MANUAL TRANSMISSION (W56)

SERVICE DATA

SSQAW-01

Output shaft 2nd gear journal diameter	Min.	42.975 mm (1.6919 in.)
Output shaft 3rd gear journal diameter	Min.	31.969 mm (1.2586 in.)
Output shaft flange thickness	Min.	5.60 mm (0.2205 in.)
Output shaft runout	Max.	0.06 mm (0.0024 in.)
1st gear inner race flange thickness	Min.	4.78 mm (0.1881 in.)
1st gear inner race outer diameter	Min.	42.975 mm (1.6919 in.)
Counter gear bearing journal diameter	Min.	29.950 mm (1.1791 in.)
Counter 5th gear journal diameter	Min.	26.975 mm (1.0620 in.)
1st, 2nd and 3rd gear thrust clearance	STD Max.	0.10 – 0.25 mm (0.0039 – 0.0098 in.) 0.30 mm (0.0118 in.)
Counter 5th gear thrust clearance	STD Max.	0.10 – 0.41 mm (0.0039 – 0.0161 in.) 0.46 mm (0.0181 in.)
1st, 2nd and counter 5th gear radial clearance	STD Max.	0.009 – 0.060 mm (0.0004 – 0.0024 in.) 0.150 mm (0.0059 in.)
3rd gear radial clearance	STD Max.	0.015 – 0.066 mm (0.0006 – 0.0026 in.) 0.200 mm (0.0079 in.)
Reverse idler gear radial clearance	STD Max.	0.041 – 0.074 mm (0.0016 – 0.0029 in.) 0.194 mm (0.0076 in.)
Reverse idler gear to shift arm shoe clearance	STD Max.	0.20 – 0.41 mm (0.0079 – 0.0161 in.) 0.90 mm (0.0354 in.)
Shift fork to hub sleeve clearance	Max.	1.0 mm (0.039 in.)
Synchronizer ring to 1st and 4th gear clearance	Min.	0.5 mm (0.020 in.)
Synchronizer ring to 2nd and 3rd gear clearance	Min.	0.7 mm (0.028 in.)
Input shaft snap ring thickness		
	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 11	2.30 – 2.35 mm (0.0906 – 0.0925 in.)
	Mark 12	2.35 – 2.40 mm (0.0925 – 0.0945 in.)
Output shaft snap ring thickness		
No.2 clutch hub	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 11	1.86 – 1.91 mm (0.0732 – 0.0752 in.)
	Mark 12	1.92 – 1.97 mm (0.0756 – 0.0776 in.)
	Mark 13	1.98 – 2.03 mm (0.0780 – 0.0799 in.)
	Mark 14	2.04 – 2.09 mm (0.0803 – 0.0823 in.)
	Mark 15	2.10 – 2.15 mm (0.0827 – 0.0846 in.)
Output shaft snap ring thickness		
Rear bearing	Mark 8	2.31 – 2.36 mm (0.0909 – 0.0929 in.)
	Mark 9	2.37 – 2.42 mm (0.0933 – 0.0953 in.)
	Mark 10	2.43 – 2.48 mm (0.0957 – 0.0976 in.)
	Mark 11	2.49 – 2.54 mm (0.0980 – 0.1000 in.)
	Mark 12	2.55 – 2.60 mm (0.1004 – 0.1024 in.)
	Mark 13	2.61 – 2.66 mm (0.1028 – 0.1047 in.)
	Mark 14	2.68 – 2.73 mm (0.1055 – 0.1075 in.)
	Mark 15	2.74 – 2.79 mm (0.1079 – 0.1098 in.)

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Output shaft snap ring thickness		
Reverse gear	Mark 5	2.25 – 2.30 mm (0.0886 – 0.0906 in.)
	Mark 11	2.30 – 2.35 mm (0.0906 – 0.0925 in.)
	Mark 12	2.35 – 2.40 mm (0.0925 – 0.0945 in.)
	Mark 13	2.40 – 2.45 mm (0.0945 – 0.0965 in.)
	Mark 14	2.45 – 2.50 mm (0.0965 – 0.0984 in.)
	Mark 15	2.50 – 2.55 mm (0.0984 – 0.1004 in.)
	Mark 16	2.55 – 2.60 mm (0.1004 – 0.1024 in.)
	Mark 17	2.61 – 2.66 mm (0.1028 – 0.1047 in.)
	Mark 18	2.67 – 2.72 mm (0.1051 – 0.1071 in.)
	Mark 19	2.73 – 2.78 mm (0.1075 – 0.1094 in.)
	Mark 20	2.79 – 2.84 mm (0.1098 – 0.1118 in.)
	Mark 21	2.85 – 2.90 mm (0.1122 – 0.1142 in.)
	Mark 22	2.91 – 2.96 mm (0.1146 – 0.1165 in.)
	Mark 23	2.97 – 3.02 mm (0.1169 – 0.1189 in.)
Coutner gear snap ring thickness		
Front bearing	Mark A	2.05 – 2.10 mm (0.0807 – 0.0827 in.)
	Mark B	2.10 – 2.15 mm (0.0827 – 0.0846 in.)
	Mark C	2.15 – 2.20 mm (0.0846 – 0.0866 in.)
	Mark D	2.20 – 2.25 mm (0.0866 – 0.0886 in.)
	Mark E	2.25 – 2.30 mm (0.0886 – 0.0906 in.)
	Mark F	2.30 – 2.35 mm (0.0906 – 0.0925 in.)
Counter gear snap ring thickness		
No.3 clutch hub	Mark 2	2.06 – 2.11 mm (0.0811 – 0.0831 in.)
	Mark 3	2.12 – 2.17 mm (0.0835 – 0.0854 in.)
	Mark 4	2.18 – 2.23 mm (0.0858 – 0.0878 in.)
	Mark 5	2.24 – 2.29 mm (0.0882 – 0.0902 in.)
Counter gear snap ring thickness		
Rear bearing	Mark 1	1.90 – 1.95 mm (0.0748 – 0.0768 in.)
	Mark 2	1.96 – 2.01 mm (0.0772 – 0.0791 in.)
	Mark 3	2.02 – 2.07 mm (0.0795 – 0.0815 in.)
	Mark 4	2.08 – 2.13 mm (0.0819 – 0.0839 in.)
	Mark 5	2.14 – 2.19 mm (0.0843 – 0.0862 in.)
	Mark 6	2.20 – 2.25 mm (0.0866 – 0.0886 in.)
	Mark 7	2.26 – 2.31 mm (0.0890 – 0.0909 in.)
Oil seal drive in depth		
Speedometer drive gear		25 mm (0.98 in.)
Front bearing retainer (from retainer end)		12.2 ± 0.5 mm (0.480 ± 0.020 in.)
Extension housing		0 ± 0.5 mm (0 ± 0.020 in.)
Transfer adaptor		45.5 ± 0.5 mm (1.969 ± 0.020 in.)

S50AX-01

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
Frame auxiliary crossmember x Frame (2WD)		95	970	70
Clutch release cylinder x Clutch housing		12	120	9
Clutch release cylinder and accumulator x Clutch housing (Diesel)		12	120	9
Front exhaust pipe clamp set bolt		19	190	14
Pipe support bracket x Clutch housing (Gasoline)	Bolt A	71	720	52
	Bolt B	72	730	53
Pipe support bracket x Clutch housing (Diesel)	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
LH and RH stiffener plates x Engine (Gasoline)		37	380	27
LH and RH stiffener plates x Engine (Diesel)	17 mm head	69	700	51
	14 mm head	37	380	27
No.2 frame crossmember x Engine rear mounting (Except 2WD)		13	130	9
No.2 frame crossmember x Frame (Except 2WD)		95	970	70
Engine rear mounting bracket x Engine rear mounting (2WD)		13	130	9
Engine rear mounting bracket x Frame (2WD)		58	590	43
Engine rear mounting x Transmission		40	410	30
Stabilizer bar bracket x Frame		29	300	22
Starter x Transmission		39	400	29
Transmission x Engine		72	730	53
Transmission x Transfer (4WD)		37	380	27
Shift fork set bolt		20	200	14
Straight screw plug		25	250	18
Reverse idler gear shaft stopper bolt		25	250	18
Oil separator x Intermediate plate		18	185	13
Front bearing retainer set bolt		25	250	18
Extension housing x Intermediate plate		37	380	27
Transfer adaptor x Intermediate plate		37	380	27
Restrict pin	2WD	40	410	30
	4WD	27	280	20
Shift lever housing x Shift and select lever shaft		39	400	29
Control shift lever retainer x Extension housing		18	185	13
Control shift lever retainer x Transfer adaptor		18	185	13
Drain and filler plugs		37	380	27
Back–up light switch		40	410	30
Clutch housing x Transmission case		37	380	27
Rear bearing retainer x Intermediate plate		18	185	13
Speedometer driven gear set bolt (2WD)		13	130	9