AUTOMATIC TRANSMISSION / TRANSAXLE

0305K–11

SERVICE DATA

Oil pump		
Body clearance	STD	0.10 – 0.17 mm (0.0039 – 0.0067 in.)
	Max.	0.17 mm (0.0067 in.)
Tip clearance	STD	0.07 – 0.15 mm (0.0028 – 0.0059 in.)
	Max.	0.15 mm (0.0059 in.)
Side clearance	STD	0.02 – 0.05 mm (0.0008 – 0.0020 in.)
	Max.	0.05 mm (0.0020 in.)
Drive gear thickness	Mark	
	A	11.690 – 11.699 mm (0.4602 – 0.4606 in.)
	B	11.700 – 11.709 mm (0.4606 – 0.4610 in.)
	C	11.710 – 11.720 mm (0.4610 – 0.4614 in.)
	D	11.721 – 11.730 mm (0.4615 – 0.4618 in.)
	E	11.731 – 11.740 mm (0.4619 – 0.4622 in.)
Driven gear thickness	Mark	
	A	11.690 – 11.699 mm (0.4602 – 0.4606 in.)
	B	11.700 – 11.709 mm (0.4606 – 0.4610 in.)
	C	11.710 – 11.720 mm (0.4610 – 0.4614 in.)
	D	11.721 – 11.730 mm (0.4615 – 0.4618 in.)
	E	11.731 – 11.740 mm (0.4619 – 0.4622 in.)
Pump body bushing inside diameter	STD	38.113 – 38.138 mm (1.50050 – 1.50149 in.)
	Max.	38.188 mm (1.50346 in.)
Stator shaft bushing inside diameter	STD	21.500 – 21.526 mm (0.84646 – 0.84748 in.)
	Max.	21.57 mm (0.8492 in.)

Multiple disc clutch		
Inside diameter	STD	23.025 – 23.045 mm (0.9065 – 0.9073 in.)
	Max.	23.09 mm (0.9091 in.)

Forward clutch		
Pack clearance		1.00 – 1.25 mm (0.0394 – 0.4921 in.)
Return spring free length		26.74 mm (1.0528 in.)
Flange thickness	Mark	
	1	3.00 mm (0.1181 in.)
	2	3.15 mm (0.1240 in.)
	3	3.30 mm (0.1299 in.)
	4	3.45 mm (0.1358 in.)
	5	3.60 mm (0.1417 in.)

Reverse clutch		
Pack clearance:		0.60 – 0.82 mm (0.02362 – 0.03228 in.)
Flange thickness	Mark	
	1	3.0 mm (0.118 in.)
	2	3.1 mm (0.122 in.)
	3	3.2 mm (0.126 in.)
	4	3.3 mm (0.130 in.)
	5	3.4 mm (0.134 in.)
	6	3.5 mm (0.138 in.)
	7	3.6 mm (0.142 in.)

Direct clutch & O/D clutch		
Pack clearance		0.61 – 0.83 mm (0.02401 – 0.03268 in.)
Return spring free length		25.91 mm (1.0201 in.)
Flange thickness	Mark	
	0	2.5 mm (0.098 in.)
	1	2.6 mm (0.102 in.)
	2	2.7 mm (0.106 in.)
	3	2.8 mm (0.110 in.)
	4	2.9 mm (0.114 in.)
	5	3.0 mm (0.118 in.)
	6	3.1 mm (0.122 in.)

2nd brake		
Pack clearance		0.62 – 0.91 mm (0.0244 – 0.0358 in.)
Return spring free length		16.61 mm (0.6539 in.)
Flange thickness	Mark	
	1	3.0 mm (0.118 in.)
	2	3.1 mm (0.122 in.)
	3	3.2 mm (0.126 in.)
	4	3.3 mm (0.130 in.)
	5	3.4 mm (0.134 in.)
	6	3.5 mm (0.138 in.)
	7	3.6 mm (0.142 in.)

U/D clutch		
Pack clearance		1.51 – 1.71 mm (0.0594 – 0.0673 in.)
U/D clutch drum bushing inside diameter	STD	37.06 – 37.08 mm (1.4591 – 1.4598 in.)
	Max.	37.13 mm (1.4618 in.)
Return spring free length		17.14 mm (0.6752 in.)
Flange thickness	Mark	
	1	3.0 mm (0.118 in.)
	2	3.1 mm (0.122 in.)
	3	3.2 mm (0.126 in.)
	4	3.3 mm (0.130 in.)
	5	3.4 mm (0.134 in.)

U/D brake		
Pack clearance		1.81 – 2.20 mm (0.0713 – 0.0866 in.)
Return spring free length		14.04 mm (0.5528 in.)
Flange thickness	Mark	
	1	3.0 mm (0.118 in.)
	2	3.2 mm (0.126 in.)
	3	3.4 mm (0.134 in.)

1st & reverse brake		
Pack clearance		1.16 – 1.35 mm (0.0457 – 0.0531in.)
Return spring free length		15.53 mm (0.6114 in.)
Flange thickness	Mark	
	1	1.8 mm (0.071 in.)
	2	1.9 mm (0.075 in.)
	3	2.0 mm (0.079 in.)
	4	2.1 mm (0.083 in.)
	5	2.2 mm (0.087 in.)
	6	2.3 mm (0.091 in.)
	7	2.4 mm (0.094 in.)
	8	2.5 mm (0.098 in.)

U/D planetary gear	
Preload (at 60 rpm)	0.50 – 1.42 N·m (5.1 – 14.5 kgf·cm, 0.06 – 0.17 in.·lbf)

Front planetary gear		
Turning torque (at 60 rpm)	New Bearing	0.51 – 1.02 N·m (5.1 – 10.0 kgf·cm, 4.4 – 8.7 in.·lbf)
	Used Bearing	0.26 – 0.51 N·m (2.7 – 5.2 kgf·cm, 2.3 – 4.5 in.·lbf)

Input shaft	
End play	0.262 – 1.249 mm (0.0103 – 0.0492 in.)

Transaxle rear cover	
Bearing press fit depth	20.55 – 21.25 mm (0.8091 – 0.8366 in.)

Transmission valve body		
Valve body installation bolt length	A	41 mm (1.614 in.)
	B	57 mm (2.244 in.)
	C	25 mm (0.984 in.)

Accumulator			
Spring		Free length/Outer diameter	Color
B_3	Inner	62.00 (2.4409) / 15.50 (0.610)	Purple
	Outer	74.23 (2.9224) / 16.50 (0.649)	Purple
C_2		60.96 (2.3999) / 14.10 (0.555)	Yellow
C_3		72.20 (2.8425) / 19.0 (0.748)	Colorless

Front differential(U151E)		
Backlash		0.05 – 0.20 mm (0.0020 – 0.0079 in.)
Thrust washer thickness	Mark	
	–	1.625 mm (0.0640 in.)
	–	1.725 mm (0.0679 in.)
	–	1.825 mm (0.0719 in.)
Praload (at 60 rpm)	New bearing	0.20 – 0.69 N·m (2.0 – 7.0 kgf·cm, 1.8 – 6.1 in.·lbf)
	Used bearing	0.10 – 0.35 N·m (1.0 – 3.6 kgf·cm, 0.9 – 3.1 in.·lbf)
Flange thickness	Mark	
	0	2.00 mm (0.0787 in.)
	1	2.05 mm (0.0807 in.)
	2	2.10 mm (0.0827 in.)
	3	2.15 mm (0.0846 in.)
	4	2.20 mm (0.0866 in.)
	5	2.25 mm (0.0886 in.)
	6	2.30 mm (0.0906 in.)
	7	2.35 mm (0.0925 in.)
	8	2.40 mm (0.0945 in.)
	9	2.45 mm (0.0965 in.)
	A	2.50 mm (0.0984 in.)
	B	2.55 mm (0.1004 in.)
	C	2.60 mm (0.1024 in.)
	D	2.65 mm (0.1043 in.)
	E	2.70 mm (0.1063 in.)
	F	2.75 mm (0.1083 in.)
	G	2.80 mm (0.1102 in.)
	H	2.85 mm (0.1122 in.)

Front differential (U151F)	
Side gear backlash	0.05 – 0.20 mm (0.0020 – 0.0079 in.)

Thrust washer thickness = Clearance – 0.162 – 0.265 mm (0.0064 – 0.0104 in.)	Mark	
	A	0.95 mm (0.0373 in.)
	B	1.00 mm (0.0393 in.)
	C	1.05 mm (0.0413 in.)
	D	1.10 mm (0.0433 in.)
	E	1.15 mm (0.0453 in.)
	F	1.20 mm (0.0472 in.)
	G	1.25 mm (0.0492 in.)
	H	1.30 mm (0.0512 in.)
	J	1.35 mm (0.0532 in.)
	K	1.40 mm (0.0552 in.)
Pinion's backlash		0.05 – 0.20 mm (0.0020 – 0.0079 in.)
Thrust washer thickness	Mark	
	MA	0.80 mm (0.0313 in.)
	MB	0.85 mm (0.0333 in.)
	MC	0.90 mm (0.0353 in.)
	MD	0.95 mm (0.0373 in.)
	ME	1.00 mm (0.0393 in.)
	MF	1.05 mm (0.0413 in.)
	MG	1.10 mm (0.0433 in.)
	MH	1.15 mm (0.0453 in.)
	MJ	1.20 mm (0.0472 in.)
	MK	1.25 mm (0.0492 in.)
	ML	1.30 mm (0.0512 in.)
	MM	1.35 mm (0.0532 in.)
	MN	1.40 mm (0.0552 in.)
Praload (at 60 rpm)	New bearing	0.20 – 0.69 N·m (2.0 – 7.0 kgf·cm, 1.8 – 6.1 in.·lbf)
	Used bearing	0.10 – 0.35 N·m (1.0 – 3.6 kgf·cm, 0.9 – 3.1 in.·lbf)
Flange thickness	Mark	
	0	2.00 mm (0.0787 in.)
	1	2.05 mm (0.0807 in.)
	2	2.10 mm (0.0827 in.)
	3	2.15 mm (0.0846 in.)
	4	2.20 mm (0.0866 in.)
	5	2.25 mm (0.0886 in.)
	6	2.30 mm (0.0906 in.)
	7	2.35 mm (0.0925 in.)
	8	2.40 mm (0.0945 in.)
	9	2.45 mm (0.0965 in.)
	A	2.50 mm (0.0984 in.)
	B	2.55 mm (0.1004 in.)
	C	2.60 mm (0.1024 in.)
	D	2.65 mm (0.1043 in.)
	E	2.70 mm (0.1063 in.)
	F	2.75 mm (0.1083 in.)
	G	2.80 mm (0.1102 in.)
	H	2.85 mm (0.1122 in.)
Oil seal press in depth		5.5 – 6.5 mm (0.217 – 0.256 in.)