AUTOMATIC TRANSMISSION

Specifications

Governor pressure (FJ)					
Differential gear ratio 3.727					
	Vehicle speed km/h (mph)				
Output shaft rpm	7.00 – 15				
1,000	35 (22)			0.8 – 1.2 kg/cm²	11 – 17 psi	78 – 118 kPa
1,800	64 (40)			2.0 – 2.4 kg/cm²	28 – 34 psi	196 – 235 kPa
3,500	125 (78)			5.7 – 6.3 kg/cm²	81 – 90 psi	559 – 618 kPa
Differential gear ratio 4.111					
Output shaft rpm	7.50R16-6	7.00-16-6	31×10.5R-15		
1,000	35 (22)	33 (21)	34 (21)	0.8 – 1.2 kg/cm²	11 – 17 psi	78 – 118 kPa
1,800	63 (39)	57 (35)	61 (38)	2.0 – 2.4 kg/cm²	28 – 34 psi	196 – 235 kPa
3,500	123 (76)	110 (68)	119 (74)	5.7 – 6.3 kg/cm²	81 – 90 psi	559 – 618 kPa
	7.50-16-6				
1,000	35 (22)			0.8 – 1.2 kg/cm²	11 – 17 psi	78 – 118 kPa
1,800	64 (40)			2.0 – 2.4 kg/cm²	28 – 34 psi	196 – 235 kPa
3,500	124 (77)			5.7 – 6.3 kg/cm²	81 – 90 psi	559 – 618 kPa
Governor pressure (HZJ)					
Differential gear ratio 4.111					
	Vehicle speed km/h (mph)				
Output shaft rpm	7.50R16-6	265/75R-15			
1,000	35 (22)	34 (21)		0.8 – 1.2 kg/cm²	11 – 17 psi	78 – 118 kPa
1,800	64 (40)	61 (38)		2.0 – 2.4 kg/cm²	28 – 34 psi	196 – 235 kPa
3,500	124 (77)	118 (74)		5.7 – 6.3 kg/cm²	81 – 90 psi	559 – 618 kPa
Line pressure					
Idling		D range		3.7 – 4.3 kg/cm²	53 – 61 psi	363 – 422 kPa
		R range		4.5 – 5.5 kg/cm²	64 – 78 psi	441 – 539 kPa
Stall		D range		11.1 – 13.6 kg/cm²	158 – 193 psi	1,089 – 1,334 kPa
		R range		14.0 – 17.0 kg/cm²	199 – 242 psi	1,373 – 1,667 kPa
Engine stall revolution		3F engine		1,850 ± 150 rpm		
		1HZ engine		1,900 ± 150 rpm		
Engine idle speed		3F engine		750 rpm		
		1HZ engine		710 rpm		
Time lag	N range → D range			Less than 0.7 seconds		
	N range → R range			Less than 1.2 seconds		
Throttle cable adjustment					
Throttle valve fully closed (Engine idling)				Between boot end face and inner cable stopper		
				0.5 – 1.5 mm		0.020 – 0.059 in.
Throttle cable stroke				33 ± 1 mm		1.30 ± 0.04 in.
Torque converter runout		Limit		0.30 mm		0.0118 in.
Torque converter installation		3F engine		15.7 mm (0.618 in.) or more		
		1HZ engine		43.8 mm (1.724 in.) or more		
Drive plate runout		Limit		0.20 mm		0.0079 in.

Specifications (Cont'd)

Shift point (3F engine)												km/h (mph)
Differential gear ratio	Tire size	D range								2 range		1 range
		Throttle valve fully open						[ ] opening 25%				
		1→2	2→3	3→4	[Lock-up ON]	[Lock-up OFF]	4→3	3→2	2→1	3→2		2→1
3.727	7.00-15-6	32–47 (20–29)	78–93 (48–58)	124–138 (77–86)	73–86 (45–53)	68–80 (42–50)	114–128 (71–80)	68–83 (42–52)	27–41 (17–25)	81–95 (50–59)		44–58 (27–36)
4.111	7.00-16-6	30–44 (19–27)	73–87 (45–54)	116–129 (72–80)	69–81 (43–50)	64–75 (40–47)	107–120 (66–75)	64–79 (40–49)	25–38 (16–24)	76–89 (47–55)		41–54 (25–34)
4.111	31 × 10.50 R15	31–44 (19–27)	75–88 (45–55)	118–131 (73–81)	70–82 (43–51)	65–77 (40–48)	108–122 (67–76)	65–79 (40–49)	26–39 (16–24)	77–91 (48–57)		42–55 (26–34)
4.111	7.50-16-6	32–46 (20–29)	76–90 (47–56)	121–135 (75–84)	72–84 (45–52)	66–78 (41–48)	111–125 (69–78)	67–81 (42–50)	27–40 (17–25)	80–94 (50–58)		43–57 (27–35)
4.111	750R-16-8	32–46 (20–29)	77–91 (48–57)	122–136 (76–85)	72–85 (45–53)	67–79 (42–49)	112–126 (70–78)	67–81 (42–50)	27–40 (17–25)	80–94 (50–58)		43–57 (27–35)
Shift point (1HZ engine)												
4.111	7.50R-16-6	32–46 (20–29)	77–91 (48–57)	122–136 (76–85)	72–85 (45–53)	67–79 (42–49)	112–126 (70–78)	67–81 (42–50)	27–40 (17–25)	80–94 (50–58)		43–57 (27–35)
4.111	265/75 R15	30–44 (19–27)	74–87 (46–54)	116–130 (72–81)	60–72 (37–45)	54–67 (34–42)	107–120 (66–75)	64–78 (40–48)	25–38 (16–24)	76–89 (47–55)		41–55 (25–34)

Torque Specifications

Part tightened		kg-cm	ft-lb	N·m
Engine × Transmission	8 mm	185	13	18
	10 mm	380	27	37
	12 mm	730	53	72
Drive plate × Crankshaft	3F engine	900	65	88
	1HZ engine	1,300	94	127
Torque converter × Drive plate	3F engine	290	21	28
	1HZ engine	550	40	54
Valve body	6 mm	100	7	10
	5 mm	55	48 in.-lb	5.4
Oil pan		70	61 in.-lb	6.9
Oil pan drain plug		280	20	27
Cooler pipe union nut		350	25	34
Testing plug		75	65 in.-lb	7.4
Neutral start switch (bolt)		130	9	13
Neutral start switch (nut)		70	61 in.-lb	6.9
Frame crossmember set bolt		620	45	61
Frame crossmember set nut		600	43	59
PTO × Drive shaft		200	14	20
Exhaust front pipe × Exhaust manifold		630	46	62
Exhaust front pipe × Exhaust tail pipe		400	29	39