

## TECHNICAL DATA

MEASUREMENTS .....	TD- 2
ENGINE .....	TD- 2
LUBRICATION SYSTEM .....	TD- 5
COOLING SYSTEM .....	TD- 5
FUEL AND EMISSION CONTROL SYSTEMS .	TD- 6
ENGINE ELECTRICAL SYSTEM .....	TD- 7
CLUTCH .....	TD- 7
MANUAL TRANSMISSION .....	TD- 8
AUTOMATIC TRANSMISSION .....	TD- 9
PROPELLER SHAFT .....	TD-11
FRONT AND REAR AXLES .....	TD-12
STEERING SYSTEM .....	TD-12
BRAKING SYSTEM .....	TD-13
WHEELS AND TIRES .....	TD-13
SUSPENSION .....	TD-14
BODY ELECTRICAL SYSTEM .....	TD-15
HEATER AND AIR CONDITIONING SYSTEM .	TD-15
STANDARD BOLT AND NUT TIGHTENING	
TORQUE .....	TD-15

45UTDX-001

### 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 <sup>2</sup> , 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: Maintenance-free	
		EX	0: Maintenance-free	
<b>Cylinder head</b>				
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}	
<b>Valve and valve guide</b>				
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	mm {in}	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}	5.99—6.03 {0.2359—0.2374}	
Valve stem-to-guide clearance	mm {in}	IN	0.005—0.060 {0.0002—0.0023}	
		EX	0.010—0.065 {0.0004—0.0025}	
		Maximum	0.20 {0.008}	
Guide projection (Height "A")	mm {in}	IN	18.3—18.9 {0.721—0.744}	
		EX	18.3—18.9 {0.721—0.744}	
<b>Valve seat</b>				
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}	
<b>Valve spring</b>				
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.	
<b>Camshaft</b>				
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}	
<b>Cylinder block</b>				
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.	
<b>Piston</b>				
Piston diameter Measured at 90° to pin bore axis and 16.5mm {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—3.2860}	
Piston-to-cylinder clearance	mm {in}	Standard	0.032—0.059 {0.0013—0.0023}	
		Maximum	0.15 {0.006}	
<b>Piston ring</b>				
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}	
		Oil	3.02—3.04 {0.1189—0.1196}	
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}	

TD

Item		Engine	BP DOHC	
<b>Piston pin</b>				
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}	
<b>Connecting rod and connecting rod bearing</b>				
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}	
<b>Crankshaft</b>				
Crankshaft runout		mm {in}	0.04 {0.0016} max.	
Main journal diameter	mm {in}	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	mm {in}	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.	
<b>Main bearing</b>				
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 {0.010}, 0.50 {0.020}, 0.75 {0.030}	
<b>Crankpin bearing</b>				
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 {0.010}, 0.50 {0.020}, 0.75 {0.030}	
<b>Thrust bearing</b>				
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}	
<b>Timing belt</b>				
Belt deflection		mm {in}/98 N {10 kgf, 22 lbf}	9.0—11.5 {0.36—0.45}	

D. LUBRICATION SYSTEM

Engine		BP DOHC
Lubrication system		Force-fed type
<b>Oil pump</b>		
Type		Trochoid gear
Relief pressure kPa {kgf/cm <sup>2</sup> , psi}		344—441 {3.5—4.5, 50—63}
Oil pressure kPa {kgf/cm <sup>2</sup> , psi}	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 mm {in}	Standard	0.02—0.18 {0.0008—0.0070}
	Maximum	0.20 {0.0079}
Outer rotor to body clearance mm {in}	Standard	0.09—0.18 {0.0036—0.0070}
	Maximum	0.20 {0.0079}
Side clearance mm {in}	Standard	0.03—0.12 {0.0012—0.0047}
	Maximum	0.14 {0.0055}
<b>Oil filter</b>		
Type		Full-flow, paper element
Relief pressure differential kPa {kgf/cm <sup>2</sup> , psi}		79—117 {0.8—1.2, 12—17}
<b>Engine oil</b>		
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

Engine		BP DOHC
Cooling system		Water-cooled, forced circulation
<b>Water pump</b>		
Type		Centrifugal, V-ribbed belt driven
Impeller diameter	mm {in}	75 {2.95}
Number of impeller blades		6
Water seal type		Unified mechanical seal
<b>Thermostat</b>		
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.
<b>Radiator</b>		
Type		Corrugated fin
Cap valve opening pressure	kPa {kgf/cm <sup>2</sup> , psi}	73.6—102 {0.75—1.05, 10.7—14.9}
Cooling circuit checking pressure	kPa {kgf/cm <sup>2</sup> , psi}	103 {1.05, 14.9}
<b>Coolant fan</b>		
Type		Electric
Number of blades		5
Outer diameter	mm {in}	320 {12.6}
Capacity	W-V	120-12
Current	A	below 7.7
<b>Coolant</b>		
Capacity		L {US qt, Imp qt}
		6.0 {6.3, 5.3}

TD

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°)*	
<b>Throttle body</b>			
Type		Horizontal draft	
Throat diameter	mm {in}	55 {2.2}	
<b>Fuel pump</b>			
Type		Impeller (in-tank)	
Output pressure	kPa {kgf/cm <sup>2</sup> , psi}	294—637 {3.0—6.5, 43—92}	
<b>Fuel filter</b>			
Type	Low-pressure side	Nylon element	
	High-pressure side	Paper element	
<b>Pressure regulator</b>			
Type		Diaphragm	
Regulating pressure	kPa {kgf/cm <sup>2</sup> , psi}	280—289 {2.85—2.95, 40.1—41.9}	
<b>Fuel injector</b>			
Type		High-ohmic	
Type of drive		Voltage	
Resistance	Ω	13.8 (at 20°C {68°F})	
<b>IAC valve</b>			
Solenoid resistance	Ω	10.7—12.3 (at 20°C {68°F})	
<b>Purge solenoid valve</b>			
Solenoid resistance	Ω	23—27 (at 20°C {68°F})	
<b>Crankshaft position sensor</b>			
Type		Hall effect	
<b>Engine coolant temperature sensor</b>			
Resistance	kΩ	20°C {68°F}	2.21—2.69
		80°C {176°F}	0.287—0.349
<b>Air valve</b>			
Opening temperature	°C {°F}	Below 45 {113}	
<b>Fuel tank</b>			
Capacity	L {US gal, Imp gal}	48 {12.7, 10.5}	
<b>Air cleaner housing</b>			
Element type		Oil permeated	
<b>Accelerator cable</b>			
Free play	mm {in}	1—3 {0.039—0.118}	
<b>Fuel</b>			
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	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 {0.31}	
	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 {0.45}	12.0 {0.47}
Ignition system	Type		Electronic spark advance (ESA)		
	Spark advance control		Powertrain control module (engine) controls spark advance		
Ignition timing*2		BTDC (°CA)/rpm	10/850	10/800	
Ignition coil	Type		Molded (with igniter)		
	Primary coil winding	Ω	—		
	Secondary coil winding	kΩ	8.7-12.9		
Spark plug	Type		NGK : BKR5E-11 BKR6E-11 (Standard ... MT) NIPPONDENSO : K16PR-U11 K20PR-U11 (Standard ... MT, AT)		
	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. powertrain control module (engine), audio, etc.)

\*2 With System Selector (49 B019 9A0) test switch at SELF TEST.

TD

**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
<b>Clutch disc</b>			
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	3.5 {0.14}
		Pressure plate side	3.8 {0.15}
<b>Clutch cover</b>			
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}
			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		7.4 {0.291}	43.0 {1.693}	13.0	1.2 {0.047}
	2-3 shift		10.0 {0.394}	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			Outer dia. mm {in}	Free length mm {in}	No. of coils	Wire dia. mm {in}
Valve spring specification						
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	Lockup 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 {1.092}	47.0 {1.850}	14.0	3.5 {0.138}
	2nd		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}
<b>Shift point (shift speed)</b>						
Range	Mode	Throttle condition	Shift	Vehicle speed km/h (mph)		
D	NOR- MAL	Wide open throttle	D <sub>1</sub> →D <sub>2</sub>	58—64 {36—39}		
			D <sub>2</sub> →D <sub>3</sub>	100—108 {62—66}		
			D <sub>3</sub> lockup ON	98—106 {61—65}		
			D <sub>3</sub> →D <sub>4</sub>	152—162 {95—100}		
		Half throttle	D <sub>1</sub> →D <sub>2</sub>	33—46 {21—28}		
			D <sub>2</sub> →D <sub>3</sub>	58—76 {36—47}		
			D <sub>3</sub> →D <sub>4</sub>	82—110 {51—68}		
			D <sub>4</sub> lockup ON	74—100 {46—62}		
		Closed throttle position	D <sub>4</sub> →D <sub>3</sub>	28—34 {17—21}		
			D <sub>3</sub> →D <sub>1</sub>	11—17 {7—10}		
		Kickdown (Wide open throttle)	D <sub>4</sub> →D <sub>3</sub>	140—150 {87—93}		
			D <sub>3</sub> →D <sub>2</sub>	92—100 {57—62}		
	D <sub>2</sub> →D <sub>1</sub>		42—48 {26—29}			
	POWER	Wide open throttle	D <sub>1</sub> →D <sub>2</sub>	58—64 {36—39}		
			D <sub>2</sub> →D <sub>3</sub>	100—108 {62—66}		
			D <sub>3</sub> lockup ON	98—106 {61—65}		
			D <sub>3</sub> →D <sub>4</sub>	152—162 {94—100}		
		Half throttle	D <sub>1</sub> →D <sub>2</sub>	44—55 {28—34}		
			D <sub>2</sub> →D <sub>3</sub>	90—108 {56—66}		
			D <sub>3</sub> lockup ON	98—106 {61—65}		
			D <sub>3</sub> →D <sub>4</sub>	140—164 {87—101}		
		Closed throttle position	D <sub>4</sub> →D <sub>3</sub>	28—34 {17—21}		
			D <sub>3</sub> →D <sub>1</sub>	11—17 {7—10}		
		Kickdown (Wide open throttle)	D <sub>4</sub> →D <sub>3</sub>	140—150 {87—93}		
D <sub>3</sub> →D <sub>2</sub>			92—100 {57—62}			
D <sub>2</sub> →D <sub>1</sub>	42—48 {26—29}					

Item		Transmission		NC4A-EL	
Range	Mode	Throttle condition	Shift	Vehicle speed km/h {mph}	
D	HOLD	All positions	D <sub>1</sub> →D <sub>2</sub>	27—33 {17—20}	
			D <sub>2</sub> →D <sub>3</sub>	35—45 {22—27}	
			D <sub>4</sub> →D <sub>3</sub>	152—158 {94—97}	
			D <sub>3</sub> →D <sub>1</sub>	12—18 {8—11}	
			D <sub>3</sub> lockup ON	95—105 {59—65}	
S	POWER	Wide open throttle	S <sub>1</sub> →S <sub>2</sub>	58—64 {36—39}	
			S <sub>2</sub> →S <sub>3</sub>	100—108 {62—66}	
			S <sub>3</sub> lockup ON	98—105 {61—65}	
		Half throttle	S <sub>1</sub> →S <sub>2</sub>	44—55 {28—34}	
			S <sub>2</sub> →S <sub>3</sub>	90—108 {56—67}	
			S <sub>3</sub> lockup ON	94—106 {58—66}	
	HOLD	All positions	S <sub>3</sub> →S <sub>1</sub>	11—17 {7—10}	
			S <sub>3</sub> →S <sub>2</sub>	92—100 {57—62}	
	L	POWER	Wide open throttle	L <sub>1</sub> →L <sub>2</sub>	56—62 {35—38}
				L <sub>1</sub> →L <sub>2</sub>	44—55 {27—34}
Half throttle			L <sub>3</sub> →L <sub>2</sub>	96—104 {60—64}	
			L <sub>2</sub> →L <sub>1</sub>	11—17 {7—10}	
Closed throttle position			L <sub>3</sub> →L <sub>2</sub>	99—105 {61—65}	
			L <sub>2</sub> →L <sub>1</sub>	42—48 {26—29}	
HOLD		All positions	L <sub>2</sub> →L <sub>1</sub>	35—41 {21—25}	
			L <sub>3</sub> lockup ON	95—105 {59—65}	
Line pressure		R range	kPa {kgf/cm <sup>2</sup> , psi}	Idle	775—970 {7.9—9.9, 113—140}
				Stall	1,972—2,167 {20.1—22.1, 286—314}
	D range	kPa {kgf/cm <sup>2</sup> , psi}	Idle	285—362 {2.9—3.7, 42—52}	
			Stall	795—912 {8.1—9.3, 116—132}	
	S range	kPa {kgf/cm <sup>2</sup> , psi}	Idle	785—921 {8.0—9.4, 114—133}	
			Stall	795—912 {8.1—9.3, 116—132}	
	L range	kPa {kgf/cm <sup>2</sup> , psi}	Idle	295—392 {3.0—4.0, 43—56}	
			Stall	883—1,078 {9.0—11.0, 128—156}	
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—25.15 {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}
27.15 {1.0689} or over				31.0 {1.22}	
Time lag	N ↔ D		sec.	0.5—0.6	
	N ↔ R		sec.	0.75—0.85	

L. PROPELLER SHAFT

Item	Specification
Max. permissible 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-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—0.004}
		Final gear	0.09—0.11 {0.0035—0.0043}
	Length (Pilot section to pilot section) mm {in}		185.428—185.50 {7.301—7.303}

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N. STEERING SYSTEM

Item	Type	Manual steering	Power steering
<b>Steering wheel</b>			
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
<b>Steering Shaft</b>			
Shaft type		Collapsible, non-tilt	
Joint type		2-cross joint	
<b>Power steering system</b>			
Power assist type		Engine speed sensing	
Gear type		Rack-and-pinion	
Gear ratio		∞ (infinite)	
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/cm², psi}	7,603—8,339 {77.5—85.0, 1,102—1,209}	

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 {0.87}	
	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 <sup>2</sup> , 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 <sup>2</sup> , psi}	2,943 {30, 427}	

Q. WHEELS AND TIRES

Item	Type	Standard	Temporary spare
Wheel	Size	14 × 5 1/2-JJ	14 × 4T
	Offset mm {in}		45 {1.77}
	Pitch circle diameter mm {in}		100 {3.94}
	Material	Aluminum alloy	Steel
Tire	Size	185/60R14 82H	T115/70D14
	Air pressure kPa {kgf/cm <sup>2</sup> , psi}	179 {1.8, 26}	415 {4.2, 60}
Wheel and tire	Runout limit mm {in}	Horizontal	2.0 {0.079}
		Vertical	1.5 {0.059}
	Maximum unbalance (at rim edge) g {oz}		10 {0.35}

R. SUSPENSION

Item	Transmission		MT		AT	
	Differential		"TORSEN" LSD	Standard		
<b>Front suspension</b>						
Type		Double-wishbone				
Stabilizer	Type		Torsion bar			
	Diameter	mm {in}	20.0 {0.79}		19.0 {0.75}	
Shock absorbers		Cylindrical double-acting, low-pressure gas charged				
Coil springs	Identification color		White		Blue	
	Wire diameter	mm {in}	11.0 {0.43}			
	Coil inner diameter	mm {in}	83.0 {3.27}			
	Free length	mm {in}	292.5 {11.52}		302.0 {11.89}	
	Coil number	6.32				
<b>Rear suspension</b>						
Type		Double-wishbone				
Stabilizer	Type		Torsion bar			
	Diameter	mm {in}	12.0 {0.47}		11.0 {0.43}	
Shock absorbers		Cylindrical double-acting, low-pressure gas charged				
Coil springs	Identification color		Yellow		Green	
	Wire diameter	mm {in}	10.1 {0.40}		10.2 {0.40}	
	Coil inner diameter	mm {in}	83.0 {3.27}			
	Free length	mm {in}	348.5 {13.72}		356.5 {14.04}	
	Coil number	7.68		7.96		
<b>Wheel alignment</b>						
Front wheel alignment (Unladen*1)	Total toe-in	mm {in}	3 ± 3 {0.12 ± 0.12}			
		degree	0°18' ± 18'			
	Maximum steering angle	Inner	37°23' ± 2°			
		Outer	32°32' ± 2°			
	Camber angle*2		0°24' ± 45'			
	Caster angle*3		4°26' ± 45'			
King pin angle		11°20'				
Rear wheel alignment (Unladen*1)	Total toe-in	mm {in}	3 ± 3 {0.12 ± 0.12}			
		degree	0°18' ± 18'			
	Camber angle*2		-0°43' ± 30'			

\*1 Fuel tank full; radiator coolant and engine oil at specified level, and spare tire, jack, and tools in designated position.

\*2 Difference between left and right must not exceed 1°.

\*3 Difference between left and right must not exceed 1°30'.

**T. BODY ELECTRICAL SYSTEM**

Item	Wattage (Bulb trade number)
<b>Warning and Indicator lights</b>	
Beam	3.4
Turn (LH and RH)	3.4
Illumination	3.4 x 4
Malfunction indicator	1.4
Brake	1.4
Charge	1.4
Belt	1.4
Air bag	2
Retractor	1.4
Hold	1.4
Anti lock	1.4
Washer	1.4
Rear window defroster	1.4
<b>Exterior lights</b>	
Headlights	60/40
Front turn signal/parking lights	27/8 (1157 NA)
Front side marker lights	3.8 (194)
License plate lights	7.5
Rear turn signal lights	27 (1156)
Rear side marker lights	3.8 (194)
Stop/taillights	27/8 (1157)
Back-up lights	27 (1156)
High-mount stoplight	18.4 (921)
<b>Interior lights</b>	5
<b>Illumination lights</b>	
Ash tray	3.4
Heater control switch panel	1.4
ACS	1.4
Hazard switch	1.4
Cruise control main switch	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, 3.9—5.1}
Refrigerant normal pressure MPa {kgf/cm <sup>2</sup> , psi}	Low pressure: 0.15—0.25 {1.5—2.5, 21—36} High pressure: 1.37—1.57 {14—16, 199—228}

**STANDARD BOLT AND NUT TIGHTENING TORQUE**

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