

# SERVICE SPECIFICATIONS

MX030-02

## SERVICE DATA

Input shaft roller bearing journal diameter		
	Limit	29.970 mm (1.1799 in.)
Input shaft 3rd gear journal diameter		
	Limit	33.090 mm (1.3028 in.)
Input shaft 4th gear journal diameter		
	Limit	32.470 mm (1.2783 in.)
Input shaft 5th gear journal diameter		
	Limit	26.970 mm (1.0618 in.)
Input shaft runout		
	Limit	0.05 mm (0.0020 in.)
Output shaft roller bearing journal diameter		
	Limit	31.970 mm (1.2587 in.)
Output shaft 1st gear journal diameter		
	Limit	37.970 mm (1.4949 in.)
Output shaft 2nd gear journal diameter		
	Limit	31.990 mm (1.2594 in.)
Output shaft runout		
	Limit	0.05 mm (0.0020 in.)
Gear thrust clearance 1st		
	STD	0.10–0.29 mm (0.0039–0.0114 in.)
	Limit	0.35 mm (0.0138 in.)
Gear thrust clearance 2nd		
	STD	0.20–0.44 mm (0.0079–0.0173 in.)
	Limit	0.50 mm (0.0197 in.)
Gear thrust clearance 3rd		
	STD	0.10–0.25 mm (0.0039–0.0098 in.)
	Limit	0.30 mm (0.0118 in.)
Gear thrust clearance 4th		
	STD	0.20–0.45 mm (0.0079–0.0177 in.)
	Limit	0.50 mm (0.0197 in.)
Gear thrust clearance 5th		
	STD	0.20–0.40 mm (0.079–0.0157 in.)
	Limit	0.45 mm (0.0177 in.)
Gear oil clearance 1st,2nd,3rd and 4th		
	STD	0.009–0.053 mm (0.0004–0.0021 in.)
	Limit	0.070 mm (0.0028 in.)
Gear oil clearance 5th		
	STD	0.009–0.050 mm (0.0004–0.0020 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.)

Input shaft snap ring thickness		
No.2 clutch hub	Mark 1	1.95–2.00 mm (0.0768–0.0787 in.)
No.2 clutch hub	Mark 2	2.00–2.05 mm (0.0787–0.0807 in.)
No.2 clutch hub	Mark 3	2.05–2.10 mm (0.0807–0.0827 in.)
No.2 clutch hub	Mark 4	2.10–2.15 mm (0.0827–0.0846 in.)
No.2 clutch hub	Mark 5	2.15–2.20 mm (0.0846–0.0866 in.)
No.2 clutch hub	Mark 6	2.20–2.25 mm (0.0866–0.0886 in.)
No.3 clutch hub	Mark 13	2.20–2.25 mm (0.0866–0.0886 in.)
No.3 clutch hub	Mark 14	2.25–2.30 mm (0.0886–0.0906 in.)
No.3 clutch hub	Mark 15	2.30–2.35 mm (0.0906–0.0925 in.)
No.3 clutch hub	Mark 16	2.35–2.40 mm (0.0925–0.0945 in.)
No.3 clutch hub	Mark 17	2.40–2.45 mm (0.0945–0.0965 in.)
No.3 clutch hub	Mark 18	2.45–2.50 mm (0.0965–0.0984 in.)
No.3 clutch hub	Mark 19	2.50–2.55 mm (0.0984–0.1004 in.)
No.3 clutch hub	Mark 20	2.55–2.60 mm (0.1004–0.1024 in.)
No.3 clutch hub	Mark 21	2.60–2.65 mm (0.1024–0.1043 in.)
No.3 clutch hub	Mark 22	2.65–2.70 mm (0.1043–0.1063 in.)
No.3 clutch hub	Mark 23	2.70–2.75 mm (0.1063–0.1083 in.)
No.3 clutch hub	Mark 24	2.75–2.80 mm (0.1083–0.1102 in.)
No.3 clutch hub	Mark 25	2.80–2.85 mm (0.1102–0.1122 in.)
No.3 clutch hub	Mark 26	2.85–2.90 mm (0.1122–0.1142 in.)
No.3 clutch hub	Mark 27	2.90–2.95 mm (0.1142–0.1161 in.)
Ball bearing	Mark A	2.15–2.20 mm (0.0846–0.0866 in.)
Ball bearing	Mark B	2.20–2.25 mm (0.0866–0.0886 in.)
Ball bearing	Mark C	2.25–2.30 mm (0.0886–0.0906 in.)
Ball bearing	Mark D	2.30–2.35 mm (0.0906–0.0925 in.)
Ball bearing	Mark E	2.35–2.40 mm (0.0925–0.0945 in.)
Differential side bearing adjusting shim thickness		
	Mark 1	1.90 mm (0.0748 in.)
	Mark 2	1.95 mm (0.0768 in.)
	Mark 3	2.00 mm (0.0787 in.)
	Mark 4	2.05 mm (0.0807 in.)
	Mark 5	2.10 mm (0.0827 in.)
	Mark 6	2.15 mm (0.0846 in.)
	Mark 7	2.20 mm (0.0866 in.)
	Mark 8	2.25 mm (0.0886 in.)
	Mark 9	2.30 mm (0.0906 in.)
	Mark 10	2.35 mm (0.0925 in.)
	Mark 11	2.40 mm (0.0945 in.)
	Mark 12	2.45 mm (0.0965 in.)
	Mark 13	2.50 mm (0.0984 in.)
	Mark 14	2.55 mm (0.1004 in.)
	Mark 15	2.60 mm (0.1024 in.)
	Mark 16	2.65 mm (0.1043 in.)
	Mark 17	2.70 mm (0.1063 in.)
	Mark 18	2.75 mm (0.1083 in.)
	Mark 19	2.80 mm (0.1102 in.)
Differential case side bearing preload (at starting)		0.8–1.6 N·m (8–16 kgf·cm, 6.9–13.9 in.·lbf)

Differential pinion to side gear backlash		0.05–0.20 mm (0.002–0.0079 in.)
Differential side gear thrust washer thickness		
	None Mark	0.95 mm (0.0374 in.)
	None Mark	1.00 mm (0.0394 in.)
	None Mark	1.05 mm (0.0413 in.)
	None Mark	1.10 mm (0.0433 in.)
	None Mark	1.15 mm (0.0453 in.)
	None Mark	1.20 mm (0.0472 in.)
Input shaft front oil seal drive in depth		0–0.5 mm (0–0.012 in.)
Shift outer lever tip play		0.1–0.5 mm (0.004–0.020 in.)

## TORQUE SPECIFICATIONS

Part tightened	N·m	kgf·cm	ft·lbf
Transmission case x Transaxle case	29	300	22
Transmission case x Case cover	29	300	22
Transmission case protector x Transmission case	18	185	13
Rear bearing retainer x Transmission case	42	430	31
Output shaft front bearing lock plate x Transaxle case	18	185	13
Transaxle case receiver x Transaxle case	7.4	75	65in.·lbf
5th driven gear lock nut	123	1,250	90
Reverse idler shaft lock bolt	29	300	22
Control shaft cover	37	375	27
Reverse shift arm bracket x Transaxle case	18	185	13
No.3 shift fork x Shift fork shaft	18	185	13
No.1 lock ball assembly lock nut	37	375	27
No.2 lock ball assembly	23	230	17
Differential ring gear x Differential case	90	920	67
Engine mount bracket x Transmission case	52	530	38
Filler plug	49	500	36
Drain plug	49	500	36
Back-up light switch	44	450	33
Side bearing retainer x Transmission case	18	185	13
Clutch release bearing retainer x Transaxle case	7.4	75	65 in.·lbf
Straight screw plug (Shift fork shaft)	13	130	9
Straight screw plug (Reverse restrict pin)	13	130	9
Transaxle x Engine			
12 mm bolt	64	650	47
10 mm bolt	46	470	34
Rear end plate set bolt	9	95	82 in.·lbf
Stiffener plate x Engine	37	380	27
Stiffener plate x Transaxle	37	380	27
Engine LH mounting set bolt	64	650	47
Suspension crossmember x Body	113	1,150	83
Suspension arm x Rear axle hub	103	1,050	76
Lower arm x Suspension crossmember	132	1,350	98
Engine rear mounting x Transaxle	77	790	57
Engine rear mounting x Crossmember	64	650	47
Engine rear mounting through bolt	87	890	64
Engine front mounting x Transaxle	77	790	57
Clutch release cylinder x Transaxle	12	120	9
Engine front mounting x Transaxle	77	790	57
Engine front mounting x Body	73	740	54
Engine front mounting through bolt	96	980	71
Front exhaust pipe x Tail pipe	62	630	46
Front exhaust pipe x Exhaust manifold	62	630	46
Transaxle x Starter	39	400	29
LH engine mounting x Body	73	740	54
LH engine mounting stay x Transaxle	25	250	18