

MANUAL TRANSAXLE (C60)

SERVICE DATA

SS032-02

Input shaft roller bearing journal diameter	Min.	24.985 mm (0.9837 in.)
Input shaft 3rd gear journal diameter	Min.	30.985 mm (1.2199 in.)
Input shaft 4th gear journal diameter	Min.	28.985 mm (1.1411 in.)
Input shaft 5th gear journal diameter	Min.	24.885 mm (0.9797 in.)
Input shaft 6th gear journal diameter	Min.	21.991 mm (0.8658 in.)
Input shaft runout	Max.	0.03 mm (0.0012 in.)
Output shaft roller bearing journal diameter	Min.	32.985 mm (1.2986 in.)
Output shaft 1st gear journal diameter	Min.	37.985 mm (1.4955 in.)
Output shaft 2nd gear journal diameter	Min.	31.985 mm (1.2592 in.)
Output shaft runout	Max.	0.03 mm (0.0012 in.)
Gear thrust clearance 1st	STD	0.10 – 0.40 mm (0.0039 – 0.0157 in.)
	Max.	0.40 mm (0.0157 in.)
Gear thrust clearance 2nd	STD	0.10 – 0.55 mm (0.0039 – 0.0217 in.)
	Max.	0.55 mm (0.0217 in.)
Gear thrust clearance 3rd	STD	0.10 – 0.35 mm (0.0039 – 0.0138 in.)
	Max.	0.35 mm (0.0138 in.)
Gear thrust clearance 4th	STD	0.10 – 0.55 mm (0.0039 – 0.0217 in.)
	Max.	0.55 mm (0.0217 in.)
Gear thrust clearance 5th	STD	0.10 – 0.62 mm (0.0039 – 0.0244 in.)
	Max.	0.62 mm (0.0244 in.)
Gear thrust clearance 6th	STD	0.10 – 0.60 mm (0.0039 – 0.0236 in.)
	Max.	0.60 mm (0.0236 in.)
Gear radial clearance 1st, 2nd, 3rd and 4th (KOYO made)	STD	0.15 – 0.58 mm (0.0006 – 0.0023 in.)
	Max.	0.058 mm (0.0023 in.)
Gear radial clearance 1st, 2nd, 3rd and 4th (NSK made)	STD	0.015 – 0.056 mm (0.0006 – 0.0022 in.)
	Max.	0.056 mm (0.0022 in.)
Gear radial clearance 5th	STD	0.015 – 0.056 mm (0.0006 – 0.0022 in.)
	Max.	0.056 mm (0.0022 in.)
Gear radial clearance 6th	STD	0.009 – 0.050 mm (0.0003 – 0.0020 in.)
	Max.	0.050 mm (0.0020 in.)
No. 3 gear shift fork to No. 3 hub sleeve clearance	Max.	0.89 mm (0.035 in.)
No. 2 gear shift fork to No. 2 hub sleeve clearance	Max.	0.35 mm (0.014 in.)
No. 1 gear shift fork to reverse gear clearance	Max.	0.35 mm (0.014 in.)
Synchronizer ring to gear clearance 1st, 4th, 5th and 6th	Min.	0.75 mm (0.0295 in.)
Synchronizer ring to gear clearance 3rd	Min.	0.65 mm (0.0256 in.)
Synchronizer ring to gear clearance 2nd	Min.	0.70 mm (0.0276 in.)
Drive in depth		
Input shaft front oil seal		15.8 ± 0.2 mm (0.622 ± 0.008 in.)
Input shaft front bearing		0 – 0.3 mm (0 – 0.012 in.)
Transmission case bushing		0.80 – 1.30 mm (0.0315 – 0.0512 in.)
Transmission case oil seal (Shift and select lever shaft side)		10.0 ± 0.3 mm (0.394 ± 0.012 in.)
No. 1 and No. 2 shift inner lever slotted spring pin		0 ± 0.5 mm (0 ± 0.020 in.)
Transmission case oil seal (Differential case side)		9.9 ± 0.3 mm (0.390 ± 0.012 in.)
Transaxle case oil seal		1.9 ± 0.3 mm (0.075 ± 0.012 in.)
Differential side gear backlash		0.05 – 0.20 mm (0.0020 – 0.0079 in.)

SERVICE SPECIFICATIONS – MANUAL TRANSAXLE

Differential side gear thrust washer thickness		0.95 mm (0.0374 in.) 1.00 mm (0.0394 in.) 1.05 mm (0.0413 in.) 1.10 mm (0.0433 in.) 1.15 mm (0.0453 in.) 1.20 mm (0.0472 in.)
Differential tapered roller bearing preload (at starting) (For use with SST)		
New bearing		0.8 – 1.6 N·m (8 – 16 kgf·cm, 6.9 – 13.9 in.·lbf)
Reused bearing		0.5 – 1.0 N·m (5 – 10 kgf·cm, 4.3 – 8.7 in.·lbf)
Input shaft snap ring thickness		
No. 2 clutch hub	Mark 0	2.30 mm (0.0906 in.)
	Mark 1	2.36 mm (0.0929 in.)
	Mark 2	2.42 mm (0.0953 in.)
	Mark 3	2.48 mm (0.0976 in.)
	Mark 4	2.54 mm (0.1000 in.)
	Mark 5	2.60 mm (0.1024 in.)
No. 3 clutch hub	Mark A	1.75 mm (0.0689 in.)
	Mark B	1.80 mm (0.0709 in.)
	Mark C	1.85 mm (0.0728 in.)
	Mark D	1.90 mm (0.0748 in.)
	Mark E	1.95 mm (0.0768 in.)
	Mark F	2.00 mm (0.0787 in.)
	Mark G	2.05 mm (0.0807 in.)
	Mark H	2.10 mm (0.0827 in.)
	Mark J	2.15 mm (0.0846 in.)
	Mark K	2.20 mm (0.0866 in.)
Input shaft center radial ball bearing		
	Mark A	2.29 mm (0.0902 in.)
	Mark B	2.35 mm (0.0925 in.)
	Mark C	2.41 mm (0.0949 in.)
	Mark D	2.47 mm (0.0972 in.)
	Mark E	2.53 mm (0.0996 in.)
	Mark F	2.59 mm (0.1020 in.)
	Mark G	2.65 mm (0.1043 in.)
	Mark H	2.71 mm (0.1066 in.)
	Mark I	2.77 mm (0.1089 in.)
	Mark J	2.83 mm (0.1112 in.)
Input shaft rear radial ball bearing		
	Mark A	1.70 mm (0.0669 in.)
	Mark B	1.75 mm (0.0689 in.)
	Mark C	1.80 mm (0.0709 in.)
	Mark D	1.85 mm (0.0728 in.)
	Mark E	1.90 mm (0.0748 in.)
	Mark F	1.95 mm (0.0768 in.)
	Mark G	2.00 mm (0.0787 in.)
	Mark H	2.05 mm (0.0807 in.)
	Mark I	2.10 mm (0.0827 in.)
	Mark J	2.15 mm (0.0846 in.)
	Mark K	2.20 mm (0.0866 in.)
	Mark L	2.25 mm (0.0886 in.)
	Mark M	2.30 mm (0.0906 in.)

Output shaft snap ring thickness No. 1 clutch hub	Mark A	2.50 mm (0.0984 in.)
	Mark B	2.56 mm (0.1008 in.)
	Mark C	2.62 mm (0.1031 in.)
	Mark D	2.68 mm (0.1055 in.)
	Mark E	2.74 mm (0.1079 in.)
	Mark F	2.80 mm (0.1102 in.)
	Mark 7	1.85 mm (0.0728 in.)
	Mark 8	1.90 mm (0.0748 in.)
	Mark 1	1.95 mm (0.0768 in.)
	Mark 2	2.00 mm (0.0787 in.)
	Mark 3	2.05 mm (0.0807 in.)
	Mark 4	2.10 mm (0.0827 in.)
	Mark 5	2.15 mm (0.0846 in.)
	Mark 6	2.20 mm (0.0866 in.)
	Mark B	2.31 mm (0.0909 in.)
	Mark C	2.37 mm (0.0933 in.)
	Mark D	2.43 mm (0.0957 in.)
	Mark E	2.49 mm (0.0980 in.)
	Mark F	2.55 mm (0.1004 in.)
Front bearing inner race	Mark G	2.61 mm (0.1028 in.)
	Mark H	2.67 mm (0.1051 in.)
	Mark J	2.73 mm (0.1075 in.)
	Mark K	2.79 mm (0.1098 in.)
	Mark L	2.85 mm (0.1122 in.)
	Mark M	2.91 mm (0.1146 in.)
	Mark B	2.31 mm (0.0909 in.)
	Mark C	2.37 mm (0.0933 in.)
	Mark D	2.43 mm (0.0957 in.)
	Mark E	2.49 mm (0.0980 in.)
Output shaft rear radial ball bearing	Mark F	2.55 mm (0.1004 in.)
	Mark G	2.61 mm (0.1028 in.)
	Mark H	2.67 mm (0.1051 in.)
	Mark J	2.73 mm (0.1075 in.)
	Mark K	2.79 mm (0.1098 in.)
	Mark L	2.85 mm (0.1122 in.)
	Mark M	2.91 mm (0.1146 in.)
	Mark B	2.31 mm (0.0909 in.)
	Mark C	2.37 mm (0.0933 in.)
	Mark D	2.43 mm (0.0957 in.)
Differential tapered roller bearing adjusting shim thickness	Mark AA	2.10 mm (0.0827 in.)
	Mark BB	2.15 mm (0.0846 in.)
	Mark CC	2.20 mm (0.0866 in.)
	Mark DD	2.25 mm (0.0886 in.)
	Mark EE	2.30 mm (0.0906 in.)
	Mark FF	2.35 mm (0.0925 in.)
	Mark GG	2.40 mm (0.0945 in.)
	Mark HH	2.45 mm (0.0965 in.)
	Mark JJ	2.50 mm (0.0984 in.)
	Mark KK	2.55 mm (0.1004 in.)
	Mark LL	2.60 mm (0.1024 in.)
	Mark MM	2.65 mm (0.1043 in.)
	Mark NN	2.70 mm (0.1063 in.)
	Mark PP	2.75 mm (0.1083 in.)
	Mark QQ	2.80 mm (0.1102 in.)
	Mark RR	2.85 mm (0.1122 in.)
	Mark SS	2.90 mm (0.1142 in.)
	Mark TT	2.95 mm (0.1161 in.)
	Mark UU	3.00 mm (0.1181 in.)