TECHNICAL DATA

ENGINE ..... TD– 2
LUBRICATING SYSTEM ..... TD– 3
COOLING SYSTEM ..... TD– 4
FUEL AND EMISSION CONTROL SYSTEMS ..... TD– 4
ENGINE ELECTRICAL SYSTEM ..... TD– 5
CLUTCH ..... TD– 5
MANUAL TRANSMISSION ..... TD– 6
AUTOMATIC TRANSMISSION ..... TD– 8
PROPELLER SHAFT TD–13
FRONT AND REAR AXLES TD–13
STEERING SYSTEM TD–13
BRAKING SYSTEM TD–14
WHEELS AND TIRES TD–15
SUSPENSION TD–15
BODY ELECTRICAL SYSTEM TD–16
HEATING AND AIR CONDITIONING SYSTEMS TD–17
STANDARD BOLT AND NUT TIGHTENING TORQUE TD–17

37UTDX-001

C. ENGINE

Item				Engine model 13B (Turbo)
Type				Rotary engine
Displacement cc {cu in}				654 × 2 {40.0 × 2}
Number of rotors and arrangement				2 rotors, longitudinal
Combustion chamber type				Bathtub
Compression ratio				9.0: 1
Port timing	Intake	Open	Primary	45° BTDC
			Secondary	32° BTDC
		Close	Primary	50° ABDC
			Secondary	50° ABDC
	Exhaust	Open		75° BBDC
		Close		48° ATDC
Compression pressure kPa {kgf/cm², psi}-rpm		Minimum		686 {7.0, 100}-250
		Maximum difference between chambers		147 {1.5, 21}-250
Side housing (Front, intermediate and rear housing)		Distortion limit mm {in}		0.04 {0.002}
		Side seal wear limit mm {in}		0.10 {0.004}
		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 {0.004}
		Oil seal wear limit mm {in}		0.02 {0.0008}
Rotor housing		Width mm {in}		80 {3.1}
		Maximum width difference mm {in}		0.06 {0.0024}
Rotor		Width (Apex) mm {in}		79.675 {3.1368}
		Clearance of side housing to rotor mm {in}	Standard	0.12–0.21 {0.0047–0.0083}
			Min.	0.10 {0.0039}
		Diameter of corner seal groove mm {in}		11.000–11.018 {0.4331–0.4338}
		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}		2.0 {0.079}
		Height (upper and lower) mm {in}	Standard	8.5 {0.33}
			Min.	7.5 {0.295}-Refer to ENGINE INSPECTION section
		Clearance of apex seal and rotor groove mm {in}	Standard	0.051–0.101 {0.002–0.004}
			Max.	0.15 {0.0059}
		Spring free height mm {in}	Long Standard	6.25 {0.246}
			Long Min.	3.5 {0.138}
			Short Standard	3.3 {0.130}
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}		3.0 {0.118}
		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}		7.0 {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}

Item			Engine model: 13B (Turbo)
Eccentric shaft	Runout max. mm {in}		0.06 {0.0027}
	End play mm {in}	Standard	0.040–0.070 {0.0016–0.0028}
		Limit	0.09 {0.0035}
	Main journal diameter mm {in}		43 {0.37}
	Clearance of main journal mm {in}	Standard	0.08–0.11 {0.0031–0.0043}...outside 0.06–0.08 {0.0023–0.0031}...inside
		Limit	0.13 {0.0051}...outside 0.11 {0.0043}...inside
	Rotor journal diameter mm {in}		74 {2.9}
	Clearance of rotor journal mm {in}	Standard	0.060–0.080 {0.0023–0.0031}
		Limit	0.10 {0.0039}
Drive belt deflection at 98 N {10 kgf, 22 lbf} mm {in}	Alternator and Air pump	Used	7.0–7.5 {0.28–0.29}
	P/S pump and A/C compressor	Used	4.5–5.0 {0.18–0.19}

D. LUBRICATING SYSTEM

Item			Engine model: 13B (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 {0.0079–0.0098}
		Max.	0.30 {0.0118}
	End float mm {in}	Standard	0.03–0.125 {0.0012–0.0049}
		Max.	0.15 {0.0059}
Pressure control valve	Relief pressure kPa {kgf/cm^2, psi}		1,080 {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 {kgf/cm^2, psi}		349 {3.56, 50} at 60°C {140°F}
	Bypass valve protrusion mm {in}		5 {0.2} or more
Regulator valve	Relief pressure kPa {kgf/cm^2, psi}		490 {5.0, 71}
Oil filter	Type		Full flow, paper element
	Relief pressure dif. kPa {kgf/cm^2, 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 L {US qt, Imp qt}	Total (dry engine)	4.9 {5.2, 4.3} *5.4 {5.7, 4.8}
		Oil pan	4.2 {4.4, 3.7}
		Oil cooler	0.85 {0.90, 0.75}
		Oil filter	0.19 {0.20, 0.17}
			0.17 {0.18, 0.15}
	Classification		API Service SG Energy Conserving II (ECII)
	Above – 25°C {– 10°F}		10W-30
	Below 0°C {32°F}		5W-30

* R1 model

E. COOLING SYSTEM

Item		Engine model: 13B (Turbo)
Cooling method		Water-cooled, forced circulation
Water pump	Type	Centrifugal
	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 {kgf/cm², psi}	115–145 {1.15–1.45, 16.4–20.6}
Electric cooling fan	Type	Electrical
	Capacity W	160 × 2
	Number of blades	No1: 5, No2: 4
	Outer diameter mm {in}	300 {11.8}
Drive belt deflection at 98 N {10 kgf, 22 lbf} mm {in}	Alternator and air pump Used	7.0–7.5 {0.28–0.29}
Coolant	Capacity L {US qt, Imp qt}	8.8 {9.3, 7.7}

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

F. FUEL AND EMISSION CONTROL SYSTEMS

Item			Specification
Idle speed*		rpm	700–750
Ignition timing	Leading	ATDC	5°
	Trailing	ATDC	20°
Air cleaner			
Element type			Oil permeated
Throttle body			
Type			Horizontal draft (2 stage-3 barrel)
Throat diameter	Primary	mm {in}	45 {1.772}
	Secondary	mm {in}	50 {1.969} × 2
Dashpot touch angle			8
Water thermovalve Operation (full open) temperature		°C {°F}	55–65 {131–149} or more
Intercooler			
Type			Air cooled
Core size {w × h × t}		mm {in}	294 × 114 × 65 {11.575 × 4.4882 × 2.5591}
Turbocharger			
System type			Sequential twin turbocharged
Cooling method			Water + engine oil
Boost control actuator			Turbo precontrol + wastegate control
Boost control method			Solenoid valve (duty-controled) × 2
Fuel tank			
Capacity		L {US gal, Imp gal}	76 {20.1, 16.7}
Fuel filter			
Type	Low-pressure		Nylon element
	High-pressure		Paper element
Pressure regulator			
Type			Diaphragm
Regulated pressure		kPa {kgf/cm², psi}	250–260 {2.5–2.6, 35.6–37.0}

* TEN terminal of diagnosis connector grounded

Item			Specification
Fuel pump			
Type			Impeller (In tank)
Output pressure		kPa {kgf/cm², psi}	490–740 {5.0–7.5, 71.1–106.7}
Injector			
Type			Side-feeding
Injection volume	Primary	cm³{cc, cu in}/min	550 {550, 33.5}
	Secondary	cm³{cc, cu in}/min	850 {850, 51.8}
Catalytic converter			
Type	Pri-converter		Metal
	Main converter		Monolithic
Air pump			
Capacity		cm³{cc}/rev	375 {375}
Output		L/min	MT 140–200, AT 160–200
Fuel			
Specification			Unleaded premium (RON95 or higher)

G. ENGINE ELECTRICAL SYSTEM

Item				Transmission	MT	AT
voltage				V	12, negative ground	
Battery	Type and capacity (20-hour rate)				55D23L (60Ah) 65D23L (55Ah)*1	55D23L (60Ah) 75D26L (65Ah)*1
Ignition system	Spark timing (test connector grounded)				Leading : ATDC 5° (BTDC – 5°) Trailing : ATDC 20° (BTDC – 20°) at idle (AT: P range)	
	Spark advance				Electronic spark advance (ESA)	
	Spark plug	Type	Leading		NGK : BUR7EQP*2, BUR6EQP, BUR7EQ, BUR6EQ	
			Trailing		NGK : BUR9EQP*2, BUR8EQP, BUR9EQ, BUR8EQ	
		Plug gap		mm {in}	1.1–1.7 {0.044–0.066}	
Alternator	Output			V-A	12–100	
	Regulated voltage			V	14.1–14.7 (With temperature gradient characteristics)	
	Brush length	Standard		mm {in}	21.5 {0.846}	
		Minimum		mm {in}	8.0 {0.315}	
Stater	Type				Direct	Reduction
	Output			V-kW	12–1.2	12–2.0
	Output (no load)	Voltage		V	11	
		Current		A	Max 90	
		Speed		rpm	Min 3000	Min 2200
	Brush length	Standard		mm {in}	17.5 {0.689}	18 {0.71}
		Minimum		mm {in}	12 {0.47}	11 {0.43}

*1 Cold area *2 Standard plug

H. CLUTCH

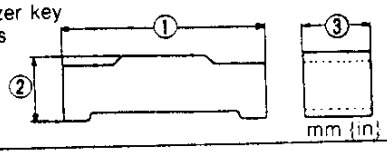
Item	Transmission	R15M-D (R5M-D)
Clutch control		Hydraulic
Clutch pedal		
Type		Suspended
Pedal ratio		6.35
Full stroke	mm {in}	135 {5.32}
Height (with carpet)	mm {in}	165.5–177.0 {6.516–6.968}
Free play	mm {in}	0.6–3.2 {0.02–0.13}
Distance from carpet when clutch is fully disengaged	mm {in}	48 {1.9} min.

Item / Transmission			R15M-D (R5M-D)
Flywheel			
Runout limit		mm {in}	0.2 {0.008}
Clutch disc			
Type			Single dry-plate
Runout limit		mm {in}	0.6 {0.024}
Wear limit		mm {in}	0.3 {0.012} from rivet head
Outer diameter		mm {in}	236 {9.29}
Inner diameter		mm {in}	160 {6.30}
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 {kgf, lbf}	7.220 {736, 1619}
Clutch master cylinder	Inner diameter	mm {in}	15.87 {0.625}
Clutch release cylinder	Inner diameter	mm {in}	19.05 {0.750}
Clutch fluid			FMVSS116 DOT-3

J. MANUAL TRANSMISSION (R15M-D)

Item / Engine			13B
Specifications			
Transmission type			R15M-D (R5M-D)
Transmission control			Floor shift
Synchronization mechanism			Forward : Synchromesh Reverse : Synchromesh
Gear ratio	1st		3.483
	2nd		2.015
	3rd		1.391
	4th		1.000
	5th		0.719
	Reverse		3.288
Fianl gear ratio			4.100
Speedometer gear ratio (driven gear/drive gear)			0.304 (23/7)
Oil	Grade		API service GL-4 or GL-5
	Viscosity	All-season	SAE 75W-90
		Above 10°C {50°F}	SAE 80W-90
	Capacity	L {US qt, Imp qt}	2.5 {2.6, 2.2}
Runout			
Mainshaft		mm {in}	0.03 {0.0012}
Clearance			
Each gear inner diameter and mainshaft outer diameter		mm {in}	0.15 {0.006}
Each clutch hub sleeve gtoove and shift fork mm {in}		Standard	0.2–0.3 {0.008–0.012}
		Maximum	0.5 {0.020.
Reverse idler gear and shaft mm {in}		Standard	0.02–0.05 {0.0008–0.0020}
		Maximum	0.15 {0.006}
Synchronizer ring (all) and flank surface of gear mm {in}		Standard	1.5 {0.059}
		Minimum	0.8 {0.031}
Control rod lever and shift rod gate		mm {in}	0.8 {0.031}
Thrust plam			
Synchronizer key and synchronizer ring (4th) mm {in}		Standard	0.66–2.0 {0.026–0.079}
		Available thrust washer thck-nesses	2.5, 3.0, 3.5 {0.098, 0.118, 0.138}

Item		Engine	13B
Thrust lock washer and C-washers (5th gear thrust play)	mm {in}	Standard	0.1–0.2 {0.004–0.008}
		Available thrust lock washer thick	6.2, 6.3, 6.4, 6.5, 6.6, 6.7 {0.244, 0.248, 0.252, 0.256, 0.260, 0.264}
C-washers and mainshaft groove	mm {in}	Standard	0–0.1 {0–0.004}
		Available C-washer thicknesses	2.9, 3.0, 3.1, 3.2 {0.114, 0.118, 0.122, 0.126}
Clutch housing and main drive gear bearing	mm {in}	Standard	0–0.1 {0–0.004}
		Available adjust shim thicknesses	0.3, 0.4, 0.5, 0.6, 0.7 {0.012, 0.016, 0.020, 0.024, 0.028}
Mainshaft front bearing	mm {in}	Standard	0–0.05 {0–0.002}
		Available adjust shim thicknesses	0.1, 0.3 {0.004, 0.012}
Countershaft front bearing	mm {in}	Bearing height	0.9–1.0 {0.035–0.039}
		Available adjust shim thicknesses	0.1, 0.3 {0.004, 0.012}

Reference			
Detent ball spring	Free length	mm {in}	22.5 {0.886}
5th/reverse retaining spring	Free length	mm {in}	73.00 {2.874}
Select lock spindle spring	Free length	mm {in}	43.25 {1.703}
Synchronizer key dimensions  mm {in}		1st and 2nd	① 18.00 {0.709}, ② 5.45 {0.215} ③ 6.00 {0.236}
		3rd, 4th 5th and Reverse	① 17.00 {0.669} ② 4.25 {0.167} ③ 5.00 {0.197}

K. AUTOMATIC TRANSMISSION

Item			Transmission	RB4A-EL
Gear ratio			1st	3.027
			2nd	1.619
			3rd	1.000
			O/D	0.694
			Reverse	2.272
Final gear ratio				3.909
Automatic transmission fluid (ATF)		Type		Dexron®II or M-III
		Capacity	L {US qt, Imp qt}	8.6 {9.1, 7.6}
Torque converter		Stall torque ratio		2.200
Number of drive plates / driven plates		Reverse clutch		2/2
		High clutch		4/7
		Forward clutch		6/6
		Overrunning clutch		3/5
		Low and reverse brake		7/7
Band servo mm {in}		Servo piston outer dia. / inner dia.		80.0/50.0 {3.15/1.97}
		O/D servo piston outer dia.		72.0 {2.83}
Mechanical system test				
Engine stall speed rpm			D, S, L, R range	3,000–3,300
Time lag sec.			N → D range	Approx. below 1.0
			N → R range	Approx. below 1.2
Line pressure kPa {kgf/cm², psi}	D range		Idle	500–520 {5.0–5.4, 72–76}
			Stall	1,200–1,270 {12.2–13.0, 174–184}
	S range		Idle	500–520 {5.0–5.4, 72–76}
			Stall	1,200–1,270 {12.2–13.0, 174–184}
	L range		Idle	500–520 {5.0–5.4, 72–76}
			Stall	1,200–1,270 {12.2–13.0, 174–184}
	R range		Idle	620–650 {6.3–6.7, 90–95}
			Stall	1,510–1,570 {15.3–16.1, 218–228}
Shift point km/h {MPH}				
POWER	D range	Fully open		$D_1 \rightarrow D_2$ 50–56 {31–35}
				$D_2 \rightarrow D_3$ 103–111 {64–69}
				$D_3 \rightarrow$ O/D 178–188 {111–117}
		Half throttle		$D_1 \rightarrow D_2$ 35–41 {22–25}
				$D_2 \rightarrow D_3$ 81–93 {50–58}
				$D_3 \rightarrow$ O/D 126–144 {78–99}
				Lockup ON (D_3) 94–106 {58–66} (*81–93 {50–58})
				Lockup ON (O/D) 174–192 {108–119} (*126–144 {78–89})
		Fully closed		O/D → D_3 39–45 {24–28}
				$D_3 \rightarrow D_2$ 13–19 {8–12}
				$D_2 \rightarrow D_1$ 5–11 {3–7}
		Kickdown (Fully open)		O/D → D_3 142–152 {88–94}
				$D_3 \rightarrow D_2$ 91–99 {57–62}
				$D_2 \rightarrow D_1$ 38–44 {24–27}

Caution
- **Lockup indicates complete lockup.**
- *** mark indicates lockup points when the engine coolant temperature is above 115°C {239°F}.**

Item			Transmission	RB4A-EL
NORMAL	D range (A/C ON)	Fully open	$D_1 \rightarrow D_2$	50–56 {31–35}
			$D_2 \rightarrow D_3$	103–111 {64–69}
			$D_3 \rightarrow$ O/D	178–188 {111–117}
		Half throttle	$D_1 \rightarrow D_2$	32–38 {20–24}
			$D_2 \rightarrow D_3$	80–92 {50–57}
			$D_3 \rightarrow$ O/D	126–144 {78–89}
			Lockup ON (D_3)	94–106 {58–66} (* 80–92 {50–57})
			Lockup ON (O/D)	174–192 {108–119} (*126–144 {78–89})
		Fully closed	O/D $\rightarrow D_3$	39–45 {24–28}
			$D_3 \rightarrow D_2$	13–19 {8–12}
			$D_2 \rightarrow D_1$	5–11 {3–7}
		Kickdown (Fully open)	O/D $\rightarrow D_3$	142–152 {88–94}
			$D_3 \rightarrow D_2$	91–99 {57–62}
			$D_2 \rightarrow D_1$	38–44 {24–27}
	D range (A/C OFF)	Fully open	$D_1 \rightarrow D_2$	50–56 {31–35}
			$D_2 \rightarrow D_3$	103–111 {64–69}
			$D_3 \rightarrow$ O/D	178–188 {111–117}
		Half throttle	$D_1 \rightarrow D_2$	32–38 {20–24}
			$D_2 \rightarrow D_3$	80–92 {50–57}
			$D_3 \rightarrow$ O/D	126–144 {78–89}
			Lockup ON (D_3)	94–106 {58–66} (*80–92 {50–57})
			Lockup ON (O/D)	174–192 {108–119} (*126–144 {78–89})
		Fully closed	O/D $\rightarrow D_3$	35–41 {22–25}
			$D_3 \rightarrow D_2$	13–19 {8–12}
			$D_2 \rightarrow D_1$	5–11 {3–7}
		Kickdown (Fully open)	O/D $\rightarrow D_3$	142–152 {88–94}
			$D_3 \rightarrow D_2$	91–99 {57–62}
			$D_2 \rightarrow D_1$	38–44 {24–27}
HOLD	D range	–	O/D $\rightarrow D_3$	180–186 {112–116}
			$D_3 \rightarrow D_2$	7–13 {4–8}
			$D_2 \rightarrow D_3$	15–25 {9–16}
			Lockup ON (D_3)	94–106 {58–66} (*39–51 {24–32})
NORMAL	S range	Fully open	$S_1 \rightarrow S_2$	50–56 {31–35}
			$S_2 \rightarrow S_3$	103–111 {64–69}
		Half throttle	$S_1 \rightarrow S_2$	35–41 {22–25}
			$S_2 \rightarrow S_3$	81–93 {50–58}
			Lockup ON (S_3)	94–106 {58–66} (*81–93 {50–58})
		Fully closed	$S_3 \rightarrow S_2$	13–19 {8–12}
			$S_2 \rightarrow S_1$	5–11 {3–7}
		Kickdown (Fully open)	$S_3 \rightarrow S_2$	91–99 {57–62}
			$S_2 \rightarrow S_1$	38–44 {24–27}
HOLD		–	$S_3 \rightarrow S_2$	112–118 {70–73}

Caution

- **Lockup indicates complete lockup.**
- *** mark indicates lockup points when the engine coolant temperature is above 115°C {239°F}.**

Item			Transmission	RB4A-EL
NORMAL	L range	Fully open	$L_1 \rightarrow L_2$	50–56 {31–35}
		Half throttle	$L_1 \rightarrow L_2$	35–41 {22–25}
		Fully closed	$L_2 \rightarrow L$	5–11 {3–7}
		Kickdown (Fully open)	$L_2 \rightarrow L_1$	38–44 {24–27}
HOLD		–	$L_2 \rightarrow L_1$	45–51 {28–32}
Control valve body				
(Upper control valve body)				
Torque converter relief valve spring mm {in}		Outer diameter		9.2 {0.362}
		Free length		38.3 {1.508}
Pressure regulator valve spring mm {in}		Outer diameter		14.0 {0.551}
		Free length		29.0 {1.142}
Pressure modifier valve spring* mm {in}		Outer diameter		(A) 6.8 {0.268} (B) 6.9 {0.272} (C) 6.9 {0.272}
		Free length		(A) 31.95 {1.258} (B) 32.6 {1.283} (C) 32.8 {1.291}
Accumulator control valve spring mm {in}		Outer diameter		10.5 {0.413}
		Free length		17.0 {0.669}
Shuttle shift valve D spring mm {in}		Outer diameter		6.0 {0.236}
		Free length		26.5 {1.043}
Shift valve B spring mm {in}		Outer diameter		7.0 {0.276}
		Free length		25.0 {0.984}
4-2 sequence valve spring mm {in}		Outer diameter		6.95 {0.274}
		Free length		29.1 {1.146}
Shift valve A spring mm {in}		Outer diameter		7.0 {0.276}
		Free length		25.0 {0.984}
4-2 relay valve spring mm {in}		Outer diameter		6.95 {0.274}
		Free length		29.1 {1.146}
Overrunning clutch control valve spring mm {in}		Outer diameter		7.0 {0.276}
		Free length		23.6 {0.929}
Overrunning clutch reducing valve spring mm {in}		Outer diameter		7.0 {0.276}
		Free length		32.5 {1.280}
Pilot valve spring mm {in}		Outer diameter		9.1 {0.358}
		Free length		25.7 {1.012}
Lockup control valve spring mm {in}		Outer diameter		4.7 {0.185}
		Free length		23.4 {0.921}
Lockup modifier valve spring mm {in}		Outer diameter		4.2 {0.165}
		Free length		21.5 {0.846}
(Lower control valve body)				
Modifier accumulator valve spring mm {in}		Outer diameter		9.8 {0.39}
		Free length		30.5 {1.20}
1st reducing valve spring mm {in}		Outer diameter		6.8 {0.27}
		Free length		25.4 {1.00}
Servo charger valve spring mm {in}		Outer diameter		6.5 {0.26}
		Free length		33.2 {1.31}

*: Either A, B, or C type spring is installed at shipment. Only A type spring is available for replacement.

Item	Transmission	RB4A-EL
Accumulator		
N-D accumulator piston spring mm {in}	Outer diameter	18.0 {0.71}
	Free length	43.0 {1.69}
1-2 accumulator piston spring mm {in}	Outer diameter	29.3 {1.16}
	Free length	45.0 {1.77}
2-3 accumulator piston spring mm {in}	Outer diameter	19.5 {0.768}
	Free length	66.0 {2.60}
3-4 / N-R accumulator piston spring mm {in}	Outer diameter	18.0 {0.709}
	Free length	43.0 {1.69}
Oil pump		
Cam ring clearance mm {in}	Standard	0.010–0.024 {0.0004–0.0009}
	Maximum	0.030 {0.0012}
Rotor, vanes, and control piston clearance mm {in}	Standard	0.030–0.044 {0.0012–0.0017}
	Maximum	0.050 {0.0020}
Seal ring clearance mm {in}	Standard	0.10–0.25 {0.004–0.010}
	Maximum	0.25 {0.010}
Cam ring spring mm {in}	Outer diameter	13.7 {0.539}
	Free length	39.8 {1.567}
Reverse clutch		
Clutch clearance mm {in}	With new drive / driven plates	0.50–0.80 {0.020–0.031}
	With reusing drive / driven plates	0.50–1.20 {0.020–0.047}
Retaining plate size mm {in}		4.6 {0.181}, 4.8 {0.189}, 5.0 {0.197}, 5.2 {0.205}, 5.4 {0.213}, 5.6 {0.220}, 5.8 {0.228}
Return spring mm {in}	Outer diameter	11.6 {0.457}
	Free length	19.69 {0.775}
High clutch		
Clutch clearance mm {in}	With new drive / driven plates	1.8–2.2 {0.071–0.087}
	With reusing drive / driven plates	1.8–3.0 {0.071–0.118}
Retaining plate size mm {in}		3.4 {0.134}, 3.6 {0.142}, 3.8 {0.150}, 4.0 {0.157}, 4.2 {0.165}
Return spring mm {in}	Outer diameter	11.6 {0.457}
	Free length	22.3 {0.878}
Band servo		
Return spring A mm {in}	Outer diameter	40.3 {1.59}
	Free length	53.8 {2.12}
Return spring B mm {in}	Outer diameter	34.3 {1.35}
	Free length	45.6 {1.80}
Return spring C mm {in}	Outer diameter	27.6 {1.09}
	Free length	29.7 {1.17}

Item	Tranemission	RB4A-EL
Forward clutch		
Clutch clearance mm {in}	With new drive / driven plates	0.45–0.85 {0.018–0.033}
	With reusing drive / driven plates	0.45–1.85 {0.018–0.073}
Retaining plate size mm {in}		8.0 {0.315}, 8.2 {0.323}, 8.4 {0.331}, 8.6 {0.339}, 8.8 {0.346}, 9.0 {0.354}, 9.2 {0.362}
Return spring mm {in}	Outer diameter	9.7 {0.38}
	Free length	35.8 {1.41}
Overrunning clutch		
Clutch clearance mm {in}	With new drive / driven plates	1.0–1.4 {0.039–0.055}
	With reusing drive / driven plates	1.0–2.0 {0.039–0.079}
Retaining plate size mm {in}		4.0 {0.157}, 4.2 {0.165}, 4.4 {0.173}, 4.6 {0.181}, 4.8 {0.189}, 5.0 {0.197}, 5.2 {0.205}
Low and reverse brake		
Brake clearance mm {in}	With new drive / driven plates	0.8–1.2 {0.031–0.047}
	With reusing drive / driven plates	0.8–2.6 {0.031–0.102}
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}, 7.8 {0.307}, 8.0 {0.315}
Return spring mm {in}	Outer diameter	11.6 {0.457}
	Free length	22.3 {0.878}
Low one-way clutch inner race		
Seal ring clearance mm {in}	Standard	0.10–0.25 {0.004–0.010}
	Maximum	0.25 {0.010}
Total end play		
Standard end play mm {in}		0.25–0.55 {0.010–0.022}
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}
Reverse clutch end play		
Standard end play mm {in}		0.55–0.90 {0.022–0.035}
Thrust washer size mm {in}		0.7 {0.028}, 0.9 {0.035}, 1.1 {0.043}, 1.3 {0.051}, 1.5 {0.059}, 1.7 {0.067}, 1.9 {0.075}
Torque converter distance (A)		
Torque converter distance (A) mm {in}		29.0 {1.14} min.

L. PROPELLER SHAFT

Item	Transmission model	R15M-D (R5M-D)
Length	mm {in}	863 {33.98}
Outer diameter	mm {in}	75 {3.0}
Max. permissible runout	mm {in}	0.4 {0.02}

M. FRONT AND REAR AXLES

Item			Specifications
Drive shaft			
Type		Wheel side	BJ (bell joint)
		Differential side	TJ (Tripod joint)
Outer diameter of large boot end	mm {in}	Wheel side	105.3 {4.146}
		Differential side	100.5 {3.957}
Grease amount	g {oz}	Wheel side	100–120 {3.53–4.23}
		Differential side	170–190 {6.01–6.70}
Shaft length*	mm {in}		791.2–801.2 {31.15–31.54}
Front axle			
Bearing play axil direction	mm {in}		0.05 {0.002} max.
Rear axle			
Bearing play axil direction	mm {in}		0.05 {0.002} max.
Differential			
Backlash (Ring gear and drive pinion)	mm {in}		0.09–0.11 {0.0035–0.0043}
Drive pinion preload (without oil seal)	N·m {kgf·cm, in·lbf}		1.3–1.7 {13–18, 12–15}
Differential oil	Grade		API Service GL–4 or 5
	Viscosity		Above –18°C {0°F} : SAE 90 Below –18°C {0°F} : SAE 80
	Capacity	L {US qt, Imp qt}	1.30 {1.38, 1.14}

* Before measuring the drive shaft length, lift the boot to equalize the pressure within it.

N. STEERING SYSTEM

Item		Specifications
Steering wheel		
Outer diameter	mm {in}	380 {15.0}
Free play	mm {in}	0–30 {0–1.18}
Wheel effort	N {kgf, lbf}	30–38 {3.0–3.9, 6.6–8.5}
Lock-to-lock	turns	2.9
Steering shaft		
Shaft type		Collapsible
Joint type		2-cross joint
Power steering system		
Gear type		Rack and pinion
Gear ratio		∞ (infinite)
Rack stroke	mm {in}	160 {6.30}
Power steering fluid		ATF DEXRON®II or M-III
Fluid capacity	L {US qt, Imp qt}	0.96 {1.01, 0.84}
Fluid pressure	kPa {kgf/cm^2, psi}	7620–8350 {77.7–85.2, 1110–1210}