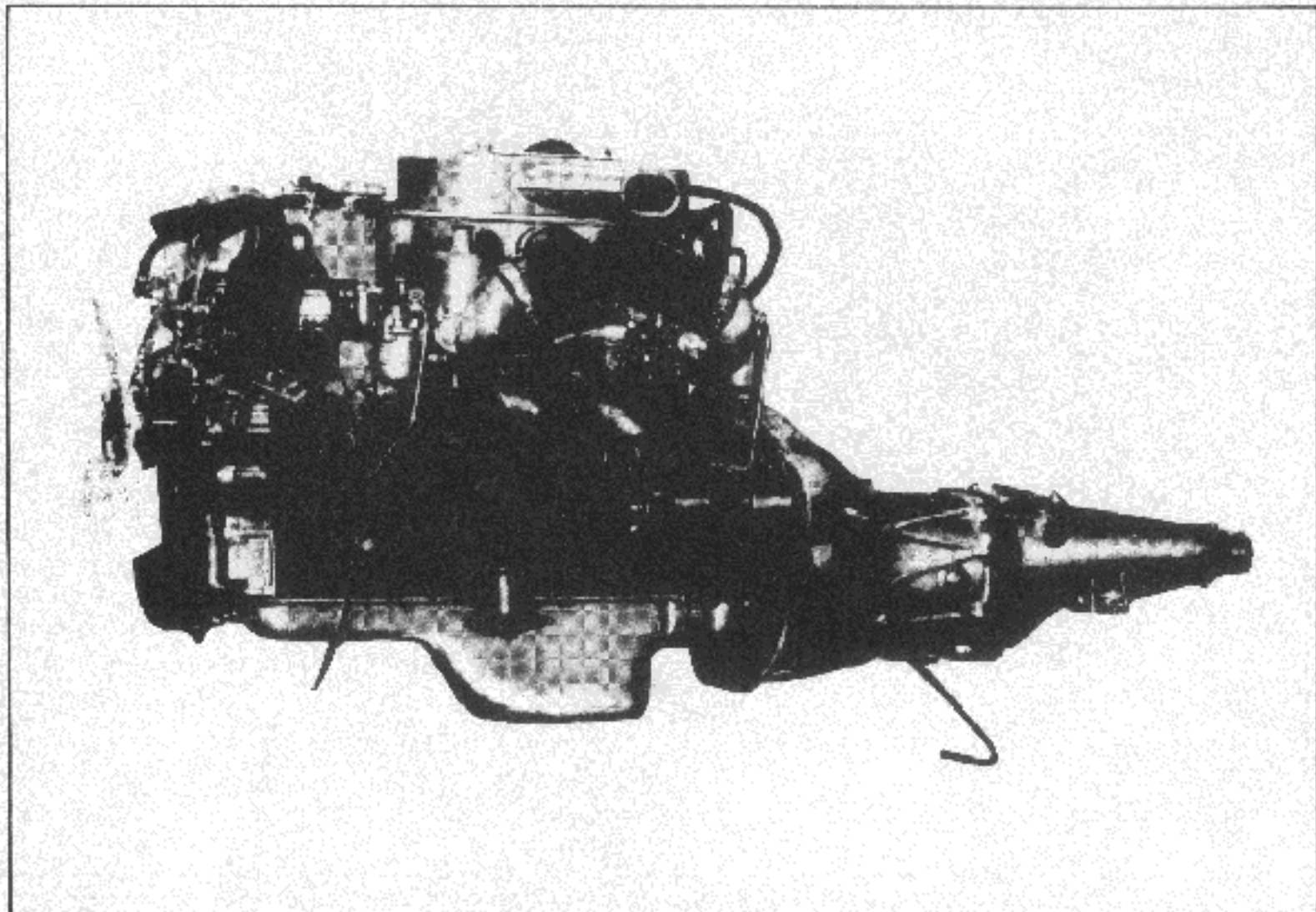


Fig. EG-8 Left hand side

ENGINE GENERAL

MAIN SPECIFICATIONS

Engine model		L13	L16	L16 (SU carb.)	L20	L20 (SU carb.)
Number of cylinders, in line		4	4	4	6	6
Valve arrangement		OHC	OHC	OHC	OHC	OHC
Bore	mm (in.)	83 (3.2677)	83 (3.2677)	83 (3.2677)	78 (3.0709)	78 (3.0709)
Stroke	mm (in.)	59.9 (2.358)	73.7 (2.902)	73.7 (2.902)	69.7 (2.744)	69.7 (2.744)
Displacement	c. c. (cu. in.)	1,296 (79.1)	1,595 (97.3)	1,595 (97.3)	1,998 (121.9)	1,998 (121.9)
Compression ratio		8.5 : 1	8.5 : 1	9.5 : 1	8.5 : 1	9.0 : 1
Maximum power, SAE	HP at r. p. m.	77 6,000	96 5,600	109 6,000	112 5,600	123 5,600
Maximum torque, SAE	m-kg (ft-lb.) at r. p. m.	11.1 (80.3) 3,600	13.8 (99.8) 3,600	14.3 (103.4) 4,000	16.7 (120.8) 3,600	17.3 (125.1) 4,400
Capacities	Oil pan (*)	4.0	4.0	4.0	4.0	4.0
	U. S. qts/U. K. qts	4.2/3.5	4.2/3.5	4.2/3.5	4.2/3.5	4.2/3.5
	Coolant	6.4	6.4	6.4	9.5	9.5
	U. S. qts/U. K. qts	6.8/5.6	6.8/5.6	6.8/5.6	10.0/8.4	10.0/8.4

(*) The table specifies the quantity of oil which is required for periodic oil replacement, when oil filter is not replaced. Should also the filter be replaced, the total quantity is about 4.7 ℓ (5.0 U. S. qts/4.0 U. K. /qts).

VEHICLE REFERENCE

As only the informations concerning power plant are described herein, please refer to both this and each manual for chassis and body for

complete details of the car.

The vehicles on which L13, L16 and L20 engines are installed are as follows:

Vehicle			Engine	
Model	Name	Model	Displacement	
510 series	Sedan, standard & deluxe	Datsun 1300	L13 1,300 c. c.	
P510 series	Sedan, standard & deluxe	Datsun 1600	L16 1,600 c. c.	
P(L)510-(U)TK	Sedan, SSS	Datsun 1600	L16 (Twin) 1,600 c. c.	
WP510 series	Wagon	Datsun 1600	L16 1,600 c. c.	
H130V series	Sedan, custom six	Datsun 2000	L20 2,000 c. c.	
H130B series	Sedan, super six	Datsun 2000	L20 2,000 c. c.	
H130 series	Sedan, super six	Datsun 2000	L20 (Twin) 2,000 c. c.	

ENGINE

RECOMMENDED LUBRICANTS, PETROL AND COOLANT

Use the following grades of oil, gasoline and coolant.

Temperature	Engine oil (MS)
Above 32° C (90° F) average	SAE 30, 10W-30
32° to 0° C (90° to 32° F) - minimum	SAE 20, 20W, 10W-30
0° to -12° C (32° to 10° F) - minimum	SAE 10W, 10W-30
Below -12° C (10° F) - minimum	SAE 10W, 10W-30

Recommended lubricants

Lubricants		Maker						
		Shell	Mobil	Caltex	Esso	BP	Castrol	Lubricating points
Engine Oil	Multi-grade	Shell Super Motor Oil Shell × -100 10W-30	Mobiloil Special HD 10W-30	Havoline Custom made 10W-30	Esso Extra Motor Oil 10W-30 20W-40	BP Viscostatic Longlife Motor Oil or Viscostatic Motor Oil	Castrolite 10W-30	Engine Carburetor linkage Distributor shaft
	Single-grade	Shell × -100 30, 20 20W, 10W	Mobiloil Arctic or Mobil-oil A or AF	Havoline or RPM Motor Oil HD	Esso Motor Oil, 30, 10W, 20W	BP H. D. Motor Oil	Castrol 20HD 30HD	
Multi-purpose Grease		Shell Retinax A	Mobil Grease	Marfak	Esso Multi-purpose Grease or Beacon	BP Energrease L2	Castro-lease LM	Distributor cam heel

Engine model	Compression ratio	Octane No. of fuel
L13	8.5 : 1	85
L16	8.5 : 1	85
L16 (TWIN)	9.5 : 1	95
L20	8.5 : 1	85
L20 (TWIN)	9.0 : 1	95