

# MANUAL TRANSMISSION / TRANSAXLE

03010-04

## SERVICE DATA

5th gear thrust clearance		0.10 – 0.65 mm (0.0040 – 0.0258 in.)
5th gear radial clearance		0.009 – 0.050 mm (0.0036 – 0.0200 in.)
Reverse idler gear sub-assy inside diameter	STD Max	20.056 – 20.074 mm (0.762 – 0.7969 in.) 20.074 mm (0.7969 in.)
Reverse idler gear shaft outer diameter	STD Min	19.984 – 20.000 mm (0.7934 – 0.7940) 19.984 mm (0.7934 in.)
Transmission hub sleeve No.3 and gear shift fork No.3 clearance		0.15–0.35 mm (0.005600 – 0.0139 in.)
Shift & select lever shaft bimetal formed bush clearance		0.081 – 0.149 mm (0.0032 – 0.0059 in.)
Transmission case oil seal clearance		3.0 – 4.0 mm (0.1191 – 0.1588 in.)
Output shaft rear bearing shim thickness	0 1 2 3 4 5 6 7 8 9 A B C D E F G H J K L M N P Q	1.30 mm (0.0516 in.) 1.35 mm (0.0536 in.) 1.40 mm (0.0556 in.) 1.45 mm (0.0576 in.) 1.50 mm (0.0596 in.) 1.55 mm (0.0615 in.) 1.60 mm (0.0635 in.) 1.65 mm (0.0655 in.) 1.70 mm (0.0675 in.) 1.75 mm (0.0695 in.) 1.80 mm (0.0715 in.) 1.85 mm (0.0734 in.) 1.90 mm (0.0754 in.) 1.95 mm (0.0774 in.) 2.00 mm (0.0794 in.) 2.05 mm (0.0814 in.) 2.10 mm (0.0834 in.) 2.15 mm (0.0854 in.) 2.20 mm (0.0873 in.) 2.25 mm (0.0893 in.) 2.30 mm (0.0913 in.) 2.35 mm (0.0933 in.) 2.40 mm (0.0953 in.) 2.45 mm (0.0973 in.) 2.50 mm (0.0993 in.)
Front differential case pleroad	New Used	0.8 – 0.16 N·m (8.15 – 1.63 kgf·cm, 7.1 – 14.2 ft·lbf) 0.5 – 10.1 N·m (5.09 – 10.1 kgf·cm, 4.4 – 8.6 ft·lbf)
Front differential case shim RR thickness	0 1 2 3 4 5 6 7 8 9 A B C D E F G H	2.00 mm (0.0794 in.) 2.05 mm (0.0814 in.) 2.10 mm (0.0834 in.) 2.15 mm (0.0854 in.) 2.20 mm (0.0873 in.) 2.25 mm (0.0893 in.) 2.30 mm (0.0913 in.) 2.35 mm (0.0933 in.) 2.40 mm (0.0953 in.) 2.45 mm (0.0973 in.) 2.50 mm (0.0993 in.) 2.55 mm (0.1012 in.) 2.60 mm (0.1032 in.) 2.65 mm (0.1052 in.) 2.70 mm (0.1071 in.) 2.75 mm (0.1092 in.) 2.80 mm (0.1112 in.) 2.85 mm (0.1131 in.)
Front transaxle case oil seal clearance		1 – 2 mm (0.0397 in. – 0.0794 in.)
Input shaft front bearing clearance		4.28 – 4.60 mm (0.1699 in. – 0.1826 in.)
Reverse restrict pin slotted pin clearance		12.5 – 13.5 mm (0.4963 – 0.53595 in.)

## SERVICE SPECIFICATIONS – MANUAL TRANSMISSION / TRANSAXLE

Transmission clutch hub No.3 snap ring clearance		0.1 mm or less (0.004 in. or less)
Transmission clutch hub No.3 snap ring thickness	A B C D E F G H J	1.75 – 1.80 mm (0.0695 – 0.0715 in.) 1.80 – 1.85 mm (0.0715 – 0.0734 in.) 1.85 – 1.90 mm (0.0734 – 0.0754 in.) 1.90 – 1.95 mm (0.0754 – 0.0774 in.) 1.95 – 2.00 mm (0.0774 – 0.0794 in.) 2.00 – 2.05 mm (0.0794 – 0.0814 in.) 2.05 – 2.10 mm (0.0814 – 0.0834 in.) 2.10 – 2.15 mm (0.0834 – 0.0854 in.) 2.15 – 2.20 mm (0.0854 – 0.0873 in.)
5 th gear radial clearance		0.009 – 0.050 mm (0.0004 – 0.0020 in.)
5 th gear thrust clearance		0.10 – 0.65 mm (0.0040 – 0.0258 in.)
4 th gear thrust clearance		0.1 – 0.57 mm (0.0039 – 0.0224 in.)
3 rd gear thrust clearance		0.1 – 0.35 mm (0.0039 – 0.0014 in.)
4 th gear radial clearance	KOYO made NSK made	0.009 – 0.053 mm (0.0004 – 0.0021 in.) 0.009 – 0.051 mm (0.0004 – 0.0020 in.)
3 rd gear radial clearance	KOYO made NSK made	0.009 – 0.053 mm (0.0004 – 0.0021 in.) 0.009 – 0.051 mm (0.0004 – 0.0020 in.)
Input shaft run out	Max	0.03 mm (0.001191 in.)
Input shaft outer diameter	STD: A B C Min: A B C	35.984 – 36.000 mm (1.4286 – 1.4292 in.) 35.984 – 36.000 mm (1.4286 – 1.4292 in.) 27.957 – 27.972 mm (1.1100 – 1.1105 in.) 35.984 mm (1.4286 in.) 35.984 mm (1.4286 in.) 27.957 mm (1.1100 in.)
4 th gear inside diameter	STD Max	42.009 – 42.025 mm (1.6678 – 1.6684 in.) 42.025 mm (1.6684 in.)
3 rd gear inside diameter	STD Max	43.009 – 43.025 mm (1.7075 – 1.7081 in.) 43.025 mm (1.7081 in.)
Synchronizer outer ring and 4th gear clearance		0.75 – 1.65 mm (0.0297 – 0.0655 in.)
Synchronizer ring No.3 and 3 rd gear clearance		0.65 – 1.75 mm (0.0258 – 0.0695 in.)
Transmission hub sleeve No.2 and gear shift fork No.2 clearance		0.15 – 0.35 mm (0.0060 – 0.0139 in.)
Transmission clutch hub No.2 snap ring clearance		0.1 mm or less (0.0039 in. or less)
Transmission clutch hub No.2 snap ring thickness	H J K L M N P	2.30 – 2.35 mm (0.0917 – 0.0933 in.) 2.35 – 2.40 mm (0.0933 – 0.0953 in.) 2.40 – 2.45 mm (0.0953 – 0.0973 in.) 2.45 – 2.50 mm (0.0973 – 0.0993 in.) 2.50 – 2.55 mm (0.0993 – 0.1012 in.) 2.55 – 2.60 mm (0.1012 – 0.1032 in.) 2.60 – 2.65 mm (0.1032 – 0.1052 in.)
Input shaft radial ball bearing snap ring clearance		0.1 mm or less (0.0039 in. or less)
Input shaft radial ball bearing snap ring thickness	1 2 3 4 5 6 7 8	2.35 – 2.40 mm (0.0933 – 0.0953 in.) 2.40 – 2.45 mm (0.0953 – 0.0973 in.) 2.45 – 2.50 mm (0.0973 – 0.0993 in.) 2.50 – 2.55 mm (0.0993 – 0.1012 in.) 2.55 – 2.60 mm (0.1012 – 0.1032 in.) 2.60 – 2.65 mm (0.1032 – 0.1052 in.) 2.65 – 2.70 mm (0.1052 – 0.1072 in.) 2.70 – 2.75 mm (0.1072 – 0.1092 in.)
3 rd gear radial clearance	KOYO made NSK made	0.009 – 0.053 mm (0.0004 – 0.0021 in.) 0.009 – 0.051 mm (0.0004 – 0.0020 in.)
4 th gear radial clearance	KOYO made NSK made	0.009 – 0.053 mm (0.0004 – 0.0021 in.) 0.009 – 0.051 mm (0.0004 – 0.0020 in.)
3 rd gear thrust clearance		0.1 – 0.35 mm (0.0039 – 0.0139 in.)
4 th gear thrust clearance		0.1 – 0.57 mm (0.0039 – 0.0226 in.)
1 st gear thrust clearance		0.25 – 0.4 mm (0.0099 – 0.0159 in.)
2 nd gear thrust clearance		0.1 – 0.35 mm (0.0004 – 0.0139 in.)

1 st gear radial clearance	KOYO made NSK made	0.009 – 0.053 mm (0.0004 – 0.0021 in.) 0.009 – 0.051 mm (0.0004 – 0.0020 in.)
2 nd gear radial clearance	KOYO made NSK made	0.009 – 0.053 mm (0.0004 – 0.0021 in.) 0.009 – 0.051 mm (0.0004 – 0.0020 in.)
output shaft run out	Max	0.03 mm (0.0012 in.)
output shaft outer diameter	STD: A B C Min: A B C	37.610 – 37.626 mm (1.4931 – 1.4938 in.) 37.610 – 37.626 mm (1.4931 – 1.4938 in.) 34.802 – 34.512 mm (1.3816 – 1.3701 in.) 37.610 mm (1.4931 in.) 37.610 mm (1.4931 in.) 34.802 mm (1.3816 in.)
2 nd gear inside diameter	STD Max	50.009 – 50.025 mm (1.9854 – 1.9860 in.) 50.025 mm (1.9860 in.)
1 st gear inside diameter	STD Max	51.009 – 51.025 mm (2.0250 – 2.0257 in.) 51.025 mm (2.0257 in.)
Synchronizer ring set No.2 and 2nd gear clearance		0.70 – 1.45 mm (0.0278 – 0.0576 in.)
Synchronizer ring set No.1 and 1 st gear clearance		0.70 – 1.45 mm (0.0278 – 0.0576 in.)
Reverse gear and reverse gear shift fork No.1		0.15 – 0.35 mm (0.0060 – 0.0139 in.)
2 nd gear radial clearance	KOYO made NSK made	0.009 – 0.053 mm (0.0004 – 0.0021 in.) 0.009 – 0.051 mm (0.0004 – 0.0020 in.)
1 st gear radial clearance	KOYO made NSK made	0.009 – 0.053 mm (0.0004 – 0.0021 in.) 0.009 – 0.051 mm (0.0004 – 0.0020 in.)
2 nd gear thrust clearance		0.1 – 0.35 mm (0.0039 – 0.0139 in.)
1 st gear thrust clearance		0.25 – 0.4 mm (0.099 – 0.0159 in.)
Front differential side gear backlash		0.05 – 0.2 mm (0.0020 – 0.0079 in.)
Front differential pinion thrust washer thickness	Min	0.94 mm (0.0370 in)
Front differential side gear backlash		0.05 – 0.2 mm (0.0020 – 0.0079 in.)
Front differential side gear thrust washer thickness	1 2 3 4	1.00 mm (0.0397 in.) 1.10 mm (0.0437 in.) 1.20 mm (0.0476 in.) 1.30 mm (0.0516 in.)
Shift lever slotted pin clearance(Select lever shaft x Select spring seat No.1)		–0.5 – 0.5 mm (–0.0199 – 0.0199 in.)
Shift lever slotted pin clearance(Select lever shaft x Shift lever inner NO.2)		5.8 – 6.8mm (0.2303 – 0.2700 in.)