MANUAL TRANSMISSION (G52, G54, G58)

SERVICE DATA

SS0BU-01

Output shaft 2nd gear journal diameter	Min.	37.86 mm (1.4905 in.)
Output shaft 3rd gear journal diameter	Min.	34.86 mm (1.3724 in.)
Output shaft flange thickness	Min.	4.70 mm (0.1850 in.)
Output shaft runout	Max.	0.06 mm (0.0024 in.)
Inner race flange thickness	Min.	3.99 mm (0.1571 in.)
Inner race outer diameter	Min.	38.985 mm (1.5348 in.)
Gear thrust clearance 1st, 2nd, & 3rd	STD	0.10 – 0.25 mm (0.0039 – 0.0098 in.)
	Max.	0.30 mm (0.0118 in.)
Gear radial clearance 1st	STD	0.009 – 0.032 mm (0.0004 – 0.0013 in.)
	Max.	0.032 mm (0.0013 in.)
Gear radial clearance 2nd & 3rd	STD	0.009 – 0.033 mm (0.0004 – 0.0013 in.)
	Max.	0.033 mm (0.0013 in.)
Shift fork to hub sleeve clearance	Max.	1.0 mm (0.039 in.)
Synchronizer ring to gear clearance	Min.	0.8 mm (0.031 in.)
Input shaft snap ring thickness		
	Mark 0	2.05 – 2.10 mm (0.0807 – 0.0827 in.)
	Mark 1	2.10 – 2.15 mm (0.0827 – 0.0846 in.)
	Mark 2	2.15 – 2.20 mm (0.0846 – 0.0866 in.)
	Mark 3	2.20 – 2.25 mm (0.0866 – 0.0886 in.)
	Mark 4	2.25 – 2.30 mm (0.0886 – 0.0906 in.)
	Mark 5	2.30 – 2.35 mm (0.0906 – 0.0925 in.)
Output shaft snap ring thickness		
Front	Mark C–1	1.75 – 1.80 mm (0.0689 – 0.0709 in.)
	Mark D	1.80 – 1.85 mm (0.0709 – 0.0728 in.)
	Mark D–1	1.85 – 1.90 mm (0.0728 – 0.0748 in.)
	Mark E	1.90 – 1.95 mm (0.0748 – 0.0768 in.)
	Mark E–1	1.95 – 2.00 mm (0.0768 – 0.0787 in.)
	Mark F	2.00 – 2.05 mm (0.0787 – 0.0807 in.)
	Mark F–1	2.05 – 2.10 mm (0.0807 – 0.0827 in.)
Output shaft snap ring thickness		
Rear	Mark A	2.67 – 2.72 mm (0.1051 – 0.1071 in.)
	Mark B	2.73 – 2.78 mm (0.1075 – 0.1094 in.)
	Mark C	2.79 – 2.84 mm (0.1098 – 0.1118 in.)
	Mark D	2.85 – 2.90 mm (0.1122 – 0.1142 in.)
	Mark E	2.91 – 2.96 mm (0.1146 – 0.1165 in.)
	Mark F	2.97 – 3.02 mm (0.1169 – 0.1189 in.)
	Mark G	3.03 – 3.08 mm (0.1193 – 0.1213 in.)
	Mark H	3.09 – 3.14 mm (0.1217 – 0.1236 in.)
	Mark J	3.15 – 3.20 mm (0.1240 – 0.1260 in.)
	Mark K	3.21 – 3.26 mm (0.1264 – 0.1283 in.)
	Mark L	3.27 – 3.32 mm (0.1287 – 0.1307 in.)
Counter gear needle roller bearing race diameter	STD	25.98 – 26.00 mm (1.0228 – 1.0236 in.)
	Min.	25.86 mm (1.0181 in.)
Counter 5th gear thrust clearance	STD	0.10 – 0.30 mm (0.0039 – 0.0118 in.)
	Max.	0.35 mm (0.0138 in.)
Counter 5th gear radial clearance	STD	0.009 – 0.032 mm (0.0004 – 0.0013 in.)
	Max.	0.032 mm (0.0013 in.)
Reverse idler gear radial clearance	STD	0.04 – 0.08 mm (0.0016 – 0.0031 in.)
	Max.	0.13 mm (0.0051 in.)

Reverse idler gear to shift arm shoe clearance	STD	0.05 – 0.27 mm (0.0020 – 0.0106 in.)
	Max.	0.50 mm (0.0197 in.)
Counter gear snap ring thickness		
Front bearing	Mark 1	2.05 – 2.10 mm (0.0807 – 0.0827 in.)
	Mark 2	2.10 – 2.15 mm (0.0827 – 0.0846 in.)
	Mark 3	2.15 – 2.20 mm (0.0846 – 0.0866 in.)
	Mark 4	2.20 – 2.25 mm (0.0866 – 0.0886 in.)
	Mark 5	2.25 – 2.30 mm (0.0886 – 0.0906 in.)
	Mark 6	2.30 – 2.35 mm (0.0906 – 0.0925 in.)
Counter gear snap ring thickness		
Gear spline piece No.5	Mark A	2.80 – 2.85 mm (0.110 – 0.112 in.)
	Mark B	2.85 – 2.90 mm (0.112 – 0.114 in.)
	Mark C	2.90 – 2.95 mm (0.114 – 0.116 in.)
	Mark D	2.95 – 3.00 mm (0.116 – 0.118 in.)
	Mark E	3.00 – 3.05 mm (0.118 – 0.120 in.)
	Mark F	3.05 – 3.10 mm (0.120 – 0.122 in.)
	Mark G	3.10 – 3.15 mm (0.122 – 0.124 in.)
Oil seal drive in depth		
Front bearing retainer (from retainer end)		12.7 ± 0.5 mm (0.500 ± 0.020 in.)
Speedometer driven gear		20 mm (0.79 in.)
Transfer adaptor (RF type transfer)		12.0 ± 0.5 mm (0.0472 ± 0.020 in.)
Transfer adaptor (VF type transfer)		45.0 ± 0.5 mm (1.772 ± 0.020 in.)

SS0BK-01

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
Frame auxiliary crossmember (2WD) Middle East, Australia and Europe		95	970	70
Clutch release cylinder x Clutch housing		12	120	9
Front exhaust pipe clamp set bolt		19	190	14
Pipe support bracket x Clutch housing (1RZ, 1RZ–E) (See page MT–4)	Bolt A	71	720	52
	Bolt B	72	730	53
Pipe support bracket x Clutch housing (2WD w/ 2L, 3L, 5L)	17 mm head	69	700	51
	14 mm head	37	380	27
Pipe support bracket x Clutch housing (4WD w/ 3L, 5L) (See page MT–15)	Bolt A	71	720	52
	Bolt B	69	700	51
Front exhaust pipe x Exhaust manifold		62	630	46
Front exhaust pipe x Tail exhaust pipe		48	490	35
Starter bracket (2WD w/ 2L, 3L, 5L)	Bolt	37	380	27
	Nut	12	120	9
LH and RH stiffener plate (1RZ, 1RZ–E)		37	380	27
LH and RH stiffener plate (Except 1RZ, 1RZ–E)	17 mm head	69	700	51
	14 mm head	37	380	27
Engine rear mounting bracket x Frame (2WD)		58	590	43
Engine rear mounting bracket x Engine rear mounting (2WD)		13	130	9
Engine rear mounting x Transmission		40	410	30
Engine rear mounting x Crossmember (4WD w/ 3L, 5L)		13	130	9
No.2 frame crossmember x Frame (4WD w/ 3L, 5L)		95	970	70
Stabilizer bar bracket x Frame (4WD w/ 3L, 5L)		29	300	22
Starter x Transmission	1RZ, 1RZ–E	39	400	29
	Except 1RZ, 1RZ–E	69	700	51
Transmission x Engine		72	730	53
Transmission x Transfer (4WD w/ 3L, 5L)	RF Type Transfer	37	380	27
	VF Type Transfer	38	390	28
Speedometer driven gear lock plate set bolt		11	115	8
Back–up light switch		37	380	27
Clutch housing x Transmission case		37	380	27
Straight screw plug		19	190	14
Transfer control shift lever retainer x Transfer adaptor		18	185	13
Control shift lever retainer		18	185	13
Restrict pin		28	290	21
Extension housing x Transmission case		37	380	27
Transfer adaptor x Transmission case		37	380	27
Shift lever housing set bolt		38	390	28
Front bearing retainer x Transmission case		17	170	12
Shift fork x Shift fork shaft		20	200	14
Reverse shift arm bracket x Intermediate plate		18	185	13
Reverse idler gear shaft stopper set bolt		17	175	13
Rear bearing retainer x Intermediate plate		18	185	13
Oil receiver pipe x Extension housing		11	115	8
Oil receiver pipe x Transfer adaptor (VF type transfer)		11	115	8
Oil receiver x Transfer adaptor (RF type transfer)		18	185	13

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Filler and drain plug	37	380	27
Plug (4WD w/ 3L, 5L)	37	380	27