

**Automatic Transmission — Section 14**

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	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT	
Transmission fluid	Capacity ℓ (US qt, Imp qt)	7.0 (7.4, 6.2) for overhaul 2.9 (3.1, 2.6) for fluid change		
Hydraulic pressure kPa (kgf/cm², psi)	Line pressure at 2,000 rpm in <span>D</span> or <span>1</span> position	830 – 880 (8.5 – 9.0, 121 – 128)	785 (8.0, 114)	
	1st clutch pressure at 2,000 rpm in <span>D</span> or <span>1</span> position			
	2nd clutch pressure at 2,000 rpm in <span>D</span> position	490 (5.0, 71)	440 (4.5, 64)	
	3rd clutch pressure at 2,000 rpm in <span>D</span> position	Fully closed throttle 880 (9.0, 128)	Fully closed throttle 785 (8.0, 114)	
	4th clutch pressure at 2,000 rpm in <span>D</span> position	throttle more than 3/16 opened	throttle more than 3/16 opened	
	1st-hold clutch pressure at 2,000 rpm in <span>1</span> position	830 – 880 (8.5 – 9.0, 121 – 128)	785 (8.0, 114)	
	2nd clutch pressure at 2,000 rpm in <span>2</span> position			
	4th clutch pressure at 2,000 rpm in <span>R</span> position			
	Throttle B pressure	0 – 15 (0 – 0.15, 0 – 2)	0 – 15 (0 – 0.15, 0 – 2)	
	Throttle fully closed Throttle fully opened	600 – 660 (6.1 – 6.7, 87 – 95)	600 – 660 (6.1 – 6.7, 87 – 95)	
Stall speed rpm	Check with vehicle on level ground	2,100	1,950 – 2,250	
Clutch	Clutch initial clearance	1st-hold	0.7 – 0.9 (0.028 – 0.035)	—
		1st	0.65 – 0.85 (0.026 – 0.033)	—
		2nd, 3rd, 4th	0.75 – 0.95 (0.030 – 0.037)	—
	Clutch return spring free length	1st	41.4 (1.630)	39.4 (1.551)
		2nd, 3rd, 4th	33.0 (1.299)	31.0 (1.220)
	Clutch disc thickness	1st-hold, 1st, 2nd, 3rd	1.88 – 2.00 (0.074 – 0.079)	Until grooves worn out Until grooves worn out
		4th	2.28 – 2.40 (0.090 – 0.094)	
	Clutch plate thickness	1st-hold, 1st	1.95 – 2.05 (0.077 – 0.081)	Discoloration  ↑  ↓  Discoloration
		2nd, 3rd, 4th	2.25 – 2.35 (0.089 – 0.093)	
	Clutch end plate thickness*	Mark 1	2.05 – 2.10 (0.081 – 0.083)	
		Mark 2	2.15 – 2.20 (0.085 – 0.087)	
		Mark 3	2.25 – 2.30 (0.089 – 0.091)	
		Mark 4	2.35 – 2.40 (0.093 – 0.094)	
		Mark 5	2.45 – 2.50 (0.096 – 0.098)	
		Mark 6	2.55 – 2.60 (0.100 – 0.102)	
		Mark 7	2.65 – 2.70 (0.104 – 0.106)	
	Mark 8	2.75 – 2.80 (0.108 – 0.110)		
	Mark 9	2.85 – 2.90 (0.112 – 0.114)		
	Valve body	Stator shaft needle bearing contact I.D. (torque converter side)	28.000 – 28.021 (1.102 – 1.103)	Wear or damage
Stator shaft needle bearing contact I.D. (ATF pump side)		31.000 – 31.013 (1.220 – 1.221)	—	
ATF pump driven gear I.D.		14.016 – 14.034 (0.552 – 0.553)	Wear or damage	
ATF pump driven gear shaft O.D.		13.980 – 13.990 (0.550 – 0.551)	Wear or damage	
ATF pump gear side clearance		0.03 – 0.05 (0.001 – 0.002)	0.07 (0.003)	
ATF pump gear-to-body clearance		0.210 – 0.265 (0.008 – 0.010)	—	
Regulator valve body	Sealing ring contact I.D.	Drive	0.070 – 0.125 (0.003 – 0.005)	
		Driven	37.000 – 37.025 (1.457 – 1.458)	
			37.05 (1.459)	

\* Clutch end plate diameter: 1st: 116 mm (4.57 in)  
1st-hold, 2nd, 3rd and 4th: 120 mm (4.72 in)

(cont'd)

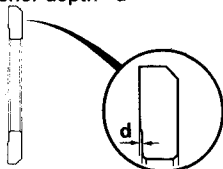
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## MEASUREMENT

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	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission (cont'd)	Selector hub O.D.	55.67 – 55.70 (2.192 – 2.193)	Wear or damage
	Thrust washer thickness		
	Mainshaft 4th gear right side	4.45 – 4.55 (0.175 – 0.179)	Wear or damage
	Mainshaft 4th gear left side	3.45 – 3.55 (0.136 – 0.140)	Wear or damage
	Mainshaft 1st gear right side	1.45 – 1.50 (0.057 – 0.059)	1.40 (0.055)
	Mainshaft 1st gear left side	2.43 – 2.50 (0.096 – 0.098)	Wear or damage
	Countershaft 3rd gear collar length	35.425 – 35.440 (1.3947 – 1.3953)	_____
		35.440 – 35.455 (1.3953 – 1.3959)	_____
		35.455 – 35.470 (1.3959 – 1.3965)	_____
		35.470 – 35.485 (1.3965 – 1.3970)	_____
		35.485 – 35.500 (1.3970 – 1.3976)	_____
		35.500 – 35.515 (1.3976 – 1.3982)	_____
	Countershaft 2nd gear spacer length	17.90 – 17.95 (0.705 – 0.707)	_____
	Cotter thickness		
	1	1.975 – 2.000 (0.078 – 0.079)	_____
	2	2.000 – 2.025 (0.079 – 0.080)	_____
	3	2.025 – 2.050 (0.080 – 0.081)	_____
	4	2.050 – 2.075 (0.081 – 0.082)	_____
	5	2.075 – 2.100 (0.082 – 0.083)	_____
	6	2.100 – 2.125 (0.083 – 0.084)	_____
	7	2.125 – 2.150 (0.084 – 0.085)	_____
	8	2.150 – 2.175 (0.085 – 0.086)	_____
	9	2.175 – 2.200 (0.086 – 0.087)	_____
	10	2.200 – 2.225 (0.087 – 0.088)	_____
	11	2.225 – 2.250 (0.088 – 0.089)	_____
	12	2.250 – 2.275 (0.089 – 0.090)	_____
	13	2.275 – 2.300 (0.090 – 0.091)	_____
	14	2.300 – 2.325 (0.091 – 0.092)	_____
	15	2.325 – 2.350 (0.092 – 0.093)	_____
	16	2.350 – 2.375 (0.093 – 0.094)	_____
	Cotter retainer thickness		
	1	2.97 – 3.00 (0.117 – 0.118)	_____
	2	3.00 – 3.03 (0.118 – 0.119)	_____
	3	3.03 – 3.06 (0.119 – 0.120)	_____
	4	3.06 – 3.09 (0.120 – 0.122)	_____
	5	3.09 – 3.12 (0.122 – 0.123)	_____
	Countershaft reverse gear thrust washer thickness	1.45 – 1.50 (0.057 – 0.059)	1.40 (0.055)
	Countershaft 1st gear collar length		
	1	62.50 – 62.55 (2.461 – 2.463)	_____
	2	62.60 – 62.65 (2.465 – 2.467)	_____
	Thrust washer thickness		
	Countershaft 1st gear left side	3.43 – 3.50 (0.135 – 0.138)	Wear or damage
	Secondary shaft 2nd gear	4.45 – 4.55 (0.175 – 0.179)	Wear or damage
	Secondary shaft spacer 31 mm length	33.00 – 33.05 (1.299 – 1.301)	_____
	End play		
	Mainshaft 4th gear	0.10 – 0.22 (0.004 – 0.009)	_____
	Mainshaft 1st gear	0.08 – 0.33 (0.003 – 0.013)	_____
	Countershaft 3rd gear	0 – 0.03 (0 – 0.001)	} Adjust with a 3rd gear collar or cotters
	Countershaft 2nd gear	0 – 0.05 (0 – 0.002)	
	Countershaft 4th gear	0.05 – 0.11 (0.002 – 0.004)	} Adjust with a cotter retainer
	Countershaft reverse gear	0.10 – 0.25 (0.004 – 0.010)	
	Countershaft 1st gear	0.20 – 0.31 (0.008 – 0.012)	} Adjust with a 1st gear collar
	Secondary shaft 2nd gear	0.01 – 0.07 (0.0004 – 0.0028)	
	Reverse idler gear	0.05 – 0.18 (0.002 – 0.007)	} Adjust with a thrust washer
	Secondary shaft 2nd gear thrust washer depth "d"	0 (0)	
		0 – 0.03 (0 – 0.001)	_____
		0.03 – 0.06 (0.001 – 0.002)	_____
		0.06 – 0.09 (0.002 – 0.004)	_____
		0.09 – 0.12 (0.004 – 0.005)	_____



(cont'd)

# Standards and Service Limits

## Automatic Transmission (cont'd) — Section 14

	MEASUREMENT	STANDARD (NEW)			
		Wire Dia.	O.D.	Free Length	No. of Coils
Spring	Idle shaft spring A	0.7 (0.028)	5.7 (0.224)	14.6 (0.575)	7.0
	Servo detent spring	1.0 (0.039)	7.6 (0.299)	14.8 (0.538)	5.5
	Regulator valve spring A	1.58 x 2.0 (0.062 x 0.079)	14.7 (0.579)	88.6 (3.488)	20.9
	Regulator valve spring B	1.8 (0.071)	9.6 (0.378)	44.0 (1.732)	14.7
	Stator reaction spring	6.0 (0.236)	38.4 (1.512)	30.3 (1.193)	2.0
	Torque converter check valve spring	1.1 (0.043)	8.4 (0.331)	41.8 (1.646)	15.7
	Relief valve spring	1.1 (0.043)	8.4 (0.331)	44.4 (1.748)	19.5
	Cooler relief valve spring	1.2 (0.047)	8.4 (0.331)	35.7 (1.406)	16.5
	One-way relief valve spring	0.9 (0.035)	6.4 (0.252)	25.1 (0.988)	11.9
	LSD relief valve spring	0.8 (0.031)	8.4 (0.331)	37.3 (1.469)	12.1
	2nd orifice control valve spring	0.8 (0.031)	8.1 (0.319)	47.9 (1.886)	16.0
	3rd orifice control valve spring	0.9 (0.035)	8.6 (0.339)	48.3 (1.902)	16.6
	4th exhaust valve spring	0.6 (0.024)	7.6 (0.299)	24.4 (0.961)	7.9
	Throttle valve B spring A/B/C/D	0.9 (0.035)	7.1 (0.280)	29.0 (1.142)	12.6
	1-2 shift valve spring	0.9 (0.035)	8.6 (0.339)	40.4 (1.591)	14.5
	2-3 shift valve spring	0.8 (0.031)	7.0 (0.276)	43.7 (1.720)	21.2
	3-4 shift valve spring	0.8 (0.031)	7.0 (0.276)	43.7 (1.720)	21.2
	1st-hold accumulator spring	3.4 (0.134)	24.3 (0.957)	64.7 (2.547)	6.7
	1st accumulator spring	2.3 (0.091)	20.0 (0.787)	104.6 (4.118)	14.8
	4th accumulator spring	3.0 (0.118)	18.0 (0.709)	84.5 (3.327)	12.8
	2nd accumulator spring	3.3 (0.130)	20.2 (0.795)	78.0 (3.071)	11.8
	3rd accumulator spring	3.2 (0.126)	19.0 (0.748)	88.6 (3.488)	14.3
	Lock-up shift valve spring	1.0 (0.039)	8.6 (0.339)	51.3 (2.020)	19.8
	Lock-up timing valve B spring	0.8 (0.031)	5.6 (0.220)	27.8 (1.094)	16.4
	Lock-up control valve spring A/B/C	0.8 (0.031)	6.6 (0.260)	38.3 (1.508)	25.0
	Servo control valve spring	1.0 (0.039)	8.1 (0.319)	53.5 (2.106)	20.8
	Modulator valve spring A/B	1.4 (0.055)	9.4 (0.370)	33.0 (1.299)	10.5
	CPC valve spring A/B/C	1.0 (0.039)	6.8 (0.268)	32.1 (1.264)	15.6
	4-3 kick down valve spring	0.9 (0.035)	6.6 (0.260)	30.7 (1.209)	12.9
	3-2 kick down valve spring	1.0 (0.039)	6.1 (0.240)	27.1 (1.067)	13.4
	2nd exhaust valve spring	1.0 (0.039)	6.1 (0.240)	27.1 (1.067)	13.4