

01-50 TECHNICAL DATA

ENGINE TECHNICAL DATA..... 01-50-1

ENGINE TECHNICAL DATA

A5U015001001W01

01-50

Item			Engine	
			BP	
			MT	AT
MECHANICAL				
Drive belt deflection (mm {in}/98 N {10 kgf, 22 lbf})	Generator	New	5.5—7.0 {0.22—0.27}	
		Used	6.0—7.5 {0.24—0.29}	
		Limit	8.0 {0.31}	
	P/S, A/C, P/S+A/C	New	7.0—8.0 {0.28—0.31}	
		Used	9.0—10.0 {0.36—0.39}	
		Limit	11.5 {0.45}	
Drive belt tension (N {kgf, lbf})	Generator	New	491—745 {50—76, 111—167}	
		Used	491—706 {50—72, 111—158}	
		Limit	343 {35, 77}	
	P/S, A/C, P/S+A/C	New	588—686 {59—70, 130—154}	
		Used	422—490 {43—50, 95—110}	
		Limit	245 {25, 55}	
Valve clearance [Engine cold] (mm {in})	IN		0.18—0.24 {0.008—0.009} (0.21±0.03 {0.008±0.0012})	
	EX		0.28—0.34 {0.012—0.013} (0.31±0.03 {0.012±0.0012})	
Compression pressure (kPa {kgf/cm ² , psi}) [rpm]	Standard		1442 {14.7, 209} [300]	
	Minimum		1009 {10.29 146} [300]	
	Maximum difference between cylinders		196 {2.0, 28}	
Tensioner spring free length (mm {in})			58.8 {2.31}	
Timing belt deflection (mm {in})/98 N {10 kgf, 22 lbf})			8.50—11.5 {0.34—0.45}	
Pushing distance of the camshaft oil seal (mm {in})			0—0.4 {0—0.015} (From the edge of the cylinder head)	
Pushing distance of the front oil seal (mm {in})			0.5—1.0 {0.02—0.03} (From the edge of the oil pump body)	
Pushing distance of the rear oil seal (mm {in})			0—0.5 {0—0.02} (From the edge of the rear cover)	
Idle speed (rpm)			750—850 (800±50)	
Ignition timing (BTDC/rpm)			6—18°/750—850 (6—18°/800±50)	
Idle-up speed*1 (rpm)	E/L ON*2		750—850 (800±50)	
	A/C ON*3		950—1,050 (1000±50)	750—850 (800±50)
	P/S ON*4		750—850 (800±50)	
Idle mixture	HC concentration		Within regulation	
	CO concentration		Within regulation	
LUBRICATION SYSTEM				
Oil pressure (kPa {kgf/cm ² , psi}) [3,000 rpm]			295—392 {3.0—4.0, 43—56}	
Oil capacity	Total (dry engine) (L {US qt, Imp qt})		4.0 {4.2, 3.5}	
	Oil replacement (L {US qt, Imp qt})		3.6 {3.8, 3.2}	
	Oil and oil filter replacement (L {US qt, Imp qt})		3.8 {4.0, 3.3}	
Engine oil			API Service SG (Energy Conserving II), SH (Energy Conserving II) or ILSAC (GF-I) SJ or ILSAC (GF-II)	
Viscosity	Above -25°C {-13°F}		SAE 10W-30	
	Below 0°C {32°F}		SAE 5W-30	

TECHNICAL DATA

Item				Engine	
				BP	
				MT	AT
Oil pump	Tip clearance (mm {in})	Standard		0.02—0.18 {0.0008—0.0070}	
		Minimum		0.20 {0.0079}	
	Body clearance (mm {in})	Standard		0.090—0.176 {0.0036—0.0069}	
		Minimum		0.22 {0.0087}	
	Side clearance (mm {in})	Standard		0.03—0.11 {0.0012—0.0043}	
		Minimum		0.14 {0.0055}	
Pressure spring	Pressing force at pressure spring height (N {kgf, lbf})	H: 35.42 mm {1.39 in}		62.8—68.6 {6.4—7.0, 14.1—15.4}	
COOLING SYSTEM					
Coolant capacity (L {US qt, Imp qt})				6.0 {6.3, 5.3}	
Radiator cap valve opening pressure (kPa {kgf/cm ² , psi})				94—122 {0.95—1.25, 13.6—17.7}	
Thermostat	Initial-opening temperature (°C {°F})			83.5—88.0 {183—190}	
	Full-opening temperature (°C {°F})			80 {176}	
	Full-open lift (mm {in})			8.5 {0.33} min.	
Cooling fan motor current (A) [12 V]				4.50—6.49	
FUEL SYSTEM					
FP hold pressure (kPa {kgf/cm ² , psi})				More than 343 {3.5, 50}	
FP maximum pressure (kPa {kgf/cm ² , psi})				Less than 637 {6.5, 92}	
Fuel injector	Leakage (drop/2 minutes)			Less than 1	
	Volume (ml {cc, floz}/15 sec.)			66—82 {66—82, 2.3—2.7}	
	Resistance (ohms) [20°C {68°F}]			12—13	
Pressure regulator	Fuel line pressure (kPa {kgf/cm ² , psi})			—	
	Fuel hold pressure (kPa {kgf/cm ² , psi})			—	
CHARGING SYSTEM					
Battery	Electrolyte gravity			—	
	Back-up current* ⁵ (mA)			Max. 20	
	Test load chart (A)	Battery type	S46A24L (S)	105	
	Slow charge (A)	Battery type (5-hour rate)	S46A24L (S) (32)	3.0—4.0	
	Quick charge (A/30 min.)	Battery type (5-hour rate)	S46A24L (S) (32)	20	
Generator	Rotor resistance (Between slip rings) (ohm) [20°C {68°F}]			2.67	
	Brush length	Standard (mm {in})		22 {0.87}	
		Minimum (mm {in})		6 {0.24}	
	Brush spring force	Standard (N {kgf, lbf})		3.43 {0.35, 0.77}	
		Minimum (N {kgf, lbf})		1.03 {0.105, 0.231}	
	Standard voltage (V)	Ignition switch ON	Terminal	B	B+
				P	Below 1
				D	Approx. 0
		Idle [20°C {68°F}]	Terminal	B	13—15
				P	3—8
				D	*
	Generated current (Reference) (A)	Engine speed (rpm)	1000	Terminal B current	0—65 (Must not be 0)
2000			Terminal B current	0—77 (Must not be 0)	
IGNITION SYSTEM					

TECHNICAL DATA

Item				Engine	
				BP	
				MT	AT
Ignition coil	Resistance [20°C {68°F}]	Secondary coil	(kilohms)	7—11	
High-tension lead	Resistance	(kilohms)	No.1 lead	5—13	
			No.2 lead	—	
			No.3 lead	1.5—4.0	
			No.4 lead	—	
Spark plug	Type	NGK		BKR5E-11* ⁶ , BKR6E-11* ⁷	
		DENSO		K16PR-U11* ⁶ , K20PR-U11* ⁷	
	Plug gap (mm {in})		1.0—1.1 {0.040—0.043}		
	Resistance (kilohms) [20°C {68°F}]	NGK		3.0—7.5	
		DENSO			
Tightening torque (N·m {kgf·m, ft·lbf})				15—22 {1.5—2.3, 11—16}	
STARTING SYSTEM					
Starter	Commutator diameter	Standard (mm {in})	29.4 {1.16}		
		Minimum (mm {in})	28.8 {1.13}		
	Brush length	Standard (mm {in})	12.3 {0.48}		
		Minimum (mm {in})	7.0 {0.28}		
	Brush spring force	Standard (N {kgf, lbf})	15.05—20.35 {1.534—2.076, 3.375—4.567}		
		Minimum (N {kgf, lbf})	5.9 {0.6, 1.3}		
	Pinion gap (mm {in})		0.5—2.0 {0.020—0.078}		
	No load test	Voltage (V)	11		
Current (A)		Below 90			

* : Turn the following electrical loads on and verify that the voltage reading increases.

- Headlights
- Blower motor
- Rear window defroster

*1 : Excludes temporary idle speed drop just after the loads (E/L, A/C, P/S) are turned on.

*2 : Headlight, fan switch (above 1st) and cooling fan are turned on.

*3 : A/C switch and fan switch are turned on.

*4 : Steering wheel is fully turned.

*5 : Back-up current is the constant flow of current present (for the audio unit, clock, PCM, etc.) when the ignition switch is off and with the ignition key removed.

*6 : Standard plug

*7 : Cold type plug