

SPECIFICATIONS

GENERAL SPECIFICATIONS

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Item	Specification
Gear Clearance	
1st gear end play	0.20 - 0.30 mm (0.007 - 0.011 in)
2nd gear end play	0.06 - 0.16 mm (0.002 - 0.006 in)
3rd gear thrust clearance	0.18 - 0.31 mm (0.0071 - 0.0122 in)
4th gear end play	0.20 - 0.30 mm (0.0078 - 0.0118 in)
5th gear thrust clearance	0.06 - 0.16 mm (0.002 - 0.006 in)
Synchronizer Ring Clearance	
1st gear clearance (outer ring-to-synchronizer cone)	0.60 - 1.10 mm (0.023 - 0.043 in)
1st gear clearance (inner ring-to-synchronizer cone)	0.60 - 0.80 mm (0.023 - 0.031 in)
2nd gear clearance (middle synchronizer ring-to-gear)	0.60 - 1.20 mm (0.023 - 0.047 in)
2nd gear clearance (outer ring-to-synchronizer cone)	0.60 - 1.10 mm (0.023 - 0.043 in)
2nd gear clearance (inner ring-to-gear)	0.70 - 1.10 mm (0.027 - 0.043 in)
3rd gear	0.90 - 1.45 mm (0.035 - 0.057 in)
4th gear	0.90 - 1.45 mm (0.035 - 0.057 in)
5th gear	0.95 - 1.40 mm (0.037 - 0.055 in)
Reverse idler gear	0.95 - 1.40 mm (0.037 - 0.055 in)
Input Shaft	
End play	0.00 - 0.06 mm (0.00 - 0.0024 in)
Adjustment shim thickness	Refer to TRANSAXLE for shim selection procedure.
Mainshaft	
End play	0.00 - 0.06 mm (0.00 - 0.0024 in)
Adjustment shim thickness	Refer to TRANSAXLE for shim selection procedure.
Reverse Idler Gear	
End play	0.04 - 0.14 mm (0.0016 - 0.0060 in)
Adjustment shim thickness	Refer to TRANSAXLE for shim selection procedure.
Input shaft thrust washer thickness	Refer to INPUT SHAFT for thrust washer thickness chart.
Input shaft snap ring thickness	Refer to INPUT SHAFT for snap ring thickness chart.
4th gear adjustment shim thickness	Refer to MAINSHAFT for 4th gear adjustment shim thickness chart.
5th gear snap ring thickness	Refer to MAINSHAFT for 5th gear snap ring thickness chart.
Mainshaft C-ring thickness	Refer to MAINSHAFT for C-ring thickness chart.
Differential	
Preload	0.15 - 0.21 mm (0.0059 - 0.0083 in)
	Refer to TRANSAXLE for adjustment shim selection

Adjustment shim thickness	procedure.
Side gear and pinion gear backlash	0.02 - 0.08 mm (0.0008 - 0.0031 in)
Lubricants and sealants	
SAE 75W-90 Gear Oil F32Z-19C547-MA	MAZDA (MES) 115-A WSS-M2C203-A1
Silicone Gasket and Sealant TA-30	WSE-M4G323-A4
Premium Long-Life Grease XG-I-C	ESA-M1C75-B

TORQUE SPECIFICATIONS

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Description	Nm	lb-ft	lb-in
Drain plug	35	26	-
Check plug (external)	15	11	-
Check plug (internal)	15	11	-
Crossmember bolts	115	85	-
Fill level inspection plug	35	26	-
Transaxle fill plug	35	26	-
Transaxle front support insulator bolts	90	66	-
Transaxle front support insulator bracket bolts	55	41	-
Transaxle front support insulator through-bolt	90	66	-
Transaxle front-to-aft crossmember bolts	90	66	-
Transaxle front-to-aft crossmember nut	90	66	-
LH transaxle support insulator bolts	55	41	-
LH transaxle support insulator bracket nuts	90	66	-
LH transaxle support insulator through-bolt	90	66	-
Clutch hydraulic line bracket bolt	2.5	-	22
Mainshaft bearing retainer bolt	7	-	62
Transaxle rear support insulator bolt	90	66	-
Transaxle rear support insulator bracket bolts	90	66	-
Transaxle rear support insulator nuts	90	66	-
Transaxle rear support insulator through-bolt	90	66	-
Reverse lever bracket bolts	14	10	-
Shift assembly bolts	7	-	62
Shift check bolt	24	18	-
Stopper bolt	28	21	-
Standard (gold) transaxle case bolts	52	38	-
Black transaxle case bolt	65	48	-
Transaxle-to-engine bolts	47	35	-
Wiring harness bracket nuts	12	9	-

Final drive gear bolts	120	89	-
Shift cable bracket bolts	22	16	-
Upper transaxle-to-engine bolts	45	33	-
Reduction gear bolts	96	71	-