MANUAL TRANSAXLE (C52)

Specifications

TRANSMISSION ASSEMBLY				
Input shaft				
Roller bearing journal diameter		Limit	24.970 mm	0.9831 in.
3rd gear journal diameter		Limit	30.970 mm	1.2193 in.
4th gear journal diameter		Limit	26.470 mm	1.0421 in.
5th gear journal diameter		Limit	24.870 mm	0.9791 in.
Runout		Limit	0.05 mm	0.0020 in.
Output shaft				
Roller bearing journal diameter		Limit	32.970 mm	1.2980 in.
1 st gear journal diameter		Limit	37.970 mm	1.4949 in.
2nd gear journal diameter		Limit	31.970 mm	1.2587 in.
Runout		Limit	0.05 mm	0.0020 in.
Gear thrust clearance		STD	0.10 – 0.40 mm	0.0039 – 0.0157 in.
		Limit	0.45 mm	0.0177 in.
	1st	STD	0.10 – 0.45 mm	0.0039 – 0.0177 in.
	2nd	Limit	0.50 mm	0.0197 in.
	3rd	STD	0.10 – 0.35 mm	0.0039 – 0.0138 in.
	4th	Limit	0.40 mm	0.0157 in.
	5th	STD	0.10 – 0.55 mm	0.0039 – 0.0217 in.
		Limit	0.60 mm	0.0236 in.
			0.10 – 0.57 mm	0.0039 – 0.0224 in.
			0.65 mm	0.0256 in.
Gear oil clearance				
1 st, 2nd, 3rd, 4th and 5th		STD	0.015 – 0.058 mm	0.0006 – 0.0023 in.
		Limit	0.070 mm	0.0028 in.
Shift fork to hub sleeve clearance		Limit	1.0 mm	0.039 in.
Synchronizer ring to gear clearance		Limit	0.6 mm	0.024 in.
Oil seal drive in depth				
Speedometer driven gear				
Input shaft snap ring thickness			25 mm	0.98 in.
No. 2 clutch hub				
		Mark		
		0	2.30 mm	0.0906 in.
		1	2.36 mm	0.0929 in.
		2	2.42 mm	0.0953 in.
		3	2.48 mm	0.0976 in.
		4	2.54 mm	0.1000 in.
		5	2.60 mm	0.1024 in.
Input rear bearing		Mark		
		A	2.29 mm	0.0902 in.
		B	2.35 mm	0.0925 in.
		C	2.41 mm	0.0949 in.
		D	2.47 mm	0.0972 in.
		E	2.53 mm	0.0996 in.
		F	2.59 mm	0.1020 in.

Specifications (Cont'd)

Output shaft snap ring thickness				
No.1 clutch hub	Mark			
	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.	
No. 3 clutch hub	Mark			
	A	2.25 mm	0.0886in.	
	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.	
		0.8 – 1.6 N–m	8 – 16 kgf–cm	6.9 – 13.9 in.–lbf
		0.5 – 1.0 N–m	5 – 10 kgf–cm	4.3 – 8.7 in.–lbf
Side bearing preload (at starting)	New bearing	0.05 – 0.20 mm	0.0020 – 0.0079 in.	
	Reused bearing	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.	
Pinion to side gear backlash				
Side gear thrust washer thickness				
Side bearing adjusting shim thickness	Mark			
	A	2.10 mm	0.0827 in.	
	B	2.15 mm	0.0846 in.	
	C	2.20 mm	0.0866 in.	
	D	2.25 mm	0.0886 in.	
	E	2.30 mm	0.0906 in.	
	F	2.35 mm	0.0925 in.	
	G	2.40 mm	0.0945 in.	
	H	2.45 mm	0.0965 in.	
	J	2.50 mm	0.0984 in.	
	K	2.55 mm	0.1004 in.	
	L	2.60 mm	0.1024 in.	
	M	2.65 mm	0.1043 in.	
	N	2.70 mm	0.1063 in.	
	P	2.75 mm	0.1083 in.	
	Q	2.80 mm	0.1102 in.	
	R	2.85 mm	0.1122 in.	
	S	2.90 mm	0.1142 in.	
	T	2.95 mm	0.1161 in.	
	U	3.00 mm	0.1181 in.	

Specifications (Cont'd)

Shift lever adjusting shim thickness	Mark			
	A	0.5 mm		0.020 in.
	B	0.6 mm		0.024 in.
	C	0.7 mm		0.028 in.
	D	0.8 mm		0.031 in.
	E	0.9 mm		0.035 in.
	F	1.0 mm		0.039 in.
	G	1.1 mm		0.043 in.
	H	1.2 mm		0.047 in.
	J	1.3 mm		0.051 in.
	K	1.4 mm		0.055 in.
	L	1.5 mm		0.059 in.
	M	1.6 mm		0.063 in.
	N	1.7 mm		0.067 in.
Shift lever preload		0.49 – 1.47 N	60 – 150 gf	0.1 – 0.3 l bf
DIFFERENTIAL ASSEMBLY				
Side gear backlash		0.05 – 0.20 mm		0.0020 – 0.0079 in.
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.

Torque Specifications

Part tightened		**N·m**	kgf–cm	ft–lbf
Transaxle x Engine	12 mm bolt	64	650	47
Transaxle x Rear end plate	10 mm bolt	46	470	34
	10 mm bolt	24	240	17
	8 mm bolt	11	115	8
Transaxle x Starter		39	400	29
Transaxle x Front engine mounting		77	790	57
Transaxle x Rear engine mounting		77	790	57
Centermember x Engine mounting		64	650	47
LH engine mounting x Transaxle		52	530	38
Mounting insulator x Bracket		87	890	64
LH engine mounting x Bracket		48	490	35
LH engine mounting stay x Transaxle		21	210	15
LH engine mounting stay x LH engine mounting		21	210	15
Output shaft front bearing lock plate bolt		11	115	8
Reverse restrict pin holder		20	200	14
Transaxle case x Transmission case		29	300	22
Reverse shift arm bracket x Transaxle case		17	175	13
Straight screw plug		13	130	9
Lock ball assembly		39	400	29
Reverse idler gear shaft lock bolt		29	300	22

Torque Specifications (Cont'd)

Part tightened	N·m	kgf–cm	ft–lbf
Rear bearing retainer x Transmission case	28	280	20
5th driven gear lock nut	118	1,200	87
Shift fork x Fork shaft	16	160	12
Control shaft cover x Transmission case	20	200	14
Shift and select lever shaft lock bolt	29	300	22
Transmission case cover x Transmission case	18	185	13
Front bearing retainer x Transmission case	11	110	8
Back–up light switch x Transmission case	40	410	30
Speedometer shaft sleeve lock plate bolt	11	115	8
Oil receiver x Transaxle case	17	175	13
Transmission case protector x Transmission case	13	130	9
Drain plug	39	400	29
Filler plug	39	400	29
Oil receiver x Transmission case	11	115	8
Selecting spring cover x Control shift lever retainer	4.9	50	43 in.–lbf
Control shift lever retainer x Plate	12	120	9
Ring gear x Differential case	97	985	71