

# AUTOMATIC TRANSMISSION / TRANSAXLE

## SERVICE DATA

0305K-24

U151E (1MZ-FE)		
Line pressure (Wheel locked)	Engine idling D position R position AT stall (Throttle valve fully opened) D position R position	372 to 412 kPa (3.8 to 4.2 kgf·cm <sup>2</sup> , 54 to 60 psi) 672 to 742 kPa (6.8 to 7.5 kgf·cm <sup>2</sup> , 97 to 106 psi) 931 to 1,031 kPa (9.5 to 10.5 kgf·cm <sup>2</sup> , 135 to 150 psi) 1,768 to 1,968 kPa (18.0 to 20 kgf·cm <sup>2</sup> , 256 to 285 psi)
Engine stall revolution	D position	2,400 ± 150 rpm
Time lag	N → D position N → R position	Less than 1.2 seconds Less than 1.5 seconds
Engine idle speed (A/C OFF)	N position	700 ± 50 rpm
Drive plate runout	Max.	0.20 mm (0.0079 in.)
Torque converter runout	Max.	0.30 mm (0.0118 in.)
Differential oil seal drive in depth	LH side RH side	0 ± 0.5 mm (0 ± 0.020 in.) 0 ± 0.5 mm (0 ± 0.020 in.)
Shift schedule		
D position (Throttle valve fully open)	1 → 2 2 → 3 3 → 4 4 → 5 5 → 4 4 → 3 3 → 2 2 → 1	45 to 52 km/h (28 to 32 mph) 85 to 94 km/h (53 to 58 mph) 137 to 151 km/h (85 to 94 mph) 193 to 209 km/h (120 to 130 mph) 187 to 203 km/h (116 to 126 mph) 131 to 145 km/h (81 to 90 mph) 80 to 88 km/h (50 to 55 mph) 37 to 44 km/h (23 to 27 mph)
(Throttle valve fully closed)	4 → 5 5 → 4	43 to 49 km/h (27 to 30 mph) 34 to 40 km/h (21 to 25 mph)
3 position (Throttle valve fully open)	1 → 2 2 → 3 4 → 3 3 → 2 2 → 1	45 to 52 km/h (28 to 32 mph) 85 to 94 km/h (53 to 58 mph) 136 to 151 km/h (85 to 94 mph) 80 to 88 km/h (50 to 55 mph) 37 to 44 km/h (23 to 27 mph)
2 position (Throttle valve fully open)	1 → 2 3 → 2 2 → 1	45 to 52 km/h (28 to 32 mph) 88 to 96 km/h (55 to 60 mph) 37 to 44 km/h (23 to 27 mph)
L position (Throttle valve fully open)	2 → 1	38 to 45 km/h (24 to 28 mph)
Lock-up point	Throttle valve opening 5%	
D position		
5th gear	Lock-up ON Lock-up OFF	69 to 77 km/h (43 to 48 mph) 68 to 75 km/h (42 to 47 mph)
4th gear	Lock-up ON Lock-up OFF	96 to 105 km/h (60 to 65 mph) 90 to 98 km/h (56 to 61 mph)
U151E (3MZ-FE)		
Line pressure (Wheel locked)	Engine idling D position R position AT stall (Throttle valve fully opened) D position R position	372 to 412 kPa (3.8 to 4.2 kgf·cm <sup>2</sup> , 54 to 60 psi) 672 to 742 kPa (6.8 to 7.5 kgf·cm <sup>2</sup> , 97 to 106 psi) 931 to 1,031 kPa (9.5 to 10.5 kgf·cm <sup>2</sup> , 135 to 150 psi) 1,768 to 1,968 kPa (18.0 to 20 kgf·cm <sup>2</sup> , 256 to 285 psi)
Engine stall revolution	D position	2,240 ± 150 rpm

U151E (3MZ-FE)		
Time lag	N → D position	Less than 1.2 seconds
	N → R position	Less than 1.5 seconds
Engine idle speed (A/C OFF)	N position	700 ± 50 rpm
Drive plate runout	Max.	0.20 mm (0.0079 in.)
Torque converter runout	Max.	0.30 mm (0.0118 in.)
Differential oil seal drive in depth	LH side	0 ± 0.5 mm (0 ± 0.020 in.)
	RH side	0 ± 0.5 mm (0 ± 0.020 in.)
Shift schedule		
D position (Throttle valve fully open)	1 → 2	39 to 47 km/h (24 to 29 mph)
	2 → 3	79 to 88 km/h (49 to 55 mph)
	3 → 4	128 to 143 km/h (80 to 89 mph)
	4 → 5	186 to 203 km/h (116 to 126 mph)
	5 → 4	179 to 196 km/h (111 to 122 mph)
	4 → 3	124 to 138 km/h (77 to 86 mph)
	3 → 2	74 to 83 km/h (46 to 52 mph)
	2 → 1	35 to 41 km/h (22 to 25 mph)
	4 → 5	44 to 50 km/h (27 to 31 mph)
	5 → 4	34 to 40 km/h (21 to 25 mph)
(Throttle valve fully closed)		
3 position (Throttle valve fully open)	1 → 2	39 to 47 km/h (24 to 29 mph)
	2 → 3	79 to 88 km/h (49 to 55 mph)
	4 → 3	127 to 141 km/h (79 to 88 mph)
	3 → 2	74 to 83 km/h (46 to 52 mph)
	2 → 1	35 to 41 km/h (22 to 25 mph)
2 position (Throttle valve fully open)	1 → 2	39 to 47 km/h (24 to 29 mph)
	3 → 2	82 to 90 km/h (51 to 56 mph)
	2 → 1	35 to 41 km/h (22 to 25 mph)
L position (Throttle valve fully open)	2 → 1	38 to 45 km/h (24 to 28 mph)
Lock-up point	Throttle valve opening 5%	
D position		
5th gear	Lock-up ON	70 to 78 km/h (43 to 48 mph)
	Lock-up OFF	68 to 76 km/h (42 to 47 mph)
4th gear	Lock-up ON	96 to 105 km/h (60 to 65 mph)
	Lock-up OFF	93 to 102 km/h (58 to 63 mph)
U250E (2AZ-FE)		
Line pressure (Wheel locked)	Engine idling	
	D position	372 to 412 kpa (3.8 to 4.2 kgf·cm <sup>2</sup> , 54 to 60 psi)
	R position	672 to 742 kpa (6.8 to 7.5 kgf·cm <sup>2</sup> , 97 to 106 psi)
	AT stall (Throttle valve fully opened)	
	D position	931 to 1,031 kpa (9.5 to 10.5 kgf·cm <sup>2</sup> , 135 to 150 psi)
	R position	1,768 to 1,968 kpa (18.0 to 20 kgf·cm <sup>2</sup> , 256 to 285 psi)
Engine stall revolution	D position	2,350 ± 150 rpm
Time lag	N → D position	Less than 1.2 seconds
	N → R position	Less than 1.5 seconds
Engine idle speed (A/C OFF)	N position	700 ± 50 rpm
Drive plate runout	Max.	0.20 mm (0.0079 in.)
Torque converter runout	Max.	0.30 mm (0.0118 in.)
Differential oil seal drive in depth	LH side	0 ± 0.5 mm (0 ± 0.020 in.)
	RH side	0 ± 0.5 mm (0 ± 0.020 in.)

## SERVICE SPECIFICATIONS – AUTOMATIC TRANSMISSION / TRANSAXLE

U250E (2AZ-FE)		
Shift schedule		
D position		
(Throttle valve fully open)	1 → 2	45 to 53 km/h (28 to 33 mph)
	2 → 3	87 to 97 km/h (54 to 60 mph)
	3 → 4	137 to 153 km/h (85 to 95 mph)
	4 → 5	196 to 215 km/h (122 to 134 mph)
	5 → 4	189 to 208 km/h (117 to 129 mph)
	4 → 3	129 to 144 km/h (80 to 89 mph)
	3 → 2	79 to 88 km/h (49 to 55 mph)
	2 → 1	32 to 38 km/h (20 to 24 mph)
(Throttle valve fully closed)	4 → 5	66 to 74 km/h (41 to 46 mph)
	5 → 4	35 to 42 km/h (22 to 26 mph)
3 position		
(Throttle valve fully open)	1 → 2	45 to 53 km/h (28 to 33 mph)
	2 → 3	87 to 97 km/h (54 to 60 mph)
	4 → 3	137 to 153 km/h (85 to 95 mph)
	3 → 2	79 to 88 km/h (49 to 55 mph)
	2 → 1	32 to 38 km/h (20 to 24 mph)
2 position		
(Throttle valve fully open)	1 → 2	45 to 53 km/h (28 to 33 mph)
	3 → 2	87 to 97 km/h (54 to 60 mph)
	2 → 1	32 to 38 km/h (20 to 24 mph)
L position		
(Throttle valve fully open)	2 → 1	39 to 45 km/h (24 to 28 mph)
Lock-up point	Throttle valve opening 5%	
D position		
5th gear	Lock-up ON	74 to 83 km/h (46 to 52 mph)
	Lock-up OFF	73 to 81 km/h (45 to 50 mph)
4th gear	Lock-up ON	74 to 84 km/h (46 to 52 mph)
	Lock-up OFF	73 to 81 km/h (45 to 50 mph)
Flex lock-up point	Throttle valve opening 5%	
D position		
5th gear	Lock-up ON	55 to 62 km/h (34 to 39 mph)
	Lock-up OFF	54 to 62 km/h (34 to 39 mph)
4th gear	Lock-up ON	39 to 47 km/h (24 to 29 mph)
	Lock-up OFF	39 to 45 km/h (24 to 28 mph)