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	0.01 ~ 0.05
Con. rod side clearance (thrust)	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

Limit valve spring (Free length)	44.7 mm
Fix load & fixed length	No.1 30.0/38.5 No. 2 61.2/31.0
Clearance valve lifter & guide	Within 0.15 mm
Clearance valve locker arm shaft	0.02 ~ 0.05 mm
FLY WHEEL	
Limit shake on the frictional face	0.2 mm
Nos. of teeth (ring gear)	105
THERMOSTAT	
Temp. to operate	82° C
Max. of valve lift	More than 9 mm at 95° C
WATER PUMP	
Rotation ratio water pump pulley	1.05 (for crank pulley)
Current quantity	85 ℓ /400 r.p.m.
OIL PUMP	
Oil pump	Trocoid gear type
Oil pressure	3.5 ~ 4.0 kg/cm^2
Thickness of adjusting shims for oil regulator	0.5 mm
Quantity of oil pumping ℓ/min-r.p.m.	19.5/3000
FUEL PUMP	
Performance	750cc/3000 min-r.p.m.

MANUFACTURER		HITACHI	MITSUBISHI
STARTER MOTOR			
Type		SS114-87	MW-V_1R
Constant		30"	30"
NO LOAD			
Terminal voltage (V)		12	11
Ampere (A)		Less than 60	Less than 60
Rotation (r.p.m.)		More than 7,000	More than 4,800
LOADED			
Terminal voltage (V)		6.3	6
Ampere (A)		Less than 420	Less than 470
Torque (kg.m)		More than 0.9	More than 0.68
Voltage for pinion out		Less than 8	Less than 9
Clearance shaft & bushing	Front	Less than 0.2 mm	Less than 0.2 mm
	Medium	Less than 0.45 mm	
	Rear	Less than 0.03-0.1 mm	Less than 0.2 mm
Alignment of shaft (Limit)		Less than 0.1 mm	
Out dia. of commutator (Standard)		33ϕ	32ϕ
Diameter wear limit of commutator		Less than -2.0 mm	
Run-out limit of commutator		Less than 0.2 mm	
Amendable accuracy of commutator		Less than 0.05 mm	
Depth mica		More than 0.2 mm	
Brush height		16 mm	15 mm
Wear limit		9.5 mm	7 mm
Spring tension (Standard)		800 g ± 15 %	
Weakness limit		Up to 700 g	

MANUFACTURER	HITACHI	MITSUBISHI
ALTERNATOR		
Alternator	LT125-02	AS2025A-1
Used rotation	1,050 ~ 12,000	
Constant revolution	5,000	2,500
14 Voltage/h revolution	Less than 1,050	Less than 1,100
Out-dia of spring	31 mm	33 mm
Wear limit (Dia)	0.5 mm	0.6 mm
Rotor coil	4.07 Ω	6 ~ 7 Ω
Rotor shaft run out	Under 0.10 mm	
Brush height (St)	19 mm	13 mm
Wear limit of brush	7 mm	7 mm
Strength of brush spring	300 ~ 380 g	300 ~ 400 g
REGULATOR		
Type	TLIZ10A	RL2220B5
No load regulated	14.0 ± 0.5V	
GAP		
Voltage regulator	Yoke 0.9 ~ 1.0	Air 0.8 ~ 1.2
	Core 0.8 ~ 1.2	Back 0.8 ~ 1.1
	Point 0.4 ~ 0.5	Point 0.3 ~ 0.4
Pilot lamp realy	Yoke 0.2	Air 0.9 ~ 1.2
	Core 0.5 ~ 0.6	Back 0.8 ~ 1.1
	Point 0.4 ~ 0.5	Point 0.8 ~ 1.1

MANUFACTURER	HITACHI	MITSUBISHI
DISTRIBUTOR		
Type	D412-53	TVA-4F$_1$L
Ignition timing	8°/600 r.p.m.	
Point contact angle	49 ~ 55°	
Point gap	0.45 ~ 0.55 mm	
Contact arm spring tension	500 ~ 650 g	
ADVANCE CHARACTERISTIC		
Governor type	Commerce 450 r.p.m. Max. 12°/1,300 r.p.m.	0°~ 18 at 500 r.p.m. 6.7 ~ 9.7° at 1,028 r.p.m. 11.0 ~ 13.0° at 1,440 r.p.m.
Vacuum type	Commerce -150 mmHg Max. 9.5°/-305 mmHg	0 ~ 1.7° at -160 mmHg 5.5 ~ 8.7° at 250 8.5 ~ 10.5° at -350 mmHg

IGNITION COIL		
Type	C14-51	HP5-10E
Primary voltage	12V	
Secondary voltage (3 ways spark gap)	More than 6 mm	
Primary coil resistance	3.2 ~ 4.1 Ω	
Secondary coil resistance	Below 20,000 Ω	Below 17,000 Ω

	HITACHI	MITSUBISHI
SPARK PLUG		
Type	L45	NGK B-6E
Screw × Reach × Hexagonal Length	14 × 19 × 20.6 mm	
Gap	0.7 ~ 0.8 mm	

BATTERY	
Type	NS40L
Capacity C20/h	32A.H
Specific gravity	1.260
	2.5 ℓ
Discharge hour -15° C 150A	More than 2.5 minute
Voltage, 5 second -15° C 150A	More than 8.4 V

CLUTCH	
Setting height of diaphragm spring	31.5 mm
Wear limit of clutch facing	0.5 mm by the head of rivet
Disc facing run-out	Less than 0.5 mm
Play of with drawal lever	1.5 ~ 2.0 mm
Height of clutch pedal	144.5 mm
Play of clutch pedal	15 ~ 20 mm

TRANSMISSION

Type	Synchromeshed on the 1st, 2nd, & 3rd gear Reverse one stage
Gear ratio	1st 3, 380, 2nd 1, 734, 3rd 1, 000 Rev. 3, 640
Gear type	Helical gear type

Back-lash of each meshing gear	Main drive gear-driven gear, second gears, first gear
Gear ratio of speed meter	4.00 (16/4)
MAIN DRIVE GEAR	
Main drive gear Nos.	19
MAIN SHAFT	
Second gear teeth Nos.	25
First gear teeth Nos.	31
Reverse gear teeth Nos.	31
Reverse gear thrust clearance	0.15 ~ 0.25 mm
First gear thrust clearance	0.15 ~ 0.25 mm
Second gear thrust clearance	0.1 ~ 0.3 mm
Front gear thrust clearance	0.1 ~ 0.35
Clearance between boulk ring & each gear	0.8 ~ 1.45 mm
Cover adjusting shim	0.5, 0.2, 0.1 mm
Bearing type of spline	(Front) Ball bearing (Rear) Bushing
COUNTER GEAR SHAFT	
Driven gear teeth Nos.	29
Counter gear teeth Nos.	22
First gear teeth Nos.	14
Reverse teeth gear	13
Clearance of front thrust	0.02 ~ 0.08 mm
Thrust washer size	0.8, 0.9, 1.0, 1.1, 1.2, 1.3 mm
Bearing type of spline	Front & rear ball bearing
REVERSE IDLER	
Gear teeth Nos.	17
Clearance between shaft & bushing	0.032 ~ 0.077
Clearance between gear & adapter plate	0.1 ~ 0.5
Clearance to snap ring	0.1 ~ 0.4
FORK SHIFT	
Length of locking ball spring	16.4 mm at 7 kg

PROPELLER SHAFT	
Play at pin of universal joint	Adjust by snap ring
Thickness of snap ring	1.58, 1.56, 1.54, 1.52, 1.50, 1.48, 1.46

DIFFERENTIAL GEAR CARRIER

SPECIFICATION	CAR MODEL	
	B10	VO10
Teeth Nos. of drive pinion	9	8
Teeth Nos. of drive gear	37	35
Final gear ratio	4.111	4.375

ADJUSTMENT	
Back lash between drive pinion & drive gear	Less than 0.10 ~ 0.15 mm
Run-out of drive gear back side	Less than 0.08 mm
Pre-load of drive pinion bearing	6 ~ 8 kg-cm
Standard dimension of drive pinion	45 mm
Back lash of side gear	0.1 ~ 0.2 mm
Standard width of side bearing	17.50 mm

ADJUST WASHER OF DRIVE PINION	
Parts No.	Thickness
38125 18000	2.30 ~ 2.32 mm
38126 18000	2.32 ~ 2.34 mm
38127 18000	2.34 ~ 2.36 mm
38128 18000	2.36 ~ 2.38 mm
38129 18000	2.38 ~ 2.40 mm
38130 18000	2.40 ~ 2.42 mm
38131 18000	2.42 ~ 2.44 mm
38132 18000	2.44 ~ 2.46 mm
38133 18000	2.46 ~ 2.48 mm
38134 18000	2.48 ~ 2.50 mm
38135 18000	2.50 ~ 2.52 mm
38136 18000	2.52 ~ 2.54 mm

38137 18000	2.54 ~ 2.56 mm
38138 18000	2.56 ~ 2.58 mm
38139 18000	2.58 ~ 2.60 mm
ADJUSTING SHIM OF DRIVE PINION	
Parts No.	Thickness
38153 18000	0.50 mm
38154 18000	0.075 mm
38155 18000	0.125 mm
38156 18000	0.250 mm
38157 18000	0.500 mm
SPACER OF DRIVE PINION	
Parts No.	Thickness
38165 18000	5.75 mm
38166 18000	6.00 mm
38167 18000	6.25 mm
THRUST WASHER OF SIDE GEAR	
Parts No.	Thickness
38424 18000	0.76 ~ 0.81 mm
38424 18001	0.81 ~ 0.86 mm
38424 18002	0.86 ~ 0.91 mm
ADJUSTING SHIM OF SIDE BEARING	
Parts No.	Thickness
38453 18000	0.050 mm
38454 18000	0.075 mm
38455 18000	0.125 mm
38456 18000	0.250 mm
38457 18000	0.500 mm

SUSPENSION

FRONT SPRING	
Dimension (L × W × T - Nos.)	976 × 50 × 4 - 6
Free chamber	120 mm
Spring constant	2.05 kg/mm

FRONT SHOCK ABSORBER		
Stroke	130 mm	
Absorbability extensile side	58 kg	
(0.3/sec) Contractile side	20 kg	
REAR SPRING		
	B10	VB10
Length × width × thickness - Nos.	1150 × 50 × 7 - 2	50 × 7 × 2 150 × 50 × 5 - 1 50 × 11 - 1
Free chamber	156 mm	161.5 mm
Spring constant	1.45 kg/mm	3.95 kg/mm
Span	1150 mm	115 mm
REAR SHOCK ABSORBER		
Stroke	160 mm	160 mm
Absorbability extensile side	70 kg	25 kg
(0.3/sec) Contractile side	105 kg	35 kg

STEERING

SPECIFICATION	
Steering gear type	Recirculating ball type
Steering gear ratio	15 : 1
Max. turning angle of front wheels	3.4
(Inside)	45°
(Outside)	36° 36
Steering gear oil	MP #90 0.24 ℓ
Steering wheel dia.	400 mm
Play of steering wheel	At the top of around of wheel less than 20 ~ 25 mm
WORM BEARING ADJUSTING SHIMS	
Parts No.	Thickness
48031 18000	0.05 mm
48032 18000	0.07 mm
48033 18000	0.08 mm
48034 18000	0.10 mm

48035 18000	0.20 mm
SECTOR SHAFT ADJUSTING SHIMS	
Parts No.	Thickness
48131 18000	1.52 ~ 1.53 mm
48132 18000	1.55 ~ 1.56 mm
48133 18000	1.58 ~ 1.59 mm
48134 18000	1.61 ~ 1.62 mm
48135 18000	1.64 ~ 1.65 mm
CLEARANCE	
Clearance of ball nut to direction of shaft	Less than 0.02 mm
Clearance between of shaft T groove & shim	Less than 0.1 mm
Clearance of sector shaft & bushing	Less than 0.12 mm

FRONT WHEEL ALIGNMENT

SPECIFICATION	
Toe-in	2 ~ 3 mm
Camber	1°45'
Caster	2°15'
King pin angle	6°30'
Side slip	Less than 3 mm with each running distance 1 mm
Turning angle (Inside) (Outside)	45° 36°36'
Rotation torque front hub (Motive)	Less than 9 kg-cm
Clearance of front hub to direction along the shaft	Less than 0.08 mm
Clearance of ball joint to direction along the shaft	Less than 0.9 mm

BRAKE

ITEM / F & R	FRONT	REAR
FOOT BRAKE		
Type	Two leading	Leading trailing
Drum inner dia.	203.2 mm	Leading trailing
Drum over size	Less than 1 mm	Leading trailing
Drum inner dia. elliptic	Within 0.02 mm	Leading trailing
Drum cylinderical limit (at 35 mm from cylinder)	Within 0.02 mm	Leading trailing
Drum surface roughness	Honing by paper less than 1.6	Leading trailing
RETURN SPRING		
Wire dia. × Free length × Rolls	3.2ϕ × 118 mm × 20.5 rolls	Cyl. side 2.0ϕ × 119.2 mm × 28 rolls Adjuster side 2.0ϕ × 69.5 mm × 20 rolls
Fixed load × Fixed length	55 kg × 127.1 mm	Cyl. side 10.6 kg × 132.7 mm Adjuster side 8.6 kg × 76.7
WHEEL CYLINDER		
Inner dia.	20.64 mm	20.64 mm
Clearance between cylinder & piston	0.02 ~ 0.105 mm	0.02 ~ 0.105 mm
Limit of clearance	0.15 mm	0.15 mm
Piston spring (Free length × fixed length × fixing load)	28 mm × 16 mm × 1.1 ± 0.1 kg	28 mm × 16 mm × 1.1 ± 0.1 kg
LINING		
Length × width × thickness	35 mm × 195 mm × 4.8 mm	35 mm × 195 mm × 4.8 mm
Wear limit	More than 1 mm	More than 1 mm
Thickness over size (for service use)	5.3 mm (+0.5 mm)	5.3 mm (+0.5 mm)
PEDAL		
Height of pedal	144.5 ± 2 mm	
Remained stroke	More than 25 mm	
Play of pedal	10 ~ 15 mm	
Adjusting shim for pedal height	16 mm (Part No. 30611-27260)	

	0.8 mm (Part No. 30612-27260) 0.5 mm (Part No. 30613-27260)
MASTER CYLINDER	
Inner dia.	17.46 mm
Remained pressure	0.3 ~ 0.7 kg/cm^2
Oil pressure (100 kg by foot)	175 kg/cm^2
Clearance between cylinder & piston	0.02 ~ 0.105 mm
Limit of clearance	0.15 mm