BARNES

SERVICE MANUAL

DATSUN 1000

MODEL B10 SERIES

NISSAN MOTOR CO., LTD. TOKYO, JAPAN

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NISSAN MOTOR CO., LTD.

6-17-1 GINZA CHUOKU
TOKYO, JAPAN

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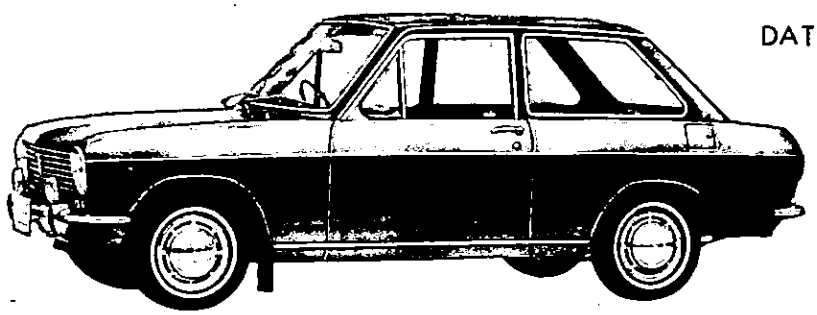
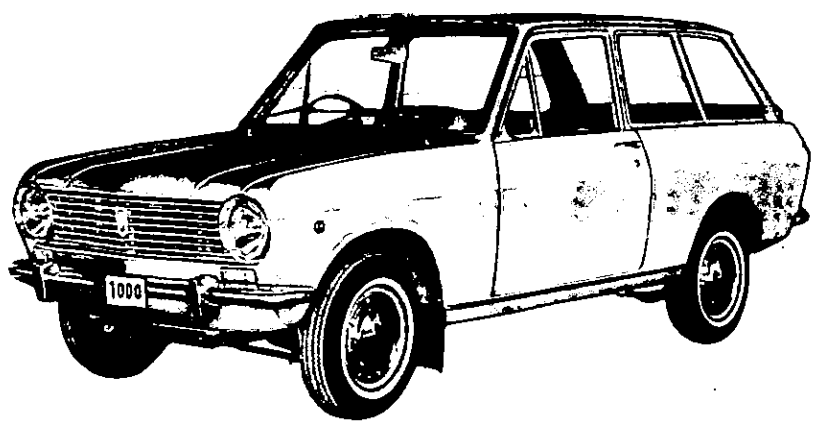
INTRODUCTION

This manual has been complies for purpose of assisting DATSUN 1000 distributors and dealers for effective service and maintenance of the Model B10 Series. Each assembly of the major components is described in detail. In addition, comprehensive instructions are given for complete dismantling, assembling and inspection of these assemblies.

It is emphasised that only genuine DATSUN 1000 Spare Parts should be used as replacements.



DATSUN 1000 MODEL B10



DATSUN 1000 MODEL VB10

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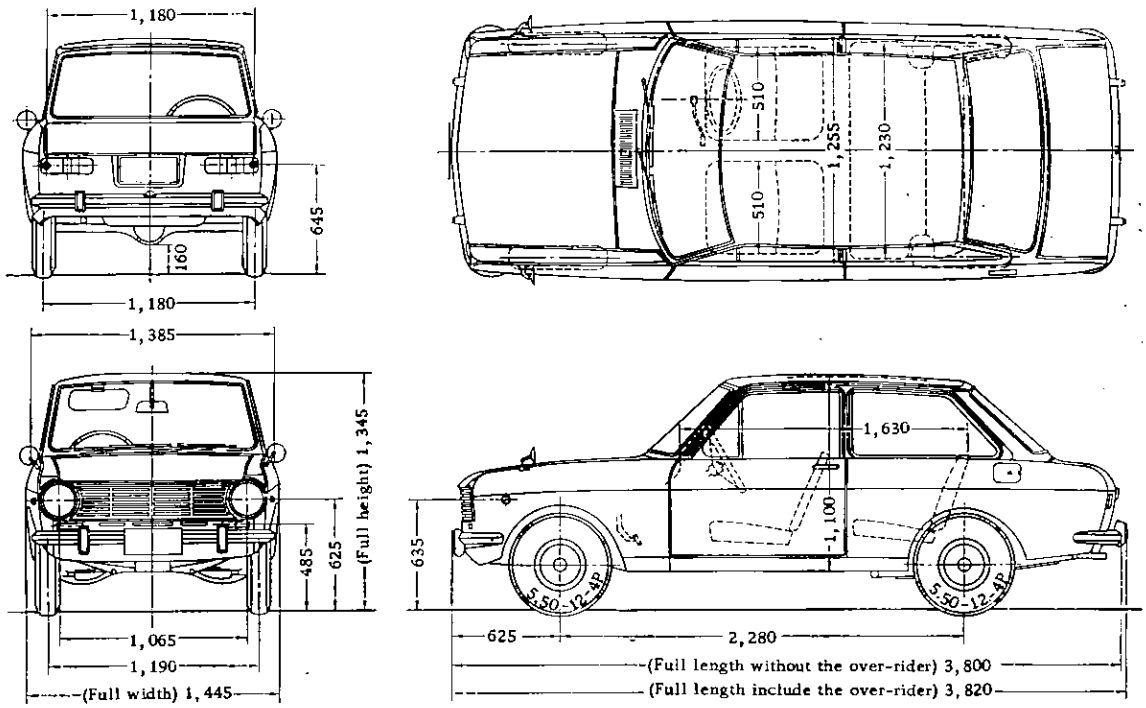
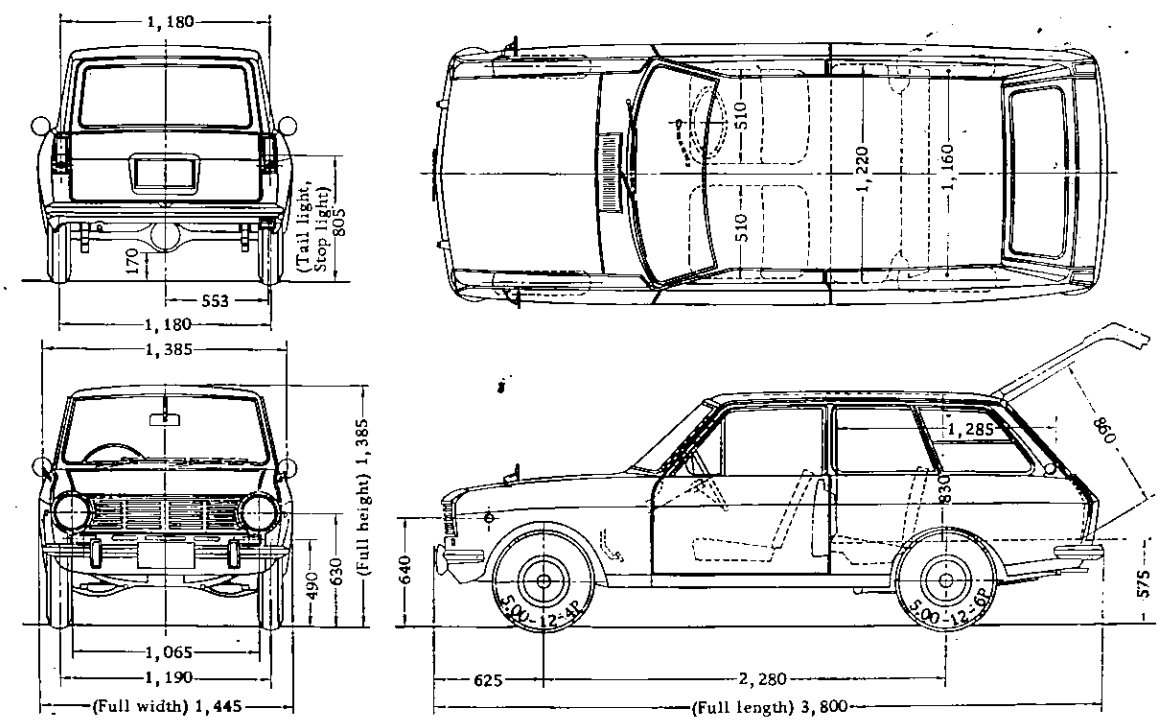
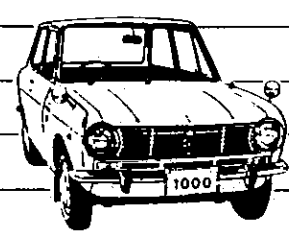


GENERAL VIEWS OF VB10



These specifications are subject to change without notice.

DATSUN 1000



GENERAL SPECIFICATIONS

ITEM \ MODEL		B10		VB10	
		S.T.D.	Deluxe	S.T.D.	Deluxe
Overall length		3,800 mm (149.6 in.)	3,820 mm (150.4 in.)	3,800 mm (149.6 in.)	3,820 mm (150.4 in.)
Overall width		1,445 mm (56.9 in.)		1,445 mm (56.9 in.)	
Overall height		1,345 mm (53.0 in.)		1,385 mm (54.5 in.)	
Wheel base		2,280 mm (89.8 in.)		2,280 mm (93.7 in.)	
Room space	I.L.	1,630 mm (64.2 in.)		1,285 mm (50.6 in.)	
	I.W.	1,255 mm (48.2 in.)		1,160 mm (45.7 in.)	
	I.H.	1,100 mm (43.3 in.)		830 mm (32.7 in.)	
Tread	Front	1,190 mm (46.9 in.)		1,190 mm (46.9 in.)	
	Rear	1,180 mm (46.6 in.)		1,180 mm (46.6 in.)	
Min. road clea.		160 mm (6.3 in.)		170 mm (6.7 in.)	
O.H. to the F.E. w/o.B.		580 mm (22.8 in.)		585 mm (23.0 in.)	
O.H. to the R.E. w/o.B.		875 mm (3.4 in.)		850 mm (3.3 in.)	
Vehicle weight		625 kg (1378 lb.)	645 kg (1422 lb.)	645 kg (1422 lb.)	665 kg (1466 lb.)
Max. I.A.	Right	49°		49°	
	Left	49°		49°	
Max. speed		135 km (100 MPH)	135 km (100 MPH)	130 km (97 MPH)	130 km (97 MPH)

Grade ability sin θ	0.387	0.379	0.306	0.301
Min. turning radius	4.0 m (13.1 ft.)		4.0 m (13.1 ft.)	

ENGINE	Model		A10
	Manufacturer		NISSAN MOTOR CO., LTD.
	Classification		Gasoline
	Cooling system		Water cooled
	No. of cylinder & arrangement		4 in line
	Cycle		4
	Combustion chamber		Wedge
	Valve arrangment		O.H.V.
	Bore × Stroke	mm	73 × 59 (2.87 × 2.32 in.)
	Displacement	ℓ	0.988 (60.3 cu.in.)
	Compression ratio		8.5
	Compression pressure kg/cm (r.p.m.)		12.0/350
	Max. exploding pressure kg/cm (r.p.m.)		48/4,000
	Max. mean effective pressure kg/cm (r.p.m.)		9.75/3,600
	Max. power HP/r.p.m.	(SAE)	62/6,000
	Max. torque (SAE) m-kg/r.p.m.		8.5/4,000 (61.5 ft-lb/4000 r.p.m.)
	Length × Width × Height	mm	547 × 553 × 590
	Weight	kg	91.5
	Position		Front
	Type of piston		T Slot
	Material of piston		LO-EX
	No. of Piston ring	Pressure Oil	2 1

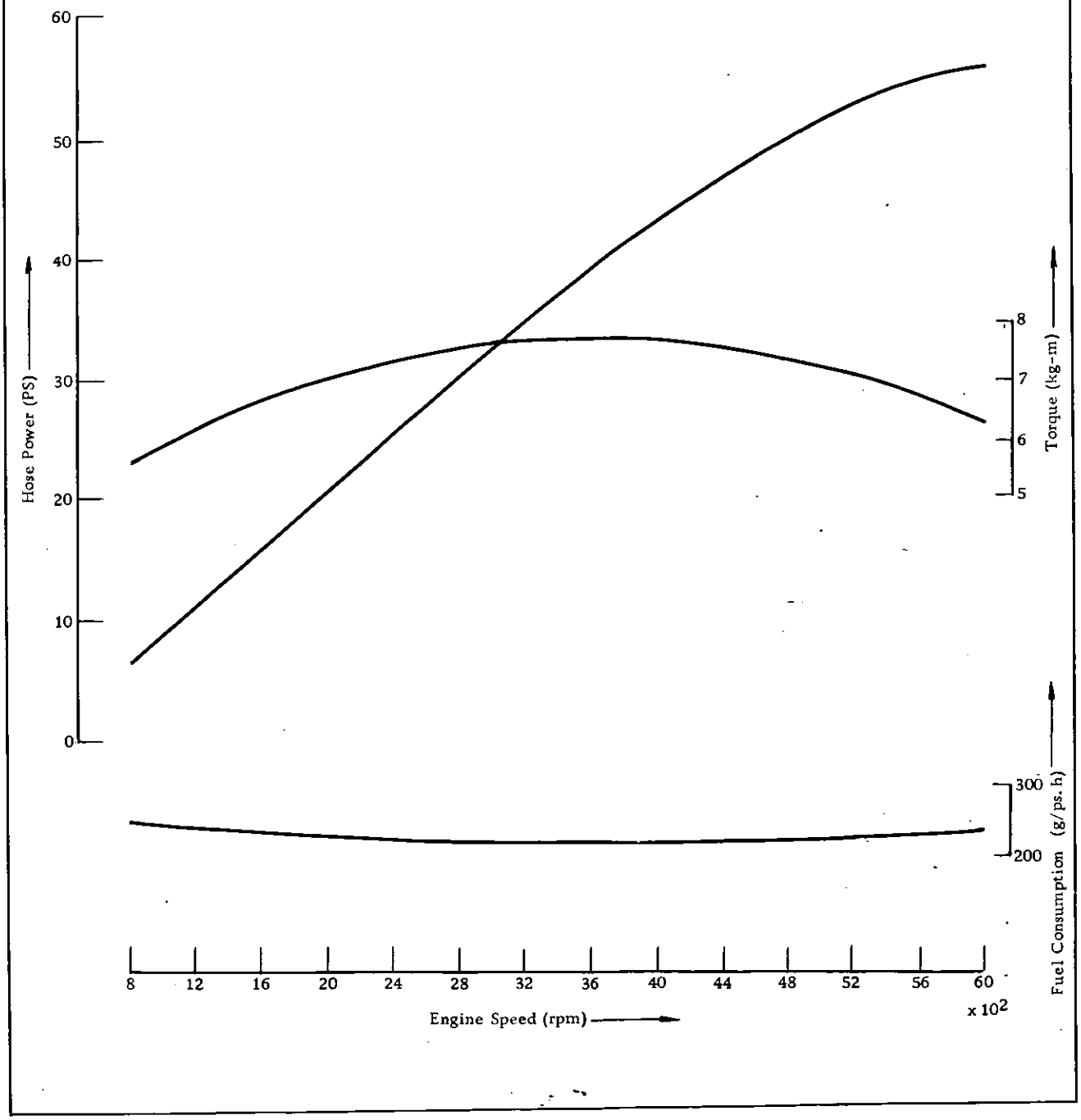
ENGINE	Valve timing	Intake open	12° B.T.D.C.	
		Intake close	48° A.B.D.C.	
		Exhaust open	50° B.T.D.C.	
		Exhaust close	10° A.T.D.C.	
	Valve Clearance	Intake mm	0.35	
		Exhaust mm	0.35	
	Starting method		Starter Motor	
IGNITION SYSTEM	Firing Method		Battery coil type	
	Ignition timing B.T.D.C./r.p.m.		8°/600	
	Ignition order		1-3-4-2	
	Ignition coil	Type	C14-51	
		Manufacturer	HITACHI	
	Distributor	Type	D412-53	
		Manufacturer	HITACHI	
		Type	L45	
IGNITION	Spark Plug	Manufacturer	HITACHI	
		Thread mm	14	
		Cap mm	0.7 ~ 0.8	
FUEL SYSTEM	Carburetor	Type	DCG286-3	
		Manufacturer	HITACHI	
		Throttle vlve bore mm	26	28
		Venturi size mm	20 × 7	24 × 7
		Main jet mm	0.95	1.40
		Slow jet mm	0.80	0
		Power jet mm	0.60	
		Air Draught	Down	

FUEL SYSTEM	Air cleaner	Type	Paper element
		Manufacturer	TSUCHIYA
	Fuel pump	Type	Diaphragm
		Manufacturer	SHOWASEIKI
		Fuel Tank Capacity	35 (for B10), 30 (for VB10)
Lubricating system		Lubrication method	Forced full flow
		Oil pump type	Trochoid type
		Oil filter	Paper filter
		Oil pan capacity	2.5
Cooling system		Type	Pressure feed water cooled
		Radiator	Corugated fin & tube type
		Capacity of cooling water	4.5
		Type of water pump	Centrifugal type
		Thermostat	Pellet type
Battery		Type	N40L
		Voltage V	12
		Capacity A.H.	40
Generator		Type	LT125-01
		Manufacturer	HITACHI
		Generating method	Alternator
		Voltage V	12
		Capacity W	250
		Voltage regulator	TL1Z-10A
Starter		Type	S114-87
		Manufacturer	HITACHI
		Voltage & power V-HP	12V-1.0

TRANSMISSION DEVICE	CLUTCH	Type		Single dry disc	
		Number of place		1 (Facing 2)	
		Out. dia. × In. dia. × Thickness mm		160 × 110 × 3.2	
		Total friction area cm^2		212	
	TRANSMISSION	Type		3 Forward 1 reverse all synchro-mesh on forward gears	4 Forward 1 reverse all synchro-mesh on forward gears
		Operating method		Remote control	Floor shift
		Gear ratio	1st	3.38	3.76
			2nd	1.73	2.17
			3rd	1.00	1.40
			4th		1.00
			Reverse	3.64	3.64
Propeller shaft Length × Out. dia. × In. dia. mm				1.178 × 63.5 × 60.3	
Type of universal joint				Spicer	
Final gear			Type of gear	Hypoid	
			Gear ratio	4.111 (B10), 4.375 (VB10)	
Differential gear			Housing type	Banjo type	
			Type & number of gear	Straight bevel pinion 2 each	
STEERING	Type of gear			Recirculating ball type	
	Gear ratio			15 : 1	
	Steering angle		Inner Outer	45° 36°36'	
RUNNING DEVICE	Steering wheel diameter mm			400	
	Wheel arrangement		Front Rear	2 wheels 2 wheels	
	Front axle			Wishbone ball joint type	
	Toe-in (unloaded)			2 ~ 3 mm	

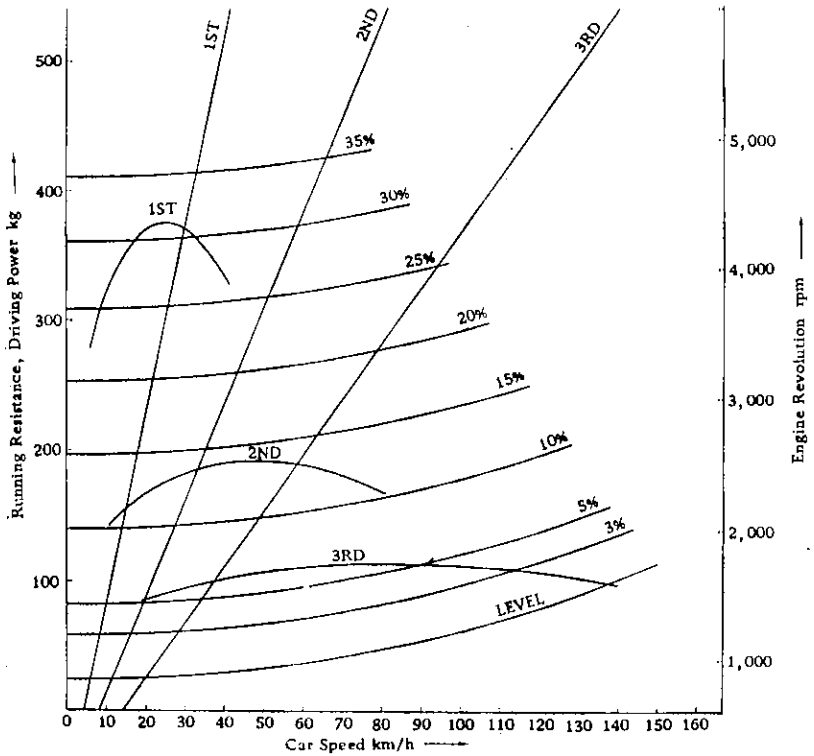
RUNNING DEVICE	Camber (unloaded)			1°45'
	Caster (unloaded)			2°15'
	Inclination angle of king pin			6°30'
	Type of rear axle			Semi-floating type
BRAKE SYSTEM	MASTER BRAKE	Type		Front: 2 leading Rear : leading and trailing
		Lining dimension (front)	mm	35 × 4.8 × 195
		Lining dimension (rear)	mm	35 × 4.8 × 195
		Total braking area (front)	cm^2	273
		Total braking area (rear)	cm^2	273
		Inner dia. of drum (front & rear)	mm	203.2
	OIL BRAKE	Inner dia. of master cylinder	mm	17.46
		Inner dia. of wheel cylinder front	mm	20.64
		Inner dia. of wheel cylinder rear	mm	20.64
		Max. oil pressure	kg/cm^2	175
BRAKE	PARKING BRAKE	Type		Mechanical for ear wheels
		Lining dimension	mm	35 × 4.8 × 195
		Total braking area	cm^2	273
		Inner dia. of drum	mm	203.2
SUSPENSION	Front			Transverse leaf spring
	Spring size Out. dia. × Length		mm	976 × 50 × 4-6
	Rear			Semi-elliptic leaf spring
	Spring size Length × Width × Thickness - No.		mm	$1,150 \times \begin{matrix} 50 \times 7\text{-}2\ (B10) \\ 50 \times 7\text{-}2 \end{matrix}$ $1,150 \times \begin{matrix} 50 \times 5\text{-}1\ (VB10) \\ 50 \times 11\text{-}1 \end{matrix}$
	Helper spring		mm	
	Shock absorber	(Front)		Telescopic type double action
	Shock absorber	(Rear)		Telescopic type double action

MODEL B10 ENGINE PERFORMANCE CURVE



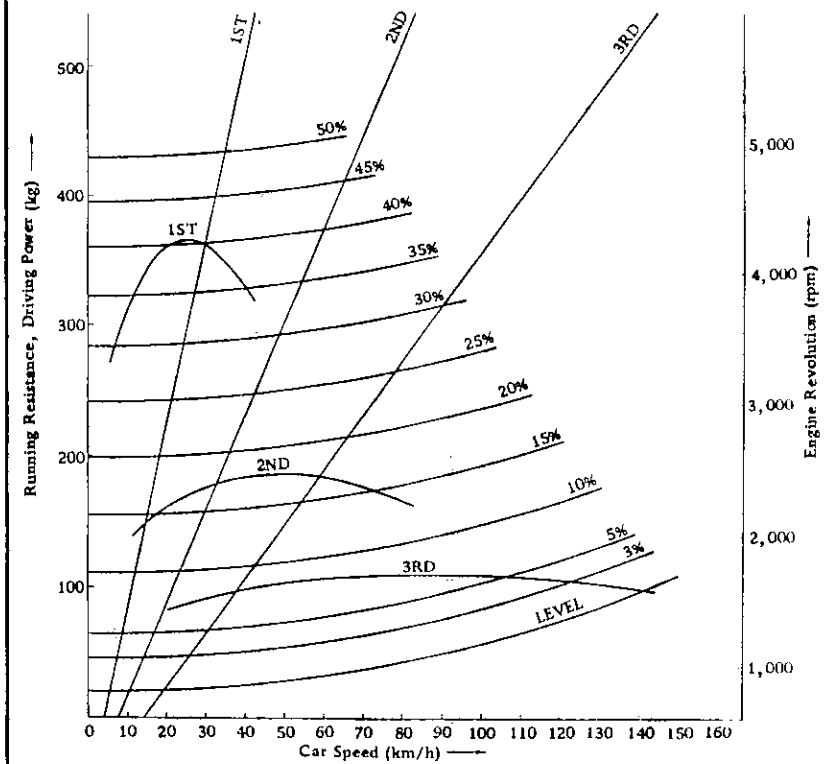
MODEL VB10 RUNNING

Final gear ratio	4.375
1st speed ratio	3.380
2nd speed ratio	1.734
3rd speed ratio	1.000
Max. grade ability	1,175 kg
Max. torque	7.7 kg-m/3,600 r.p.m.
Max. B.H.P.	56PS/6,000 r.p.m.



MODEL B10 RUNNING

Final gear ratio	4.111
1st speed ratio	3.380
2nd speed ratio	1.734
3rd speed ratio	1.000
Max. grade ability	920 kg
Max. torque	7.7 kg-m/3,600 r.p.m.
Max. B.H.P.	56PS/6,000 r.p.m.



SERVICE DATA

Tightening torque	Tightening torque (kg-m)
ENGINE	
Cylinder head bolt	4.5 ~ 4.8
Main bearing cap bolt	5.0 ~ 5.3
Con. rod bearing cap bolt	3.4 ~ 3.6
Fly-wheel bolt	2.5 ~ 3.0
Camshaft sprocket	4.0 ~ 4.5
Rocker shaft bolt	2.0 ~ 2.3
Water pump nut	1.2 ~ 1.3
Oil pump bolt	1.3 ~ 1.5
Oil pan	0.5 ~ 0.6
Front cover	0.5 ~ 0.6
TRANSMISSION	
Front cover	1.0 ~ 1.4
Rear extension	1.6 ~ 2.2
FRONT SUSPENSION	
Hub nut (Without lubrication)	2.3 ~ 2.5
Hub nut (Coating with grease)	1.6 ~ 1.8
Hub nut (Begining to turn motion)	Under 9 kg ~ cm
Front shock absorber bolt	2.2 ~ 2.8
Tension rod (Front side)	4.0 ~ 4.5
Tension rod (Rear side)	4.2 ~ 5.3
Suspension member fixing bolt	4.0 ~ 4.5
Upper ball joint	3.5 ~ 4.9
Upper ball fixing bolt	1.6 ~ 2.2
Lower ball joint	5.5 ~ 7.6
Lower ball joint fixing bolt	2.0 ~ 2.8
Upper link spindle fixing bolt	4.2 ~ 5.3
Lower link pin	4.2 ~ 5.3

REAR SUSPENSION	
Rear shaft fixing bolt	1.5 ~ 2.0
Rear shock absorber	2.0 ~ 2.5
U bolt	3.5 ~ 4.0
Rear spring front pin	3.5 ~ 4.0
Rear spring shacle pin	2.0 ~ 2.5
GEAR CARRIER	
Gear carrier	1.5 ~ 2.0
Pinion nut	14 ~ 16.8
Drive gear	3.0 ~ 3.5
Side bearing cap	4.2 ~ 4.9
STEERING	
Gear box fixing bolt	6.0
Gear box side cover	1.8 ~ 2.5
Gear rear cover	1.8 ~ 2.5
Gear arm nut	14.0
Gear arm cross rod	3.5 ~ 4.9
Idler arm bracket	1.9 ~ 2.6
Tie rod end	3.5 ~ 4.9
Steering wheel nut	4.0 ~ 4.5

ENGINE

SERVICE DATA	
Oil content	3.04 ℓ (include oil filter 0.54 ℓ) distinct between level gauge mark Max & Min 0.6 ℓ
Cooling water	3.8 ℓ (with heater 4.5 ℓ) 2 ℓ (Radiator side) 1.8 ℓ (Engine side)
Transmission	0.8 ℓ
Idling r.p.m.	600 r.p.m.
Fan belt slack	13-15 mm
Compression	More than 10 kg/cm^2 (350 r.p.m.)

Spark plug gap	0.7 ~ 0.8 mm
Point gap (distributor)	0.45 ~ 0.55 mm
Ignition timing	8°/600 r.p.m.
Vacuum	More than 400 mm Hg/600 r.p.m.
CYLINDER HEAD	
Limit strain	Under 0.10 mm
Thickness of gasket	Free 1.10 Used 1.05
Allowable difference of each cyl. bore (inner dia.)	An eliptic 0.015 Taper within 0.020
Wear limit of inner dia.	0.2 mm
PISTON	
Clearance between piston and cyl. bore	0.03 ~ 0.04 (at 20° C)
Fixing direction	F mark to front side Con. rod (oil hole to camshaft side)
Piston oversize	S.T.D. 0.25, 0.50, 0.75, 1.00, 1.25, 1.50
Measure with feeler-gauge between piston & cyl. bore	Pull out measuring 0.5-1.5 kg with 0.03 mm thickness feeler
Clearance between piston groove & ring	Within 0.20 mm
Piston ring end gap	Within 1.0 mm
Piston ring over size	S.T.D. 0.25, 0.50, 0.75, 1.00, 1.25, 150
Method of inserting piston and pin	Press fit to piston and con. rod small end (1 ~ 1.5t)
CONNECTING ROD	
Allowable difference of gross weight with connecting rod & piston	Within 5 gram (for each weight diff.)
Alignment on a con. rod	0.05 mm (Allowable limit with pin on 100 mm length)
Material of big end bushing	F 500
Connecting rod side clearance	Within 0.4 mm
Clearance big end bearing Con. rod side clearance (thrust)	0.01 ~ 0.05 0.20 ~ 0.30 limit 0.40
Connecting bushing under size	S.T.D. 0.008, 0.12, 0.25, 0.50, 0.75, 1.00

CRANK SHAFT	
Wear limit at pin portion of crank shaft journal	0.03 mm (elliptic or taper)
Limit crank shaft alignment	Not to exceed 0.05 mm
Side clearance of crank shaft	Within 0.3 mm
Crank shaft journal oil clearance	0.02 ~ 0.06 mm
Portion of crank shaft thrust bushing	2nd side
Bushing over size of crank shaft journal	S.T.D. 0.25, 0.50, 0.75, 1.00
Dimension of crank shaft jorunal	49.951 ~ 49.964 mm
Dimension of crank shaft pin	44.961 ~ 44.974 mm
CAM SHAFT	
Wear limit of cam shaft jornal	0.03 mm (elliptic or taper)
Limit of alignment of cam shaft	0.5 mm
Height of cam	36.45 ~ 36.55 (Inlet & Exhaust)
Wear limit of cam	0.5 (at all height)
End play of cam shaft	0.1 ~ 0.2 mm
Clearance bushing & cam shaft	0.03 ~ 0.07 mm (same journal for all)
Bushing under size	S.T.D. 0.25, 0.50, 0.75
VALVE	
Angle of valve face	45° 30' (Inlet & Exhaust)
Diameter, valve stem	1.3 mm (Inlet & Exhaust)
Limit valve head thickness	0.5 mm (Inlet & Exhaust)
Dia. of stem	8.0 mm
Wear limit, valve stem	(Clearance to guide) Less than 0.10 mm
Tappet clearance	0.35 mm (Inlet & Exhaust, at hot)
Clearance valve guide and guide inserting hole	0.02 ~ 0.04 mm
Clearance for valve seat inserting	0.06 ~ 0.09 mm
Limit of valve seat depresion	0.2 mm
Valve seat over size	S.T.D. 0.50
Valve guide over size	S.T.D. 0.50
Valve spring (Free)	45.7 mm