

AUTOMATIC TRANSMISSION (A340E)

Service Data

Oil pump	Body clearance	STD	0.07 – 0.15 mm	0.0028 – 0.0059 in.
		Limit	0.3 mm	0.012 in.
	Tip clearance	STD	0.11 – 0.14 mm	0.0043 – 0.0055 in.
		Limit	0.3 mm	0.012 in.
	Side clearance	STD	0.02 – 0.05 mm	0.0008 – 0.0020 in.
		Limit	0.1 mm	0.004 in.
Bushings bore	Oil pump body	Limit	38.19 mm	1.5035 in.
	Stator shaft (FR)	Limit	21.58 mm	0.8496 in.
	(RR)	Limit	27.08 mm	1.0661 in.
	O/D direct clutch drum	Limit	27.11 mm	1.0673 in.
	O/D planetary gear	Limit	11.27 mm	0.4437 in.
	Direct clutch drum	Limit	53.99 mm	2.1256 in.
	Forward clutch drum	Limit	24.08 mm	0.9480 in.
	Front planetary ring gear	Limit	24.08 mm	0.9480 in.
	Planetary sun gear	Limit	27.08 mm	1.0661 in.
	Transmission case	Limit	38.19 mm	1.5035 in.
	Extension housing	Limit	40.09 mm	1.5783 in.
Planetary pinion gear thrust clearance	O/D planetary gear	STD	0.20 – 0.60 mm	0.0079 – 0.0236 in.
		Limit	1.00 mm	0.0394 in.
	Front planetary gear	STD	0.20 – 0.60 mm	0.0079 – 0.0236 in.
		Limit	1.00 mm	0.0394 in.
	Rear planetary gear	STD	0.20 – 0.60 mm	0.0079 – 0.0236 in.
		Limit	1.00 mm	0.0394 in.
Flange thickness	O/D direct clutch (C ₀)	No. 21	3.1 mm	0.122 in.
		No. 20	3.2 mm	0.126 in.
		No. 19	3.3 mm	0.130 in.
		No. 18	3.4 mm	0.134 in.
		No. 17	3.5 mm	0.138 in.
		No. 16	3.6 mm	0.142 in.
	Direct clutch (C ₂)	No. 33	3.0 mm	0.118 in.
		No. 32	3.1 mm	0.122 in.
		No. 31	3.2 mm	0.126 in.
		No. 30	3.3 mm	0.130 in.
		No. 29	3.4 mm	0.134 in.
		No. 28	3.5 mm	0.138 in.
		No. 27	3.6 mm	0.142 in.
		No. 34	3.7 mm	0.146 in.
	O/D brake (B ₀)	No. 26	3.3 mm	0.130 in.
		No. 25	3.5 mm	0.138 in.
		No. 12	3.6 mm	0.142 in.
		No. 24	3.7 mm	0.146 in.
		No. 11	3.8 mm	0.150 in.
		No. 23	3.9 mm	0.154 in.
		None	4.0 mm	0.157 in.

Service Data (Cont'd)

Flange thickness	Forward clutch (C ₁)	No. 61	3.0 mm	0.118 in.		
		No. 60	3.2 mm	0.126 in.		
		No. 45	3.4 mm	0.134 in.		
		No. 62	3.6 mm	0.142 in.		
		No. 44	3.8 mm	0.150 in.		
		No. 42	4.0 mm	0.157 in.		
		No. 63	4.2 mm	0.165 in.		
		No. 64	4.4 mm	0.173 in.		
	First and reverse brake (B ₃)	No. 50	5.0 mm	0.197 in.		
		No. 51	4.8 mm	0.189 in.		
		No. 52	4.6 mm	0.181 in.		
		No. 53	4.4 mm	0.173 in.		
		No. 54	4.2 mm	0.165 in.		
		No. 55	4.0 mm	0.157 in.		
Clutch piston stroke	O/D direct clutch (C ₀)		1.85 – 2.15 mm	0.0728 – 0.0846 in.		
	Direct clutch (C ₂)	2WD	1.37 – 1.60 mm	0.0539 – 0.0630 in.		
		4WD	1.37 – 1.67 mm	0.0539 – 0.0657 in.		
Brake piston stroke	O/D brake (B ₀)		1.40 – 1.70 mm	0.0551 – 0.0669 in.		
	Second coast brake (B ₁)		1.5 – 3.0 mm	0.059 – 0.118 in.		
Brake pack clearance	Second brake (B ₂)		0.62 – 1.98 mm	0.0244 – 0.0780 in.		
	Forward clutch (C ₁)		0.50 – 0.90 mm	0.0197 – 0.0354 in.		
	First and reverse brake (B ₃)	2WD	0.59 – 1.87 mm	0.0232 – 0.0736 in.		
		4WD	0.58 – 1.93 mm	0.0228 – 0.0760 in.		
Valve body spring			Free length mm (in.)	Coil outer diameter mm (in.)	Total No. of coils	Color
	(Upper valve body)					
	Down-shift plug		27.3 (1.075)	8.7 (0.343)	12.5	Yellow
	Throttle valve		20.6 (0.811)	9.2 (0.362)	9.5	Blue
			or 23.3 (0.917)	9.2 (0.362)	9.5	White
	3–4 shift valve		30.8 (1.213)	9.7 (0.382)	10.5	Purple
	Second coast modulator valve		25.3 (0.996)	8.6 (0.339)	11.5	Orange
	Lock-up relay valve		21.4 (0.843)	5.5 (0.217)	17.5	Light Gray
	Secondary regulator valve		30.9 (1.217)	11.2 (0.441)	10.5	Blue
	Cut-back valve		21.8 (0.858)	6.0 (0.236)	13.5	Red
	2–3 shift valve		30.8 (1.213)	9.7 (0.382)	10.5	Purple
	Low coast modulator valve		30.4 (1.197)	8.3 (0.327)	10.5	Light Green
	(Lower valve body)					
	Check valve		20.2 (0.795)	12.1 (0.476)	6.5	None
	1–2 shift valve		30.8 (1.213)	9.7 (0.382)	10.5	Purple
	Primary regulator valve		TRUCK, 4RUNNER (3VZ–E) SUPRA (7M–GTE)			
			62.3 (2.453)	18.6 (0.732)	12.5	None
			CRESSIDA, TRUCK 4RUNNER (22R–E)			
			66.7 (2.626)	18.6 (0.732)	12.5	Purple
	Others					
			66.7 (2.626)	18.6 (0.732)	12.5	None
	Accumulator control valve		33.9 (1.335)	8.8 (0.364)	12.0	Pink

Service Data (Cont'd)

Output shaft thrust play		0.27 – 0.86 mm		0.0106 – 0.0339 in.	
Second coast brake piston rod length		71.4 mm		2.811 in.	
		72.9 mm		2.870 in.	
Accumulator piston spring			Free length mm (in.)	Coil outer diameter mm (in.)	Color
	B ₂	Upper	70.5 (2.776)	19.7 (0.776)	Yellow
		Lower	—	—	—
	C ₂	Upper (Outer)	68.5 (2.697)	20.2 (0.795)	Blue
		Upper (Inner)	—	—	—
		Lower	—	—	—
	B ₀	—	66.0 (2.598)	16.1 (0.634)	Purple
	C ₀	Outer	74.6 (2.937)	20.3 (0.799)	Yellow
		Inner	46.0 (1.811)	14.0 (0.551)	Yellow

Torque Specifications

Part tightened		kg-cm	ft-lb	N-m
Transmission housing × Transmission case	10 mm	345	25	34
	12 mm	580	42	57
Extension housing × Transmission case		370	27	36
Parking lock pawl bracket		75	65 in.-lb	7.4
O/D support × Transmission case		260	19	25
Oil pump × Transmission case		220	16	22
Oil pump body × Stator shaft		100	7	10
Valve body × Transmission case		100	7	10
Upper valve body × Lower valve body		65	56 in.-lb	6.4
Detent spring × Valve body		100	7	10
Solenoid × Valve body		100	7	10
Oil strainer		100	7	10
Oil pan		75	65 in.-lb	7.4
Speed sensor		160	12	16
Speedometer driven gear lock plate		160	12	16
Cooler union		300	22	29
Neutral start switch	Bolt	130	9	13
	Nut	70	61 in.-lb	6.9
Control shaft lever		160	12	16