

## SECTION 10

**SERVICE DATA**

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## ENGINE

Item				Standard	Limit	Remarks
Compressed pressure (kg/cm <sup>2</sup> - rpm)				12.5~400	10.0 — 400	
C.P difference between cylinders (kg/cm <sup>2</sup> )				Less than 1.0		
V belt elongation (mm)		New	7~9		When apply 10 kg force to belt center	
		Old	7~11			
Valve distance(mm)		IN	Cooling procedure	0.15	10 min after warm up	
			Hot procedure	0.25		
		EX	Cooling procedure	0.20	10 min after warm up	
			Hot procedure	0.30		
Idling R.P.M (rpm)				950±50		
Wheelst idling R.P.M (rpm)						Non controlable
Exhaust gas density		CO	1.5±1.0%			
		HC	Below 400 ppm			
Cylinder Head	Cylinder - to - contact surface declination (mm)				0.05	
	Manifold install surface declination (mm)				0.10	
	Valve seat	Contact width	IN	1.46~1.66		
			EX	1.46~1.66		
		Angle (°)	Against inside	IN=60, EX: 75		
			Against seat surface	45		
			Plane surface	15		
	Valve guide I.D (mm)	IN	5.500~5.512	5.54		
		EX	5.500~5.512	5.54		
	Valve stem O.D (mm)	IN	5.465~5.480			
		EX	5.450~5.465			
	Valve guide-to-stem clearance (mm)	IN	0.020~0.047	0.07		
		EX	0.035~0.062	0.09		
	Valve guide end lenth (mm)			14.0		
	Valve spring		Free length (mm)	54.45	53.4	
			Perpendicular degree (mm)		2.4	
	Valve rocker arm-to-shaft clearance (mm)			0.005~0.04	0.06	
	Cam shaft vibration (mm)				0.10	
	Cam hight (mm)	IN	36.13	36.00		
		EX	36.14	36.00		
	Cam shaft journal portion O.D (mm)	1	43.425~43.450	43.375	Marking in order from Pulley side	
		2	43.625~43.650	43.575		
		3	43.825~43.850	43.775		
		4	44.025~44.050	43.975		
		5	—	—		
	Cam shaft journal portion I.D (mm)	1	43.500~43.516	43.525	Marking in order from Pulley side	
		2	43.700~43.716	43.725		
		3	43.900~43.916	43.925		
		4	44.100~44.116	44.125		
		5	—	—		
	Cam shaft oil clearance (mm)			0.050~0.091	0.15	
Cylinder	Cylinder - to - contact surface declination (mm)				0.05	
	I.D (mm)			68.500~68.520	68.570	Measure from 8 places and then calculate the difference between max. and min.
	I.D extension limit (mm)				69.000	

Item				Standard	Limit	Remarks
Piston	Piston O.D (mm)			68.465~68.485		
	Piston to cylinder distance (mm)			0.025~0.045	0.10	
	Piston ring	Ring joint distance when assembly(mm)	No.1 ring	0.15~0.030	0.7	
			No.2 ring	0.10~0.30	0.7	
		Ring to- ring groove gap(mm)	No.1 ring	0.020~0.060	0.10	
			No.2 ring	0.020~0.060	0.10	
			Oil ring	0.06~0.10		
	Piston pin boss I.D (φ )			16.006~16.014		
Piston pin O.D (φ )			15.995~16.000			
Connecting rod	Bent (mm)				0.05	When 100mm
	Distortion (mm)				0.10	
	Big end strut interval (mm)			0.1~0.2	0.35	
	Connecting rod bearing oil clearance (mm)			0.020~0.040	0.065	
Crank shaft	Vibration (mm)				0.03	Rotate 1 turn and read 1/2 of the value
	Journal pin partial wear				0.02	
	Journal diameter (mm)			43.982~44.00		
	Pin diameter (mm)			37.982~38.000		
	Crankshaft bearing oil clearance (mm)			0.020~0.040	0.065	
	Strut interval (mm)			0.11~0.31	0.40	

## FUEL SYSTEM

Item				Standard	Limit	Remarks
Carburetor throttle level (mm)				17.2		

## COOLING SYSTEM

Item				Standard	Limit	Remarks
Radiator	Radiator cap available voltage (Kg/cm <sup>2</sup> )			0.75~1.05		
	Electronic fan start to operate temp. (°C)			93		
Thermostat	Start to operate temp. (°C)			82		
	Fully open and shut temp. (°C)			95		

## LUBRICATING SYSTEM

Item			Standard	Limit	Remarks
Engine Oil	Oil pressure (kg/cm <sup>2</sup> — rpm)		2.5~2000		
	Oil Quantity( l )	When replacing	2.5		
		When replacing with filter at the same time	2.7		
		When disassemble	3.0		
	Level gage difference between upper and lower limit( l )		1.0		
	Useable engine oil		SF/CC10W — 30		
	Oil exchange interval		Every 10.000Km		
	Oil filter exchange interval		Every 10.000Km		

## POWER TRANSMISSION

Item		Standard	Limit	Remarks
Clutch	Clutch pedal	Free play (mm)	20-30	
		Distance from bottom (mm)	Above 60	
	Clutch disc	Thickness (mm)	7.9	
		Turning direction play (mm)	1.0	Measure from periphery
		Rivet shank (mm)	0.5	
	Clutch cover plane degree (mm)		Below 0.03	0.15
Transmission	Using oil		75W/85	
	Oil quantity ( l )		2.0(2.1)	
	Gear-to-synchronizer ring clearance (mm)		1.0	0.5
	Synchronizer key groove (mm)	1st gear	8.2	8.6
		2nd, 3rd, 4th gear	9.6	10.0
		5th gear	9.1	7.8
		Over top	9.4	9.8
	Synchronizer ring-to- shift fork clearance (mm)		0.2-0.6	1.0
	Shaft fork end thickness (mm)		Low speed : 8.7(7 - 8)	8.1 ( ) is highspeed 5th

## BRAKE SYSTEM

Item		Standard	Limit	Remarks
Brake Pedal	Free play (mm)	1-8		
	Distance from bottom (mm)	Above 75		When depressed with 30Kg
Master Cylinder	I.D(mm)	19.05		
Disc brake (Front)	Brake chamber I.D (mm)		48.1	
	Pad thickness (mm)		9.0	
	Disc	Thickness (mm)	10.0	8.0
		Vibration (mm)	Below 0.15	Measure from periphery
Drum brake (rear)	Wheel cylinder I.D (mm)		17.46	
	Brake drum I.D (mm)		180	
	Brake lining thickness (mm)		4.3	
	Drum - to - lining clearance (mm)		0.5	
Parking brake	Notch		3 — 8	
	Drum I.D (mm)		180	
	Lining thickness (mm)		4.3	
	Drum-to-lining clearance (mm)		0.5	

## STEERING

Item		Standard	Limit	Remarks
Front wheel alignment	Toe - in (mm)	1±2		
	Camber (°)	30'±1°		
	Caster (°)	3°35'±1°		
	Steering angle	Inside	40°	
		Outside	35°	
	Side slip (m/km)	in 0.5±1.5		
Steering wheel free play (mm)		0-30		
Steering pinion break out torque (kg.cm)		8-13		

## ELECTRICAL SYSTEM

Item				Standard	Limit	Remarks
Ignition system	Spark plug	CHAMPION	Type	RNIYC		Alternate standard
			Spark gap (mm)	0.7~0.8		
	AIR CAP(contactless type)		(mm)	0.25~0.35		
	Ignition order			1 — 3 — 2		
	Ignition timing(BTDC, degree/rpm)			8±1/950		
	Advancer	Centrifugal	1800 rpm	8°		
			300 rpm	15.5°		
			4500 rpm	16.5°		
		Vacuum	— 80 mmHg	0°		
			— 154 mmHg	8.4°		
			— 250 mmHg	16°		
	High tension code resistance(KΩ/m)			10~22		
	Ignition coil resistance(Ω)		Primary	1.2		
Secondary			12.1K			
Battery	Specific gravity(liquid temp. 20℃)		General	1.280		
	Capacity (Ah)		General	28(5)		
Starter motor output			(Kw)	0.8		
Alternator	Rotor coil resistance		(Ω)	2.8~3.0		
	Regulating voltage		(V)	14.2 — 14.8		25℃, load 10A
A/C	Compressor belt intensity		(mm)	10~12		
	A/C ON			1000±100		

## TIRE · WHEEL

Item			Standard	Limit	Remarks
Wheel	Bearing axial play (mm)	Front	0-0.35		
		Rear	0-0.35		
	Rim vibration (mm)		Below 2.5		Measure from rim periphery
	Pattern groove deply (mm)			1.6	
Tire	Size	Front	135SR12		
		Rear			
	Air pressure (Kg/cm <sup>2</sup> )	Front	1.8Kg/cm <sup>2</sup>		
		Rear			



## SUPPLEMENT

Section	Use	Class	Manufacturer	Brand
Engine	<ul style="list-style-type: none"> <li>• Engine oil</li> <li>• Antifreezing solution</li> <li>• An additive to increase antifreezing efficiency and anticorrosion of engine cooling system</li> <li>• Apply to cylinder block contact surface and oil fan</li> </ul>	SF/CC class, 10W30	ISU CHEMICAL CO., LTD KEUK DONG JE YOUN KEUK DONG JE YOUN  THREE BOND	MORE MORE CROWN A - 103  LLC  TB 1207C
Transi - mission	<ul style="list-style-type: none"> <li>• Mission oil</li> <li>• Oil seal lip</li> <li>• Gear shift shaft bolt</li> <li>• Mission case contact surface</li> <li>• Side cover contact surface</li> <li>• Gear shift guide case contact surface</li> </ul>	75W/85(GL-4)	SHELL  ISU CHEMICAL CO., LTD  ISU CHEMICAL CO., LTD   THREE BOND	 TOTAL MOLTIS EP  TOTAL MOLTIS MS   TB 1215
Clutch	<ul style="list-style-type: none"> <li>• Release shaft arm bush seal</li> <li>• Release shaft arm</li> <li>• Release bearing inside</li> <li>• Input shaft spline and shearing section</li> </ul>		  ISU CHEMICAL CO., LTD  ISU CHEMICAL CO., LTD	 TOTAL MULTIS EP  TOTAL MULTIS MS
Brake	<ul style="list-style-type: none"> <li>• Brake fluid</li> </ul>		KEUK DONG JE YOUN	CROWN B - 121
Others	<ul style="list-style-type: none"> <li>• Window washer fluid</li> </ul>		KEUK DONG JE YOUN	WINDOW WASHER FLUID