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97UTDX-001

TD TECHNICAL DATA

A. MEASUREMENTS

Item			Specification
Overall length		mm (in)	4,315 (169.9) 4,310 (169.7) (With license plate holder)
Overall width		mm (in)	1,690 (66.5)
Overall height		mm (in)	1,265 (49.8)
Wheelbase		mm (in)	2,430 (95.7)
Tread	mm (in)	Front	1,450 (57.1)
		Rear	1,440 (56.7)

C. ENGINE

Item \ Engine model				RE 13B (TURBO)	RE 13B (NON-TURBO)
Type				Rotary engine	
Displacement			cc (cu in)	654x2 (40.0x2)	
Number of rotors and arrangement				2 rotors, longitudinal	
Combustion chamber type				Bathtub	
Compression ratio				9.0:1	9.7:1
Port timing	Intake	Open	Primary	45° ATDC	32° ATDC
			Secondary	32° ATDC	
			Auxiliary	—	45° ATDC
		Close	Primary	50° ABDC	40° ABDC
			Secondary	50° ABDC	30° ABDC
			Auxiliary	—	80° ABDC
	Exhaust	Open		75° BBDC	
		Close		48° ATDC	
Compression pressure kPa (kg/cm², psi)-rpm		Minimum		589 (6.0, 85)-250	
		Maximum difference between chambers		147 (1.5, 21)-250	
Side housing (Front, intermediate and rear housing)		Distortion limit	mm (in)	0.04 (0.0016)	
		Side seal wear limit	mm (in)	0.10 (0.0039)	
		Side seal wear limit, overlapping oil seal wear	mm (in)	0.01 (0.0004)	
		Side seal wear limit, outside oil seal wear	mm (in)	0.10 (0.0039)	
		Oil seal wear limit	mm (in)	0.02 (0.0008)	
Rotor housing		Width	mm (in)	79.970—80.010 (3.1484—3.1500)	
		Maximum width difference	mm (in)	0.06 (0.0024)	
Rotor		Width (Apex)	mm (in)	79.800—79.850 (3.1417—3.1437)	
		Clearance of side housing to rotor	mm (in) Standard	0.12—0.21 (0.0047—0.0083)	
			mm (in) Min.	0.10 (0.0039)	
		Diameter of corner seal groove	mm (in)	11.000—11.018 (0.4331—0.04338)	
		Width of side seal groove	mm (in)	0.714—0.739 (0.0281—0.0291)	
		Width of apex seal groove	mm (in)	1.995—2.012 (0.0785—0.0792)	
Apex seal and spring		Width	mm (in)	1.910—1.939 (0.0752—0.0763)	
		Height (upper and lower)	mm (in) Standard	8.0 (0.315)	
			mm (in) Min.	6.5(0.256)—Refer to ENGINE INSPECTION section	
		Clearance of apex seal and rotor groove	mm (in) Standard	0.041—0.091 (0.0016—0.0036)	0.052—0.092 (0.0020—0.0036)
			mm (in) Max.	0.15 (0.0059)	
		Spring free height mm (in) Long	Standard	6.25 (0.246)	
			Min.	4.6 (0.181)	
		Spring free height mm (in) Short	Standard	3.3 (0.130)	
			Min.	1.7 (0.067)—Refer to ENGINE INSPECTION section	

Item \ Engine model			RE 13B (TURBO)	RE 13B (NON-TURBO)
Side seal and spring	Thickness mm (in)		0.661—0.686 (0.0260—0.0270)	
	Clearance of side seal to rotor groove mm (in)	Standard	0.028—0.078 (0.0011—0.0031)	
		Max.	0.10 (0.0039)	
	Height mm (in)		2.85—3.15 (0.1122—0.1240)	
	Protrusion min. mm (in)		0.50 (0.020)	
	Clearance of side seal to corner seal mm (in)	Standard	0.05—0.15 (0.0020—0.0059)	
		Max.	0.40 (0.016)	
Corner seal and spring	Outer diameter mm (in)		10.990—11.014 (0.4327—0.4336)	
	Height mm (in)		6.8—7.0 (0.268—0.276)	
	Protrusion min. mm (in)		0.50 (0.020)	
Rotor oil seal and spring	Height mm (in)		5.6—5.8 (0.220—0.228)	
	Oil seal lip width max. mm (in)		0.50 (0.020)	
	Protrusion min. mm (in)		0.50 (0.020)	
Main bearing	Inner diameter mm (in)		43.025—43.050 (1.6939—1.6949)	
Rotor bearing	Inner diameter mm (in)		74.025—74.050 (2.9144—2.9153)	
Eccentric shaft	Runout max. mm (in)		0.12 (0.0047)	
	End play mm (in)	Standard	0.040—0.070 (0.0016—0.0028)	
		Limit	0.09 (0.0035)	
	Main journal diameter mm (in)		42.970—42.985 (1.6917—1.6923)	
	Clearance of main journal mm (in)	Standard	0.040—0.080 (0.0016—0.0031)	
		Limit	0.10 (0.0039)	
	Rotor journal diameter mm (in)		73.970—73.985 (2.9122—2.9128)	
	Clearance of rotor journal mm (in)	Standard	0.040—0.080 (0.0016—0.0031)	
		Limit	0.10 (0.0039)	
Drive belt deflection at 98 N (10 kg, 22 lb) mm (in)	Alternator	Used	14—17 (0.55—0.67)	
	Air pump	Used	11—13 (0.43—0.51)	
	A/C compressor	Used	8—9 (0.31—0.35)	
	P/S pump	Used	14.0—16.0 (0.55—0.63)	

D. LUBRICATING SYSTEM

Item \ Engine model			RE 13B (TURBO)	RE 13B (NON-TURBO)
Lubrication system			Forced-fed	
Oil pump	Type		Trochoid	
	Lobe clearance of outer rotor to inner rotor. mm (in)	Standard	0.03—0.12 (0.0012—0.0047)	
		Max.	0.15 (0.0059)	
	Clearance of outer rotor to pump body mm (in)	Standard	0.20—0.25 (0.0079—0.098)	
		Max.	0.30 (0.0118)	
	End float mm (in)	Standard	0.03—0.13 (0.0012—0.0051)	
		Max.	0.15 (0.0059)	
Pressure control valve	Relief pressure kPa (kg/cm^2, psi)		1,079 (11.0, 156)	
Oil cooler	Type		Air-cooled, with bypass valve	
	Relief temperature °C (°F)		60—65 (140—149) or below	
	Relief pressure dif. kPa (kg/cm^2, psi)		349 (3.56, 50) at 60°C (140°F)	
	Bypass valve protrusion mm (in)		5 (0.2) or more	

Item \ Engine model			RE 13B (TURBO)	RE 13B (NON-TURBO)
Regulator valve	Relief pressure kPa (kg/cm², psi)		490 (5.0, 71)	
Oil filter	Type		Full flow, paper element	
	Relief pressure dif. kPa (kg/cm², psi)		98 (1.0, 14)	
Eccentric shaft bypass valve	Relief temperature °C (°F)		60 (140) or below	
	Protrusion mm (in)		6 (0.24) or more	
Engine oil	Capacity liters (US qt, Imp qt)	Total (dry engine)	5.8 (6.1, 5.1)	
		Oil pan	4.4 (4.7, 3.9)	
		Oil cooler	0.85 (0.90, 0.75)	
		Oil filter	0.19 (0.20, 0.17).....Factory installed 0.17 (0.18, 0.15).....Service parts	
	Classification		API service "Fuel efficient" SF (Mineral only)	
	−10°C (15°F) or over		20W-40, 20W-50	
	−25—30°C (−10-85°F)		10W-30	
	−25°C (−10°F) or over		10W-40, 10W-50	
	0°C (32°F) or below		5W-30	

E. COOLING SYSTEM

Item \ Engine model			RE 13B (TURBO)	RE 13B (NON-TURBO)	
Cooling method			Water-cooled, forced circulation		
Water pump	Type		Centrifugal impeller		
	Pulley ratio (Speed)		1:1.22		
Thermostat	Type		Wax, bottom bypass		
	Opening temperature °C (°F)		80.5—83.5 (177—182)		
	Full-open temperature °C (°F)		95 (203)		
	Full-open lift min. mm (in)		8—10 (0.31—0.39)		
Radiator	Type		Corrugated fin		
Coolant filler cap	Relief pressure kPa (kg/cm², psi)		74—103 (0.75—1.05, 11—15)		
Cooling fan	Cooling fan		Thermo-modulated		
	Number of blades		10		
	Outer diameter mm (in)		390 (15.35)		
Electric cooling fan	Type		Electrical		
	Capacity W		90		
	Number of blades		5		
	Outer diameter mm (in)		255 (10.04)		
Drive belt deflection at 98 N (10 kg, 22 lb) mm (in)	Alternator	Used	14—17 (0.55—0.67)		
	Air pump	Used	11—13 (0.43—0.51)		
Coolant	Capacity liters (US qt, Imp qt)		8.7 (9.2, 7.7)	7.3 (7.7, 6.4)	
Antifreeze solution	Protection \ Mixture		Mixture percentage %		Specific gravity at 20°C (68°F)
			Water	Antifreeze	
	Above −16°C (3°F)		65	35	1.054
	Above −26°C (−15°F)		55	45	1.066
	Above −40°C (−40°)		45	55	1.078

F1. FUEL AND EMISSION CONTROL SYSTEMS (EGI)

Item			Specification
Fuel tank capacity	liters (US gal, Imp gal)		70 (18.5, 15.4)
Fuel filter	Type	Low pressure	Nylon 6 (164 and 45 mesh)
		High pressure	Filter paper
Fuel pump	Type		Impeller (intank)
	Output pressure kPa (kg/cm^2, psi)		441—588 (4.5—6.0, 64.0—85.3)
Pressure regulator	Type		Diaphragm
	Regulated pressure kPa (kg/cm^2, psi)		235—275 (2.4—2.8, 34.1—39.8)
Throttle body	Type		Horizontal-draft (2 stages, 3 barrel)
	Throat diameter	Primary mm (in)	45 (1.772)
		Secondary mm (in)	45 (1.772)x2
	Water thermo valve operation temp. °C (°F)		M/T; 67—77 (153—171) or more A/T; 60—70 (140—158) or more
Air cleaner	Element type		Long life wet
Accelerator cable	Deflection mm (in)		1—3 (0.04—0.12)
Idle speed (Test connector grounded)		rpm	750 ± 25 (A/T; in P range)
Dashpot	Adjustment speed	rpm	2,700—3,100
Injector (Primary and secondary)	Drive		Voltage drive
	Injection volume cc (cu in)/15 sec.		111—118 (6.8—7.2)
	Resistance	Ω	12—16
Airflow meter	Resistance	$E_2 \leftrightarrow V_S$ Ω	200—400 (Closed ↔ Open; 20°C (68°F))
		$E_2 \leftrightarrow V_C$ Ω	200—1,000 (Closed; 20°C (68°F))
			20—800 (Open; 20°C (68°F))
Water thermo-sensor	Resistance	−20°C (−4°F) kΩ	16.2 ± 1.6
		20°C (68°F) kΩ	2.5 ± 0.2
		80°C (176°F) kΩ	0.3 ± 0.1
Heat hazard sensor	Operation temperature °C (°F)		105—115 (221—239)
Intake air thermosensor	Airflow meter	−20°C (−4°F) Ω	10,000—20,000
		0°C (32°F) Ω	4,000—7,000
		20°C (68°F) Ω	2,000—3,000
		40°C (104°F) Ω	900—1,300
		60°C (140°F) Ω	400—700
	Dynamic chamber	25°C (77°F) kΩ	33 ± 4
		85°C (185°F) kΩ	3.5 ± 0.4
Throttle sensor (Full range)	Resistance	Ⓓ—Ⓔ kΩ	Idle position; 0.6—0.9 Full open; 3.4—5.1
		Ⓓ—Ⓕ kΩ	4.0—6.0
Throttle sensor (Narrow range)	Resistance	Ⓐ—Ⓑ kΩ	Idle position; 0.8—1.2 Full open; 4.0—6.0
		Ⓑ—Ⓒ kΩ	4.0—6.0
Solenoid valve (BAC)	Resistance	Ω	10.7—12.3
Solenoid valve (AWS)	Resistance	Ω	9.3—11.3
Circuit opening relay	Resistance	STA ↔ E_1 Ω	21—43
		B ↔ F_C Ω	109—226
Sub-zero starting assist fluid			Anti-freeze 90% water 10%

F2. FUEL AND EMISSION CONTROL SYSTEMS (EGI TURBO)

Item			Specification
Fuel tank capacity liters (US gal, Imp gal)			70 (18.5, 15.4)
Fuel filter	Type	Low pressure	Nylon 6 (164 and 45 mesh)
		High pressure	Filter paper
Fuel pump	Type		Impeller (intank)
	Output pressure kPa (kg/cm², psi)		490—637 (5.0—6.5, 71.1—92.4)
Pressure regulator	Type		Diaphragm
	Regulated pressure kPa (kg/cm², psi)		235—275 (2.4—2.8, 34.1—39.8)
Throttle body	Type		Horizontal-draft (2 stage, 3 barrel)
	Throat diameter	Primary mm (in)	45 (1.772)
		Secondary mm (in)	45 (1.772)x2
	Water thermo valve operation temp. °C (°F)		55—65 (131—149) or more
Air cleaner	Element type		Long life wet
Accelerator cable	Deflection mm (in)		1—3 (0.04—0.12)
Idle speed (Test connector grounded) rpm			750 ± 25
Dashpot	Adjustment (Throttle sensor (narrow range) resistance Ⓐ—Ⓑ) kΩ		1.8—3.8
Injector (Primary and secondary)	Drive		Voltage drive
	Injection volume cc (cu in)/15 sec.		133—142 (8.1—8.7)
	Resistance Ω		12—16
Airflow meter	Resistance	E_2 ↔ Vs Ω	200—400 (Closed ↔ Open; 20°C (68°F))
		E_2 ↔ Vc Ω	200—1,000 (Closed; 20°C (68°F))
			20—800 (Open; 20°C (68°F))
Water thermo-sensor	Resistance	−20°C (−4°F) kΩ	16.2 ± 1.6
		20°C (68°F) kΩ	2.5 ± 0.2
		80°C (176°F) kΩ	0.3 ± 0.1
Heat hazard sensor	Operation temperature °C (°F)		105—115 (221—239)
Intake air thermosensor	Airflow meter	−20°C (−4°F) Ω	10,000—20,000
		0°C (32°F) Ω	4,000—7,000
		20°C (68°F) Ω	2,000—3,000
		40°C (104°F) Ω	900—1,300
		60°C (140°F) Ω	400—700
	Engine (Intake air pipe)	20°C (68°F) kΩ	33 ± 4
		85°C (185°F) kΩ	3.5 ± 0.4
Throttle sensor (Full range)	Resistance	Ⓓ—Ⓔ kΩ	Idle position; 0.6—0.9 Full open; 3.4—5.1
		Ⓓ—Ⓕ kΩ	4.0—6.0
Throttle sensor (Narrow range)	Resistance	Ⓐ—Ⓑ kΩ	Idle position; 0.8—1.2 Full open; 4.0—6.0
		Ⓑ—Ⓒ kΩ	4.0—6.0
Solenoid valve (BAC)	Resistance Ω		10.7—12.3
Solenoid valve (AWS)	Resistance Ω		9.3—11.3
Solenoid valve (ASV)	Resistance Ω		16.5—23.5
Circuit opening relay	Resistance	STA ↔ E_1 Ω	21—43
		B ↔ Fc Ω	109—226
Turbocharger	Type		Water cooled
	Lubrication		Engine oil
	Boost pressure kPa (kg/cm², psi)		57.0 (0.58, 8.25)

Item				Specification
Waste gate valve				Incorporated with turbocharger
Intercooler	Type			Air cooled
Knock control system knocking frequency			kHz	3.5 ± 0.3
Fuel pump resistor relay	Resistance	a—b	Ω	0
		c—d	Ω	60—92
		e—f	Ω	0.74—0.94
Sub-zero starting assist fluid				Anti-freeze 90% water 10%

G. ENGINE ELECTRICAL SYSTEM

Item \ Model				M/T (EGI)	A/T (EGI)	M/T (EGI TURBO)
Charging system						
Battery	Type			Maintenance free, 55D23L, 65D23L (65D23L: Coldproof area)		
	Voltage		V	12		
	Capacity		Ah	55 (65D23L) 60 (55D23L)		
	Specific gravity at 20°C (68°F)	Recharge	at	1.230		
		Fully charged		1.280		
	Charging current		A	55D23L: Max. 6 65D23L; Max. 5.5		
Alternator	Type			A/C type		
	Voltage-capacity		V-A	12-80		
	Pulley ratio			1:2.03		
	Load test	Current	A	Min. 60		
		Speed	rpm	2,500		
	Regulated voltage		V	14.1—14.7		
	Brush	Number		2		
		Length mm (in)	Standard	16.5 (0.650)		
			Limit	8 (0.315)		
		Spring force	N (kg, lb)	2.9—4.3 (0.3—0.44, 0.66—0.97)		
Starter system						
Starter	Output		kW	1.2	2.0	1.2
	Free running test	Voltage	V	11.0		
		Current	A	Max. 90		
		Speed	rpm	Min. 3,000		
	Lock test	Voltage	V	4		
		Current	A	Min. 780	Min. 980	Min. 780
		Torque	N·m (m-kg, ft-lb)	Min. 17.6 (1.79, 13.0)	Min. 22.5 (2.29, 16.6)	Min. 17.6 (1.79, 13.0)
	Brush	Number		4		
		Length mm (in)	Standard	17.5 (0.689)		
			Limit	10.0 (0.394)		
		Spring force	N (kg, lb)	14—23 (1.4—2.4, 3.1—5.2)		
	Mica depth mm (in)		Standard	0.5—0.8 (0.02—0.03)		
			Limit	0.2 (0.008)		
	Pinion gap (magnetic clutch engaged) mm (in)			0.5—2.0 (0.02—0.08)		
	Operation of magnetic switch			Max. 8V		
Electronic spark advance (ESA) control system						
Crank angle sensor	Resistance	G①—G②	Ω	110—210		
		Ne①—Ne②	Ω	110—210		

Item \ Model				M/T (EGI)	A/T (EGI)	M/T (EGI TURBO)
Ignition system						
Ignition timing	Leading		ATDC	5° ± 1° (Test connector grounded)		
	Trailing		ATDC	20° ± 2° (Test connector grounded)		
Timing mark location				Eccentric shaft pulley		
Spark plug	Type	NGK		Trailing: BUR9EQ, Leading: BUR7EQ		
	Gap		mm (in)	1.1 (0.043)—1.7 (0.067)		
Ignition coil	Resistance	Primary	Ω	0.2—1.0		
High-tension lead	Resistance		Ω/1 m (3.28 ft)	16,000		
Drive belt	Deflection at 98 N (10 kg, 22 lb)		mm (in) New	12—15 (0.47—0.59)		
			mm (in) Used	14—17 (0.55—0.67)		

H. CLUTCH

Item			Specification	
			Turbo model	Non-Turbo model
Clutch pedal	Pedal ratio		6.35:1	
	Stroke	mm (in)	135 (5.31)	
	Height (With carpet)	mm (in)	183—193 (7.20—7.60)	
	Pedal free play	mm (in)	0.6—3.0 (0.02—0.12)	
	Disengagement height	mm (in)	54 (2.13)	
Clutch cover	Set load	N (kg, lb)	6,867 (700, 1,540)	5,199 (530, 1,166)
Clutch disc	Facing (outer)	mm (in)	230 (9.06)	225 (8.86)
	Facing (inner)	mm (in)	155 (6.10)	150 (5.91)
	Thickness — Pressure plate side	mm (in)	3.2 (0.13)	3.2 (0.13)
	Thickness — Flywheel side	mm (in)	3.2 (0.13)	3.2 (0.13)
	Run-out limit	mm (in)	0.7 (0.028)	
	Wear limit	mm (in)	0.3 (0.012)	
Master cylinder	Bore	mm (in)	15.87 (0.625)	
Release cylinder	Bore	mm (in)	19.05 (0.750)	

J1, J2. MANUAL TRANSMISSION

Item		Specification	
		Turbo model	Non-Turbo model
Gear ratio	1st	3.483	3.475
	2nd	2.015	2.002
	3rd	1.391	1.366
	4th	1.000	
	5th	0.719	0.697 0.756*
	Reverse	3.288	3.493
Oil capacity	liters (US qt, Imp qt)	2.5 (2.6, 2.2)	2.5 (2.6, 2.2)
Mainshaft	Max. permissible run-out mm (in)	0.03 (0.0012)	0.03 (0.0012)
	Clearance between mainshaft and gear (or bush) Wear limit mm (in)	0.15 (0.006)	
Reverse idle gear	Clearance between reverse idle gear bushing and shaft Wear limit mm (in)	0.15 (0.006)	
Shift fork and rod	Clearance between shift fork and clutch sleeve Wear limit mm (in)	0.5 (0.020)	
	Clearance between shift rod gate and control lever Wear limit mm (in)	0.8 (0.031)	
Synchronizer ring	Clearance between synchronizer ring and side of gear when fitted Standard mm (in) Wear limit mm (in)	 1.5 (0.059) 0.8 (0.031)	
Lubricant	Above 10°C (50°F)	API Service GL-4 or GL-5 SAE80W-90	
	All seasons	API Service GL-4 or GL-5 SAE75W-90	

* With viscous limited slip differential

K. AUTOMATIC TRANSMISSION

Item			Model N4A-EL
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)		7.3 (7.7, 6.4)
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	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)
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 (0.010—0.020)
	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 (0.035—0.043)
	Retaining plate size mm (in)		5.0 (0.197), 5.2 (0.205), 5.4 (0.213), 5.6 (0.220), 5.8 (0.228), 6.0 (0.236), 6.2 (0.244)
	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)	Maximum	0.8—1.0 (0.031—0.039)
	Total end play mm (in)		0.25—0.50 (0.010—0.020)
	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—0.028)
		Maximum	0.8 (0.031)
Rear planetary gear unit	Pinion clearance mm (in)	Standard	0.2—0.7 (0.008—0.028)
		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 (0.002—0.006)
		Maximum	0.40 (0.016)

Item \ Model		N4A-EL			
Valve spring specification		Outer dia. mm (in)	Free length mm (in)	No. of coils	Wire dia. mm (in)
Control valve	Pressure regulator	11.7 (0.461)	43.0 (1.693)	15.0	1.2 (0.047)
	1-2 shift	7.4 (0.291)	26.4 (1.039)	11.6	0.7 (0.028)
	2-3 shift	7.4 (0.291)	57.6 (2.268)	26.0	0.9 (0.035)
	3-4 shift	7.5 (0.295)	40.2 (1.583)	17.0	0.8 (0.031)
	Throttle backup	8.3 (0.327)	18.3 (0.720)	7.5	0.8 (0.031)
	Backup control	8.5 (0.335)	21.3 (0.839)	9.25	0.9 (0.035)
	N-R reducing	7.4 (0.291)	14.5 (0.571)	7.0	0.6 (0.024)
	Pressure modifier	9.2 (0.362)	19.8 (0.780)	7.3	0.7 (0.028)
	3-2 control	5.5 (0.217)	39.5 (1.555)	24.4	0.65 (0.026)
	Throttle relief	7.4 (0.291)	38.2 (1.504)	17.0	1.1 (0.043)
	Orifice check	5.0 (0.197)	15.5 (0.610)	12.0	0.23 (0.009)
	1-2 reducing	9.5 (0.374)	19.5 (0.768)	7.6	0.9 (0.035)
	1-2 accumulator	10.3 (0.406)	62.6 (2.465)	24.0	1.4 (0.055)
	N-R/2-3 accumulator	8.7 (0.343)	75.8 (2.984)	30.0	1.1 (0.043)
	N-D accumulator	9.3 (0.366)	43.4 (1.709)	24.0	1.4 (0.055)
	Throttle relief (ball)	6.5 (0.256)	26.8 (1.055)	16.0	0.9 (0.035)
Oil pump	Lockup control	5.45 (0.215)	25.7 (1.012)	16.5	0.65 (0.026)
Drum support	OD accumulator	16.0 (0.630)	40.4 (1.590)	9.8	2.6 (0.102)
Band servo	OD	28.0 (1.102)	48.0 (1.890)	7.0	3.5 (0.138)
	2nd	28.25 (1.112)	35.0 (1.378)	—	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		—	5.3–6.2 (0.209–0.244)	—	—
Parking rod		7.2 (0.283)	32.0 (1.260)	14.0	0.7 (0.028)

Shift point (except convertible)

Mode	Range	Throttle condition (Throttle sensor voltage)	Shift	Turbine speed (rpm)	Vehicle speed km/h (mph)
Normal	D	Fully opened (4.3 volt)	$D_1 \rightarrow D_2$	5,780—6,350	60—66 (37—41)
			$D_2 \rightarrow D_3$	5,800—6,210	111—119 (69—74)
			$D_3 \rightarrow OD$	5,250—5,590	155—165 (96—102)
		Half throttle (2.6 volt)	$D_1 \rightarrow D_2$	3,950—4,520	41—47 (25—29)
			$D_2 \rightarrow D_3$	3,970—4,390	76—84 (47—52)
			Lockup ON (D_3)	3,290—3,490	97—103 (60—64)
			$D_3 \rightarrow OD$	3,860—4,130	114—122 (71—76)
			Lockup ON (OD)	3,860—4,130	114—122 (71—76)
			Lockup OFF (OD)	2,100—2,290	86—94 (53—58)
			$OD \rightarrow D_3$	2,100—2,290	86—94 (53—58)
			$D_3 \rightarrow D_2$	1,390—1,660	41—49 (25—30)
		Kickdown	$OD \rightarrow D_3$	3,540—3,780	145—155 (90—96)
			$D_3 \rightarrow D_2$	3,420—3,690	101—109 (63—68)
			$D_2 \rightarrow D_1$	2,190—2,510	42—48 (26—30)
	S	Fully opened (4.3 volt)	$S_1 \rightarrow S_2$	5,780—6,350	60—66 (37—41)
			$S_2 \rightarrow S_3$	5,800—6,210	111—119 (69—74)
			$S_3 \rightarrow S_2$	3,460—3,660	102—108 (63—67)
			$S_2 \rightarrow S_1$	2,190—2,510	42—48 (26—30)
		Half throttle (2.6 volt)	$S_1 \rightarrow S_2$	3,950—4,520	41—47 (25—29)
			$S_2 \rightarrow S_3$	3,970—4,390	76—84 (47—52)
			$S_3 \rightarrow S_2$	1,420—1,630	42—48 (26—30)
	L	Fully opened (4.3 volt)	$L_1 \rightarrow L_2$	5,780—6,350	60—66 (37—41)
			$L_2 \rightarrow L_1$	2,190—2,510	42—48 (26—30)
		Half throttle (2.6 volt)	$L_1 \rightarrow L_2$	4,040—4,620	42—48 (26—30)
Hold	D	—	$D_2 \rightarrow D_3$	890—1,200	17—23 (11—14)
			$D_3 \rightarrow D_2$	200—470	6—14 (4—9)
	S	Fully closed (0.8 volt)	$OD \rightarrow D_3$	3,830—3,980	157—163 (97—101)
			$S_3 \rightarrow S_2$	3,800—4,000	112—118 (69—73)
	L		$L_2 \rightarrow L_1$	2,350—2,660	45—51 (28—32)

Item \ Model				N4A-EL	
Shift point (convertible)					
Mode	Range	Throttle condition (Throttle sensor voltage)	Shift	Turbine speed (rpm)	Vehicle speed km/h (mph)
Normal	D	Fully opened (4.3 volt)	$D_1 \rightarrow D_2$	5,960—6,560	59—65 (37—40)
			$D_2 \rightarrow D_3$	5,910—6,350	108—116 (67—72)
			$D_3 \rightarrow OD$	5,330—5,690	150—160 (93—99)
		Half throttle (2.6 volt)	$D_1 \rightarrow D_2$	4,040—4,640	40—46 (25—29)
			$D_2 \rightarrow D_3$	4,050—4,490	74—82 (46—51)
			Lockup ON (D_3)	3,450—3,660	97—103 (60—64)
			$D_3 \rightarrow OD$	3,910—4,190	110—118 (68—73)
			Lockup ON (OD)	2,810—3,020	110—118 (68—73)
			Lockup OFF (OD)	2,120—2,330	83—91 (51—56)
			$OD \rightarrow D_3$	2,120—2,330	83—91 (51—56)
			$D_3 \rightarrow D_2$	1,460—1,740	41—49 (25—30)
		Kickdown	$OD \rightarrow D_3$	3,530—3,790	138—148 (86—92)
			$D_3 \rightarrow D_2$	3,410—3,700	96—104 (60—64)
			$D_2 \rightarrow D_1$	2,190—2,520	40—46 (25—29)
	S	Fully opened (4.3 volt)	$S_1 \rightarrow S_2$	5,960—6,560	59—65 (37—40)
			$S_2 \rightarrow S_3$	5,910—6,350	108—116 (67—72)
			$S_3 \rightarrow S_2$	3,450—3,660	97—103 (60—64)
			$S_2 \rightarrow S_1$	2,190—2,520	40—46 (25—29)
		Half throttle (2.6 volt)	$S_1 \rightarrow S_2$	4,040—4,640	40—46 (25—29)
			$S_2 \rightarrow S_3$	4,110—4,440	75—81 (47—50)
			$S_3 \rightarrow S_2$	1,460—1,740	41—49 (25—30)
	L	Fully opened (4.3 volt)	$L_1 \rightarrow L_2$	5,960—6,560	59—65 (37—40)
			$L_2 \rightarrow L_1$	2,190—2,520	40—46 (25—29)
		Half throttle (2.6 volt)	$L_1 \rightarrow L_2$	4,040—4,640	40—46 (25—29)
Hold	D	—	$D_2 \rightarrow D_3$	930—1,260	17—23 (11—14)
			$D_3 \rightarrow D_2$	210—500	6—14 (4—9)
		Fully closed (0.8 volt)	$OD \rightarrow D_3$	3,840—3,990	150—156 (93—97)
	S		$S_3 \rightarrow S_2$	3,800—4,020	107—113 (66—70)
	L		$L_2 \rightarrow L_1$	2,350—2,680	43—49 (27—30)

Item			Model N4A-EL
Line pressure	Shift position	Engine speed	750 ± 25
	R range kPa (kg/cm², psi)	Idle	638—736 (6.5—7.5, 92—107)
		Stall	1,864—2,060 (19.0—21.0, 270—299)
	D (Normal) range kPa (kg/cm², psi)	Idle	294—392 (3.0—4.0, 43—57)
		Stall	883—1,079 (9.0—11.0, 128—156)
	S (Normal) range kPa (kg/cm², psi)	Idle	294—392 (3.0—4.0, 43—57)
		Stall	883—1,079 (9.0—11.0, 128—156)
	S (Hold) range kPa (kg/cm², psi)	Idle	294—392 (3.0—4.0, 43—57)
		Stall	638—834 (6.5—8.5, 92—121)
	L range kPa (kg/cm², psi)	Idle	294—392 (3.0—4.0, 43—57)
		Stall	883—1,079 (9.0—11.0, 128—156)
Engine stall speed		rpm	1,900—2,100
Vacuum diaphragm	Clearance between body and throttle valve mm (in)		Adjusting rod length mm (in)
	Below 27.30 (1.0748)		29.0 (1.14)
	27.30—27.80 (1.0748—1.0945)		29.5 (1.16)
	27.80—28.30 (1.0945—1.1142)		30.0 (1.18)
	28.30—28.80 (1.1142—1.1339)		30.5 (1.20)
	28.80 (1.1339) or over		31.0 (1.22)
Time lag	N ↔ D (Normal)	sec.	0.5—0.6
	N ↔ D (Hold)	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			Specification	
			Turbo model	Non-Turbo model
Reduction ratio M/T			4.1	4.1, 4.3 (Viscous L.S.D.)
Reduction ratio A/T (convertible)			—	3.909 (4.1)
Backlash of ring gear and pinion		mm (in)	0.09—0.11 (0.0035—0.0043)	
Pinion bearing preload (without pinion oil seal)		N·m (in-lb)	1.3—1.8 (11.3—15.6)	
Backlash at side gear and pinion gear		mm (in)	0—0.1 (0—0.004)	
Front wheel bearing end play		mm (in)	0 (0)	
Rear wheel bearing end play		mm (in)	0—0.1 (0—0.004)	
Lubricant	Standard diff.	Above −18°C (0°F)	API Service GL-5 SAE90	
		Below −18°C (0°F)	API Service GL-5 SAE80W	
	Viscous L.S.D.	Above −18°C (0°F)	API Service GL-5 SAE90	
		Below −18°C (0°F)	API Service GL-5 SAE80W	
Oil capacity	Standard diff.	liters (US qt, Imp qt)	—	1.3 (1.4, 1.1)
	Viscous L.S.D.	liters (US qt, Imp qt)	1.4 (1.5, 1.2)	1.3 (1.4, 1.1)
"L" (case spread)		mm (in)	204.43—204.50 (8.048—8.051)	185.43—185.50 (7.300—7.303)

Viscous L.S.D.: Viscous Limited Slip Differential

N. STEERING SYSTEM

Item \ Type		Engine speed sensing power steering	Electronically controlled power steering
Steering wheel			
Outer diameter	mm (in)	380 (15.0)	
Free play	mm (in)	5—20 (0.20—0.79)	
Wheel effort	N (kg, lb)	36 (3.7, 8.1) or less	13.7—20.6 (1.4—2.1, 3.1—4.6)
Lock-to-lock	turns	2.70	3.09
Steering Shaft			
Shaft type		Collapsible	
Joint type		2-cross joint	
Tilt stroke	mm (in)	35 (1.38)	
Power steering system			
Gear type		Rack and pinion	
Gear ratio		∞ (infinite)	
Rack stroke	mm (in)	144 (5.67)	
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)	7,848—8,339 (80—85, 1,137—1,209)	

P. BRAKING SYSTEM

Item			NON-TURBO Type A*	NON-TURBO Type B*	TURBO
Brake pedal	Height (with carpet) mm (in)		184—189 (7.24—7.44)		
	Free play mm (in)		4—7 (0.16—0.28)		
	Reserve travel mm (in) (without carpet, clearance when pedal is depressed at 58.9 N (6.0 kg, 13.2 lb))		100 (3.94) min.		
Master cylinder	Type		Tandem (with level sensor)		
	Bore mm (in)		22.22 (0.875)		23.81 (0.937)
	Fluid type		SAE J1703 or FMVSS116 DOT-3		
Front brakes (Disc)	Type		Ventilated disc, single-piston caliper	Ventilated disc, four piston caliper	
	Thickness of pad mm (in)	Standard	9 (0.35)	11 (0.43)	
		Limit	2 (0.08)	2 (0.08)	
	Thickness of disc plate mm (in)	Standard	22 (0.87)		
		Limit	20 (0.79)		
	Disc plate runout mm (in)		0.1 (0.004) max.		
	Wheel cylinder bore mm (in)		50.8 (2.00)	36.12 (1.42)	
Rear brake (Disc)	Type		Solid disc	Ventilated disc	
	Thickness of pad mm (in)	Standard	8 (0.31)		
		Limit	1 (0.04)		
	Thickness of disc plate mm (in)	Standard	10 (0.39)	20 (0.79)	
		Limit	8 (0.31)	18 (0.71)	
	Disc plate runout mm (in)		0.1 (0.004) max.		
	Wheel cylinder bore mm (in)		34.93 (1.375)		
Parking brake	Lever notches [Pulled at 98 N (10 kg, 22 lb)]		5—7		

Type A*: Standard suspension models
Type B*: Sport suspension, Auto Adjusting Suspension (AAS), or convertible top models

Item		NON-TURBO		TURBO
		Type A*	Type B*	
Power brake unit	Type	Single diaphragm		Tandem diaphragm
	Diameter mm (in)	238 (9.37)		188&215 (7.40&8.46)
	Push rod-to-piston clearance mm (in)	When vacuum applied to the unit is approx. 500 mmHg (19.7 inHg) 0.1—0.3 (0.004—0.012)		
	Fluid pressure per treading force when 500 mmHg (19.7 inHg) vacuum applied kPa (kg/cm², psi)/N (kg, lb)	7,063 (72, 1,024)	8,339 (85, 1,209)	
Rear wheel hydraulic control system	Type	PBV		
	Bend portion (Master cylinder pressure) kPa (kg/cm², psi)	2,943 (30, 427)		

Type A*: Standard suspension models
Type B*: Sport suspension, Auto Adjusting Suspension (AAS), or convertible top models

Q. WHEELS AND TIRES

Item \ Type		Standard			Temporary spare	
Wheel	Size	6JJx15	6-1/2JJx15	7JJx16	4Tx15	4Tx16
	Offset mm (in)	40 (1.57)				30 (1.18)
	Pitch circle diameter mm (in)	114.3 (4.5)				
	Material	Steel	Aluminum		Steel	Aluminum
Tire	Size	205/60R15 89H	*205/60VR15	*205/55R16 88V	T135/70D15	T135/70D16
	Air pressure kPa (kg/cm², psi)	216 (2.2, 32)			415 (4.2, 60)	
Wheel and tire	Runout limit mm (in) Horizontal	2.0 (0.08)				
	Runout limit mm (in) Vertical	2.0 (0.08)				
	Maximum unbalance (at rim edge) g (oz)	9 (0.31)		8 (0.28)	—	

*Indicates directional tires

R. SUSPENSION
Front Suspension

Item \ Type				Sport suspension		Standard suspension	
				Left side	Right side	Left side	Right side
Suspension type				Strut			
Stabilizer	Type			Torsion bar			
	Diameter		mm (in)	24 (0.94)			
Shock absorbers				Cylindrical, double-acting			
Coil springs	Identification mark color			Green	Gray	Red	Light green
	Wire diameter		mm (in)	12.2 (0.48)	12.0 (0.47)	12.0 (0.47)	12.0 (0.47)
	Coil diameter	Top	mm (in)	147.2 (5.80)	147.0 (5.79)	147.0 (5.79)	147.0 (5.79)
		Bottom	mm (in)	69.8 (2.75)	70.0 (2.76)	70.0 (2.76)	70.0 (2.76)
	Free length		mm (in)	346.5 (13.64)	336.5 (13.23)	355.5 (14.00)	348.5 (13.72)
	Coil number			4.29	4.08	4.41	4.41
Front wheel alignment (*Unladen)	Total toe-in		mm (in)	3 ± 3 (0.12 ± 0.12)			
			degree	0°18' ± 18'			
	Maximum steering angle	Inner		36° ± 2°			
		Outer		32° ± 2°			
	Camber angle			0°20' ± 30'			
	Caster angle			4°40' ± 45'			
	Kingpin angle			13°45'			

Rear Suspension

Item \ Type			Sport suspension	Standard suspension	
			Normal body		Convertible top
Suspension type			Multilink semi-trailing		
Stabilizer	Type		Torsion bar		
	Diameter	mm (in)	14 (0.55)	12 (0.47)	
Shock absorbers			Cylindrical, double-acting		
Coil springs	Identification mark color		Purple		Orange
	Wire diameter	mm (in)	10.1 (0.40)		10.3 (0.41)
	Coil diameter	mm (in)	84.4 (3.32)		84.2 (3.31)
	Free length	mm (in)	385.0 (15.16)		372.5 (14.67)
	Coil number		9.62		9.43
Rear wheel alignment (*Unladen)	Total toe-in	mm (in)	3 ± 3 (0.12 ± 0.12)		
		degree	0°18' ± 18'		
	Camber angle		−0°44' ± 30'		

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

T. BODY ELECTRICAL SYSTEM

Item		Specification (W) (BULB TRADE NO.)
Front exterior lights	Headlight (Halogen)	65/35 (HP6054, H6054)
	Turn signal/Parking light	27/8 (1157)
	Front fog light (For U.S.A.)	55
	Daytime running light (For Canada)	55
	Side marker light	3.8 (194)
Rear exterior lights	Back-up light	27 (1156)
	License plate light	7.5 (89)
	Stop/Tail light	27/8 (1157)
	High mounted stop light	27 (1156)
	Turn signal light	27 (1156)
	Side marker light	3.8 (194)

Item		Specification (W) and Bulb trade number
Interior lights	Interior light	10
	Glove compartment light Courtesy light	3.4 (158)
	Luggage compartment light Map light	5
Warning lights	Overheat exhaust system Add coolant Washer level Alternator Front doors Engine oil level Check Brake Anti-lock Seat belt Rear glass hatch Cooling fan Fuel	1.4
Indicator	Shift up Hazard High beam	3.4 (158)
	Turn signal Security light	3.4
	Cooling fan (In meter unit) Main Cruise O/D OFF	1.4
Illumination lights	Automatic selector Cigarette lighter	3.4 (158)
	Door key	1.4
	Ignition key Meter	3.4

U. HEATING AND AIR CONDITIONING SYSTEMS

Item		Specifications
Refrigerant amount		800 g (28.2 oz)
Compressor oil amount cc (cu in)	Nippondenso compressor	60—100 (3.7—6.1)
	Sanden compressor	135 (8.2)
Refrigerant normal pressure at 25°C (77°F) kPa (kg/cm², psi)		Low pressure: 98—167 (1.0—1.7, 14—24) High pressure: 1,030—1,324 (10.5—13.5, 149—192)

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—4.1	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