

TECHNICAL DATA

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A. MEASUREMENTS

Item		Measurements	
Overall length	mm { in }	3,948 { 155.4 }	
Overall width	mm { in }	1,676 { 65.9 }	
Overall height	mm { in }	1,224 { 48.2 }	
Wheelbase	mm { in }	2,266 { 89.2 }	
Tread	Front	mm { in }	1,410 { 55.5 }
	Rear	mm { in }	1,428 { 56.2 }

B. ENGINE

Item		Engine	BP DOHC
Type			Gasoline, 4-cycle
Cylinder arrangement and number			In-line, 4-cylinders
Combustion chamber			Pentroof
Valve system			DOHC, belt-driven 16 valves
Bore x Stroke		mm { in }	83.0 x 85.0 { 3.27 x 3.35 }
Total piston displacement		ml { cc , cu in }	1,840 { 1,840 , 112 }
Compression ratio			9.0
Compression pressure kPa { kgf/cm ² , psi }-rpm	Standard		1,255 { 12.8 , 182 }-300
	Minimum		883 { 9.0 , 128 }-300
	Maximum difference between each cylinder		196 { 2.0 , 28 }
Valve timing	IN	Open (BTDC°)	5
		Close (ABDC°)	48
	EX	Open (BBDC°)	56
		Close (ATDC°)	14
Valve clearance	mm { in }	IN	0 { 0 } : Maintenance-free
		EX	0 { 0 } : Maintenance-free
Cylinder head			
Height		mm { in }	133.8—134.0 { 5.268—5.275 }
Distortion		mm { in }	0.10 { 0.004 } max.
Grinding		mm { in }	0.10 { 0.004 } max.
Cylinder head-to-HLA clearance	mm { in }	Standard	0.025—0.066 { 0.0010—0.0025 }
		Maximum	0.18 { 0.0071 }
Valve and valve guide			
Valve head diameter	mm { in }	IN	32.9—33.1 { 1.296—1.303 }
		EX	27.85—28.15 { 1.097—1.108 }
Valve head margin thickness	mm { in }	IN	0.9 { 0.035 }
		EX	1.0 { 0.039 }
Valve face angle		IN	45°
		EX	45°
Valve length	IN	Standard	101.89 { 4.0114 }
		Minimum	100.39 { 3.9524 }
	EX	Standard	101.99 { 4.0153 }
		Minimum	100.49 { 3.9563 }
Valve stem diameter	mm { in }	IN	5.970—5.985 { 0.2351—0.2356 }
		EX	5.965—5.980 { 0.2349—0.2354 }
Guide inner diameter		mm { in }	6.01—6.03 { 0.2367—0.2374 }
Valve stem-to-guide clearance	mm { in }	IN	0.025—0.060 { 0.0010—0.0023 }
		EX	0.030—0.065 { 0.0012—0.0025 }
		Maximum	0.20 { 0.008 }
Guide projection	mm { in }	IN	18.3—18.9 { 0.721—0.744 }
		EX	18.3—18.9 { 0.721—0.744 }
Valve seat			
Seat angle		IN	45°
		EX	45°

Item		Engine	BP DOHC	
Seat contact width		mm { in }	0.8—1.4 { 0.032—0.055 }	
Seat sinking	mm { in }	Standard	45.0 { 1.772 }	
		Maximum	46.5 { 1.831 }	
Valve spring				
Free length	mm { in }	IN	46.26 { 1.821 }	
		EX	46.26 { 1.821 }	
Minimum length	mm { in }	IN	39.5 { 1.56 } with a set load of 224—253 N { 22.8—25.8 kgf , 50.2—56.7 lbf }	
		EX	39.5 { 1.56 } with a set load of 224—253 N { 22.8—25.8 kgf , 50.2—56.7 lbf }	
Out-of-square	mm { in }	IN	1.62 { 0.0638 } max.	
		EX	1.62 { 0.0638 } max.	
Camshaft				
Cam height	mm { in }	IN	Standard	44.094 { 1.7360 }
			Minimum	43.894 { 1.7281 }
		EX	Standard	44.600 { 1.7559 }
			Minimum	44.400 { 1.7480 }
Journal diameter	mm { in }	Standard (No.1—No.5)	25.940—25.965 { 1.0213—1.0222 }	
Camshaft bearing oil clearance	mm { in }	Standard (No.1—No.5)	0.035—0.081 { 0.0014—0.0031 }	
		Maximum	0.15 { 0.006 }	
Camshaft runout	mm { in }		0.03 { 0.0012 } max.	
Camshaft end play	mm { in }	Standard	0.07—0.19 { 0.0028—0.0074 }	
		Maximum	0.20 { 0.008 }	
Cylinder block				
Height	mm { in }		221.5 { 8.720 }	
Distortion	mm { in }		0.15 { 0.006 } max.	
Grinding	mm { in }		0.20 { 0.008 } max.	
Cylinder bore diameter	mm { in }	Standard size	83.000—83.019 { 3.2678—3.2684 }	
		0.25 { 0.01 } oversize	83.256—83.263 { 3.2778—3.2780 }	
		0.50 { 0.02 } oversize	83.506—83.513 { 3.2877—3.2879 }	
Cylinder bore taper and out-of-round	mm { in }		0.019 { 0.0007 } max.	
Piston				
Piston diameter Measured at 90° to pin bore axis and 16.5 mm { 0.65 in } below oil ring groove	mm { in }	Standard size	82.954—82.974 { 3.2659—3.2666 }	
		0.25 { 0.01 } oversize	83.211—83.217 { 3.2761—3.2762 }	
		0.50 { 0.02 } oversize	83.461—83.467 { 3.2859—3.2861 }	
Piston-to-cylinder clearance	mm { in }	Standard	0.032—0.059 { 0.0013—0.0023 }	
		Maximum	0.15 { 0.006 }	
Piston ring				
Thickness	mm { in }	Top	1.47—1.49 { 0.0579—0.0586 }	
		Second	1.47—1.49 { 0.0579—0.0586 }	
End gap (Measured in cylinder)	mm { in }	Top	0.15—0.30 { 0.006—0.011 }	
		Second	0.15—0.30 { 0.006—0.011 }	
		Oil (rail)	0.20—0.70 { 0.008—0.027 }	
		Maximum	1.0 { 0.039 }	
Ring groove width in piston	mm { in }	Top	1.52—1.535 { 0.0599—0.0604 }	
		Second	1.52—1.54 { 0.0599—0.0606 }	
		Oil	3.02—3.04 { 0.1189—0.1196 }	
Piston ring-to-ring groove clearance	mm { in }	Top	0.03—0.065 { 0.0012—0.0025 }	
		Second	0.03—0.07 { 0.0012—0.0027 }	
		Maximum	0.15 { 0.006 }	

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Item		Engine	BP DOHC
Piston pin			
Diameter		mm { in }	19.987—19.993 { 0.7869—0.7871 }
Piston-to-piston pin clearance		mm { in }	-0.005—0.013 { -0.0002—0.0005 }
Connecting rod bush-to-piston pin clearance		mm { in }	0.010—0.027 { 0.0004—0.0010 }
Connecting rod and connecting rod bearing			
Length (Center to center)		mm { in }	132.85—132.95 { 5.231—5.234 }
Bending		mm { in }	0.030 { 0.0012 } max./100 { 3.94 }
Small end bore (Bush inner diameter)		mm { in }	20.003—20.014 { 0.7876—0.7879 }
Big end bore		mm { in }	48.000—48.016 { 1.8898—1.8903 }
Big end width		mm { in }	21.838—21.890 { 0.8598—0.8618 }
Connecting rod side clearance	mm { in }	Standard	0.110—0.262 { 0.0044—0.0103 }
		Maximum	0.30 { 0.012 }
Crankshaft			
Crankshaft runout		mm { in }	0.04 { 0.0016 } max.
Main journal diameter	Standard size	Standard	49.938—49.956 { 1.9661—1.9667 }
		Minimum	49.904 { 1.9647 }
	0.25 { 0.01 } undersize	Standard	49.704—49.708 { 1.9569—1.9570 }
		Minimum	49.652 { 1.9548 }
	0.50 { 0.02 } undersize	Standard	49.454—49.458 { 1.9470—1.9471 }
		Minimum	49.402 { 1.9450 }
0.75 { 0.03 } undersize	Standard	49.204—49.208 { 1.9372—1.9373 }	
	Minimum	49.152 { 1.9351 }	
Main journal out-of-round		mm { in }	0.05 { 0.0020 } max.
Crankpin diameter	Standard size	Standard	44.940—44.956 { 1.7693—1.7699 }
		Minimum	44.908 { 1.7680 }
	0.25 { 0.01 } undersize	Standard	44.690—44.706 { 1.7595—1.7600 }
		Minimum	44.658 { 1.7582 }
	0.50 { 0.02 } undersize	Standard	44.440—44.456 { 1.7496—1.7502 }
		Minimum	44.408 { 1.7483 }
0.75 { 0.03 } undersize	Standard	44.190—44.206 { 1.7398—1.7403 }	
	Minimum	44.158 { 1.7385 }	
Crankpin out-of-round		mm { in }	0.05 { 0.0020 } max.
Main bearing			
Main journal bearing oil clearance	mm { in }	Standard	0.018—0.036 { 0.0008—0.0014 }
		Maximum	0.10 { 0.004 }
Available undersize bearing		mm { in }	0.25 { 0.01 }, 0.50 { 0.02 }, 0.75 { 0.03 }
Crankpin bearing			
Crankpin bearing oil clearance	mm { in }	Standard	0.020—0.044 { 0.0008—0.0017 }
		Maximum	0.10 { 0.004 }
Available undersize bearing		mm { in }	0.25 { 0.01 }, 0.50 { 0.02 }, 0.75 { 0.03 }
Thrust bearing			
Crankshaft end play	mm { in }	Standard	0.080—0.282 { 0.0032—0.0111 }
		Maximum	0.30 { 0.012 }
Bearing width	mm { in }	Standard size	2.500—2.550 { 0.0985—0.1003 }
		0.25 { 0.01 } oversize	2.625—2.675 { 0.1034—0.1053 }
		0.50 { 0.02 } oversize	2.750—2.800 { 0.1083—0.1102 }
		0.75 { 0.03 } oversize	2.875—2.925 { 0.1132—0.1151 }
Timing belt			
Belt deflection		mm { in } /98 N { 10 kgf , 22 lbf }	9.0—11.5 { 0.36—0.45 }

D. LUBRICATION SYSTEM

Item		Engine	BP DOHC
Lubrication system			Force-fed type
Oil pump			
Type			Trochoid gear
Relief pressure		kPa { kgf/cm ² , psi }	344—441 { 3.5—4.5, 50—63 }
Oil pressure	1,000 rpm		98—196 { 1.0—2.0, 15—28 }
	3,000 rpm		295—392 { 3.0—4.0, 43—56 }
Inner rotor tooth tip to outer rotor clearance	Standard		0.02—0.18 { 0.0008—0.0070 }
	Maximum		0.20 { 0.0079 }
Outer rotor to body clearance	Standard		0.09—0.18 { 0.0036—0.0070 }
	Maximum		0.20 { 0.0079 }
Side clearance	Standard		0.03—0.12 { 0.0012—0.0047 }
	Maximum		0.14 { 0.0055 }
Oil filter			
Type			Full-flow, paper element
Relief pressure differential		kPa { kgf/cm ² , psi }	79—117 { 0.8—1.2, 12—17 }
Engine 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 }	3.75 { 4.0, 3.3 }
Engine oil			API Service SG, SH (ECII) ILSAC
Viscosity number	Above -25 °C { -13 °F }		SAE 10W-30
	Below 0 °C { 32 °F }		SAE 5W-30

E. COOLING SYSTEM

Item		Engine	BP DOHC
Cooling system			Water-cooled, forced circulation
Water pump			
Type			Centrifugal, V-ribbed belt driven
Impeller diameter		mm { in }	75 { 2.95 }
Number of impeller blades			6
Water seal type			Unified mechanical seal
Thermostat			
Type			Wax, two-stage
Opening temperature		°C { °F }	Sub: 83.5—86.5 { 183—187 }, Main: 86.5—89.5 { 188—193 }
Full-open temperature		°C { °F }	100 { 212 }
Full-open lift		mm { in }	Sub: 1.5 { 0.06 } min., Main: 8.0 { 0.31 } min.
Radiator			
Type			Corrugated fin
Cap valve opening pressure		kPa { kgf/cm ² , psi }	73.6—102 { 0.75—1.05, 10.7—14.9 }
Cooling circuit checking pressure		kPa { kgf/cm ² , psi }	103 { 1.05, 14.9 }
Coolant fan			
Type			Electric
Number of blades			5
Outer diameter		mm { in }	320 { 12.6 }
Capacity		W-V	MT: 70—12, AT: 80—12
Current		A	MT: 5.9 + 10 % max, AT: 6.7 + 10 % max
Coolant			
Capacity		L { US qt, Imp qt }	6.0 { 6.3, 5.3 }

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Item	Engine	BP DOHC		
		Volume percentage %		Specific gravity at 20 °C { 68 °F }
Antifreeze solution	Coolant protection	Water	Coolant	
	Above -16 °C { 3 °F }	65	35	1.054
	Above -26 °C { -15 °F }	55	45	1.066
	Above -40 °C { -40 °F }	45	55	1.078

F. FUEL AND EMISSION CONTROL SYSTEMS

Item		Specification	
Idle speed	rpm	800—900 (850 ± 50) [MT]*, 750—850 (800 ± 50) [AT]*	
Ignition timing	BTDC	9°—11° (10° ± 1°)*	
Throttle body			
Type		Horizontal draft	
Throat diameter	mm { in }	55 { 2.2 }	
Fuel pump			
Type		Impeller (in-tank)	
Output pressure	kPa { kgf/cm ² , psi }	294—637 { 3.0—6.5 , 43—92 }	
Fuel filter			
Type	Low-pressure side	Nylon element	
	High-pressure side	Paper element	
Pressure regulator			
Type		Diaphragm	
Regulating pressure	kPa { kgf/cm ² , psi }	280—289 { 2.85—2.95 , 40.1—41.9 }	
Fuel injector			
Type		High-ohmic	
Type of drive		Voltage	
Resistance	Ω 20 °C { 68 °F }	13.8	
IAC valve			
Solenoid resistance	Ω 20 °C { 68 °F }	10.7—12.3	
Purge solenoid valve			
Solenoid resistance	Ω 20 °C { 68 °F }	23—27	
Camshaft position sensor			
Type		Hall effect	
Engine coolant temperature sensor			
Resistance	kΩ	20 °C { 68 °F }	2.21—2.69
		80 °C { 176 °F }	0.287—0.349
Air valve			
Opening temperature	°C { °F }	Below 45 { 113 }	
Fuel tank			
Capacity	L { US gal , Imp gal }	48 { 12.7 , 10.5 }	
Air cleaner housing			
Element type		Oil permeated	
Accelerator cable			
Free play	mm { in }	1—3 { 0.039—0.118 }	
Fuel			
Specification		Unleaded regular (RON 87 or higher)	

*...with system selector (49 B019 9A0) test switch at SELF TEST

G. ENGINE ELECTRICAL SYSTEM

Item		Engine	BP DOHC		
			MT	AT	
Battery	Voltage	V	12, Negative ground		
	Type and capacity (5-hour rate)		S46A24L(S) (32 Ah) Maintenance-free		
Dark current*1		mA	MAX. 20.0		
Alternator	Type		A.C.		
	Output	V-A	12-65	12-70	
	Regulator type		Transistorized (built-in voltage regulator)		
	Regulated voltage	V	14.3-14.9		
	Brush length	mm { in }	Standard	21.5 { 0.85 }	
			Minimum	8.0 { 0.32 }	
	Drive belt deflection	mm { in }	New	5.5-7.0 { 0.22-0.27 }	
Used			6.0-7.5 { 0.24-0.29 }		
Starter	Type		Direct	Coaxial reduction	
	Output	V-kW	12-0.95	12-1.4	
	Brush length	mm { in }	Standard	17.0 { 0.67 }	17.5 { 0.69 }
			Minimum	11.5 { 0.46 }	12.0 { 0.47 }
Ignition system	Type		Electronic spark advance (ESA)		
	Spark advance control		Engine control module controls spark advance		
Ignition timing*2		BTDC (°CA)/rpm	10/850	10/800	
Ignition coil	Type		Molded (with ignition control module)		
	Primary coil winding	Ω	—		
	Secondary coil winding	kΩ	8.7-12.9 [at 20 °C { 68 °F }]		
Spark plug	Type		NGK : BKR5E-11 BKR6E-11 (Standard) NIPPONDENSO : K16PR-U11 K20PR-U11 (Standard)		
	Plug gap	mm { in }	1.0-1.1 { 0.040-0.043 }		
	Firing order		1-3-4-2		

*1 Dark current is the constant flow of current while the ignition switch is OFF. (i.e. engine control module, audio, etc.)

*2 TEN terminal of data link connector ground.

H. CLUTCH

Item		Engine	BP DOHC	
Clutch control			Hydraulic	
Clutch pedal				
Type			Suspended	
Pedal ratio			6.13	
Full stroke		mm { in }	120 { 4.72 }	
Height (with carpet)		mm { in }	175-185 { 6.89-7.28 }	
Free play		mm { in }	0.6-3.1 { 0.02-0.12 }	
Distance to carpet when clutch fully disengaged		mm { in }	Minimum	68 { 2.68 }
Flywheel				
Runout limit		mm { in }	0.2 { 0.008 }	

Item		Engine	BP DOHC
Clutch disc			
Type			Single dry plate
Runout limit		mm { in }	0.7 { 0.028 }
Wear limit		mm { in }	0.3 { 0.012 } from rivet head
Outer diameter		mm { in }	215 { 8.46 }
Inner diameter		mm { in }	150 { 5.91 }
Facing thickness		mm { in }	Flywheel side
			Pressure plate side
			3.5 { 0.14 }
			3.8 { 0.15 }
Clutch cover			
Type			Diaphragm spring
Set load		N { kgf , lbf }	4,310 { 440 , 968 }

J. MANUAL TRANSMISSION

Item		Transmission	M15M-D
Gear ratio	1st		3.136
	2nd		1.888
	3rd		1.330
	4th		1.000
	5th		0.814
	Reverse		3.758
Oil capacity		L { US qt , Imp qt }	2.0 { 2.1 , 1.8 }
Mainshaft	Runout	mm { in } Maximum	0.03 { 0.0012 }
	Clearance between mainshaft and gear (or bush)	mm { in } Wear limit	0.15 { 0.006 }
Reverse idle gear	Clearance between reverse idle gear bushing and shaft	mm { in } Wear limit	0.15 { 0.006 }
Shift fork and rod	Clearance between shift fork and clutch sleeve	mm { in } Wear limit	0.5 { 0.020 }
	Clearance between shift rod gate and control lever	mm { in } Wear limit	0.8 { 0.032 }
Synchronizer ring	Clearance between synchronizer ring and side of gear when fitted	mm { in } Standard	1.5 { 0.059 }
		mm { in } Wear limit	0.8 { 0.032 }
Shift rod spring (5th/Reverse)	Free length	mm { in }	75 { 2.953 }
Detent ball spring (1st/2nd)	Free length	mm { in }	22.5 { 0.886 }
Detent ball spring (3rd/4th)	Free length	mm { in }	22.5 { 0.886 }
Detent ball spring (5th/Reverse)	Free length	mm { in }	17.0 { 0.669 }
Lubricant	Above 10 °C { 50 °F }		API Service GL-4 or GL-5 SAE 80W-90
	All seasons		API Service GL-4 or GL-5 SAE 75W-90

K. AUTOMATIC TRANSMISSION

Item		Transmission	NC4A-EL			
Gear ratio	First		2.458			
	Second		1.458			
	Third		1.000			
	Fourth		0.720			
	Reverse		2.182			
Automatic transmission fluid (ATF)	Type		Dexron®II or M-III			
	Capacity	L { US qt , Imp qt }	7.3 { 7.7 , 6.4 }			
Oil pump	Body clearance	mm { in }	Standard	0.02—0.04 { 0.0008—0.0015 }		
			Maximum	0.08 { 0.0031 }		
	Tip clearance	mm { in }	Standard	0.14—0.21 { 0.0056—0.0082 }		
			Maximum	0.25 { 0.0098 }		
	Side clearance	mm { in }	Standard	0.05—0.20 { 0.0020—0.0078 }		
			Maximum	0.25 { 0.0098 }		
Drum support	Seal ring and groove clearance	mm { in }	Standard	0.04—0.16 { 0.0016—0.0062 }		
			Maximum	0.40 { 0.0157 }		
Direct clutch	Side plate clearance	mm { in }	0.2 { 0.008 }			
	Side plate size	mm { in }	0.4 { 0.016 }, 0.6 { 0.024 }, 0.8 { 0.031 }, 1.0 { 0.039 }, 1.2 { 0.047 }			
	End play	mm { in }	0.5—0.8 { 0.020—0.031 }			
	Bearing race size	mm { in }	0.8 { 0.031 }, 1.0 { 0.039 }, 1.2 { 0.047 }, 1.4 { 0.055 }, 1.6 { 0.063 }, 1.8 { 0.071 }, 2.0 { 0.079 }, 2.2 { 0.087 }			
Forth gear planetary gear unit	Pinion clearance	mm { in }	Standard	0.2—0.7 { 0.008—0.028 }		
			Maximum	0.8 { 0.031 }		
	Total end play	mm { in }	0.25—0.50 { 0.0099—0.0196 }			
Bearing race size	mm { in }	1.2 { 0.047 }, 1.4 { 0.055 }, 1.6 { 0.063 }, 1.8 { 0.071 }, 2.0 { 0.079 }, 2.2 { 0.087 }				
Front clutch	Retaining plate clearance	mm { in }	0.9—1.1 { 0.036—0.043 }			
	Retaining plate size	mm { in }	5.8 { 0.228 }, 6.0 { 0.236 }, 6.2 { 0.244 }, 6.4 { 0.252 }, 6.6 { 0.260 }, 6.8 { 0.268 }, 7.0 { 0.276 }			
	End play	mm { in }	0.5—0.8 { 0.020—0.031 }			
	Bearing race size	mm { in }	0.8 { 0.031 }, 1.0 { 0.039 }, 1.2 { 0.047 }, 1.4 { 0.055 }, 1.6 { 0.063 }, 1.8 { 0.071 }, 2.0 { 0.079 }, 2.2 { 0.087 }			
Rear clutch	Retaining plate clearance	mm { in }	0.8—1.0 { 0.032—0.039 }			
	Retaining plate size	mm { in }	6.2 { 0.244 }, 6.4 { 0.252 }, 6.6 { 0.260 }, 6.8 { 0.268 }, 7.0 { 0.276 }, 7.2 { 0.283 }, 7.6 { 0.299 }			
	Total end play	mm { in }	0.25—0.50 { 0.0099—0.0196 }			
	Bearing race size	mm { in }	1.2 { 0.047 }, 1.4 { 0.055 }, 1.6 { 0.063 }, 1.8 { 0.071 }, 2.0 { 0.079 }, 2.2 { 0.087 }			
Front planetary gear unit	Pinion clearance	mm { in }	Standard	0.2—0.7 { 0.008—0.027 }		
			Maximum	0.8 { 0.031 }		
Rear planetary gear unit	Pinion clearance	mm { in }	Standard	0.2—0.7 { 0.008—0.027 }		
			Maximum	0.8 { 0.031 }		
Low and reverse brake	Retaining plate clearance	mm { in }	0.8—1.05 { 0.031—0.041 }			
	Retaining plate size	mm { in }	11.8 { 0.465 }, 12.0 { 0.472 }, 12.2 { 0.480 }, 12.4 { 0.488 }, 12.6 { 0.496 }, 12.8 { 0.504 }			
Oil distributor	Seal ring to groove clearance	mm { in }	Standard	0.04—0.16 { 0.0016—0.0062 }		
			Maximum	0.40 { 0.0157 }		
Valve spring specification			Outer dia.	Free length	No. of coils	Wire dia.
Control valve	Pressure regulator		mm { in }	mm { in }		mm { in }
	1—2 shift		11.7 { 0.461 }	43.0 { 1.693 }	13.0	1.2 { 0.047 }
	2—3 shift		7.4 { 0.291 }	26.4 { 1.039 }	9.6	0.7 { 0.028 }
	3—4 shift		10.0 { 0.394 }	50.0 { 1.969 }	13.7	1.0 { 0.039 }
			7.5 { 0.295 }	40.2 { 1.583 }	15.0	0.8 { 0.031 }

TD

Transmission			NC4A-EL			
Item	Valve spring specification		Outer dia. mm { in }	Free length mm { in }	No. of coils	Wire dia. mm { in }
Control valve	Pressure modifier		9.2 { 0.362 }	19.8 { 0.780 }	5.3	0.7 { 0.028 }
	Throttle backup	Small	6.7 { 0.264 }	17.5 { 0.689 }	7.4	0.7 { 0.028 }
		Large	9.0 { 0.354 }	17.5 { 0.689 }	5.2	0.9 { 0.035 }
	N-R reducing		7.4 { 0.291 }	14.5 { 0.571 }	5.0	0.6 { 0.024 }
	Backup control		8.5 { 0.335 }	21.3 { 0.839 }	7.3	0.9 { 0.035 }
	3-2 control		5.5 { 0.217 }	39.5 { 1.555 }	24.4	0.65 { 0.026 }
	Orifice check		5.0 { 0.197 }	15.5 { 0.610 }	12.0	0.23 { 0.009 }
	1-2 reducing		9.4 { 0.370 }	19.5 { 0.768 }	5.0	0.8 { 0.031 }
	1-2 accumulator		11.2 { 0.441 }	62.0 { 2.441 }	21.3	1.2 { 0.047 }
	N-R/2-3 accumulator		8.9 { 0.350 }	82.5 { 3.248 }	29.7	1.1 { 0.043 }
	N-D accumulator		9.3 { 0.366 }	43.4 { 1.709 }	22.0	1.4 { 0.055 }
Throttle relief (ball)		6.5 { 0.256 }	26.8 { 1.055 }	14.0	0.9 { 0.035 }	
Oil pump	TCC control		5.5 { 0.217 }	25.7 { 1.012 }	16.5	0.7 { 0.028 }
Drum support	Fourth gear accumulator		16.0 { 0.630 }	40.4 { 1.591 }	9.8	2.6 { 0.102 }
Band servo	Fourth gear		27.7 { 1.091 }	47.0 { 1.850 }	14.0	3.5 { 0.138 }
	Second gear		28.25 { 1.112 }	38.7 { 1.52 }	5.4	3.5 { 0.138 }
Direct, front, and rear clutches			8.0 { 0.315 }	30.5 { 1.20 }	14.5	1.3 { 0.051 }
Low and reverse brake			—	5.9—6.2 { 0.232—0.244 }	—	—
Parking rod			7.2 { 0.283 }	32.0 { 1.260 }	14.0	0.7 { 0.028 }
Shift point (shift speed)						
Range	Mode	Throttle condition	Shift	Vehicle speed km/h { mph }		
D	NOR- MAL	Wide open throttle	D ₁ →D ₂	58—64 { 36—39 }		
			D ₂ →D ₃	100—108 { 62—66 }		
			D ₃ TCC ON	98—106 { 61—65 }		
			D ₃ →D ₄	152—162 { 95—100 }		
		Half throttle	D ₁ →D ₂	33—46 { 21—28 }		
			D ₂ →D ₃	58—76 { 36—47 }		
			D ₃ →D ₄	82—110 { 51—68 }		
			D ₄ TCC ON	74—100 { 46—62 }		
		Closed throttle position	D ₄ →D ₃	28—34 { 17—21 }		
			D ₃ →D ₁	11—17 { 7—10 }		
		Kickdown (Wide open throttle)	D ₄ →D ₃	140—150 { 87—93 }		
			D ₃ →D ₂	92—100 { 57—62 }		
	D ₂ →D ₁		42—48 { 26—29 }			
	POWER	Wide open throttle	D ₁ →D ₂	58—64 { 36—39 }		
			D ₂ →D ₃	100—108 { 62—66 }		
			D ₃ TCC ON	98—106 { 61—65 }		
			D ₃ →D ₄	152—162 { 94—100 }		
		Half throttle	D ₁ →D ₂	44—55 { 28—34 }		
			D ₂ →D ₃	90—108 { 56—66 }		
			D ₃ TCC ON	98—106 { 61—65 }		
D ₃ →D ₄			140—164 { 87—101 }			
Closed throttle position		D ₄ →D ₃	28—34 { 17—21 }			
		D ₃ →D ₁	11—17 { 7—10 }			
Kickdown (Wide open throttle)		D ₄ →D ₃	140—150 { 87—93 }			
		D ₃ →D ₂	92—100 { 57—62 }			
	D ₂ →D ₁	42—48 { 26—29 }				

Item			Transmission	NC4A-EL	
Range	Mode	Throttle condition	Shift	Vehicle speed km/h { mph }	
D	HOLD	All positions	D ₁ →D ₂	27—33 { 17—20 }	
			D ₂ →D ₃	35—45 { 22—27 }	
			D ₄ →D ₃	152—158 { 94—97 }	
			D ₃ →D ₁	12—18 { 8—11 }	
			D ₃ TCC ON	95—105 { 59—65 }	
S	POWER	Wide open throttle	S ₁ →S ₂	58—64 { 36—39 }	
			S ₂ →S ₃	100—108 { 62—66 }	
			S ₃ TCC ON	98—105 { 61—65 }	
		Half throttle	S ₁ →S ₂	44—55 { 28—34 }	
			S ₂ →S ₃	90—108 { 56—67 }	
			S ₃ TCC ON	94—106 { 58—66 }	
	HOLD	All positions	S ₃ →S ₁	11—17 { 7—10 }	
			S ₃ →S ₂	92—100 { 57—62 }	
	L	POWER	Wide open throttle	S ₂ →S ₁	42—48 { 26—29 }
				S ₃ →S ₂	99—105 { 61—65 }
Half throttle			S ₃ TCC ON	95—105 { 59—65 }	
			Closed throttle position	L ₁ →L ₂	56—62 { 35—38 }
L ₁ →L ₂				44—55 { 27—34 }	
HOLD			All positions	L ₃ →L ₂	96—104 { 60—64 }
		L ₂ →L ₁		11—17 { 7—10 }	
		L ₃ →L ₂		99—105 { 61—65 }	
		L ₂ →L ₁		42—48 { 26—29 }	
Line pressure		R position kPa { kgf/cm ² , psi }	L ₂ →L ₁	35—41 { 21—25 }	
	L ₃ TCC ON		95—105 { 59—65 }		
	D range kPa { kgf/cm ² , psi }	Idle	775—970 { 7.9—9.9, 113—140 }		
		Stall	1,972—2,167 { 20.1—22.1, 286—314 }		
	S range kPa { kgf/cm ² , psi }	Idle	285—362 { 2.9—3.7, 42—52 }		
		Stall	795—912 { 8.1—9.3, 116—132 }		
	L range kPa { kgf/cm ² , psi }	Idle	785—921 { 8.0—9.4, 114—133 }		
		Stall	795—912 { 8.1—9.3, 116—132 }		
Engine stall speed			rpm	2,100—2,500	
Vacuum dia- phragm	Clearance between body and throttle valve mm { in }		Adjusting rod length mm { in }		
	Below 25.65 { 1.0099 }		29.0 { 1.14 }		
	25.65—26.15 { 1.0099—1.0295 }		29.5 { 1.16 }		
	25.90—26.40 { 1.0197—1.0394 }		29.75 { 1.17 }		
	26.15—26.65 { 1.0295—1.0492 }		30.0 { 1.18 }		
	26.65—27.15 { 1.0492—1.0689 }		30.5 { 1.20 }		
Time lag	N ↔ D	sec.	0.5—0.6		
	N ↔ R	sec.	0.75—0.85		

L. PROPELLER SHAFT

Item	Specification
Max. run out	mm { in }
	0.4 { 0.016 }

M. FRONT AND REAR AXLES

Item		Specifications	
Front axle	Type	Double-wishbone	
	Bearing	Angular ball bearing	
	Wheel bearing play mm { in } Maximum	0.05 { 0.002 }	
Rear axle	Type	Double-wishbone	
	Bearing	Angular ball bearing	
	Wheel bearing play mm { in } Maximum	0.05 { 0.002 }	
Differential	Type	"TORSEN" LSD Standard	
	Reduction gear	Hypoid gear	
	Reduction ratio	4.100	
	Differential gear	Worm gear ("TORSEN" LSD) Straight-bevel gear	
	Ring gear size mm { in }	182.88 { 7.20 }	
	Oil	Grade	API service GL-4, GL-5
		Viscosity	Above -18°C { 0°F } : SAE 90 Below -18°C { 0°F } : SAE 80W
		Capacity L { US qt , Imp qt }	1.00 { 1.06 , 0.88 }
	Drive pinion preload (without oil seal)		Locknut tightening torque: 128—284 N·m { 13—29 kgf·m , 94.1—209.7 ft·lbf } 0.9—1.3 N·m { 9—14 kgf·cm , 7.9—12.1 in·lbf }
	Backlash mm { in }	Side gear and pinion gear	0—0.1 { 0—0.0039 }
		Final gear	0.09—0.11 { 0.0035—0.0043 }
Length (Pilot section to pilot section) mm { in }		185.428—185.50 { 7.3003—7.3031 }	

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N. STEERING SYSTEM

Item	Type	Manual steering	Power steering
Steering wheel			
Outer diameter	mm { in }	370 { 14.6 }	
Free play	mm { in }	0—30 { 0—1.18 }	
Wheel effort	N { kgf, lbf }	4.9—29.4 { 0.5—3.0, 1.1—6.6 }	23.5—35.3 { 2.4—3.6, 5.3—8.0 }
Lock-to-lock	turns	3.36	2.8
Steering Shaft			
Shaft type		Collapsible, non-tilt	
Joint type		2-cross joint	
Power steering system			
Power assist type		Engine speed sensing	
Gear type		Rack-and-pinion	
Total gear ratio		17.3	14.4
Rack stroke	mm { in }	121.0 { 4.76 }	
Power steering fluid		ATF Dexron®II or M-III	
Fluid capacity	L { US qt, Imp qt }	—	0.8 { 0.85, 0.70 }
Fluid pressure	kPa { kgf/cm ² , psi }	7,601—8,335 { 77.5—85.0, 1,103—1,208 }	

P. BRAKING SYSTEM

Item		Specifications	
Brake pedal	Height (with carpet) mm { in }	171—181 { 6.73—7.13 }	
	Free play mm { in }	4—7 { 0.16—0.28 }	
	Reserve travel (without carpet, clearance when pedal is depressed at 589 N { 60 kgf , 132 lbf }) mm { in }	95 { 3.74 }	
Master cylinder	Type	Tandem	
	Bore mm { in }	22.22 { 0.875 }	
	Fluid type	FMVSS116, DOT-3	
Front brake (Disc)	Type	Disc	
	Thickness of pad mm { in }	Standard	8.0 { 0.31 }
		Limit	1.0 { 0.04 }
	Thickness of disc plate mm { in }	Standard	20.0 { 0.79 }
		Limit	18.0 { 0.71 }
	Disc plate runout mm { in }	0.1 { 0.004 } max.	
Wheel cylinder bore mm { in }	51.1 { 2.01 }		
Rear brake (Disc)	Type	Disc	
	Thickness of pad mm { in }	Standard	8.0 { 0.31 }
		Limit	1.0 { 0.04 }
	Thickness of disc plate mm { in }	Standard	9.0 { 0.35 }
		Limit	8.0 { 0.31 }
Wheel cylinder bore mm { in }	31.75 { 1.25 }		
Parking brake	Lever notches (Pulled at 196 N { 20 kgf, 44 lbf })	7—9	
Power brake unit	Type	Single diaphragm	
	Diameter mm { in }	214 { 8.0 }	
	Push rod-to-piston clearance mm { in }	When vacuum applied to the unit is approx. 66.7 kPa { 500 mmHg , 19.7 inHg } 0.1—0.4 { 0.004—0.016 }	
	Fluid pressure per treading force kPa { kgf/cm ² , psi }/N { kgf , lbf }	1,079—1,177 { 11—12 , 156—171 }/196 { 20 , 44 } at 0 kPa { 0 mmHg , 0 inHg } min. 5,199—5,494 { 53—56 , 754—796 }/196 { 20 , 44 } at 66.7 kPa { 500 mmHg , 19.7 inHg } min.	
Rear wheel hydraulic control system	Type	PBV	
	Bend portion (Rear brake pressure) kPa { kgf/cm ² , psi }	2,943 { 30 , 427 }	

Q. WHEELS AND TIRES

Item	Type	Standard		Temporary spare
		Size	15 × 6JJ	14 × 5 1/2-JJ
Wheel	Offset mm { in }	45 { 1.77 }		
	Pitch circle diameter mm { in }	100 { 3.94 }		
	Material	Aluminum alloy		Steel
Tire	Size	195/50R15 81V	185/60R14 82H	T115/70D14
	Air pressure kPa { kgf/cm ² , psi }	177 { 1.8 , 26 }		412 { 4.2 , 60 }
Wheel and tire	Runout limit mm { in }	Radial	2.0 { 0.079 }	
		Lateral	1.5 { 0.059 }	
	Maximum unbalance (at rim edge) g { oz }	10 { 0.35 }		

R. SUSPENSION

		Transmission	MT	AT
Item				
Front suspension				
Type		Double-wishbone		
Stabilizer	Type	Torsion bar		
	Diameter	mm { in }	19.0 { 0.75 }	
Shock absorbers		Cylindrical double-acting, low-pressure gas charged		
Rear suspension				
Type		Double-wishbone		
Stabilizer	Type	Torsion bar		
	Diameter	mm { in }	11.0 { 0.43 }	
Shock absorbers		Cylindrical double-acting, low-pressure gas charged		
Wheel alignment				
Front wheel alignment (Unladen*1)	Total toe-in	mm { in }	3 ± 4 { 0.12 ± 0.15 }	
		degree	0°18' ± 24'*2	
	Maximum steering angle	Inner	37°23' ± 2°	
		Outer	32°32' ± 2°	
	Camber angle*3	0°24' ± 1°		
	Caster angle*3	4°26' ± 1°		
SAI*4	11°20'			
Rear wheel alignment (Unladen*1)	Total toe-in	mm { in }	3 ± 4 { 0.12 ± 0.15 }	
		degree	0°18' ± 24'*2	
	Camber angle*3	-0°43' ± 1°		

*1 • Fuel tank full; radiator coolant and engine oil at specified levels; and spare tire, jack, and tools in designated positions

• Adjust to the median when carrying out wheel alignment

*2 Indicates measurements made by using the 4-wheel alignment tester

*3 Difference between left and right must not exceed 1.5°

*4 SAI: Steering Axis Inclination

T. BODY ELECTRICAL SYSTEM

Item	Wattage (Bulb trade number)
Warning and indicator lights	
High beam indicator light	3.4
Turn indicator light	3.4
Instrument cluster illumination	3.4 × 4
Malfunction indicator lamp	1.4
Brake system warning light	1.4
Generator warning light	1.4
Seat belt warning light	1.4
Air bag system warning light	1.4
Retractor indicator light	1.4
HOLD indicator light	1.4
ABS warning light	1.4
Washer fluid-level warning light	1.4
Rear window defroster indicator light	1.4
Exterior lights	
Headlights	60/40
Front turn lights/parking lights	27/8 (1157 NA)
Front side marker lights	3.8 { 194 }
Licence plate lights	7.5
Rear turn lights	27 { 1156 }
Rear side marker lights	3.8 { 194 }
Brake light/taillights	27/8 { 1157 }
Back-up lights	27 { 1156 }
High-mount brake light	18.4 { 921 }
Interior lights	
	5
Illumination lights	
Ash tray illumination	3.4
Heater control switch illumination	1.4
Hazard warning switch illumination	1.4
Cruise control main switch illumination	1.4

U. HEATER AND AIR CONDITIONING SYSTEM

Item	Specifications
Refrigerant amount g { oz }	600 { 21.2 }
Compressor oil amount ml { cc , fl oz }	130—170 { 130—170 , 4.4—5.7 }
Refrigerant normal pressure MPa { kgf/cm ² , psi }	Low pressure: 0.15—0.24 { 1.5—2.5 , 22—35 } High pressure: 1.38—1.56 { 14—16 , 200—227 }

STANDARD BOLT AND NUT TIGHTENING TORQUES

Diameter mm { in }	Pitch mm { in }	4T			6T			8T		
		N·m	kgf·m	ft·lbf	N·m	kgf·m	ft·lbf	N·m	kgf·m	ft·lbf
6 { 0.236 }	1 { 0.039 }	4.3—6.1	0.43—0.63	3.2—4.5	6.9—9.8	0.7—1.0	5.0—7.2	7.9—11.7	0.8—1.2	5.8—8.6
8 { 0.315 }	1.25 { 0.049 }	10—14	1.0—1.5	7.3—10.8	16—22	1.6—2.3	12—16	18—26	1.8—2.7	13—19
10 { 0.394 }	1.25 { 0.049 }	20—28	2.0—2.9	15—20	32—46	3.2—4.7	24—33	37—53	3.7—5.5	27—39
12 { 0.472 }	1.5 { 0.059 }	35—50	3.5—5.1	26—36	55—80	5.6—8.2	41—59	63—93	6.4—9.5	47—68
14 { 0.551 }	1.5 { 0.059 }	—	—	—	76—102	7.7—10.5	56—75	98—137	10—14	73—101
16 { 0.630 }	1.5 { 0.059 }	—	—	—	118—156	12—16	87—115	157—215	16—22	116—159
18 { 0.709 }	1.5 { 0.059 }	—	—	—	167—225	17—23	123—166	226—304	23—31	167—224
20 { 0.787 }	1.5 { 0.059 }	—	—	—	236—313	24—32	174—231	305—421	31—43	225—311
22 { 0.866 }	1.5 { 0.059 }	—	—	—	314—421	32—43	232—311	422—568	43—58	311—419
24 { 0.945 }	1.5 { 0.059 }	—	—	—	403—549	41—56	297—405	540—725	55—74	398—535