C50 MANUAL TRANSMISSION

SERVICE DATA

Manual transaxle assembly			
5th gear thrust clearance		STD	0.10 to 0.57 mm (0.0039 to 0.02244 in.)
		Max	0.57 mm (0.02244 in.)
5th gear radial clearance	KOYO made	STD	0.015 to 0.058 mm (0.0006 to 0.0023 in.)
		Max	0.058 mm (0.0023 in.)
	NSK made	STD	0.015 to 0.056 mm (0.0006 to 0.0022 in.)
		Max	0.056 mm (0.0022 in.)
No. 3 synchronizer ring back and 5th gear spline end clearance		STD	0.75 to 1.65 mm (0.0295 to 0.0650 in.)
		Max	0.75 mm (0.0295 in.)
No. 3 transmission hub sleeve and No. 3 gear shift fork clearance		STD	0.3 to 0.5 mm (0.012 to 0.020 in.)
5th gear inner diameter		STD	29.915 to 29.931mm (1.1778 to 1.1784 in.)
		Max	29.931mm (1.1784 in.)
Reverse idler gear sub-assembly inner diameter		STD	18.040 to 18.058 mm (0.7102 to 0.7109 in.)
		Max	18.058 mm (0.7109 in.)
Reverse idler gear shaft outer diameter		STD	17.966 to 17.984 mm (0.7073 to 0.7080 in.)
		Min	17.966 mm (0.7073 in.)
Front transaxle case oil seal drive in depth			15.6 to 16.0 mm (0.6142 to 0.6299 in.)
Input shaft front bearing drive in depth			0 to 0.3 mm (0 to 0.012 in.)
Shift & Select lever shaft bimetal formed bush drive in depth			0 to 0.5 mm (0 to 0.020 in.)
Front differential case tapered roller bearing preload		New bearing	0.78 to 1.57 NVm (8 to 16 kgfVcm, 6.9 to 13.9 in.Vlbf)
Front differential case shim thickness		AA	2.10 mm (0.0827 in.)
		BB	2.15 mm (0.0846 in.)
		CC	2.20 mm (0.0866 in.)
		DD	2.25 mm (0.0886 in.)
		EE	2.30 mm (0.0906 in.)
		FF	2.35 mm (0.0925 in.)
		GG	2.40 mm (0.0945 in.)
		HH	2.45 mm (0.0965 in.)
		JJ	2.50 mm (0.0984 in.)
		KK	2.55 mm (0.1004 in.)
		LL	2.60 mm (0.1024 in.)
		MM	2.65 mm (0.1043 in.)
		NN	2.70 mm (0.1063 in.)
		PP	2.75 mm (0.1083 in.)
		QQ	2.80 mm (0.1102 in.)
		RR	2.85 mm (0.1122 in.)
		SS	2.90 mm (0.1142 in.)
		TT	2.95 mm (0.1161 in.)
		UU	3.00 mm (0.1181 in.)

Transmission case oil seal drive in depth		2.1 +- 2.7 mm (0.0827 +- 0.1063 in.)
Transaxle case oil seal drive in depth		1.6 +- 2.2 mm (0.0630 +- 0.0866 in.)
Reverse restrict pin slotted pin drive in depth		16.0 +- 17.0 mm (0.630 +- 0.670 in.)
No. 3 transmission clutch hub snap ring thickness	A	2.25 mm (0.0886 in.)
	B	2.31 mm (0.0909 in.)
	C	2.37 mm (0.0933 in.)
	D	2.43 mm (0.0957 in.)
	E	2.49 mm (0.0980 in.)
	F	2.55 mm (0.1004 in.)
	G	2.61 mm (0.1028 in.)

SS

Input shaft assembly			
4th gear thrust clearance		STD	0.1 to 0.55 mm (0.0039 to 0.0217 in.)
		Max	0.55 mm (0.0217 in.)
3rd gear thrust clearance		STD	0.1 to 0.35 mm (0.0039 to 0.0138 in.)
		Max	0.35 mm (0.0138 in.)
4th gear radial clearance		STD	0.009 to 0.050 mm (0.0004 to 0.0020 in.)
		Max	0.050 mm (0.0023 in.)
3rd gear radial clearance	KOYO made	STD	0.015 to 0.058 mm (0.0006 to 0.0023 in.)
		Max	0.058 mm (0.0023 in.)
	NSK made	STD	0.015 to 0.056 mm (0.0006 to 0.0022 in.)
		Max	0.056 mm (0.0022 in.)
Input shaft run out		Max	0.015 mm (0.0006 in.)
Input shaft outer diameter	STD	Part A	24.885 to 24.900 mm (0.9797 to 0.9803 in.)
		Part B	28.991 to 29.006 mm (1.1413 to 1.1419 in.)
		Part C	30.985 to 31.000 mm (1.2198 to 1.2204 in.)
		Part D	24.985 to 25.000 mm (0.9836 to 0.9842 in.)
	Max	Part A	24.885 mm (0.9797 in.)
		Part B	28.991 mm (1.1413 in.)
		Part C	30.985 mm (1.2198 in.)
		Part D	24.985 mm (0.9836 in.)
4th gear inside diameter		STD	34.015 to 34.031 mm (1.3391 to 1.3398 in.)
		Max	34.031 mm (1.3398 in.)
3rd gear inside diameter		STD	36.015 to 36.031 mm (1.4179 to 1.4185 in.)
		Max	36.031 mm (1.4185 in.)
3rd gear synchronizer ring back and 3rd gear spline end clearance		Min	0.75 mm (0.0295 in.)
4th gear synchronizer ring back and 3rd gear spline end clearance		Min	0.75 mm (0.0295 in.)
No. 2 gear shift fork claw and glove of the No. 2 transmission hub sleeve clearance			0.15 to 0.35 mm (0.0059 to 0.0137 in.)
No. 2 transmission hub sleeve clearance			0.15 to 0.35 mm (0.0059 to 0.0137 in.)

No. 2 transmission clutch hub snap ring thickness	0	2.30 mm (0.0906 in.)
	1	2.36 mm (0.0929 in.)
	2	2.42 mm (0.0953 in.)
	3	2.42 mm (0.0953 in.)
	4	2.54 mm (0.1000 in.)
	5	2.60 mm (0.1024 in.)
Input shaft rear bearing shaft snap ring clearance		0.1 mm (0.0039 in.) or less
Input shaft rear bearing shaft snap ring thickness	A	2.29 mm (0.0901 in.)
	B	2.35 mm (0.0925 in.)
	C	2.41 mm (0.0948 in.)
	D	2.47 mm (0.0972 in.)
	E	2.53 mm (0.0996 in.)
	F	2.59 mm (0.1019 in.)

SS

Output shaft assembly		
1st gear thrust clearance	STD	0.10 to 0.40 mm (0.0039 to 0.0157 in.)
2nd gear thrust clearance	STD	0.10 to 0.45 mm (0.0039 to 0.0177 in.)
1st gear radial clearance	KOYO made	0.015 to 0.058 mm (0.0006 to 0.0023 in.)
	NSK made	0.015 to 0.056 mm (0.0006 to 0.0022 in.)
2nd gear radial clearance	KOYO made	0.015 to 0.058 mm (0.0006 to 0.0023 in.)
	NSK made	0.015 to 0.056 mm (0.0006 to 0.0022 in.)
Output shaft maximum run out		0.015 mm (0.0006 in.)
Output shaft outer diameter	Part A	31.985 mm (1.2592 in.)
	Part B	37.985 mm (1.4955 in.)
	Part C	32.985 mm (1.2986 in.)
2nd gear inside diameter	New	38.015 to 38.031 mm (1.4967 to 1.4972 in.)
	Max	38.031 mm (1.4972 in.)
1st gear inside diameter	New	44.015 to 44.031 mm (1.7329 to 1.7335 in.)
	Max	44.031 mm (1.7335 in.)
1st gear thrust washer thickness	New	5.975 to 6.025 mm (0.2352 to 0.2372 in.)
	Min	5.975 mm (0.2352 in.)
No. 2 synchronizer ring set back and 2nd gear spline end clearance		0.75 to 1.65 mm (0.0295 to 0.065 in.)
No. 1 synchronizer ring set back and 2nd gear spline end clearance		0.75 to 1.65 mm (0.0295 to 0.065 in.)
Reverse gear glove and reverse gear shift fork claw clearance		0.15 to 0.35 mm (0.0059 to 0.014 in.)
No. 1 clutch hub shaft snap ring clearance		0.1 mm (0.039 in.) or less
No. 1 clutch hub shaft snap ring thickness	A	2.50 mm (0.0984 in.)
	B	2.56 mm (0.1008 in.)
	C	2.62 mm (0.1031 in.)
	D	2.68 mm (0.1055 in.)
	E	2.74 mm (0.1079 in.)
	F	2.80 mm (0.1102 in.)

Shift & Select lever shaft assembly	
Control shaft cover oil seal drive in depth	0.2 to 1.2 mm (0.079 to 0.0472 in.)
Shift lever slotted pin (for select inner lever) drive in depth	3.0 to 4.0 mm (0.1181 to 0.1575 in.)
Shift lever slotted pin (for No. 1 shift lever inner) drive in depth	-0.5 to 0.5 mm (-0.0197 to 0.0197 in.)
Shift lever slotted pin (for No. 2 shift lever inner) drive in depth	-0.5 to 0.5 mm (-0.0197 to 0.0197 in.)

Differential case assembly		
Front differential side gear backlash		0.05 to 0.20 mm (0.0020 to 0.0079 in.)
Front differential pinion thrust washer	Min	0.94 mm (0.03701 in.)
No. 1 front differential pinion shaft outer diameter	Min	16.982 mm (0.6685 in.)