

TECHNICAL DATA

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15UTDX-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/Transmission		B6 DOHC	
				M/T	A/T
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)		78.0 x 83.6 (3.07 x 3.29)	
Total piston displacement		cc (cu in)		1,597 (97.42)	
Compression ratio				9.4	9.0
Compression pressure kPa (kg/cm ² , psi)-rpm	Standard			1,324 (13.5, 192)-300	
	Minimum			932 (9.5, 135)-300	
	Maximum difference between each cylinder			196 (2.0, 28)	
Valve timing	IN	Open BTDC		5°	5°
		Close ABDC		51°	40°
	EX	Open BBDC		53°	55°
		Close ATDC		15°	5°
Valve clearance	mm (in)	IN		0: Maintenance-free	
		EX		0: Maintenance-free	
Cylinder head					
Height		mm (in)		133.8—134.0 (5.268—5.276)	
Distortion		mm (in)		0.15 (0.006) max.	
Grinding		mm (in)		0.20 (0.008) max.	
Cylinder head-to-HLA clearance	mm (in)	Standard		0.025—0.066 (0.0010—0.0026)	
		Maximum		0.18 (0.0071)	
Valve and valve guide					
Valve head diameter	mm (in)	IN		30.9—31.1 (1.217—1.224)	
		EX		26.1—26.3 (1.028—1.035)	
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		105.29 (4.1452)	
		Minimum		104.79 (4.1256)	
	EX	Standard		105.39 (4.1492)	
		Minimum		104.89 (4.1295)	
Valve stem diameter	mm (in)	IN		5.970—5.985 (0.2350—0.2356)	
		EX		5.965—5.980 (0.2348—0.2354)	
Guide inner diameter		mm (in)		6.01—6.03 (0.2366—0.2374)	
Valve stem-to-guide clearance	mm (in)	IN		0.025—0.060 (0.0010—0.0024)	
		EX		0.030—0.065 (0.0012—0.0026)	
		Maximum		0.20 (0.008)	
Guide projection (Height "A")	mm (in)	IN		16.8—17.4 (0.661—0.685)	
		EX		16.8—17.4 (0.661—0.685)	
Valve seat					
Seat angle		IN		45°	
		EX		45°	

Item		Engine/Transmission		B6 DOHC			
				M/T	A/T		
Seat contact width		mm (in)		0.8—1.4 (0.031—0.055)			
Seat sinking		mm (in)		Standard	43.5 (1.713)		
				Maximum	45.0 (1.772)		
Valve spring							
Free length		mm (in)		IN	48.1 (1.893)		
				EX	48.3 (1.902)		
Minimum length				IN	40.0 with a set load of 23.3 ^{+1.75} / _{-1.17} kg		
				EX	40.0 with a set load of 18.6 ^{+1.4} / _{-0.93} kg		
Out-of-square		mm (in)		IN	1.68 (0.0661) max.		
				EX	1.69 (0.0665) max.		
Setting load/height		N (kg, lb)/mm (in)		IN	217—246 (22.1—25.1, 48.6—55.2)/40.0 (1.575)		
				EX	174—196 (17.7—20.0, 38.9—44.0)/40.0 (1.575)		
Camshaft							
Cam height		mm (in)		IN	Standard	40.888 (1.6098)	39.984 (1.5741)
					Minimum	40.688 (1.6019)	39.784 (1.5662)
				EX	Standard	40.889 (1.6098)	40.888 (1.6097)
					Minimum	40.689 (1.6019)	40.688 (1.6018)
Journal diameter		mm (in)		Standard (No.1—No.5)			25.940—25.965 (1.0213—1.0222)
				Out-of-round			0.03 (0.001) max.
Camshaft bearing oil clearance		mm (in)		Standard (No.1—No.5)			0.035—0.081 (0.0014—0.0032)
				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—0.0075)
				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			78.006—78.013 (3.0711—3.0714)
				0.25 (0.010) oversize			78.256—78.263 (3.0809—3.0812)
				0.50 (0.020) oversize			78.506—78.513 (3.0908—3.0911)
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 16.5mm (0.650 in) below oil ring groove		mm (in)		Standard size			77.954—77.974 (3.0690—3.0698)
				0.25 (0.010) oversize			78.211—78.217 (3.0792—3.0794)
				0.50 (0.020) oversize			78.461—78.467 (3.0890—3.0892)
Piston-to-cylinder clearance		mm (in)		Standard			0.039—0.052 (0.0015—0.0020)
				Maximum			0.15 (0.006)
Piston ring							
Thickness		mm (in)		Top			1.47—1.49 (0.0579—0.0587)
				Second			1.47—1.49 (0.0579—0.0587)
End gap (Measured in cylinder)		mm (in)		Top			0.15—0.30 (0.006—0.012)
				Second			0.3—0.45 (0.012—0.018)
				Oil (rail)			0.20—0.70 (0.008—0.028)
				Maximum			1.0 (0.039)
Ring groove width in piston		mm (in)		Top			1.52—1.54 (0.0598—0.0606)
				Second			1.52—1.54 (0.0598—0.0606)
				Oil			4.02—4.04 (0.1583—0.1591)
Piston ring-to-ring groove clearance		mm (in)		Top			0.03—0.07 (0.0012—0.0028)
				Second			0.03—0.07 (0.0012—0.0028)
				Maximum			0.15 (0.006)
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—0.0011)			

TD

Item		Engine/Transmission		B6 DOHC	
				M/T	A/T
Connecting rod and connecting rod bearing					
Length (Center to center)		mm (in)		132.85—132.95 (5.230—5.234)	
Bending		mm (in)		0.075 (0.0030) max./50 (1.97)	
Small end bore (Bush inner diameter)		mm (in)		20.003—20.014 (0.7875—0.7880)	
Big end bore		mm (in)		48.000—48.016 (1.8898—1.8904)	
Big end width		mm (in)		21.838—21.890 (0.8598—0.8618)	
Connecting rod side clearance		mm (in)		Standard	
				Maximum	
				0.110—0.262 (0.0043—0.0103)	
				0.30 (0.012)	
Crankshaft					
Crankshaft runout		mm (in)		0.04 (0.0016) max.	
Main journal diameter		Standard size		Standard	
				Minimum	
		0.25 (0.010) undersize		Standard	
				Minimum	
		0.50 (0.020) undersize		Standard	
				Minimum	
		0.75 (0.030) undersize		Standard	
				Minimum	
Main journal taper and out-of-round		mm (in)		0.05 (0.0020) max.	
Crankpin diameter		Standard size		Standard	
				Minimum	
		0.25 (0.010) undersize		Standard	
				Minimum	
		0.50 (0.020) undersize		Standard	
				Minimum	
		0.75 (0.030) undersize		Standard	
				Minimum	
Crankpin taper and out-of-round		mm (in)		0.05 (0.0020) max.	
Main bearing					
Main journal bearing oil clearance		mm (in)		Standard	
				Maximum	
				0.018—0.036 (0.0007—0.0014)	
				0.10 (0.004)	
Available undersize bearing		mm (in)		0.25 (0.010), 0.50 (0.020), 0.75 (0.030)	
Crankpin bearing					
Crankpin bearing oil clearance		mm (in)		Standard	
				Maximum	
				0.028—0.068 (0.0011—0.0027)	
				0.10 (0.004)	
Available undersize bearing		mm (in)		0.25 (0.010), 0.50 (0.020), 0.75 (0.030)	
Thrust bearing					
Crankshaft end play		mm (in)		Standard	
				Maximum	
				0.080—0.282 (0.0031—0.0111)	
				0.30 (0.012)	
Bearing width		mm (in)		Standard size	
				0.25 (0.010) oversize	
				0.50 (0.020) oversize	
				0.75 (0.030) oversize	
				2.500—2.550 (0.0984—0.1004)	
				2.625—2.675 (0.1033—0.1053)	
				2.750—2.800 (0.1083—0.1102)	
				2.875—2.925 (0.1132—0.1152)	
Timing belt					
Belt deflection		mm (in)/98 N (10 kg, 22 lb)		9.0—11.5 (0.35—0.45)	

D. LUBRICATION SYSTEM

Item		Engine	B6 DOHC
Lubricating method			Force-fed
Oil pump			
Type			Trochoid gear
Relief pressure		kPa (kg/cm ² , psi)	343—441 (3.5—4.5, 50—64)
Oil pressure		1,000 rpm	
		3,000 rpm	
		196—294 (2.0—3.0, 28—43)	
		294—392 (3.0—4.0, 43—57)	

Item		Engine	B6 DOHC
Inner rotor tooth tip to outer rotor clearance	mm (in)	Standard	0.02—0.16 (0.0008—0.0063)
		Maximum	0.20 (0.0079)
Outer rotor to body clearance	mm (in)	Standard	0.09—0.18 (0.0035—0.0071)
		Maximum	0.22 (0.0087)
Side clearance	mm (in)	Standard	0.03—0.11 (0.0012—0.0043)
		Maximum	0.14 (0.0055)
Oil filter			
Type		Full-flow, paper element	
Relief pressure differential		kPa (kg/cm ² , psi)	78—118 (0.8—1.2, 11—17)
Engine oil			
Capacity liters (US qt, Imp qt)	Total (dry engine)		3.6 (3.8, 3.2)
	Oil pan		3.2 (3.4, 2.8)
	Oil filter		0.17 (0.18, 0.15)
Grade		API Service SG energy conserving II (ECII)	
Viscosity number	Above -25°C (-13°F)		SAE 10W-30
	Below 0°C (32°F)		SAE 5W-30

E. COOLING SYSTEM

Item		Engine	B6 DOHC
Cooling method		Water-cooled, forced circulation	
Water pump			
Type		Centrifugal, V-belt driven	
Impeller diameter	mm (in)	75 (2.95)	
Number of impeller blades		6	
Speed ratio		1 : 1.05	
Water seal type		Unified mechanical seal	
Thermostat			
Type		Wax, two-stage	
Opening temperature	°C (°F)	Sub: 83.5—86.5 (182—188), 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 (kg/cm ² , psi)	74—103 (0.75—1.05, 11—15)	
Cooling circuit checking pressure	kPa (kg/cm ² , psi)	103 (1.05, 15)	
Cooling fan			
Type		Electric	
Number of blades		5	
Outer diameter	mm (in)	320 (12.6)	
Switching temperature OFF → ON	°C (°F)	97 (207)	
Capacity	W-V	70-12	
Current	A	5.3—6.5	
Coolant			
Capacity	liters (US qt, Imp qt)	6.0 (6.3, 5.3)	

TD

Item		Engine	B6 DOHC		
Antifreeze solution	Coolant protection		Volume percentage %		Specific gravity at 20°C (68°F)
			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	850 ± 50 *	
Ignition timing	BTDC	10° ± 1° (M/T) *, 8° ± 1° (A/T) *	
Throttle body			
Type		Horizontal draft	
Throat diameter	mm (in)	55 (2.2)	
Dashpot			
Adjustment speed	rpm	2,500 ± 150	
Airflow meter			
Resistance	E2 ↔ Vs	Fully closed	200—600
		Fully open	20—1,000
	E2 ↔ Vc		200—400
	E2 ↔ THAA (Intake air thermosensor)	-20°C (-4°F)	13,600—18,400
		20°C (68°F)	2,210—2,690
		60°C (140°F)	493—667
E1 ↔ Fc	Fully closed	∞	
	Fully open	0	
Fuel pump			
Type		Impeller (in-tank)	
Output pressure	kPa (kg/cm ² , psi)	441—589 (4.5—6.0, 64—85)	
Fuel filter			
Type	Low-pressure side	Nylon element	
	High-pressure side	Paper element	
Pressure regulator			
Type		Diaphragm	
Regulating pressure	kPa (kg/cm ² , psi)	265—314 (2.7—3.2, 38—46)	
Injector			
Type		High-ohmic	
Type of drive		Voltage	
Resistance	Ω	12—16 (at 20°C, 68°F)	
ISC valve (Solenoid valve (Idle speed control))			
Solenoid resistance	Ω	11—13 (at 20°C, 68°F)	
Circuit opening relay			
Resistance	Ω	STA — E1	21—43
		B — Fc	109—226
		B — Fp	∞
Solenoid valve (Purge control)			
Solenoid resistance	Ω	23—27 (at 20°C, 68°F)	
Crank angle sensor			
Type		Optical pickup	
Water thermosensor			
Resistance	kΩ	-20°C (-4°F)	14.6—17.8
		20°C (68°F)	2.2—2.7
		80°C (176°F)	0.29—0.35
Air valve			
Opening temperature	°C (°F)	Below 40 (104)	
Fuel tank			
Capacity	liters (US gal, Imp gal)	45 (11.9, 9.9)	

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

Item	Specification
Air cleaner	
Element type	Oil permeated
Accelerator cable	
Free play	mm (in) 1-3 (0.039-0.118)
Fuel	
Specification	Unleaded regular (RON 87 or higher)

G. ENGINE ELECTRICAL SYSTEM

Item		Engine	B6 DOHC	
Battery	Voltage	V	12, Negative ground	
	Type and capacity (5-hour rate)		S46A24L(S) (32Ah) Maintenance-free	
Dark current *1		mA	20.0	
Alternator	Type		A.C.	
	Output	V-A	12-60 (M/T), 12-65 (A/T)	
	Regulator type		Transistorized (built-in IC regulator)	
	Regulated voltage		14.3-14.9	
	Brush length	mm (in)	Standard	21.5 (0.85)
			Minimum	8 (0.31)
Drive belt tension	mm (in)	New	8-9 (0.31-0.35)	
		Used	9-10 (0.35-0.39)	
Starter	Type		Direct	
	Output	V-kW	12-0.95	
	Brush length	mm (in)	Standard	17.0 (0.67)
Minimum			11.5 (0.45)	
Ignition system	Type		Electronic spark advance (ESA)	
	Spark advance control		Engine control unit controls sparks advance	
Ignition timing		BTDC	9°-11° (M/T)*2, 7°-9° (A/T)*2	
Ignition coil	Type		Molded	
	Primary coil winding	kΩ	0.78-0.94	
	Secondary coil winding	kΩ	11.2-15.2	
Spark plug	Type		NGK: BKR5E-11 NIPPONDENSO: K16PR-U11 BKR6E-11 K20PR-U11 (Standard...M/T) (Standard...M/T, A/T) BKR7E-11 K22PR-U11	
	Plug gap	mm (in)	1.0-1.1 (0.039-0.043)	
	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 unit, audio etc.)

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

TD

H. CLUTCH

Item		Engine	B6 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)
Clutch disc			
Type			Single dry plate

Item		Engine	B6 DOHC
Runout limit		mm (in)	0.7 (0.028)
Wear limit		mm (in)	0.3 (0.012) from rivet head
Outer diameter		mm (in)	200 (7.87)
Inner diameter		mm (in)	130 (5.12)
Facing thickness	mm (in)	Flywheel side	3.5 (0.14)
		Pressure plate side	3.5 (0.14)
Clutch cover			
Type			Diaphragm spring
Set load		N (kg, lb)	4,022 (410, 902)

J. MANUAL TRANSMISSION

Item		Transmission	M-type (M5M-D)
Gear ratio	1st		3.136
	2nd		1.888
	3rd		1.330
	4th		1.000
	5th		0.814
	Reverse		3.758
Oil capacity		liters (US qt, Imp qt)	2.0 (2.1, 1.8)
Mainshaft	Runout	mm (in)	Maximum
	Clearance between mainshaft and gear (or bush)	mm (in)	Wear limit
Reverse idle gear	Clearance between reverse idle gear bushing and shaft	mm (in)	Wear limit
Shift fork and rod	Clearance between shift fork and clutch sleeve	mm (in)	Wear limit
	Clearance between shift rod gate and control lever	mm (in)	Wear limit
Synchronizer ring	Clearance between synchronizer ring and side of gear when fitted	mm (in)	Standard
			Wear limit
Shift rod (5th/Reverse) spring	Free length	mm (in)	
Detent ball spring (1st/2nd)	Free length	mm (in)	
Detent ball spring (3rd/4th)	Free length	mm (in)	
Detent ball spring (5th/Reverse)	Free length	mm (in)	
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 (HYDRAULICALLY-CONTROLLED)

Item		Transmission	N4A-HL
Torque converter stall torque ratio			1.9 : 1
Gear ratio	1st		2.841
	2nd		1.541
	3rd		1.000
	OD (4th)		0.720
	Reverse		2.400
Automatic transmission fluid (ATF)	Type	Dexron®II or M-III	
	Capacity liters (US qt, Imp qt)	Total	6.7 (7.1, 5.9)
		Oil pan	4.0 (4.2, 3.5)
Engine stall speed	rpm	D, 2, 1, and R ranges	2,600—3,000
Time lag	sec.	N → D range	0.5—1.0
		N → R range	0.5—1.0
Line pressure kPa (kg/cm ² , psi)	At idle	D and 1 ranges	294—392 (3.0—4.0, 43—57)
		2 range	1,020—1,138 (10.4—11.6, 148—166)
		R range	697—834 (7.1—8.5, 101—121)
	At stall	D and 1 ranges	932—1,128 (9.5—11.5, 135—164)
		2 range	981—1,177 (10.0—12.0, 142—171)
		R range	2,246—2,541 (22.9—25.9, 326—369)
Governor pressure kPa (kg/cm ² , psi)	Vehicle speed: 30 km/h (19 mph)		78—137 (0.8—1.4, 11—20)
	Vehicle speed: 55 km/h (34 mph)		157—235 (1.6—2.4, 23—34)
	Vehicle speed: 85 km/h (53 mph)		334—432 (3.4—4.4, 48—63)
	Cutback point	Atmospheric pressure	108—167 (1.1—1.7, 16—24)
		200 mmHg (7.87 inHg)	59—118 (0.6—1.2, 9—17)
Oil pump	Body clearance mm (in)	Standard	0.02—0.04 (0.0008—0.0016)
		Maximum	0.08 (0.0031)
	Tip clearance mm (in)	Standard	0.14—0.21 (0.0055—0.0083)
		Maximum	0.25 (0.0098)
	Side clearance mm (in)	Standard	0.05—0.20 (0.0020—0.0079)
		Maximum	0.25 (0.0098)
Drum support	Seal ring and groove clearance mm (in)	Standard	0.04—0.16 (0.0016—0.0063)
		Maximum	0.40 (0.016)
Direct clutch	Number of drive/driven plates		2/2
	Drive plate thickness mm (in)	Standard	1.6 (0.063)
		Minimum	1.4 (0.055)
	Clutch clearance mm (in)	0.2 (0.008) max.	
	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)	
	Thrust washer size mm (in)	1.3 (0.051), 1.5 (0.059), 1.7 (0.067), 1.9 (0.075), 2.1 (0.083), 2.3 (0.091), 2.5 (0.098), 2.7 (0.106)	
OD 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 (0.0098—0.0197)	
	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	Number of drive/driven plates		4/5
	Drive plate thickness mm (in)	Standard	1.6 (0.063)
		Minimum	1.4 (0.055)
	Clutch clearance mm (in)	0.9—1.1 (0.035—0.043)	
	Retaining plate size mm (in)	5.6 (0.220), 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)	
	Thrust washer size mm (in)	1.3 (0.051), 1.5 (0.059), 1.7 (0.067), 1.9 (0.075), 2.1 (0.083), 2.3 (0.091), 2.5 (0.098), 2.7 (0.106)	

TD

Item		Transmission	N4A-HL
Rear clutch	Number of drive/driven plates		6/6
	Drive plate thickness mm (in)	Standard	1.6 (0.063)
		Minimum	1.4 (0.055)
	Clutch clearance	mm (in)	0.8—1.0 (0.031—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), 7.4 (0.291), 7.6 (0.299)
	Total end play	mm (in)	0.25—0.50 (0.0098—0.0197)
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)	
Low and reverse brake	Number of drive/driven plates		4/4
	Drive plate thickness mm (in)	Standard	2.0 (0.079)
		Minimum	1.8 (0.071)
	Clutch clearance	mm (in)	0.8—1.05 (0.031—0.041)
Retaining plate size	mm (in)	7.8 (0.307), 8.0 (0.315), 8.2 (0.323), 8.4 (0.331), 8.6 (0.339), 8.8 (0.346)	
Front planetary gear	Pinion clearance mm (in)	Standard	0.2—0.7 (0.008—0.028)
		Maximum	0.8 (0.031)
Rear planetary gear	Pinion clearance mm (in)	Standard	0.2—0.7 (0.008—0.028)
		Maximum	0.8 (0.031)
Parking gear (oil distributor)	Seal ring and groove clearance mm (in)	Standard	0.04—0.16 (0.0016—0.0063)
		Maximum	0.40 (0.0157)

Spring specifications

Spring	Item	Outer dia. mm (in)	Free length mm (in)	No. of coil	Wire dia. mm (in)
Control valve	Second lock	5.55 (0.219)	33.5 (1.319)	18.0	0.55 (0.022)
	Pressure regulator	11.7 (0.461)	43.0 (1.692)	15.0	1.2 (0.047)
	Down shift	5.55 (0.219)	21.9 (0.862)	14.0	0.55 (0.022)
	Throttle back-up	7.3 (0.287)	36.0 (1.417)	16.0	0.8 (0.031)
	3-4 shift	6.6 (0.260)	30.3 (1.193)	14.6	0.8 (0.031)
	2-3 shift	6.4 (0.252)	39.2 (1.543)	20.0	0.7 (0.028)
	1-2 shift	6.65 (0.262)	26.9 (1.059)	12.2	0.65 (0.026)
	Pressure modifier	8.6 (0.339)	15.5 (0.610)	7.5	0.6 (0.024)
	3-2 timing	7.5 (0.295)	23.2 (0.913)	11.0	0.8 (0.031)
	Throttle relief	6.5 (0.256)	26.8 (1.055)	16.0	0.9 (0.035)
Governor valve	Orifice check	5.0 (0.197)	15.5 (0.610)	12.0	0.23 (0.009)
	Primary	8.75 (0.344)	21.8 (0.858)	7.0	0.45 (0.018)
	Secondary	9.25 (0.364)	26.7 (1.051)	9.0	0.75 (0.030)
Oil pump	Lockup control	5.5 (0.217)	25.0 (0.984)	15.0	0.7 (0.028)
Drum support	OD accumulator	16.0 (0.630)	40.4 (1.591)	9.8	2.6 (0.102)
	OD cancel	4.95 (0.195)	23.0 (0.906)	14.8	0.65 (0.026)
Band servo	OD	26.8 (1.055)	47.0 (1.850)	8.4	2.9 (0.114)
	2ND	28.25 (1.112)	37.0 (1.457)	5.4	3.5 (0.138)
Direct, front, and rear clutches		8.0 (0.315)	30.5 (1.201)	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)

Vehicle speed at gearshift table

Range	Throttle condition (Manifold vacuum)	Shifting	Vehicle speed km/h (mph)
D	Fully opened	D1→D2	50–56 (31–35)
		D2→D3	93–99 (58–61)
		OD→D3	Above 93 (58)
		D3→D2	87–93 (54–58)
		D2→D1	37–43 (23–27)
	Half throttle 200 mmHg (7.87 inHg)	D1→D2	17–23 (11–14)
		D2→D3	25–31 (16–19)
		D3→OD	44–50 (27–31)
		Lockup ON (OD)	66–72 (41–45)
		Lockup OFF (OD)	60–66 (37–41)
		OD→D3	27–33 (17–20)
		D3→D2	9–15 (6– 9)
	Fully closed	D2→D1	9–15 (6– 9)
		D1→D2	12–18 (7–11)
		D2→D3	22–28 (14–17)
		D3→OD	41–47 (25–29)
		OD→D3	27–33 (17–20)
	1	---	D3→D2
D2→D1			9–15 (6– 9)
12→11			38–44 (24–27)

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	Standard	
	Reduction gear	Hypoid gear	
	Reduction ratio	4.300	
	Differential gear	Straight-bevel gear	
	Ring gear size mm (in)	162.16 (6.38)	
	Oil	Grade	API service GL-5
		Viscosity	Above -18°C (0°F): SAE 90 Below -18°C (0°F): SAE 80W
		Capacity liter (Us qt, Imp qt)	0.65 (0.69, 0.57)
	Drive pinion preload (without oil seal) N·m (cm·kg, in·lb)		0.3–0.7 (3–7, 2.6–6.1)
	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)		150.20 ± ⁰ _{0.063} (5.913 ± ⁰ _{0.0025})	

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 (kg, lb)	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	
Gear ratio		∞ (infinite)	
Rack stroke	mm (in)	121.0 (4.76)	
Power steering fluid		ATF Dexron®II or M-III	
Fluid capacity	liter (US qt, Imp qt)	0.8 (0.85, 0.70)	
Fluid pressure	kPa (kg/cm ² , 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 mm (in) (without carpet, clearance when pedal is depressed at 589 N (60 kg, 132 lb))	95 (3.74)	
Master cylinder	Type	Tandem	
	Bore mm (in)	22.22 (0.87)	
	Fluid type	SAEJ1703 or FMVSS116, DOT-3	
Front brake (Disc)	Type	Disc	
	Thickness of pad mm (in)	Standard	9.5 (0.37)
		Limit	1.0 (0.04)
	Thickness of disc plate mm (in)	Standard	18.0 (0.71)
		Limit	16.0 (0.63)
	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 (0.35)
		Limit	7 (0.28)
Wheel cylinder bore mm (in)		31.75 (1.25)	
Parking brake	Lever notches [Pulled at 98 N (10 kg, 22 lb)]	5—7	
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. 500 mmHg (19.7 inHg) 0.1—0.4mm (0.004—0.016 in)	
	Fluid pressure per treading force kPa (kg/cm ² , psi)/N (kg, lb)	1,079—1,177 (11—12, 156—171)/196 (20, 44) at 0 mmHg (0 inHg) min. 5,199—5,494 (53—56, 754—796)/196 (20, 44) at 500 mmHg (19.7 inHg) min.	
Rear wheel hydraulic control system	Type	PBV	
	Bend portion (Rear brake pressure) kPa (kg/cm ² , 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		P185/60R14 82H	T115/70D14
	Air pressure	kPa (kg/cm ² , 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	M/T	A/T
Front suspension				
Type			Double-wishbone	
Stabilizer	Type		Torsion bar	
	Diameter	mm (in)	21 (0.82)	
Shock absorbers			Cylindrical double-acting, low-pressure gas charged	
Coil springs	Identification color		Red	White
	Wire diameter	mm (in)	10.8 (0.43)	11.0 (0.43)
	Coil inner diameter	mm (in)	83 (3.27)	83 (3.27)
	Free length	mm (in)	282.5 (11.12)	292.5 (11.52)
	Coil number		5.91	6.32
Rear suspension				
Type			Double-wishbone	
Stabilizer	Type		Torsion bar	
	Diameter	mm (in)	14 (0.55)	
Shock absorbers			Cylindrical double-acting, low-pressure gas charged	
Coil springs	Identification color		Blue	Orange
	Wire diameter	mm (in)	10.1 (0.40)	10.2 (0.40)
	Coil inner diameter	mm (in)	83 (3.27)	83 (3.27)
	Free length	mm (in)	339.5 (13.37)	347.5 (13.68)
	Coil number		7.68	7.96
Wheel alignment				
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		0°24' ± 45' ^{*2}	
	Caster angle		4°26' ± 45' ^{*3}	
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		-0°43' ± 30' ^{*2}	

*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)
Instrument cluster lamps	
Beam	3.4
Turn (LH and RH)	3.4
Illumination	3.4
Engine check	1.4
Brake	1.4
Charge	1.4
Belts	1.4
Air bag	1.4
Retractor	1.4
O/D off	1.4
Anti lock	1.4
Washer	1.4
Rear window defroster	1.4
Exterior lights	
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)
Interior lamps	5
Illumination lamps	
Ash tray	3.4
Heater control switch panel	1.4
A/C switch	1.4
Hazard switch	1.4
Cruise control main switch	1.4

U. HEATER AND AIR CONDITIONING SYSTEM

Item	Specifications
Refrigerant amount	g (oz) 800 (28.24)
Compressor oil amount	cc (cc in) 80—100 (4.88—6.1)
Refrigerant normal pressure	kPa (kg/cm ² , psi) Low pressure: 147—294 (1.5—3.0, 21—43) High pressure: 1,177—1,619 (12.0—16.5, 171—235)

STANDARD BOLT AND NUT TIGHTENING TORQUE

Diameter mm (in)	Pitch mm (in)	4T			6T			8T		
		N-m	m-kg	ft-lb	N-m	m-kg	ft-lb	N-m	m-kg	ft-lb
6 (0.236)	1 (0.039)	4.2—6.2	0.43—0.63	3.1—4.6	6.9—9.8	0.7—1.0	5.0—7.2	7.8—11.8	0.8—1.2	5.8—8.8
8 (0.315)	1.25 (0.049)	9.8—14.7	1.0—1.5	7.2—10.8	16—23	1.6—2.3	12—17	18—26	1.8—2.7	13—20
10 (0.394)	1.25 (0.049)	20—28	2.0—2.9	14—21	31—46	3.2—4.7	23—34	36—54	3.7—5.5	27—40
12 (0.472)	1.5 (0.059)	34—50	3.5—5.1	25—37	55—80	5.6—8.2	41—59	63—93	6.4—9.5	46—69
14 (0.551)	1.5 (0.059)	—	—	—	75—103	7.7—10.5	56—76	102—137	10—14	75—101
16 (0.630)	1.5 (0.059)	—	—	—	116—157	12—16	85—116	156—211	16—22	115—156
18 (0.709)	1.5 (0.059)	—	—	—	167—225	17—23	123—166	221—299	23—31	163—221
20 (0.787)	1.5 (0.059)	—	—	—	231—314	24—32	171—231	308—417	31—43	227—307
22 (0.866)	1.5 (0.059)	—	—	—	314—423	32—43	231—312	417—564	43—58	307—416
24 (0.945)	1.5 (0.059)	—	—	—	475—546	41—56	298—403	536—726	55—74	396—536